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strong in connectivity

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ACT catalog

ACT

Index

ACT solves your ICT, network and AV connectivity challenges 2 $\ensuremath{2}$
ACT solutions
Custom made cables: copper, fiber optics and powercables $\ldots 4$
Engineering: we translate your wishes into a suitable solution. 5
Construction Product Regulation (CPR)6
When to use shielded network cables?
Copper CAT8
CAT8 - assortment9
Copper CAT6A
CAT6A - cable on reel11
CAT6A - connecting hardware12
CAT6A - patch cable
CAT6A - patch cable
CAT6A - slimline patch cable
Permanent link and channel
Patch cable component level
Cross connection and testing
Copper CAT6
CAT6 - cable on reel
CAT6 - connecting hardware assortment
CAT6 - connecting hardware assortment
CAT6 - patch cable
CAT6 - component level patch cable
PoE information
Copper CAT5E
CAT5E - cable on reel
CAT5E - connecting hardware assortment
CAT5E - connecting hardware assortment
CAT5E - patch cable
CAT5E - component level patch cable
Fiber optic
ACT Fiber Kit
Fiber optic cleaners
Fiber optic installation cables
Pre-terminated cables: What you should know
Installing a pre-terminated cable41
Fiber optic pre-terminated cables
Pre-terminated cables - data centers
ACT solutions for patching fiber and more
5 things you should know about fiber optic patch cables 52
Fiber optic cable
4 things you should consider when chosing SFP modules 60
What is the best video cable solution for my set up?

Video	
DisplayPort cables	
DisplayPort- DisplayPort AOC cables	
HDMI Premium Certified/Ultra High Speed Certified	67
HDMI cables	
HDMI AOC cables	69
DVI cables - coax cables	70
VGA cables - video adapter cables	71
AV Solutions - HDMI / DisplayPort Extenders	72
ACT AV Solutions - Splitters / Switches	74
Audio	76
Audio cables	
Power	78
ACT power cables	79
Power cables	
Power - Line Interactive UPS	
Power - Laptop chargers	
USB	
What is USB-C?	
The advantages of USB-C:	
USB-A	
Thunderbolt [™] 2	
USB-C	
USB Docking stations	92
USB-C Multiport adapters	94-95
USB-C Video adapters	96
Mirror your content	
Extend your content	
USB-C Video adapters	
USB-hubs	100
USB-hubs & cardreaders	102
USB accessories	
USB boosters and extenders	
Cable management	.106-108
ACT cables and accessories in Zip-bag	
ICT accessories	
ICT accessories - desk mounts	
ICT accessories - laptop stands & laptop locks	
ICT accessories - Input and multimedia - mice	115
ICT accessories - laptop bags, backpacks and sleeves	
USB HDD/SSD enclosures	
SATA HDD enclosures	
Video conferencing	
ACT PoF switches - injector	122



ACT solves your ICT, network and AV connectivity challenges

ACT was founded 20 years ago to provide users a brand for extremely reliable and consistent quality cabling, network products and ict accessories. ACT solutions mix and match seamlessly in use with other well known brands.

More than a million products on stock

Did you know that ACT has more than one million products on stock? Also the one cable you need tomorrow. You can get started straight away.

ACT Product portfolio:

- COPPER Copper Network
- FIBER Fiber Network
- VIDEO Video/audio cables, extensions, converters
- POWER Power cables
 - ^{SB} USB cables and solutions
- Cable management
- Cable on reel
- ICT accessories

Custom made service

Do you need a custom-made cable? For a different length or special connector? As a cable specialist nearly everything is possible!

ACT Custom made service consists of:

- Excellent support by an experienced specialist
- · Flexibility and short lead times
- Labelling as desired
- Clear data sheets
- Excellent price/quality ratio

We will be glad to support your way to find the best connectivity solution.

Mix and Match approach

- ACT solutions mix and match seamlessly in use with other well known brands
- ACT matches and exceeds the international standards for maximum compatibility

Consistent guaranteed quality

- In house quality management
- We believe in offering consistent quality each time you apply an ACT product
- Meet and exceed international standards and EU legislation
- ACT offers a 5 year warranty

MARINE RAILWAY

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ACT solutions





Custom made cables: copper, fiber optics and powercables

Almost anything is possible in the field of copper and fiberglass assemblies.

In addition to the extensive range of cabling, we specialize in custom cabling. Almost anything is possible in the field of copper and fiber optics assemblies.





In addition to the extensive range of cabling, we specialize in custom cabling. Almost anything is possible in the field of copper and fiber optics assemblies.

Benefits of custom cabling:

- Extremely flexible, fast and competitively priced.
- Expertise per sub-area, internal quality management.
- We create a technical drawing for each custom cable to provide 100% clarity for both parties.
- It is possible to label cables with text/labels to your specific requirements.

Cable labeling

Cable management is of crucial importance within data centers, among others. You want to see at a glance which cables are connected. Cable labeling is possible for almost all types of cables, such as network cables (CAT6 / CAT6A), fiber optic cables, DAC cables, power cables, etc.

Benefits of cable labeling:

- Save on labor costs, cables are already labeled.
- No investment in printers and other equipment needed.
- Self-declare what needs to be labeled and on which part of the cable.







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Engineering: ACT thinks with you

As a solution provider we would like to jointly look at the possibilities for the best solution. With the expertise, knowledge and experience of our engineering department, we are able to translate your needs into a suitable solution.

Engineering discusses and lists your requirements, via a video call, at your location or our office. Your requirements are recorded and discussed internally with the team. We will then translate your requirements into a technical solution. To ensure that this entire process runs smoothly, we use project management and keep you informed of progress. We find it important to stay in contact with you at all times. Cooperation is of great value in order to come to the right solution.

What to expect from us:

A detailed drawing of the solution

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- Version and project management
- Sample possibilities for testing
- We will keep you informed about the progress of the project

We are specialised in:

- Custom made cables
- Extensive wiring looms
- Complete networks
- Cabling infrastructure
- Control room solutions



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What is CPR regulation?

The social importance of fire safety is increasing. People spend most of their time in buildings, unaware of the dangers that are present in the field of fire. Despite the fact that approximately 90% of all fires that break out every year take place in buildings. Guaranteeing quality in the use of building materials is therefore essential. CPR (Construction Products Regulation) is a European regulation that ensures that the essential characteristics and performance that construction products must meet are subject to clear requirements.

What is the purpose of the CPR?

The Construction Products Regulation (CPR) is intended to provide reliable information on construction products, in relation to the performance of the products. This is achieved by providing a "common technical language" to determine uniform assessment methods for the performance of the construction products. Those assessment methods shall be drawn up in harmonised technical specifications. This uniform technical language should be applied by:

- Manufacturers in communicating the performance of their products
- Member State authorities in specifying requirements
- Users (architects, engineers, constructors,

Which cables are covered by the CPR?

The following cables are subject to the CPR regulations:

- Cables that are intended to be used for the provision of electricity and communication in buildings and other civil engineering works and subject to fire performance requirements.
- Cables intended for the provision of electricity, communications, fire detection and alarms in buildings and other civil engineering works

What performance characteristics of cables are covered by CPR? The performance of cables that fall under the CPR are:

- Fire behaviour
- Function Preservation
- Release of hazardous substances under normal use, disassembly and recycling

Which fire classes apply to the fire behaviour (Reaction to fire)? In order to describe the fire behaviour of cables, cables are classified in a Euroclassification that consists of seven fire classes and the corresponding contribution to the fire.

Euro classes	Fire propagation and heat generation	Smake development s-smake	Burning falling particles d = droplets	Toacidy acidity of the a - acidity
Aca B1ca	No Barely			
B2ca	very firmled	12	d1 Limited	at Low
Cca	limited	s1 Little	d1 Limited	a1 Low
Dca	Average	strong, no demands	High, no demands	High, no demands
Eca	High	-	•	
Eca	Not determined			

The four classes in bold are relevant for European countries. Heat release and fire propagation are the most important criteria. Smoke development, falling burning material and acidity of fl ue gases are additionally classified.

Fire classes

To determine the correct fire classification for the application of cables in buildings, the CPR cables are classified in different fire classes.

Fire risk	Classification cable	
łow	Eca	
Medium size	D _{ca} -s3,d2,a3	
Big	C _{ca} -s1,d1,a1	
Very big	B2 _{ca} -s1,d1,a1	

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When to use shielded network cables?

A network cable can be affected by electromagnetic interference from outside. This is often caused by the cables being too close to other electrical equipment or cables. Network cables can also interfere with each other ("alien crosstalk").

These disturbances, also called interferences, can prevent the network signal from being transmitted properly. This causes errors in data transmission, potentially resulting in data loss. It can even cause total failure of the network connection.

An unshielded U/UTP network cable is designed to reduce interference to a limited level. This is achieved through the twisted pair design.

Shielded network cables have an additional conductive layer, also called a shield. This type of shielding is applied around the entire cable and/or around the individual twisted pair wires.

Types of shielding:

- Foil shielding
- Braided shield
- Combination of foil and braided shield

This shielding protects the cable much better from unwanted interference and ensures a stable and well-functioning network connection.

Shielded cabling is recommended in the following situations:

- Near high voltage panels or cables
- Next to 230V power cables
- Important network connections, where maximum reliability is essential. (For example switch to Server)

There are of course other situations where electromagnetic interference can occur. If it is not known whether there are sources of interference in the vicinity, then preferably use a shielded cable.

An example of a shielded network cable is the FP700B:

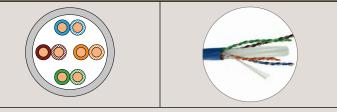


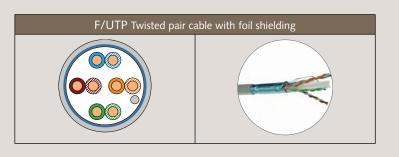
This is a fully double shielded cable (S/FTP), which means that the individual wire pairs and also the entire cable are shielded.

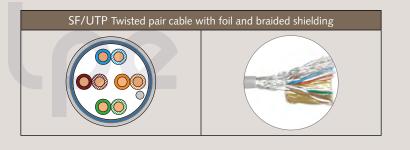
What are the advantages of an unshielded U/UTP cable?

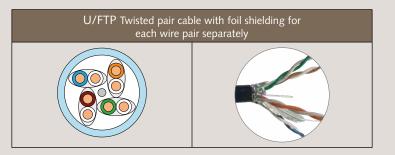
- Cost: a U/UTP cable is usually cheaper
- Installation: installation is easier because the unshielded cables are often more flexible and have a smaller diameter.
- U/UTP is only a valid choice when no interference is expected.



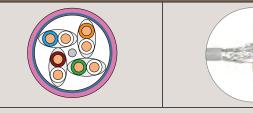








S/FTP Twisted pair cable with foil shielding for each wire pair plus additional braided shielding wrapped around all pairs.



COPPER

COPPER CAT8

Copper CAT8

مامه

Category 8, ISO Class 1 with a bandwidth of 2000 MHz, can be used for 100 Mbps, 1000 Mbps, 10 Gigabit and for 40 Gigabit Ethernet networks up to a maximum length of 30 meters.











S/FTP

Twisted pair cable with foil shielding for each wire pair plus additional braided shielding wrapped around all pairs.





COPPER CAT8

CAT8 - assortment

CAT8 S/FTP LSZH patch cable, AWG24 CU, 50 μ gold-plated contacts

Colour	1m	1.5m	2m	3m	5m
Yellow	<u>FB8001</u>	<u>FB8051</u>	<u>FB8002</u>	<u>FB8003</u>	<u>FB8005</u>
					· · · · · · · · · · · · · · · · · · ·

Keystone CAT8

Description	Cable mounting	Colour	Туре по.	
Shielded toolfree	Back	Full metal	<u>TD8511</u>	
ACT keystones are compatible with all ACT connecting hardware				

Patch panel CAT8

			Contraction of the second
Description	Ports	Application	Туре по.
Keystone panel	24 ports	Suitable for mounting keystones	<u>PP1030</u>

Tools

		- AND
Description	Application	Туре по.
LSA Tool	Dogging tool for LSA contacts	<u>64172K</u>
Stripper	Stripper for data contacts	<u>FHT501</u>
110 block punchtool	Dogging tool for 110 block	<u>TD060</u>

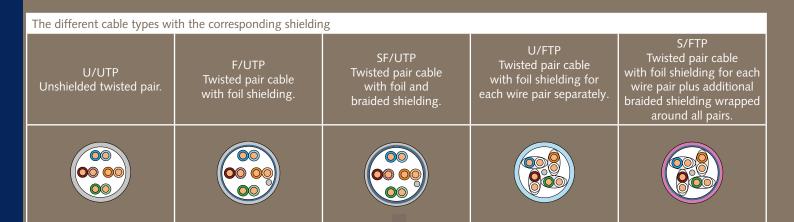
COPPER CAT6A

Copper CAT6A

CAT6A

Category 6A, ISO Class EA with a bandwidth of 500 MHz, can be used for 100 Mbps, 1000 Mbps and 10 Gigabit Ethernet networks with a maximum length of 100 meters. Besides Ethernet, these cables are also suitable for other protocols, such as Profinet, ATM, Token Ring and RS-232 up to a distance of 100 meters.







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CAT6A - cable on reel



ALT CAT6A, U/UTP twisted pair installation cable

	1			
Colour	Shielding	Outer Jacket	AWG	305m box
Grey	U/UTP	PVC	24	<u>EP400B</u>
Red	U/UTP	PVC	24	<u>EP455B</u>
Blue	U/UTP	PVC	24	<u>EP456B</u>
Green	U/UTP	PVC	24	<u>EP457B</u>
Yellow	U/UTP	PVC	24	<u>EP458B</u>
Black	U/UTP	PVC	24	<u>EP459B</u>
Grey	S/FTP	PVC	26	<u>FP700B</u>

ACT CAT6A U/UTP Solid twisted pair installation cable

Colour	Shielding	Outer Jacket	AWG	CPR level	DoP	305m reel	500m reel
Blue	U/UTP	PVC	23	Eca	1186892	<u>XS6103</u>	<u>XS6105</u>
Purple	U/UTP	LSZH	23	Eca	1186891	<u>XS6113</u>	<u>XS6115</u>
Grey	F/UTP	PVC	24	Eca	1186889	<u>FS6103</u>	<u>FS6105</u>
Purple	F/UTP	LSZH	24	Eca	1186890	<u>FS6113</u>	<u>FS6115</u>
Grey	F/UTP	PVC	23	B2ca	1175345	<u>XS6120</u>	<u>XS6121</u>







CAT6A - connecting hardware

E

ACT Modular surface mount box CAT6A

			and the second se
Description	Description	Connector	Type no.
Shielded	Modular surface mount box	1 x RJ45, 1 x IDC	<u>FA7005</u>
Shielded	Modular surface mount box	2 x RJ45, 2 x IDC	<u>FA7004</u>
Shielded	Modular surface mount box	8 x RJ45, 8 x IDC	<u>FA7001</u>
Keystone outlet	In-Wall keystone jack box	2 x keystone jack	<u>FA6010</u>

ACT Keystone CAT6A

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Description	Cable attachment	Colour	Туре по.	
Unshielded toolfree	Down	Black	<u>TD6016</u>	
Unshielded toolfree	Down	White	<u>TD6017</u>	
Shielded punch down	Back	Metal	<u>TD6511</u>	
Shielded punch down	Down	Metal	<u>TD6023</u>	
Shielded toolfree	Back	Metal	<u>TD6510</u>	
Keystone coupler RJ45 Shielded	Back	Metal	<u>SD6519</u>	
ACT keystones are compatible with all ACT connection hardware				

Compatible with all listed keystones







*All brand names mentioned are the property of their trademark owners.

ACT Patch panel CAT6A

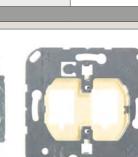
			Constant and a second sec
Description	Ports	Connector	Type no.
Shielded	24 Ports	RJ45, IDC	<u>PP1020</u>
Keystone panel	24 Ports	Suitable for mounting keystones	<u>PP1030</u>
Shielded	Consolidation point	8 x RJ45, 8 x IDC	<u>FA7001</u>

ACT Multimedia inserts/keystones	-
Description	Туре по.
LC Duplex adapter Singlemode/Multimode	<u>TD4101</u>
HDMI 2.0 A-A female	<u>TD4102</u>
HDMI 2.0 A-A female angled	<u>TD4103</u>
USB 3.2 Gen1 A-A female	<u>TD4104</u>
USB 3.2 Gen2 C-C female	<u>TD4105</u>
Compatible with ACT bardware such as BP1020_EA6010/11/12	

ACT Connectors CAT6A		
Description		Type no.
Shielded	Suitable for solid and flexible cable with positioning block, AWG24 (1.2 mm)	<u>FA2000</u>
Shielded	Suitable for solid and flexible cable with positioning block, AWG23 (1.5 mm)	FA2001

ACT Tools

Description		Type no.
Krone punch tool	LSA plus	<u>64172K</u>
UTP cable stripper	For flat and round cables	<u>FHT501</u>
Punch tool	For 110 block	<u>TD060</u>
Modular crimping tool	Strip, cut the cable - crimp the connectors on the cable (AWG23/24 cores)	<u>WL2000</u>



Jung* 569-2NWE / CD569-2NWEWW

CAT6A - patch cable



-1111 - 22

ACT CAT6A U/UTP PVC patch cable, AWG24 CU, 50 μ gold-plated contacts

ALT CAT6A U/UTP PVC patch cable, AWG24 CU, 50µ gold-plated contacts												
Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	
lvory	<u>IB3352</u>	<u>IB3300</u>	<u>IB3301</u>	<u>IB3351</u>	<u>IB3302</u>	<u>IB3303</u>	<u>IB3305</u>	<u>IB3307</u>	<u>IB3310</u>	<u>IB3315</u>	<u>IB3320</u>	
Grey	<u>IB3452</u>	<u>IB3400</u>	<u>IB3401</u>	<u>IB3451</u>	<u>IB3402</u>	<u>IB3403</u>	<u>IB3405</u>	<u>IB3407</u>	<u>IB3410</u>	<u>IB3415</u>	<u>IB3420</u>	
Red		<u>IB3700</u>	<u>IB3701</u>	<u>IB3751</u>	<u>IB3702</u>	<u>IB3703</u>	<u>IB3705</u>	<u>IB3707</u>	<u>IB3710</u>	<u>IB3715</u>	<u>IB3720</u>	
Blue		<u>IB3800</u>	<u>IB3801</u>	<u>IB3851</u>	<u>IB3802</u>	<u>IB3803</u>	<u>IB3805</u>	<u>IB3807</u>	<u>IB3810</u>	<u>IB3815</u>	<u>IB3820</u>	
		<u>IB3900</u>	<u>IB3901</u>	<u>IB3951</u>	<u>IB3902</u>	<u>IB3903</u>	<u>IB3905</u>	<u>IB3907</u>	<u>IB3910</u>	<u>IB3915</u>	<u>IB3920</u>	
Yellow		<u>IB4100</u>	<u>IB4101</u>	<u>IB4151</u>	<u>IB4102</u>	<u>IB4103</u>	<u>IB4105</u>	<u>IB4107</u>	<u>IB4110</u>	<u>IB4115</u>	<u>IB4120</u>	
Black		<u>IB4200</u>	<u>IB4201</u>	<u>IB4251</u>	<u>IB4202</u>	<u>IB4203</u>	<u>IB4205</u>	<u>IB4207</u>	<u>IB4210</u>	<u>IB4215</u>	<u>IB4220</u>	
Orange		<u>IB4300</u>	<u>IB4301</u>	<u>IB4351</u>	<u>IB4302</u>	<u>IB4303</u>	<u>IB4305</u>	<u>IB4307</u>	<u>IB4310</u>	<u>IB4315</u>	<u>IB4320</u>	
Brown		<u>IB4400</u>	<u>IB4401</u>	<u>IB4451</u>	<u>IB4402</u>	<u>IB4403</u>	<u>IB4405</u>	<u>IB4407</u>	<u>IB4410</u>	<u>IB4415</u>	<u>IB4420</u>	
Purple		<u>IB6600</u>	<u>IB6601</u>	<u>IB6651</u>	<u>IB6602</u>	<u>IB6603</u>	<u>IB6605</u>	<u>IB6607</u>	<u>IB6610</u>	<u>IB6615</u>	<u>IB6620</u>	
Pink		<u>IB7300</u>	<u>IB7301</u>	<u>IB7351</u>	<u>IB7302</u>	<u>IB7303</u>	<u>IB7305</u>	<u>IB7307</u>	<u>IB7310</u>	<u>IB7315</u>	<u>IB7320</u>	
White		<u>IB9300</u>	<u>IB9301</u>	<u>IB9351</u>	<u>IB9302</u>	<u>IB9303</u>	<u>IB9305</u>	<u>IB9307</u>	<u>IB9310</u>	<u>IB9315</u>	<u>IB9320</u>	

	T6A U/UTP PVC patch cable,	AWG24 CU, 50µ gold-plated	contacts, in Zip-bag		
Colour	0.9m	2m	5m	10m	
Black	<u>AC4000</u>	<u>AC4002</u>	<u>AC4005</u>	<u>AC4010</u>	

	CAT6A U/UTP PVC snagless patch cable, AWG24 CU, 50µ gold-plated contactsn													
Colour	0.25m	0.5m	1m	1.5m	2m	2.5m	3m	4m	5m	7m	10m	15m	20m	
lvory	<u>IB3252</u>	<u>IB3200</u>	<u>IB3201</u>	<u>IB3251</u>	<u>IB3202</u>		<u>IB3203</u>		<u>IB3205</u>	<u>IB3207</u>	<u>IB3210</u>	<u>IB3215</u>	<u>IB3220</u>	
Grey	<u>IB3052</u>	<u>IB3000</u>	<u>IB3001</u>	<u>IB3051</u>	<u>IB3002</u>	<u>IB3053</u>	<u>IB3003</u>	<u>IB3004</u>	<u>IB3005</u>	<u>IB3007</u>	<u>IB3010</u>	<u>IB3015</u>	<u>IB3020</u>	
Red	<u>IB2552</u>	<u>IB2500</u>	<u>IB2501</u>	<u>IB2551</u>	<u>IB2502</u>		<u>IB2503</u>		<u>IB2505</u>	<u>IB2507</u>	<u>IB2510</u>	<u>IB2515</u>	<u>IB2520</u>	
Blue	<u>IB2652</u>	<u>IB2600</u>	<u>IB2601</u>	<u>IB2651</u>	<u>IB2602</u>		<u>IB2603</u>		<u>IB2605</u>	<u>IB2607</u>	<u>IB2610</u>	<u>IB2615</u>	<u>IB2620</u>	
Green	<u>IB2752</u>	<u>IB2700</u>	<u>IB2701</u>	<u>IB2751</u>	<u>IB2702</u>		<u>IB2703</u>		<u>IB2705</u>	<u>IB2707</u>	<u>IB2710</u>	<u>IB2715</u>	<u>IB2720</u>	
Yellow	<u>IB2852</u>	<u>IB2800</u>	<u>IB2801</u>	<u>IB2851</u>	<u>IB2802</u>		<u>IB2803</u>		<u>IB2805</u>	<u>IB2807</u>	<u>IB2810</u>	<u>IB2815</u>	<u>IB2820</u>	
Black	<u>IB2952</u>	<u>IB2900</u>	<u>IB2901</u>	<u>IB2951</u>	<u>IB2902</u>		<u>IB2903</u>		<u>IB2905</u>	<u>IB2907</u>	<u>IB2910</u>	<u>IB2915</u>	<u>IB2920</u>	
Orange		<u>IB2100</u>	<u>IB2101</u>	<u>IB2151</u>	<u>IB2102</u>		<u>IB2103</u>		<u>IB2105</u>	<u>IB2107</u>	<u>IB2110</u>	<u>IB2115</u>	<u>IB2120</u>	
Brown		<u>IB2200</u>	<u>IB2201</u>	<u>IB2251</u>	<u>IB2202</u>		<u>IB2203</u>		<u>IB2205</u>	<u>IB2207</u>	<u>IB2210</u>	<u>IB2215</u>	<u>IB2220</u>	
Purple		<u>IB2300</u>	<u>IB2301</u>	<u>IB2351</u>	<u>IB2302</u>		<u>IB2303</u>		<u>IB2305</u>	<u>IB2307</u>	<u>IB2310</u>	<u>IB2315</u>	<u>IB2320</u>	
Pink		<u>IB2400</u>	<u>IB2401</u>	<u>IB2451</u>	<u>IB2402</u>		<u>IB2403</u>		<u>IB2405</u>	<u>IB2407</u>	<u>IB2410</u>	<u>IB2415</u>	<u>IB2420</u>	
White		<u>IB6300</u>	<u>IB6301</u>	<u>IB6351</u>	<u>IB6302</u>		<u>IB6303</u>		<u>IB6305</u>	<u>IB6307</u>	<u>IB6310</u>	<u>IB6315</u>	<u>IB6320</u>	

	ACT CAT6A U/UTP LSZH patch cable, AWG24 CU, 50µ gold-plated contacts													
Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m			
lvory	<u>IB1052</u>	<u>IB1000</u>	<u>IB1001</u>	<u>IB1051</u>	<u>IB1002</u>	<u>IB1003</u>	<u>IB1005</u>	<u>IB1007</u>	<u>IB1010</u>	<u>IB1015</u>	<u>IB1020</u>			
Grey	<u>IB1152</u>	<u>IB1100</u>	<u>IB1101</u>	<u>IB1151</u>	<u>IB1102</u>	<u>IB1103</u>	<u>IB1105</u>	<u>IB1107</u>	<u>IB1110</u>	<u>IB1115</u>	<u>IB1120</u>			
Red		<u>IB1200</u>	<u>IB1201</u>	<u>IB1251</u>	<u>IB1202</u>	<u>IB1203</u>	<u>IB1205</u>	<u>IB1207</u>	<u>IB1210</u>					
Blue		<u>IB1300</u>	<u>IB1301</u>	<u>IB1351</u>	<u>IB1302</u>	<u>IB1303</u>	<u>IB1305</u>	<u>IB1307</u>	<u>IB1310</u>					
Green		<u>IB1400</u>	<u>IB1401</u>	<u>IB1451</u>	<u>IB1402</u>	<u>IB1403</u>	<u>IB1405</u>	<u>IB1407</u>	<u>IB1410</u>					
Yellow		<u>IB1900</u>	<u>IB1901</u>	<u>IB1951</u>	<u>IB1902</u>	<u>IB1903</u>	<u>IB1905</u>	<u>IB1907</u>	<u>IB1910</u>					
Black		<u>IB3500</u>	<u>IB3501</u>	<u>IB3551</u>	<u>IB3502</u>	<u>IB3503</u>	<u>IB3505</u>	<u>IB3507</u>	<u>IB3510</u>					

ALT CAT6A U/UTP PVC cross-over patch cable, AWG24 CU, 50µ gold-plated contacts									
Colour	0.5m	1m	1.5m	2m	3m	5m			
cable Boot	<u>IB6200</u>	<u>IB6201</u>	<u>IB6251</u>	<u>IB6202</u>	<u>IB6203</u>	<u>IB6205</u>			



CAT6A - patch cable



ALT CAT6A S/FTP PVC PIMF snagless patch cable, AWG26 CU, 50µ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m
lvory	FB6052	<u>FB6000</u>	FB6001	FB6051	FB6002	FB6003	FB6005	FB6007	FB6010	FB6015	FB6020	FB6025	FB6030
Grey	<u>FB3052</u>	<u>FB3000</u>	FB3001	FB3051	FB3002	FB3003	FB3005	FB3007	<u>FB3010</u>	FB3015	<u>FB3020</u>	<u>FB3025</u>	<u>FB3030</u>
Red		<u>FB6500</u>	FB6501	FB6551	FB6502	FB6503	FB6505	FB6507	FB6510	FB6515	<u>FB6520</u>	FB6525	FB6530
Blue		FB6600	FB6601	FB6651	FB6602	FB6603	FB6605	FB6607	FB6610	FB6615	FB6620	FB6625	FB6630
Green		<u>FB6700</u>	FB6701	FB6751	FB6702	FB6703	FB6705	FB6707	FB6710	FB6715	FB6720	FB6725	FB6730
Yellow		<u>FB6800</u>	FB6801	<u>FB6851</u>	<u>FB6802</u>	FB6803	FB6805	FB6807	<u>FB6810</u>	FB6815	<u>FB6820</u>	<u>FB6825</u>	<u>FB6830</u>
Black		<u>FB6900</u>	FB6901	FB6951	FB6902	FB6903	FB6905	FB6907	FB6910	FB6915	<u>FB6920</u>	FB6925	<u>FB6930</u>
Orange		FB2100	FB2101	FB2151	FB2102	FB2103	FB2105	FB2107	FB2110	FB2115	FB2120	FB2125	FB2130
Brown		<u>FB2200</u>	<u>FB2201</u>	FB2251	<u>FB2202</u>	FB2203	FB2205	<u>FB2207</u>	<u>FB2210</u>	<u>FB2215</u>	<u>FB2220</u>	FB2225	<u>FB2230</u>
Purple		FB2300	FB2301	<u>FB2351</u>	<u>FB2302</u>	<u>FB2303</u>	FB2305	FB2307	<u>FB2310</u>	FB2315	<u>FB2320</u>	<u>FB2325</u>	<u>FB2330</u>
Pink		<u>FB2400</u>	FB2401	<u>FB2451</u>	<u>FB2402</u>	<u>FB2403</u>	FB2405	<u>FB2407</u>	<u>FB2410</u>	<u>FB2415</u>	<u>FB2420</u>	<u>FB2425</u>	<u>FB2430</u>
White		FB6400	FB6401	FB6451	FB6402	FB6403	FB6405	FB6407	FB6410	FB6415	FB6420	FB6425	FB6430

ALT CAT6A S/FTP PIMF LSZH patch cable, AWG26 CU, 50µ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m
Ivory	<u>IB3652</u>	<u>IB3600</u>	<u>IB3601</u>	<u>IB3651</u>	<u>IB3602</u>	<u>IB3603</u>	<u>IB3605</u>	<u>IB3607</u>	<u>IB3610</u>	<u>IB3615</u>	<u>IB3620</u>	<u>IB3625</u>	<u>IB3630</u>
Grey	<u>IB4052</u>	<u>IB4000</u>	<u>IB4001</u>	<u>IB4051</u>	<u>IB4002</u>	<u>IB4003</u>	<u>IB4005</u>	<u>IB4007</u>	<u>IB4010</u>	<u>IB4015</u>	<u>IB4020</u>	<u>IB4025</u>	<u>IB4030</u>
Red		<u>IB5000</u>	<u>IB5001</u>	<u>IB5051</u>	<u>IB5002</u>	<u>IB5003</u>	<u>IB5005</u>	<u>IB5007</u>	<u>IB5010</u>				
Blue		<u>IB5300</u>	<u>IB5301</u>	<u>IB5351</u>	<u>IB5302</u>	<u>IB5303</u>	<u>IB5305</u>	<u>IB5307</u>	<u>IB5310</u>				
Green		<u>IB7400</u>	<u>IB7401</u>	<u>IB7451</u>	<u>IB7402</u>	<u>IB7403</u>	<u>IB7405</u>	<u>IB7407</u>	<u>IB7410</u>				
Yellow		<u>IB9100</u>	<u>IB9101</u>	<u>IB9151</u>	<u>IB9102</u>	<u>IB9103</u>	<u>IB9105</u>	<u>IB9107</u>	<u>IB9110</u>				
Black		<u>IB9200</u>	<u>IB9201</u>	<u>IB9251</u>	<u>IB9202</u>	<u>IB9203</u>	<u>IB9205</u>	<u>IB9207</u>	<u>IB9210</u>				

ALT CAT6A S/FTP PIMF, LSZH patch cable snagless AWG26 CU, 50µ gold-plated contacts

				0		0						
Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	30m
lvory	FB7452	<u>FB7400</u>	<u>FB7401</u>	<u>FB7451</u>	<u>FB7402</u>	<u>FB7403</u>	<u>FB7405</u>	<u>FB7407</u>	<u>FB7410</u>	<u>FB7415</u>	<u>FB7420</u>	<u>FB7430</u>
Grey	<u>FB7052</u>	<u>FB7000</u>	FB7001	FB7051	<u>FB7002</u>	<u>FB7003</u>	FB7005	FB7007	<u>FB7010</u>	<u>FB7015</u>	<u>FB7020</u>	<u>FB7030</u>
Red		<u>FB7500</u>	FB7501	<u>FB7551</u>	<u>FB7502</u>	<u>FB7503</u>	FB7505	FB7507	<u>FB7510</u>	<u>FB7515</u>	<u>FB7520</u>	<u>FB7530</u>
Blue		<u>FB7600</u>	FB7601	FB7651	<u>FB7602</u>	FB7603	FB7605	FB7607	<u>FB7610</u>	<u>FB7615</u>	<u>FB7620</u>	<u>FB7630</u>
Green		<u>FB7700</u>	<u>FB7701</u>	<u>FB7751</u>	<u>FB7702</u>	<u>FB7703</u>	FB7705	<u>FB7707</u>	<u>FB7710</u>	<u>FB7715</u>	<u>FB7720</u>	<u>FB7730</u>
Yellow		<u>FB7800</u>	<u>FB7801</u>	<u>FB7851</u>	<u>FB7802</u>	FB7803	FB7805	<u>FB7807</u>	<u>FB7810</u>	<u>FB7815</u>	<u>FB7820</u>	<u>FB7830</u>
Black		<u>FB7900</u>	FB7901	FB7951	FB7902	FB7903	FB7905	FB7907	<u>FB7910</u>	FB7915	FB7920	<u>FB7930</u>
Orange		<u>FB7100</u>	<u>FB7101</u>	<u>FB7151</u>	<u>FB7102</u>	<u>FB7103</u>	FB7105	FB7107	<u>FB7110</u>	<u>FB7115</u>	<u>FB7120</u>	<u>FB7130</u>
Purple		<u>FB8700</u>	FB8701	FB8751	FB8702	FB8703	FB8705	FB8707	<u>FB8710</u>	FB8715	FB8720	<u>FB8730</u>
Pink		<u>FB8800</u>	FB8801	FB8851	FB8802	FB8803	FB8805	FB8807	<u>FB8810</u>	FB8815	FB8820	<u>FB8830</u>
White		<u>FB7300</u>	FB7301	<u>FB7351</u>	<u>FB7302</u>	<u>FB7303</u>	<u>FB7305</u>	FB7307	<u>FB7310</u>	FB7315	<u>FB7320</u>	<u>FB7330</u>

	T6A U/FTP PV	C High Flex Tai	ngle-Free patch	n cable, AWG2	6 CU, 50µ gold	-plated contac	ts			and the second
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m
Black	<u>FB5000</u>	<u>FB5001</u>	<u>FB5051</u>	<u>FB5002</u>	<u>FB5003</u>	<u>FB5005</u>	FB5007	<u>FB5010</u>	FB5015	<u>FB5020</u>



CAT6A - slimline patch cable

When to use slimline patch cables?

Slimline patch cables can be used where cable space is limited, such as in data centers. The slimline version of standard patch cables is more than 40% thinner in diameter. These thin cables reduce the amount of cable space required in racks.

Key benefits of slimline patch cables:

Better cable management and space saving:

The slimline cable has a smaller diameter, saving valuable space in your server room. Especially when bundling slimline cables, much less volume is used. Together with the greater flexibility, cable management improves significantly.

Energy efficiency:

Because slimline patch cables are 40% thinner and more flexible than normal patch cables, they have less air resistance. This improves airflow.

Snagless connectors:

A snagless connector has a small flap that covers the RJ-45 protective tab. This flap prevents the protective tab from breaking or becoming entangled with other cables during installation or when repatching. All of our slimline data center cables are equipped with snagless connectors.

ALT CAT6A U/FTP LSZH datacenter slimline patch cable, AWG32 CU, 50µ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m
Grey	<u>DC7052</u>	<u>DC7000</u>	<u>DC7001</u>	<u>DC7051</u>	<u>DC7002</u>	<u>DC7003</u>	<u>DC7005</u>
Red	<u>DC7552</u>	<u>DC7500</u>	<u>DC7501</u>	<u>DC7551</u>	<u>DC7502</u>	<u>DC7503</u>	<u>DC7505</u>
Blue	<u>DC7652</u>	<u>DC7600</u>	<u>DC7601</u>	<u>DC7651</u>	<u>DC7602</u>	<u>DC7603</u>	<u>DC7605</u>
Green	<u>DC7752</u>	<u>DC7700</u>	<u>DC7701</u>	<u>DC7751</u>	<u>DC7702</u>	<u>DC7703</u>	<u>DC7705</u>
Yellow	<u>DC7852</u>	<u>DC7800</u>	<u>DC7801</u>	<u>DC7851</u>	<u>DC7802</u>	<u>DC7803</u>	<u>DC7805</u>
Black	<u>DC7952</u>	<u>DC7900</u>	<u>DC7901</u>	<u>DC7951</u>	<u>DC7902</u>	<u>DC7903</u>	<u>DC7905</u>



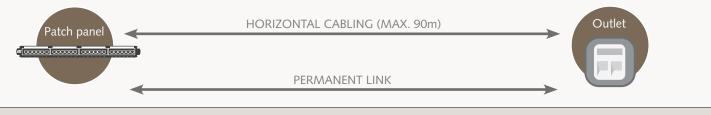




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Permanent link

Permanent link is the connection from a patch panel to the working area outlet (also called the horizontal cabling). This is the permanent mounted solid cable which will be kept in place for longer periods of time. The maximum permitted length is 90 m.



Channel

Channel is the complete connection from an active device such as a switch to a network card in a computer. So this includes patch cables together with the horizontal cabling. The horizontal cabling together with the patch cords may not exceed 100 m.



Structured ACT cabling systems - compatible and comply to international standards

ACT Copper and fiber network solutions are durable and exceed the specifications of international standards. Each product has a 5-year product warranty and offers excellent performance as you would expect from ACT products. Because of its compatibility, ACT cables are commonly used for modifications, also called moves adds and changes (MAC), in existing installations.

The ACT portfolio consists of a wide range of copper installation cables and connection devices in both Category 5E, Category 6, Category 6A and Category 8 that includes both unshielded and shielded solutions. The ACT portfolio is characterized by quality and convenience. ACT components allow structured cabling systems to be customized for regular office systems, 4-connector link solutions and cross-connect systems.

Copper ACT cables are suitable for installations where PoE, PoE+ or PoE++ is also used.ACT cabling specialists are ready to help you choose a solution.

Below an overview of the international standards ACT complies to:

Components	CAT5E	CAT6	CAT6A	CAT8
Bandwidth	100 Mhz	250 Mhz	500 Mhz	2000 Mhz
ISO-norm	ISO 1801Ed2.0 (2002)	ISO 11801Ed2.0 (2002)	ISO 11801 (CE2008)	ISO/11801-1 (2017)
EN-norm	EN50173-1 (2008)	EN50173-1 (2008)	EN50173-1 (2008)	EN50173-5 (2018)
Class	Class D	Class E	Class Ea	Class I
EIA/TIA-norm	EIA/TIA568-2D	EIA/TIA 568-2D	EIA/TIA 568-2D	EIA/TIA-568-2D





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Flexibility Flexibility in your network is achieved by using Consolidation points add consolidation points. By usi provide additional transitions Preliable because By usi

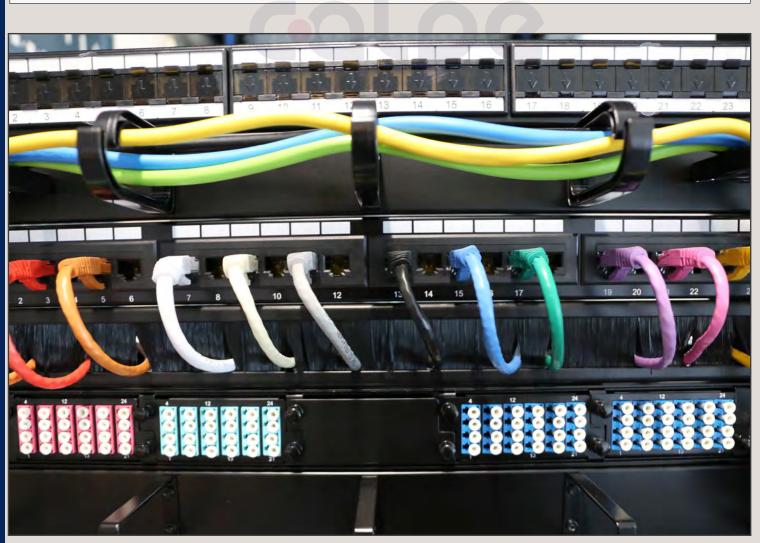
Solution

By using component level patch cables network reliability is guaranteed because extra attenuation is compensated.

ACT component level patch cables

Flexibility in your network is achieved by using consolidation points. But consolidation points add an extra transition to your cabling. This can affect the reliability of your network. Did you know that an additional transition/cable in the network also adds two additional connectors? (Each cable has two connectors). This results in an additional connector transition in the horizontal cabling: the so-called 4-connector model.

ACT component level patch cables compensate for additional transitions in your network due to its very high quality. ACT offers consolidation points in CAT5E up to and including CAT6A (these can be found in the product overviews under patch panels). The component level patch cords are applied when using an extra consolidation point in your network and at cross-connects.



ACT component level patch cables

Component level patch cables guarantee optimal performance with a 4 connector link. These 4 connector links are used for consolidation points that are often placed near desk islands and cross connect systems in datacenters. For more information see page 17.

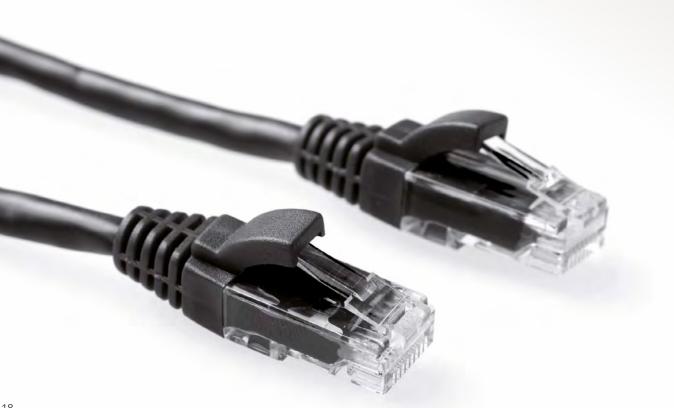
Length of consolidation connections in CAT6 class E and CAT6A class EA

The adjacent connection lengths are simulated based on 10m of patch cable in addition to the two cables.

Using a consolidation point in an installation enables flexible furnishing of an office. From the consolidation point you bridge the last meters to the wall outlet with normal solid installation cable. The maximum length of the total installation cable is 90 meters. We advise to use a maximum of 30 meters from the consolidation point to the outlet.

- PP = Patch panel
- CP = Consolidation point
- WO = Wall outlet

Segment PP-CP	Segment CP-WO		
60m	30m		
65m	25m		
75m	15m		
85m	5m		



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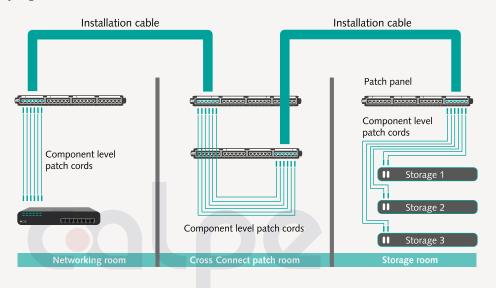
Cross connects in datacenters - Another use for component level patch cables

Within datacenters the networking and storage are typically in a separate location. They are connected with each other via an installation cable. Somewhere in the middle you can find a cross connect patch room where cabling can easily be rerouted/repatched. Reasons datacenters choose for this setup are:

- Flexibility: in datacenters it is crucial to be able to fast and easily reroute cabling.
- Minimizing risks: High costs storage servers and networking equipment should have as little contact as possible with employees. Having employees doing all the repatching at a cross connect space in the middle minimizes contact with expensive equipment.

The cross connect patch room has incoming solid installation cables from the networking and storage area, which is terminated on patch panels. Between the patch panels component level patch cables are used to repatch / reroute connections. The 2 extra patch panels also add 2 transitions to your network. This can affect the reliability of your network. By using component level patch cables the network reliability is guaranteed.

The component level patch cables are used in the connection to the equipment in the networking and server locations as well in the cross connect room.



Testing your cabling

When you buy ACT products you are assured of consistent quality products that exceed international standards. However these different components have to be installed the right way in order to ensure a trouble free operating network.

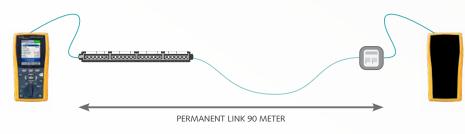
Most common mistakes during installation:

During installations the following mistakes are most common:

- The cabling is bent more than the maximum advised bending radius (or even folded).
- Untwisting the pairs too much when cutting the jacket.
- The cables have been tightened to hard with cable ties.
- During installation the cables are being pulled to hard.

Why testing is important

Some of these mistakes can't be visually checked and that is why we advise to test every permanent link, from patch panel to wall outlet.



Testing a link from the patch panel to the wall sockets.



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YEAR WARRANTY

Copper CAT6

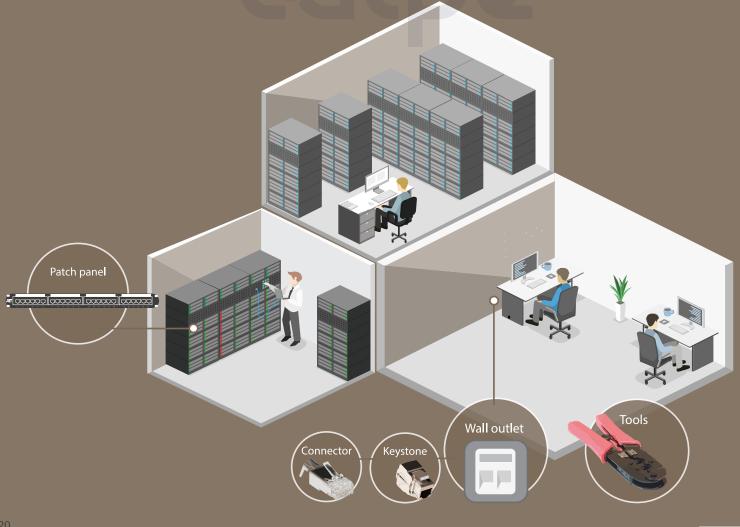
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CAT6

Category 6, ISO Class E with a bandwidth of 250 MHz, can be used for 100 Mbps and 1000 Mbps Ethernet networks, up to a maximum length of 100 meters. 10 Gigabit Ethernet can be used for a maximum length of 55 meters. The maximum length is 37 meters when the cables are bundled, due to alien crosstalk. Besides Ethernet, these cables are also suitable for other protocols, such as Profinet, ATM, Token Ring and RS-232 up to a distance of 100 meters.



The different cable types wi	th the corresponding shieldir	g		
U/UTP Unshielded twisted pair.	F/UTP Twisted pair cable with foil shielding.	SF/UTP Twisted pair cable with foil and braided shielding.	U/FTP Twisted pair cable with foil shielding for each wire pair separately.	S/FTP Twisted pair cable with foil shielding for eacl wire pair plus additional braided shielding wrapped around all pairs.



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COLPC INDUSTRIAL MARINE RAILWAY

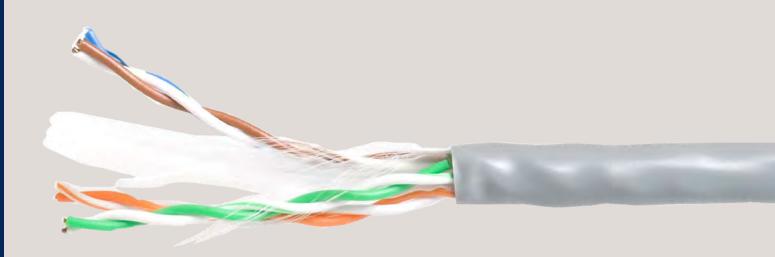
ACT CAT6, stranded twisted pair installation cable

Colour	Shielding	Outer Jacket	AWG	100m	305m box	500m reel
lvory	U/UTP	PVC	24	<u>EP840H</u>	<u>EP384B</u>	<u>EP845A</u>
Grey	U/UTP	PVC	24	<u>EP800H</u>	<u>EP380B</u>	
	U/UTP	PVC	24	<u>EP850H</u>	<u>EP385B</u>	
	U/UTP	PVC	24	<u>EP860H</u>	<u>EP386B</u>	
	U/UTP	PVC	24	<u>EP870H</u>	<u>EP387B</u>	
Yellow	U/UTP	PVC	24	<u>EP880H</u>	<u>EP388B</u>	
Black	U/UTP	PVC	24	<u>EP890H</u>	<u>EP389B</u>	
Grey	S/FTP	PVC	26		<u>FP600B</u>	
	S/FTP	PVC	26		<u>FP655B</u>	
	S/FTP	PVC	26		<u>FP656B</u>	
	S/FTP	PVC	26		<u>FP657B</u>	
Yellow	S/FTP	PVC	26		<u>FP658B</u>	
Black	S/FTP	PVC	26		FP659B	

ACT CAT6 Solid twisted pair installation cable

Colour	Shielding	Outer Jacket	AWG	CPR level	DoP	100m	305m box	500m reel
Grey	U/UTP	PVC	24	Eca	1186887	<u>XS100H</u>	<u>XS305B</u>	
Grey	F/UTP	PVC	24	Eca	1186889		<u>FS6003</u>	<u>FS6005</u>
Purple	F/UTP	LSZH	24	Eca	1186890		FS6013	FS6015
Grey	U/UTP	PVC	24	B2ca	1175349		<u>XS6001</u>	<u>XS6002</u>
Purple	U/UTP	LSZH	24	Dca	1176113		<u>XS6003</u>	







CAT6 - connecting hardware assortment



ALT Surface mounted box and In-wall keystone jack box CAT6

Description		Connector	Type no.
Unshielded	Surface mounted box	1 x RJ45, 1 x IDC	<u>FA6003</u>
Unshielded	Surface mounted box	2 x RJ45, 2 x IDC	FA6002
Keystone jack	In-Wall keystone jack box	2 x keystone	FA6010

ACT Surface mounted box shielded CAT6

Description		Connector	Type no.
Shielded	Surface mounted box	1 x RJ45, 1 x IDC	<u>FA6005</u>
Shielded	Surface mounted box	2 x RJ45, 2 x IDC	<u>FA6004</u>

ACT Keystone unshielded CAT6			
Description	Cable attachment	Colour	Type no.
Unshielded punch down	Back	Black	<u>TD6012</u>
Unshielded punch down	Back	White	<u>TD6013</u>
Unshielded punch down	Down	Black	<u>TD6014</u>
Unshielded punch down	Down	White	<u>TD6015</u>
Unshielded toolfree	Back	Black	<u>TD6010</u>
Unshielded toolfree	Back	White	<u>TD6011</u>
Unshielded coupler RJ45	Back	White	<u>SD6009</u>
ACT keystones are compatible with all ACT h	ardware		

ACT Keystone shielded CAT6			1	
Description	Cable attachment	Colour	Type no.	
Shielded punch down	Back	Metal	<u>TD6021</u>	
Shielded punch down	Down	Metal	<u>TD6022</u>	
Shielded toolfree	Back	Metal	<u>TD6020</u>	
Shielded coupler RJ 45	Back	Metal	<u>SD6019</u>	
ACT keystones are compatible with all ACT hardware				

Compatible with all listed keystones

19100



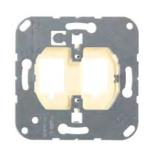




740011



Busch-Jaeger* 2CKA001753A8055



Jung* 569-2NWE / CD569-2NWEWW

*All brand names mentioned are the property of their trademark owners.



COPPER *CAT6*

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CAT6 - connecting hardware assortment

ACT Patch panel CAT6

Type no.
<u>PP1010</u>
<u>PP1012</u>
<u>PP1030</u>
<u>FA6000</u>
<u>FA6001</u>

ACT	Multimedia	inserts/keystones
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ACT Multimedia inserts/keystones	-
Description	Type no.
LC Duplex adapter Singlemode/Multimode	<u>TD4101</u>
HDMI 2.0 A-A female	<u>TD4102</u>
HDMI 2.0 A-A female angled	<u>TD4103</u>
USB 3.2 Gen1 A-A female	<u>TD4104</u>
USB 3.2 Gen2 C-C female	<u>TD4105</u>
Compatible with ACT hardware such as PP1030, FA6010/11/12	

ACT Connectors CAT6

		\$
Description		Type no.
Unshielded	Suitable for solid and flexible cable with positioning block, AWG24-AWG26	<u>TD168M</u>
Shielded	Suitable for solid and flexible cable with positioning block, AWG26-AWG24	<u>TD168A</u>
Unshielded	Suitable for solid and flexible cable with positioning block, AWG23-AWG26	<u>TD168B</u>
Shielded	Suitable for solid and flexible cable with positioning block, AWG23-AWG26	<u>TD168C</u>
<u>.</u>		

ACT Tools		and the second
Description		Type no.
Krone punch tool	LSA plus	<u>64172K</u>
UTP cable stripper	For flat and round cables	<u>FHT501</u>
Punch tool	For 110 block	<u>TD060</u>
Modular crimp tool	Strip and cut the cable, and crimp the connectors to the cable	<u>TD005</u>
Modular crimp tool	For easy connect RJ45 connectors, crimp and cut the wires in one step	<u>TD168T</u>
	1	





ALT CAT6 U/UTP PVC patch cable, AWG24 CU, 50 μ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	30m
lvory	<u>IB8452</u>	<u>IB8400</u>	<u>IB8401</u>	<u>IB8451</u>	<u>IB8402</u>	<u>IB8403</u>	<u>IB8405</u>	<u>IB8407</u>	<u>IB8410</u>	<u>IB8415</u>	<u>IB8420</u>	<u>IB8430</u>
Grey	<u>IB8052</u>	<u>IB8000</u>	<u>IB8001</u>	<u>IB8051</u>	<u>IB8002</u>	<u>IB8003</u>	<u>IB8005</u>	<u>IB8007</u>	<u>IB8010</u>	<u>IB8015</u>	<u>IB8020</u>	<u>IB8030</u>
Red	<u>IB8552</u>	<u>IB8500</u>	<u>IB8501</u>	<u>IB8551</u>	<u>IB8502</u>	<u>IB8503</u>	<u>IB8505</u>	<u>IB8507</u>	<u>IB8510</u>	<u>IB8515</u>	<u>IB8520</u>	
Blue	<u>IB8652</u>	<u>IB8600</u>	<u>IB8601</u>	<u>IB8651</u>	<u>IB8602</u>	<u>IB8603</u>	<u>IB8605</u>	<u>IB8607</u>	<u>IB8610</u>	<u>IB8615</u>	<u>IB8620</u>	
Green	<u>IB8752</u>	<u>IB8700</u>	<u>IB8701</u>	<u>IB8751</u>	<u>IB8702</u>	<u>IB8703</u>	<u>IB8705</u>	<u>IB8707</u>	<u>IB8710</u>	<u>IB8715</u>	<u>IB8720</u>	
Yellow	<u>IB8852</u>	<u>IB8800</u>	<u>IB8801</u>	<u>IB8851</u>	<u>IB8802</u>	<u>IB8803</u>	<u>IB8805</u>	<u>IB8807</u>	<u>IB8810</u>	<u>IB8815</u>	<u>IB8820</u>	
Black	<u>IB8952</u>	<u>IB8900</u>	<u>IB8901</u>	<u>IB8951</u>	<u>IB8902</u>	<u>IB8903</u>	<u>IB8905</u>	<u>IB8907</u>	<u>IB8910</u>	<u>IB8915</u>	<u>IB8920</u>	
Orange		<u>IB1500</u>	<u>IB1501</u>	<u>IB1551</u>	<u>IB1502</u>	<u>IB1503</u>	<u>IB1505</u>	<u>IB1507</u>	<u>IB1510</u>	<u>IB1515</u>	<u>IB1520</u>	
Brown		<u>IB1600</u>	<u>IB1601</u>	<u>IB1651</u>	<u>IB1602</u>	<u>IB1603</u>	<u>IB1605</u>	<u>IB1607</u>	<u>IB1610</u>	<u>IB1615</u>	<u>IB1620</u>	
Purple		<u>IB1700</u>	<u>IB1701</u>	<u>IB1751</u>	<u>IB1702</u>	<u>IB1703</u>	<u>IB1705</u>	<u>IB1707</u>	<u>IB1710</u>	<u>IB1715</u>	<u>IB1720</u>	
Pink		<u>IB1800</u>	<u>IB1801</u>	<u>IB1851</u>	<u>IB1802</u>	<u>IB1803</u>	<u>IB1805</u>	<u>IB1807</u>	<u>IB1810</u>	<u>IB1815</u>	<u>IB1820</u>	
White		<u>IB9400</u>	<u>IB9401</u>	<u>IB9451</u>	<u>IB9402</u>	<u>IB9403</u>	<u>IB9405</u>	<u>IB9407</u>	<u>IB9410</u>	<u>IB9415</u>	<u>IB9420</u>	

ALT CAT6 U/UTP PVC snagless patch cable, AWG24 CU, 50µ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	2.5m	3m	4m	5m	7m	10m	15m	20m	30m
Ivory	<u>IS8452</u>	<u>IS8400</u>	<u>IS8401</u>	<u>IS8451</u>	<u>IS8402</u>		<u>IS8403</u>		<u>IS8405</u>	<u>IS8407</u>	<u>IS8410</u>	<u>IS8415</u>	<u>IS8420</u>	<u>IS8430</u>
Grey	<u>IS8052</u>	<u>IS8000</u>	<u>IS8001</u>	<u>IS8051</u>	<u>IS8002</u>	<u>IS8053</u>	<u>IS8003</u>	<u>IS8004</u>	<u>IS8005</u>	<u>IS8007</u>	<u>IS8010</u>	<u>IS8015</u>	<u>IS8020</u>	<u>IS8030</u>
Red	<u>IS8552</u>	<u>IS8500</u>	<u>IS8501</u>	<u>IS8551</u>	<u>IS8502</u>		<u>IS8503</u>		<u>IS8505</u>	<u>IS8507</u>	<u>IS8510</u>	<u>IS8515</u>	<u>IS8520</u>	
Blue	<u>IS8652</u>	<u>IS8600</u>	<u>IS8601</u>	<u>IS8651</u>	<u>IS8602</u>		<u>IS8603</u>		<u>IS8605</u>	<u>IS8607</u>	<u>IS8610</u>	<u>IS8615</u>	<u>IS8620</u>	
Green	<u>IS8752</u>	<u>IS8700</u>	<u>IS8701</u>	<u>IS8751</u>	<u>IS8702</u>		<u>IS8703</u>		<u>IS8705</u>	<u>IS8707</u>	<u>IS8710</u>	<u>IS8715</u>	<u>IS8720</u>	
Yellow	<u>IS8852</u>	<u>IS8800</u>	<u>IS8801</u>	<u>IS8851</u>	<u>IS8802</u>		<u>IS8803</u>		<u>IS8805</u>	<u>IS8807</u>	<u>IS8810</u>	<u>IS8815</u>	<u>IS8820</u>	
Black	<u>IS8952</u>	<u>IS8900</u>	<u>IS8901</u>	<u>IS8951</u>	<u>IS8902</u>		<u>IS8903</u>		<u>IS8905</u>	<u>IS8907</u>	<u>IS8910</u>	<u>IS8915</u>	<u>IS8920</u>	
Orange		<u>IS1500</u>	<u>IS1501</u>	<u>IS1551</u>	<u>IS1502</u>		<u>IS1503</u>		<u>IS1505</u>	<u>IS1507</u>	<u>IS1510</u>	<u>IS1515</u>	<u>IS1520</u>	
Brown		<u>IS1600</u>	<u>IS1601</u>	<u>IS1651</u>	<u>IS1602</u>		<u>IS1603</u>		<u>IS1605</u>	<u>IS1607</u>	<u>IS1610</u>	<u>IS1615</u>	<u>IS1620</u>	
Purple		<u>IS1700</u>	<u>IS1701</u>	<u>IS1751</u>	<u>IS1702</u>		<u>IS1703</u>		<u>IS1705</u>	<u>IS1707</u>	<u>IS1710</u>	<u>IS1715</u>	<u>IS1720</u>	
Pink		<u>IS1800</u>	<u>IS1801</u>	<u>IS1851</u>	<u>IS1802</u>		<u>IS1803</u>		<u>IS1805</u>	<u>IS1807</u>	<u>IS1810</u>	<u>IS1815</u>	<u>IS1820</u>	

AC		CAT6 U/UTP	LSZH patch	cable,	AWG24 CI	U, 50µ	gold-plated	contacts
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Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m
Grey	<u>IB9000</u>	<u>IB9001</u>	<u>IB9051</u>	<u>IB9002</u>	<u>IB9003</u>	<u>IB9005</u>	<u>IB9007</u>	<u>IB9010</u>
	<u>IB9500</u>	<u>IB9501</u>	<u>IB9551</u>	<u>IB9502</u>	<u>IB9503</u>	<u>IB9505</u>	<u>IB9507</u>	<u>IB9510</u>
	<u>IB9600</u>	<u>IB9601</u>	<u>IB9651</u>	<u>IB9602</u>	<u>IB9603</u>	<u>IB9605</u>	<u>IB9607</u>	<u>IB9610</u>
	<u>IB9700</u>	<u>IB9701</u>	<u>IB9751</u>	<u>IB9702</u>	<u>IB9703</u>	<u>IB9705</u>	<u>IB9707</u>	<u>IB9710</u>
Yellow	<u>IB9800</u>	<u>IB9801</u>	<u>IB9851</u>	<u>IB9802</u>	<u>IB9803</u>	<u>IB9805</u>	<u>IB9807</u>	<u>IB9810</u>
Black	<u>IB9900</u>	<u>IB9901</u>	<u>IB9951</u>	<u>IB9902</u>	<u>IB9903</u>	<u>IB9905</u>	<u>IB9907</u>	<u>IB9910</u>
Wit	<u>IB8300</u>	<u>IB8301</u>		<u>IB8302</u>	<u>IB8303</u>	<u>IB8305</u>		

ACT	САТ					
Colo	our	0.5m	1m	2m	3m	10m
cables	Boot	IB8100	IB8101	IB8102	IB8103	IB8110

	T6 S/FTP PI	MF LSZH pa	atch cable, /	AWG26 CU	, 50µ gold- _l	plated cont	acts						
Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m
Grey	<u>FB9052</u>	<u>FB9000</u>	<u>FB9001</u>	<u>FB9051</u>	<u>FB9002</u>	<u>FB9003</u>	FB9005	<u>FB9007</u>	<u>FB9010</u>	<u>FB9015</u>	<u>FB9020</u>	FB9025	<u>FB9030</u>
		<u>FB9500</u>	FB9501	<u>FB9551</u>	<u>FB9502</u>	<u>FB9503</u>	FB9505	<u>FB9507</u>	<u>FB9510</u>	<u>FB9515</u>	<u>FB9520</u>	<u>FB9525</u>	<u>FB9530</u>
		<u>FB9600</u>	FB9601	<u>FB9651</u>	FB9602	FB9603	FB9605	FB9607	FB9610	FB9615	<u>FB9620</u>	FB9625	<u>FB9630</u>
		<u>FB9700</u>	<u>FB9701</u>	<u>FB9751</u>	<u>FB9702</u>	<u>FB9703</u>	FB9705	<u>FB9707</u>	<u>FB9710</u>	<u>FB9715</u>	<u>FB9720</u>	<u>FB9725</u>	<u>FB9730</u>
Yellow		<u>FB9800</u>	<u>FB9801</u>	<u>FB9851</u>	<u>FB9802</u>	<u>FB9803</u>	FB9805	<u>FB9807</u>	<u>FB9810</u>	<u>FB9815</u>	<u>FB9820</u>	<u>FB9825</u>	<u>FB9830</u>
Black		<u>FB9900</u>	<u>FB9901</u>	<u>FB9951</u>	<u>FB9902</u>	<u>FB9903</u>	<u>FB9905</u>	<u>FB9907</u>	<u>FB9910</u>	<u>FB9915</u>	<u>FB9920</u>	FB9925	<u>FB9930</u>



ACT component level patch cable

ACT component level patch cables

Flexibility in your network is achieved by using consolidation points. But consolidation points add an extra transition to your cabling. This can affect the reliability of your network.

Did you know that an additional transition/cable in the network also adds two additional connectors? (Each cable has two connectors). This results in an additional connector transition in the horizontal cabling: the so-called 4-connector model. ACT component level patch cords compensate for extra transitions in your network thanks to the very high quality. The component level patch cables are used when using an extra consolidation point in your network and at cross-connects.

An ACT component level patch cable must always meet the set standards in the field of transmission speeds. These are the best quality patch cords where extra attention is paid to the mounting of the cable in the connector. Everything to ensure that there is as little loss of speed as possible.

ACT CAT6 component level U/UTP PVC snagless patch cable, AWG24 CU, 50µ gold-plated contacts											
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m			
lvory	<u>IK8400</u>	<u>IK8401</u>	<u>IK8451</u>	<u>IK8402</u>	<u>IK8403</u>	<u>IK8405</u>	<u>IK8407</u>	<u>IK8410</u>			
Red	<u>IK8500</u>	<u>IK8501</u>	<u>IK8551</u>	<u>IK8502</u>	<u>IK8503</u>	<u>IK8505</u>	<u>IK8507</u>	<u>IK8510</u>			
Blue	<u>IK8600</u>	<u>IK8601</u>	<u>IK8651</u>	<u>IK8602</u>	<u>IK8603</u>	<u>IK8605</u>	<u>IK8607</u>	<u>IK8610</u>			
Green	<u>IK8700</u>	<u>IK8701</u>	<u>IK8751</u>	<u>IK8702</u>	<u>IK8703</u>	<u>IK8705</u>	<u>IK8707</u>	<u>IK8710</u>			
Yellow	<u>IK8800</u>	<u>IK8801</u>	<u>IK8851</u>	<u>IK8802</u>	<u>IK8803</u>	<u>IK8805</u>	<u>IK8807</u>	<u>IK8810</u>			
Black	<u>IK8900</u>	<u>IK8901</u>	<u>IK8951</u>	<u>IK8902</u>	<u>IK8903</u>	<u>IK8905</u>	<u>IK8907</u>	<u>IK8910</u>			

When to use slimline patch cable?

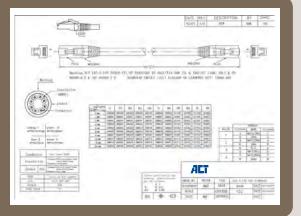
Slimline patch cables can be used where cable space is limited, such as in a data center. The slimline version of standard patch cables is more than 40% smaller in diameter. These thin cables reduce the amount of cable space required in racks. This ensures maximum energy efficiency, better cable management and space savings.

HLI CAT6 U/UTP LSZH da	tacenter slimline patch cable, A	WG28 CU, 50µ gold-plated contacts

Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m
Grey	DC9052	<u>DC9000</u>	<u>DC9001</u>	<u>DC9051</u>	<u>DC9002</u>	<u>DC9003</u>	<u>DC9005</u>
Red	<u>DC9552</u>	<u>DC9500</u>	<u>DC9501</u>	<u>DC9551</u>	<u>DC9502</u>	<u>DC9503</u>	<u>DC9505</u>
Blue	<u>DC9652</u>	<u>DC9600</u>	<u>DC9601</u>	<u>DC9651</u>	<u>DC9602</u>	<u>DC9603</u>	<u>DC9605</u>
Green	DC9752	<u>DC9700</u>	<u>DC9701</u>	<u>DC9751</u>	<u>DC9702</u>	<u>DC9703</u>	<u>DC9705</u>
Yellow	DC9852	<u>DC9800</u>	<u>DC9801</u>	<u>DC9851</u>	<u>DC9802</u>	<u>DC9803</u>	<u>DC9805</u>
Black	<u>DC9952</u>	<u>DC9900</u>	<u>DC9901</u>	<u>DC9951</u>	<u>DC9902</u>	<u>DC9903</u>	<u>DC9905</u>

ACT datasheet

Our ACT patch cables are provided with a datasheet. You can download this datasheet on our website.





PoE information

RAILWAY

MARINE

INDUSTRIAL

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3

Power over Ethernet (PoE)

Power over Ethernet (PoE) is a technology for wired ethernet local area networks (LANs) that allows the electrical current (necessary for the operation of each device) to be carried by the data cables. Using PoE minimizes the number of wires that must be used in order to install the network. PoE was originally developed to support devices like WiFi access points (APs) and IP phones. PoE made AP installations easier and more flexible, especially on ceilings.

For PoE to work, the electrical current must go into the data cable at the power-supply end, and come out at the device end, in such a way that the current is kept separate from the data signal so that neither interferes with the other.

PoE (Type 1) for low powered devices

PoE utilizes two pairs to connect many types of lower-powered devices to the network. Based on the initial IEEE 802.3af-2003 standard, it provides up to 15.4W of DC power to each PoE port (up to 12.95W of power for each device). PoE Type 1 can support devices such as VoIP phones, sensors/meters, basic access points and simple, static surveillance cameras that don't pan, tilt or zoom.

PoE+ (Type 2) for higher powered devices

Higher-powered devices are connected to the network using PoE, based on the IEEE 802.3at-2009 standard. It is backward compatible (meaning that it can also support the types of devices typically supported by PoE), and provides 30W of DC power to each PoE port (up to 25.5W of power for each device). PoE+ can support devices such as more complex surveillance cameras that pan, tilt or zoom, as well as advanced wireless access points, LCD displays, biometric sensors and tablets. For PoE (Power over Ethernet) applications, it is important to use installation and patch cables with full copper conductors. All ACT cables have copper conductors and are suited for networks where PoE is used.

COPPER CONDUCTORS

officieel distributeur

ΡοΕ

PoE++ (Type 3) 4-pair 4-pair PoE uses all four pairs in a copper cable. It provides 60W of DC power to each PoE port (up to 51W of power for each device). 4-pair POE can support devices such as videoconferencing system components and building system components and building management devices.

Higher-power PoE (Type 4)

Growing power requirements of network devices are pushing the need for higher power delivered through network cabling, which is where Higher-power PoE comes into play. It provides up to 100W of DC power to each PoE port (up to 71W of power for each device). PoE Type 4 can support devices such as laptops, TVs, and smart Led lighting for office buildings.



Type no.

6 port, 10/100 Mbps 4x PoE+ (30W) port	<u>AC4430</u>
24 port, 10/100 Mbps 24x PoE+ (30W) port	<u>AC4434</u>
PoE+ (30W injector)	

Colour	Description	Туре по.
Black	Gigabit PoE+ (30W) injector	<u>AC4438</u>

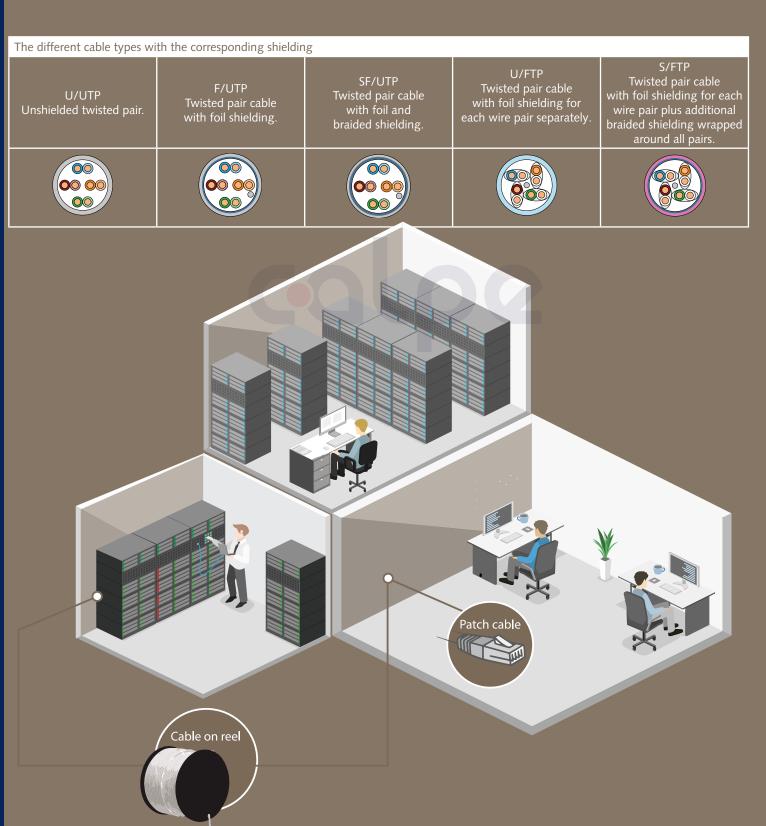
COPPER CAT5E

Copper CAT5E

CAT5E

Category 5E, ISO Class D supports Gigabit networks; this cable category can be used for 100 Mbps and 1000 Mbps Ethernet networks. In addition to Ethernet, these cables are also suitable for other protocols, such as Profinet, ATM, Token Ring and RS-232 up to a distance of 100 meters.







CAT5E - cable on reel

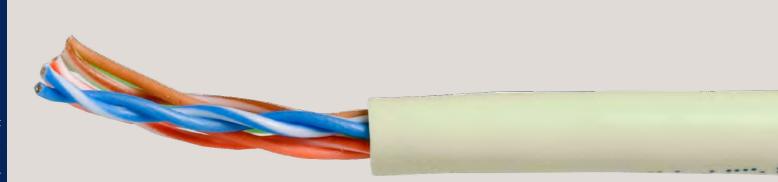


ALT CAT5E, Stranded twisted pair installation cable

	1	1				
Colour	Shielding	Outer Jacket	AWG	100m	305m box	500m reel
lvory	U/UTP	PVC	24	<u>EP100H</u>	<u>EP305B</u>	<u>EP500A</u>
Grey	U/UTP	PVC	24	<u>EP600H</u>	EP360B	
	U/UTP	PVC	24	<u>EP550H</u>	<u>EP355B</u>	
	U/UTP	PVC	24	<u>EP560H</u>	<u>EP356B</u>	
	U/UTP	PVC	24	<u>EP570H</u>	<u>EP357B</u>	
Yellow	U/UTP	PVC	24	<u>EP580H</u>	<u>EP358B</u>	
Black	U/UTP	PVC	24	<u>EP590H</u>	<u>EP359B</u>	
lvory	F/UTP	LSZH	26	<u>FP100H</u>	<u>FP305B</u>	<u>FP500A</u>
Grey	F/UTP	LSZH	26			<u>FP7450</u>
	F/UTP	LSZH	26	<u>FP750H</u>		<u>FP7550</u>
	F/UTP	LSZH	26	<u>FP760H</u>		<u>FP7650</u>
	F/UTP	LSZH	26	<u>FP770H</u>		<u>FP7750</u>
Yellow	F/UTP	LSZH	26	<u>FP780H</u>		<u>FP7850</u>
Black	F/UTP	LSZH	26	<u>FP790H</u>		<u>FP7950</u>
Grey	SF/UTP	LSZH	26			<u>FP510A</u>

ACT CAT5E Solid twisted pair installation cable

Colour	Shielding	Outer Jacket	AWG	CPR level	DoP	100m	305m box	500m reel
Grey	U/UTP	PVC	24	Eca	1186884	<u>ES100H</u>	<u>ES305B</u>	<u>ES500A</u>
	U/UTP	PVC	24	Eca	1186884		<u>ES356B</u>	
Grey	F/UTP	PVC	26	Eca	1186885	<u>FS100H</u>		





CAT5E - connecting hardware assortment



ACT In-Wall Box unshielded CAT5E

Description		Туре по.
In-Wall Box	2 x RJ45, 2 x IDC	<u>FA5008</u>
In-Wall Box	1 x RJ45, 1 x IDC	<u>FA5003</u>
In-Wall Box	2 x RJ45, 2 x IDC	<u>FA5002</u>
In-Wall Box	2 x Suitable for ACT keystone jacks	<u>FA6010</u>
	In-Wall Box In-Wall Box	In-Wall Box 1 x RJ45, 1 x IDC In-Wall Box 2 x RJ45, 2 x IDC

ACT Surface mounted box shielded CAT5E

Description		Connector	Type no.
Shielded	Surface mounted box	1 x RJ45, 1 x IDC	<u>FA5005</u>
Shielded	Surface mounted box	2 x RJ45, 2 x IDC	<u>FA5004</u>



ACT Keystone surface mounted box CAT5E

Description		Connector	Type no.
Keystone surface mounted box	Suitable for ACT keystone jacks	1 x port for keystone	<u>FA6011</u>
Keystone surface mounted box	Suitable for ACT keystone jacks	2 x ports for keystone	FA6012

ACT Keystone unshielded CAT5E

Description	Cable attachment	Colour	Type no.		
Unshielded punch down	Back	Black	<u>TD5012</u>		
Unshielded punch down	Down	Black	<u>TD5014</u>		
Unshielded punch down	Down	White	<u>TD5015</u>		
Unshielded toolfree	Back	Black	<u>TD5010</u>		
Unshielded toolfree	Back	White	<u>TD5011</u>		
Unschielded coupler RJ45	Back	White	<u>SD5009</u>		
ACT keystones are compatible with all ACT hardware					

ACT Keystone shielded CAT5E

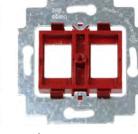
Description	Cable attachment	Colour	Type no.		
Shielded punch down	Back	Metal	<u>TD5021</u>		
Shielded punch down	Down	Metal	<u>TD5022</u>		
Shielded toolfree	Back	Metal	<u>TD5020</u>		
Shielded coupler RJ45	Back	Metal	<u>SD5019</u>		
ACT keystones are compatible with all ACT hardware					

Compatible with all listed keystones

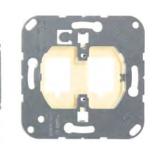


19100

Peha* 740011



Busch-Jaeger* 2CKA001753A8055



Jung* 569-2NWE / CD569-2NWEWW

*All brand names mentioned are the property of their trademark owners.



F

COPPER CAT5E

CAT5E - connecting hardware assortment

ACT Patch panel CAT5E

Pater parer CATSE			
Description	Ports		Type no.
Unshielded	24 Ports, angled	RJ45, IDC	<u>P24AK1</u>
Unshielded	24 Ports	RJ45, IDC	<u>PP1001</u>
Shielded	24 Ports	RJ45, IDC	<u>PP1002</u>
Keystone	24 Ports	Suitable for keystones	<u>PP1030</u>
Keystone	24 Ports, angled	Suitable for keystones	<u>PP1033</u>
Unshielded	Consolidation point	8 x RJ45, 8 x IDC	<u>FA5000</u>
Shielded	Consolidation point	8 x RJ45, 8 x IDC	<u>FA5001</u>

агт

ALT Multimedia inserts/keystones	
Description	Type no.
LC Duplex adapter Singlemode/Multimode	<u>TD4101</u>
HDMI 2.0 A-A female	<u>TD4102</u>
HDMI 2.0 A-A female angled	<u>TD4103</u>
USB 3.2 Gen1 A-A female	<u>TD4104</u>
USB 3.2 Gen2 C-C female	<u>TD4105</u>
Compatible with ACT hardware such as PP1030, FA6010/11/12	

ACT Connectors CAT5E

Description		Type no.
Unshielded	Suitable for flexible and solid cable with positioning block, AWG26-AWG24	<u>TD1118</u>
Shielded	Suitable for flexible and solid cable with positioning block, AWG26-AWG24	<u>TD1138</u>

ACT Tools		and the second second
Description		Type no.
Krone punch tool	LSA plus	<u>64172K</u>
UTP cable stripper	For flat and round cables	<u>FHT501</u>
Punch tool	For 110 block	<u>TD060</u>
Modular crimp tool	Strip and cut the cable, and crimp the connectors to the cable	<u>TD005</u>
Modular Coupler RJ45 - RJ45	Coupler suited for the extension of your network cables	AC4105 Zip-bag
		SEE -

CAT5E - patch cable



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	INDUSTRIAL	
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			r			r		r					
Colour	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m
lvory	<u>IB6452</u>	<u>IB6400</u>	<u>IB6401</u>	<u>IB6451</u>	<u>IB6402</u>	<u>IB6403</u>	<u>IB6405</u>	<u>IB6407</u>	<u>IB6410</u>	<u>IB6415</u>	<u>IB6420</u>	<u>IB6425</u>	<u>IB6430</u>
Grey	<u>IB6052</u>	<u>IB6000</u>	<u>IB6001</u>	<u>IB6051</u>	<u>IB6002</u>	<u>IB6003</u>	<u>IB6005</u>	<u>IB6007</u>	<u>IB6010</u>	<u>IB6015</u>	<u>IB6020</u>	<u>IB6025</u>	<u>IB6030</u>
Red		<u>IB5500</u>	<u>IB5501</u>	<u>IB5551</u>	<u>IB5502</u>	<u>IB5503</u>	<u>IB5505</u>	<u>IB5507</u>	<u>IB5510</u>	<u>IB5515</u>	<u>IB5520</u>		
Blue		<u>IB5600</u>	<u>IB5601</u>	<u>IB5651</u>	<u>IB5602</u>	<u>IB5603</u>	<u>IB5605</u>	<u>IB5607</u>	<u>IB5610</u>	<u>IB5615</u>	<u>IB5620</u>		
Green		<u>IB5700</u>	<u>IB5701</u>	<u>IB5751</u>	<u>IB5702</u>	<u>IB5703</u>	<u>IB5705</u>	<u>IB5707</u>	<u>IB5710</u>	<u>IB5715</u>	<u>IB5720</u>		
Yellow		<u>IB5800</u>	<u>IB5801</u>	<u>IB5851</u>	<u>IB5802</u>	<u>IB5803</u>	<u>IB5805</u>	<u>IB5807</u>	<u>IB5810</u>	<u>IB5815</u>	<u>IB5820</u>		
Black		<u>IB5900</u>	<u>IB5901</u>	<u>IB5951</u>	<u>IB5902</u>	<u>IB5903</u>	<u>IB5905</u>	<u>IB5907</u>	<u>IB5910</u>	<u>IB5915</u>	<u>IB5920</u>		
Orange		<u>IB4500</u>	<u>IB4501</u>	<u>IB4551</u>	<u>IB4502</u>	<u>IB4503</u>	<u>IB4505</u>	<u>IB4507</u>	<u>IB4510</u>	<u>IB4515</u>	<u>IB4520</u>		
Brown		<u>IB4600</u>	<u>IB4601</u>	<u>IB4651</u>	<u>IB4602</u>	<u>IB4603</u>	<u>IB4605</u>	<u>IB4607</u>	<u>IB4610</u>	<u>IB4615</u>	<u>IB4620</u>		
Purple		<u>IB4700</u>	<u>IB4701</u>	<u>IB4751</u>	<u>IB4702</u>	<u>IB4703</u>	<u>IB4705</u>	<u>IB4707</u>	<u>IB4710</u>	<u>IB4715</u>	<u>IB4720</u>		
Pink		<u>IB4800</u>	<u>IB4801</u>	<u>IB4851</u>	<u>IB4802</u>	<u>IB4803</u>	<u>IB4805</u>	<u>IB4807</u>	<u>IB4810</u>	<u>IB4815</u>	<u>IB4820</u>		
White		<u>IB5400</u>	<u>IB5401</u>	<u>IB5451</u>	<u>IB5402</u>	<u>IB5403</u>	<u>IB5405</u>	<u>IB5407</u>	<u>IB5410</u>	<u>IB5415</u>	<u>IB5420</u>		

ALT CAT5E U/UTP LSZH patch cable, AWG24 CU, 50µ gold-plated contacts										
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m
Grey	<u>IB2000</u>	<u>IB2001</u>	<u>IB2051</u>	<u>IB2002</u>	<u>IB2003</u>	<u>IB2005</u>	<u>IB2007</u>	<u>IB2010</u>	<u>IB2015</u>	<u>IB2020</u>

ACT CAT5E U/UTP PVC cross-over patch cable, AWG24 CU, 50µ gold-plated contacts										
Colour	0.5m	1m	1.5m	2m	3m	5m	10m			
Black	<u>IB6100</u>	<u>IB6101</u>	<u>IB6151</u>	<u>IB6102</u>	<u>IB6103</u>	<u>IB6105</u>	<u>IB6110</u>			

ALT CAT5E F/UTP PVC patch cable, AWG26 CU, 50µ gold-plated contacts										
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m
lvory	<u>IB7200</u>	<u>IB7201</u>	<u>IB7251</u>	<u>IB7202</u>	<u>IB7203</u>	<u>IB7205</u>	<u>IB7207</u>	<u>IB7210</u>	<u>IB7215</u>	<u>IB7220</u>
Grey	<u>IB7100</u>	<u>IB7101</u>	<u>IB7151</u>	<u>IB7102</u>	<u>IB7103</u>	<u>IB7105</u>	<u>IB7107</u>	<u>IB7110</u>	<u>IB7115</u>	<u>IB7120</u>

ACT CAT5E F/UTP LSZH patch cable, AWG26 CU, 50µ gold-plated contacts											
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	
Grey	<u>FB2000</u>	<u>FB2001</u>	<u>FB2051</u>	<u>FB2002</u>	<u>FB2003</u>	FB2005	<u>FB2007</u>	<u>FB2010</u>	<u>FB2015</u>	<u>FB2020</u>	
Red	<u>IB7500</u>	<u>IB7501</u>	<u>IB7551</u>	<u>IB7502</u>	<u>IB7503</u>	<u>IB7505</u>	<u>IB7507</u>	<u>IB7510</u>	<u>IB7515</u>	<u>IB7520</u>	
Blue	<u>IB7600</u>	<u>IB7601</u>	<u>IB7651</u>	<u>IB7602</u>	<u>IB7603</u>	<u>IB7605</u>	<u>IB7607</u>	<u>IB7610</u>	<u>IB7615</u>	<u>IB7620</u>	
Green	<u>IB7700</u>	<u>IB7701</u>	<u>IB7751</u>	<u>IB7702</u>	<u>IB7703</u>	<u>IB7705</u>	<u>IB7707</u>	<u>IB7710</u>	<u>IB7715</u>	<u>IB7720</u>	
Yellow	<u>IB7800</u>	<u>IB7801</u>	<u>IB7851</u>	<u>IB7802</u>	<u>IB7803</u>	<u>IB7805</u>	<u>IB7807</u>	<u>IB7810</u>	<u>IB7815</u>	<u>IB7820</u>	
Black	<u>IB7900</u>	<u>IB7901</u>	<u>IB7951</u>	<u>IB7902</u>	<u>IB7903</u>	<u>IB7905</u>	<u>IB7907</u>	<u>IB7910</u>	<u>IB7915</u>	<u>IB7920</u>	

ACT CAT5E F/UTP cross-over LSZH patch cable, AWG26 CU, 50µ gold-plated contacts									
Colour 0.5m 1m	0.5m 1m 1.5m 2m 3m 5m		5m	10m					
Cable Boot IB5100 IB5101	<u>IB5151</u>	<u>IB5102</u>	<u>IB5103</u>	<u>IB5105</u>	<u>IB5110</u>				

ACT CAT5E SF/UTP PVC patch cable, AWG26 CU, 50µ gold-plated contacts, not molded boots										10 10
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m
lvory	<u>IB7000</u>	<u>IB7001</u>	<u>IB7051</u>	<u>IB7002</u>	<u>IB7003</u>	<u>IB7005</u>	<u>IB7007</u>	<u>IB7010</u>	<u>IB7015</u>	<u>IB7020</u>

ACT component level patch cable

ACT component level patch cables

Flexibility in your network is achieved by using consolidation points. But consolidation points add an extra transition to your cabling. This can affect the reliability of your network.

Did you know that an additional transition/cable in the network also adds two additional connectors? (Each cable has two connectors). This results in an additional connector transition in the horizontal cabling: the so-called 4-connector model.

ACT component level patch cords compensate for additional transitions in your network thanks to their very high quality. ACT offers consolidation points in CAT5E up to and including CAT6A (these can be found in the product overviews under patch panels). The component level patch cables are applied when using an extra consolidation point in your network and for cross-connects.

ALT CAT5E component level U/UTP PVC snagless patch cable, AWG24 CU, 50µ gold-plated contacts									
Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	
lvory	<u>IK5400</u>	<u>IK5401</u>	<u>IK5451</u>	<u>IK5402</u>	<u>IK5403</u>	<u>IK5405</u>	<u>IK5407</u>	<u>IK5410</u>	
Red	<u>IK5500</u>	<u>IK5501</u>	<u>IK5551</u>	<u>IK5502</u>	<u>IK5503</u>	<u>IK5505</u>	<u>IK5507</u>	<u>IK5510</u>	
Blue	<u>IK5600</u>	<u>IK5601</u>	<u>IK5651</u>	<u>IK5602</u>	<u>IK5603</u>	<u>IK5605</u>	<u>IK5607</u>	<u>IK5610</u>	
Green	<u>IK5700</u>	<u>IK5701</u>	<u>IK5751</u>	<u>IK5702</u>	<u>IK5703</u>	<u>IK5705</u>	<u>IK5707</u>	<u>IK5710</u>	
Yellow	<u>IK5800</u>	<u>IK5801</u>	<u>IK5851</u>	<u>IK5802</u>	<u>IK5803</u>	<u>IK5805</u>	<u>IK5807</u>	<u>IK5810</u>	
Black	<u>IK5900</u>	<u>IK5901</u>	<u>IK5951</u>	<u>IK5902</u>	<u>IK5903</u>	<u>IK5905</u>	<u>IK5907</u>	<u>IK5910</u>	
		·							



CALPE.NL

Fiber optic

Reliable and future proof

More than 80% of all errors in networks and fiber optic networks are caused by failures related to cabling. Businesses that depend on excellent network performance invest in the best brands and products of active equipment like switches, servers and routers but often overlook the part that makes the biggest difference, the cabling. Customers choose for ACT cables and cabling solutions because our products are reliable and future proof. ACT cables and components meet and exceed international standards by using grade A fiber and fiber optic connectors. Premium materials ar used and al our products have 100% quality control.

Consistent low loss

In fiber optic networks it's important that all the light from the source reaches the end of the link. By using ACT cables you are ensured of a consistent low loss.

Upgrade to 40-400Gb

ACT fiber optic cables ensure low loss in networks. This makes it possible to upgrade 1Gb or 10Gb to 40-100Gb (this depends on distance and chosen fiber type).

Individual test report and third party testing facilities

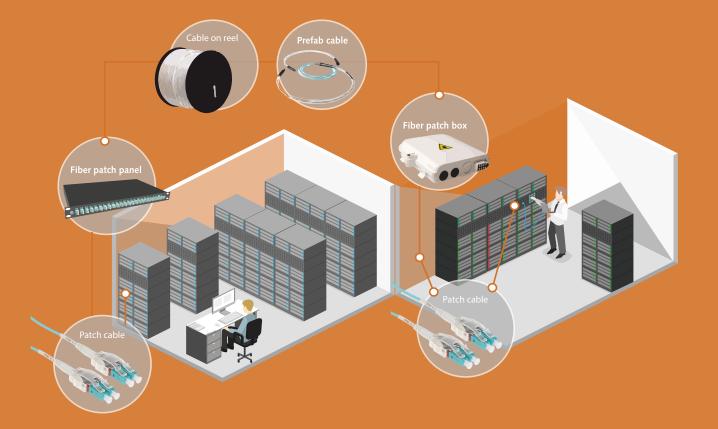
All of our cables are individually tested and have an individual test report so you know every part of your network is tested and can be accounted for.

Besides our own individual testing of fiber optic cables we do provide samples to third party testing facilities who perform their own testing as a double check.

Types of fiber and distances:

Fiber Optic type	OM1	OM2	OM3	OM4	OM5	OS2	
		Singlemode					
	62,5/125µm		9/125µm				
Structuur	Structuur						
Distance	2000 m	550 m	300 m	400 m	440 - 150 m	10 Km	
Used for	10/100 Mb/s	1 Gb/s	10 Gb/s	10 Gb/s	40-400 Gb/s		

* Maximum length is related to the best suitable speed and depends on the transceive







ACT Fiber Kit

2

ACT Fiber Kit: pre-terminated fiber optic cables and patch cables custom made and labeled

Would you also like to save time by faster installation of pre-terminated fiber optic cables and patch cables in a data center? Less chance of errors when installing pre-terminated fiber optic cables and patch cables in a data center because all products are packed per corridor?

To help you we have developed an ACT Fiber Kit: pre-terminated fiber optic cables, MTP / MPO cables and patch cables custom made and ready for use.

What is ACT Fiber Kit?

ACT Fiber Kit consists of multiple cables that are custom made and labeled for you. These can be patch cables but also MTP/MPO cabling or pre-terminated cabling. We make it extra convenient with the possibility to pack per corridor / aisle.

You can choose to have each cable packaged individually or with multiple cables at once for less waste and unpacking time during installation. ACT Fiber Kit is a turnkey tailor-made solution: pre-terminated fiber optic cables, MTP / MPO cables and patch cables custom made and ready for use.

ALTA

Why we offer it?

The ACT Fiber Kit not only ensures easy installation, but also provides significant cost savings. You save by faster installation and do not need to invest in special equipment such as a label printer and expertise.

Where is it applied?

ACTFIBERKIT

ACT Fiber Kit is suitable for use in a datacenter, server room or PoP and has been developed to relieve datacenter professionals

FIBER

Why choose ACT Fiber Kit?

 $\sqrt{\frac{\text{Time saving}}{\text{You save installation time with our turnkey solution.}}}$

✓ Cost savings

The reduction in installation time also saves labour costs. You don't need to invest in a label printer and expertise.

Better organised

ACT Fiber Kit consists of coded (labeled) cables. By using labeled cabling, your cabling is better organised and faults can be traced and resolved faster.

 Exactly the right length
 No more bothering with excess cabling that you have to find a place for in precious space. Cables are made to measure, exactly the length needed.





Use ACT Fiber optic cleaners for the best performance

In order to get the best performance out of our fiber optic network we advise to always clean the ferrule tips of the connectors. Cleaning fibers is essential for an optimal connection as dirt can block the path of light and damages connectors and equipment. With the increase in network speeds we see that the cleaning of fibers is essential in order to prevent failures and degraded performances.

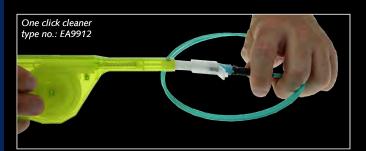
The greatest cause of link failures are issues with connector contamination. This is reported by 98% of installers and 80% of network owners in a study by NTT-Advanced Technology. Cleaning a fiber reduces the chance of contaminating another optical interface or expensive fiber optic equipment.

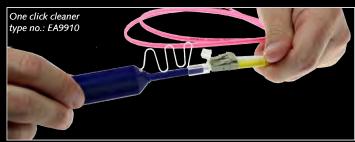
Cleaners for fiber cables

ACT advises to inspect and clean all connectors before they are plugged into connectors or equipment, this also applies to new cables. It is not necessary to periodically clean connectors that are already mated.

We offer two kind of ACT cleaners for fiber cables, a reel cleaner and one click cleaner. The advantage of a reel cleaner is the possibility to clean connectors with different ferrule sizes. The advantage of a one click cleaner is the possibility to clean both connectors and bulkheads (adapters). They are easy to use, minimizing the risk of clean mistakes.

By cleaning fiber connectors the transceivers will not get dirty either. When they do, we advise to use cleaning sticks. Cleaning sticks have the lowest chance of damaging your equipment.





Fiber optic cleaners			
Туре по.	LC/MU	SC/ST/FC/E2000	MPO/MT
One click cleaner	<u>EA9910</u>	<u>EA9911</u>	<u>EA9912</u>
Cleaning sticks	<u>EA9904</u>	<u>EA9905</u>	
Reel Cleaner	<u>EA9901</u>	<u>EA9901</u>	<u>EA9901</u>
Spare reel	<u>EA9902</u>	<u>EA9902</u>	<u>EA9902</u>

ACT fiber optics installation cable - delivered from stock

ACT Installation Cable's product range consists of fiber optic cables in different lengths (per meter), fiber types and number of fibers. We have these cables in stock and therefore can deliver the next day.

characteristics

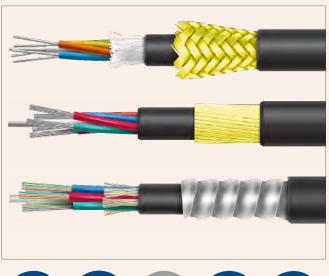
- Fiber optic installation cable in the desired
- length (per meter), fiber type and number of fibers.
- Suitable for indoor and outdoor use.
- Suitable for horizontal and vertical installation.
- Meets one of the highest CPR fire classes: Cca.
- Cable provides mechanical protection against external influences.

Tailor-made cabling

Permanent cabling, also called installation cable, comes in different types, different lengths and is usually delivered on a roll, therefore it is also called cable on a roll.

In addition to our stock of installation cable, ACT specializes in custom cabling solutions. Almost anything is possible in the field of fiber optic installation cabling.

Please contact our sales department for your requirements.





We have these cables in stock and therefore we can ship out the same day.

ACT Fiber optic ins	tallation cable	e (in the lengt	h you specify)		
Colour	Fiber	CPR level	DoP	OM3	OS2
Black	6	Cca	0370-3935	<u>RL4051</u>	<u>RL4011</u>
Black	12	Cca	0370-3935	<u>RL4052</u>	<u>RL4012</u>
Black	24	Cca	0370-3935	<u>RL4053</u>	<u>RL4013</u>

ACT Pigtails					201
Connector		L	С		SC
Туре	1m / 1pcs	1m / 12pcs	2m / 1pcs	2m / 12pcs	1m / 1pcs
OM3	RL9695	<u>RL9680</u>			<u>RL8695</u>
OM4	<u>RL8795</u>	<u>RL3780</u>			<u>RL8795</u>
OS2	<u>RL9995</u>	<u>RL9980</u>	<u>RL9996</u>	<u>RL9982</u>	<u>RL8995</u>

FIBER

Pre-terminated cables: What you should know

With pre-terminated cables you can easily and quickly install a fiber optic network. There are a number of points to be aware of when installing pre-terminated cables. In this article we explain the most important ones.

Structure of a pre-terminated cable

A pre-terminated cable is actually a cable assembly, a combination of different cables and connectors into one assembled ready-to-use product. A fiber optic pre-terminated cable nearly almost always contains multiple fibers.

A pre-terminated cable usually consists of the following parts:

- Installation cable: a robust installation cable that is suitable for bridging longer distances and offers good protection against external influences.
- Fanout kit: the transition from the installation cable to the fanout cables.
- Cable gland: is in some cases attached on the fanout kit and aims to fix the cable to, for example, a patch panel or fiber box.
- Fanout cables: are multiple small diameter cables with a fiber optic connector at the end.

Achieving the right length

In order to calculate the correct pre-terminated cable length, it is essential to consider the following things:

Straight line distance: The distance between the two points you want to connect without considering any obstacles.

Horizontal distance: Usually you cannot move your cable from point a to point b without having to lay the cable around objects. Keep in mind that in datacenters, for example, cables are usually routed through a cable duct / fiber raceway.

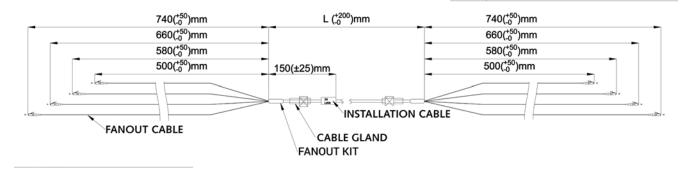
Vertical distance: It is also important to consider the vertical distance. If the cable has to come out halfway through a 19" cabinet, it is important to count the distance from halfway through the cabinet to the cable duct (which may be in the ceiling or in the floor).

We recommend that you always choose a slightly longer cable than is calculated. Often there is an additional obstacle that has not been taken into account beforehand. Short over lengths are easy to eliminate. If a cable is too short it cannot be extended.

In that case an extra cable has to be connected and this causes an extra transition and optical losses.



Note: Is the length of the cable specified? This refers only to the installation cable and not to the fanout kit and the fanout cables. For more info, see the technical drawing below.



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Installing a pre-terminated cable

Protect the fanout cables and connectors

When installing a pre-terminated cable, it is important to protect the fanout cables and connectors. These are the most vulnerable parts that can be damaged without protection. We advise to use a protective conduit during installation. The protection conduit can be removed after installation. ACT pre-terminated cables are standard equipped with a protection conduit on both sides of the cable for optimal protection.

Preferred installation

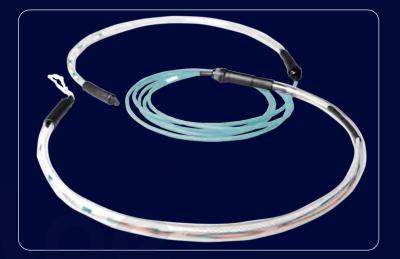
We recommend to lay the cable when possible and if installing is not an option then pull the cable. The fibers in a fiber optic cable can be damaged by pulling. Fiber optic cables are designed to withstand tensile load so that the fiber remains protected, this is called strain relief. It is important to strain within the specifications of the cable.

This maximum specified tensile load of a cable applies to the installation cable but not to the fanout cables. Of these, the tensile load is much smaller. To solve this, ACT pre-terminated cables are equipped with a pulling rope on one side at the end of the protection conduit. If this is pulled, the tensile load is placed on the installation cable and not on the fanout cables.

Conduit for outdoor use

Pre-terminated cables are also suitable for outdoor use. Please note that most variants are not suitable for direct burial without any form of protection. The influences from outside are much greater than with indoor use, especially rodents. For this reason, when using preterminated cables outside, a conduit is required. An exception to this are pre-terminated cables with an armoured outer jacket, which offer sufficient protection against external influences because of the armouring.









Pre-terminated cables - a do it yourself solution

Pre-terminated cables are used by the following target audiences: • Network installers that are not specialized in termination

- of fiber optics.
- System integrators.
- Data center.

By using pre-terminated cables you have the following advantages:

- Connectors are terminated and tested in a clean room production environment.
- Cables come with individual test reports on insertion loss.
- No need to investment in equipment for splicing or testing.
- Up to 80% less installation time (compared to terminating your own connectors).
- Connectors are protected by protective tubing during installation.

Stock assortment

We have a stock of pre-terminated cables in lengths from 10 up to 300 meters in both OM3 and OS2. These are Loose tube indoor / outdoor cables with 4 or 8 fibers. All other types will be custom made with very short lead-time.

Our experts are available to help you choose the best option for your case.



ACT 4 Fibers pre-terminated indoor/outdoor cables OS2, with LC connectors Colour 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m Yellow <u>RL2301</u> <u>RL2302</u> <u>RL2303</u> RL2304 RL2305 RL2306 RL2307 <u>RL2308</u> RL2309 <u>RL2310</u> 110m 120m 130m 140m 150m 160m 170m 180m 190m 200m Yellow <u>RL2311</u> <u>RL2312</u> <u>RL2313</u> RL2314 RL2315 <u>RL2316</u> <u>RL2317</u> <u>RL2318</u> <u>RL2319</u> <u>RL2320</u> 210m 220m 230m 240m 250m 260m 270m 280m 290m 300m Yellow <u>RL2321</u> <u>RL2322</u> <u>RL2323</u> <u>RL2324</u> <u>RL2325</u> <u>RL2326</u> <u>RL2327</u> <u>RL2328</u> <u>RL2329</u> <u>RL2330</u>

ACT 4 Fibers pre-terminated indoor/outdoor cables OM3, with LC connectors

Colour	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m
Aqua	<u>RL2401</u>	<u>RL2402</u>	RL2403	RL2404	<u>RL2405</u>	<u>RL2406</u>	<u>RL2407</u>	<u>RL2408</u>	<u>RL2409</u>	<u>RL2410</u>
	110m	120m	130m	140m	150m	160m	170m	180m	190m	200m
Aqua	<u>RL2411</u>	<u>RL2412</u>	<u>RL2413</u>	<u>RL2414</u>	<u>RL2415</u>	<u>RL2416</u>	<u>RL2417</u>	<u>RL2418</u>	<u>RL2419</u>	<u>RL2420</u>
	210m	220m	230m	240m	250m	260m	270m	280m	290m	300m
Aqua	<u>RL2421</u>	<u>RL2422</u>	<u>RL2423</u>	<u>RL2424</u>	<u>RL2425</u>	<u>RL2426</u>	<u>RL2427</u>	<u>RL2428</u>	<u>RL2429</u>	<u>RL2430</u>

ACT 8 Fibers pre-terminated indoor/outdoor cables OS2, with LC connectors

Colour	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m
Yellow	<u>RL4101</u>	<u>RL4102</u>	<u>RL4103</u>	<u>RL4104</u>	<u>RL4105</u>	<u>RL4106</u>	<u>RL4107</u>	<u>RL4108</u>	<u>RL4109</u>	<u>RL4110</u>
	110m	120m	130m	140m	150m	160m	170m	180m	190m	200m
Yellow	<u>RL4111</u>	<u>RL4112</u>	<u>RL4113</u>	<u>RL4114</u>	<u>RL4115</u>	<u>RL4116</u>	<u>RL4117</u>	<u>RL4118</u>	<u>RL4119</u>	<u>RL4120</u>
	210m	220m	230m	240m	250m	260m	270m	280m	290m	300m
Yellow	<u>RL4121</u>	<u>RL4122</u>	<u>RL4123</u>	<u>RL4124</u>	<u>RL4125</u>	<u>RL4126</u>	<u>RL4127</u>	<u>RL4128</u>	<u>RL4129</u>	<u>RL4130</u>

ACT 8 Fibe	rs pre-termina	ted indoor/out	door cables OI	M3, with LC co	nnectors					
Colour	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m
Aqua	<u>RL4201</u>	<u>RL4202</u>	<u>RL4203</u>	<u>RL4204</u>	<u>RL4205</u>	<u>RL4206</u>	<u>RL4207</u>	<u>RL4208</u>	<u>RL4209</u>	<u>RL4210</u>
	110m	120m	130m	140m	150m	160m	170m	180m	190m	200m
Aqua	<u>RL4211</u>	<u>RL4212</u>	<u>RL4213</u>	<u>RL4214</u>	<u>RL4215</u>	<u>RL4216</u>	<u>RL4217</u>	<u>RL4218</u>	<u>RL4219</u>	<u>RL4220</u>
	210m	220m	230m	240m	250m	260m	270m	280m	290m	300m
Aqua	<u>RL4221</u>	<u>RL4222</u>	<u>RL4223</u>	<u>RL4224</u>	<u>RL4225</u>	<u>RL4226</u>	<u>RL4227</u>	<u>RL4228</u>	<u>RL4229</u>	<u>RL4230</u>

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Pre-terminated cables – minimize installation time and labor in your datacenter or server room

For fast and easy installation of installation and backbone cabling in your datacenter choose ACT pre-terminated cabling

ACT for all your MAC (Moves Adds and Changes)

Unique is that ACT keeps stock of pre-terminated fiber cabling. For you this means you can start directly if you want to change or expand your backbone cabling.

Cabling on stock

We have stock in Singlemode and Multimode cabling with 24 fibers and LC connectors lengths up to 100 meters. These are ultra-compact cables with uniboot connectors for the smallest possible fanout.

The most requested lengths are also available in MTP / MPO trunk cables up to 100 meters. This range includes cables with 1,2 or 4 MTP / MPO

connectors per side in both polarity A as B in Multimode.



ACT 2	4 fibers p	re-termin	ated OS2	indoor, v	vith LC po	olarity twi	st connec	tors							Č	5:5
Colour	3m	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Yellow	DC5550	DC5551	DC5552	DC5553	DC5554	DC5555	DC5556	DC5557	DC5558	DC5559	DC5560	DC5561	DC5562	DC5563	DC5564	DC5565

ACT 24	4 fibers p	re-termin	ated OM4	4 (OM3) i	ndoor, wi	ith LC pol	arity twis	t connect	ors						C	10
Colour	3m	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Erika violet	<u>DC5500</u>	<u>DC5501</u>	DC5502	DC5503	<u>DC5504</u>	<u>DC5505</u>	DC5506	DC5507	<u>DC5508</u>	DC5509	<u>DC5510</u>	DC5511	DC5512	DC5513	DC5514	DC5515

ACT 1	< 12 fibers tru	inkcable OM4	(OM3), with	1x MTP/MPC	O connector e	ach side					10
Colour	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Polarity A											
Erika violet	DC5000	DC5001	DC5002	DC5003	DC5004	DC5005	DC5006	DC5007	DC5008	DC5009	DC5010
Polarity B						·	` `				
Erika violet	<u>DC5020</u>	DC5021	DC5022	DC5023	<u>DC5024</u>	DC5025	DC5026	DC5027	DC5028	DC5029	<u>DC5030</u>

ACT 2	x 12 fibe	rs trunkca	able OM	4 (OM3),	, with 2x	MTP/MI	PO conne	ectors ead	ch side								I all
Colour	5m	7m	10m	12m	15m	20m	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Polarity A																	
Erika violet	DC5200	DC5201	DC5202	DC5203	DC5204	DC5205	DC5206	DC5207	DC5208	DC5209	<u>DC5210</u>	DC5211	DC5212	DC5213	<u>DC5214</u>	DC5215	DC5216
Polarity B																	
Erika violet	DC5250	DC5251	DC5252	DC5253	DC5254	DC5255	DC5256	DC5257	DC5258	DC5259	DC5260	DC5261	DC5262	DC5263	DC5264	DC5265	DC5266

ACT 4	x 12 fibe	rs trunkca	able OM	4 (OM3),	, with 4x	MTP/MI	PO conne	ectors ead	ch side								1
Colour	5m	7m	10m	12m	15m	20m	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Polarity A																	
Erika violet	<u>DC5400</u>	<u>DC5401</u>	DC5402	<u>DC5403</u>	<u>DC5404</u>	DC5405	DC5406	<u>DC5407</u>	DC5408	<u>DC5409</u>	<u>DC5410</u>	DC5411	DC5412	<u>DC5413</u>	<u>DC5414</u>	DC5415	DC5416
Polarity B																	
Erika violet	DC5450	DC5451	DC5452	DC5453	DC5454	DC5455	DC5456	DC5457	DC5458	DC5459	DC5460	DC5461	DC5462	DC5463	DC5464	DC5465	DC5466

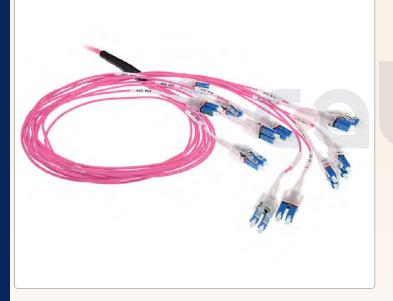
Pre-terminated cables - data centers

Pre-terminated fiber optic installation cables on stock.

ACT pre-terminated cables, also called pre-terminated fiber cables, are fiber optic installation cables with connectors already attached. The pre-terminated cables are used in Point to Point cabling and structured fiber optic cabling. No tooling is required for the installation. ACT pre-terminated fiber optic installation cables are available in the following variants:

- 4/8 fibers with LC connectors suitable for indoor / outdoor use.
- 24 fibers with LC Polarity Twist connectors for indoor data center applications.
- 12/24/48 fibers with MTP/MPO connectors for indoor data center applications.

Our ACT Pre-terminated cables are available from stock so you can get start your installation right away. The last two variants are for data center applications. What does this mean and why are these cables suitable for data centers? Read the rest of this article to find out.



ACT pre-terminated fiber optic installation cables: flexible, scalable and suitable for fast MAC (Moves, Adds and Changes)

When designing a cabling system in a data center, flexibility and scalability of installation cables are of great important. Expansions or changes (Moves, Adds and Changes) regularly occur in a data center or server room.

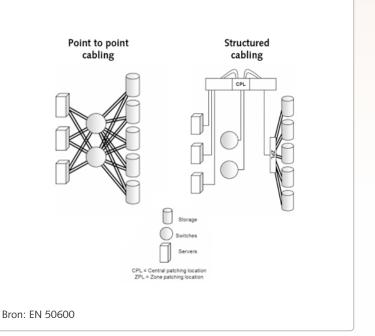
Use of pre-terminated fiber optic installation cables is an excellent solution because of its compact shape and Polarity Twist connectors. The range of ACT pre-terminated fiber optic installation cables consists of the multiple pre-terminated cables with 24 fibers and MTP/MPO trunk cables.

Suitable for point-to-point and structured cabling

ACT fiber optic installation cables, pre-terminated cables, are suitable for both Point-to-point and structured cabling.

Point-to-point cabling involves connecting equipment directly to each other.

Structured cabling, also called fixed cabling, involves the use of panels, installation cabling and patch cabling. By using a staggered fanout, the pre-terminated fiber optic cables are easy to connect to both patch panels and equipment such as switches, servers and storage.



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ACT multiple pre-terminated cables with 24 fibers and **Polarity Twist connectors**

With ACT multiple pre-terminated cables with 24 fibers, your data center is prepared for the future. The multiple pre-terminated fiber optic cables are equipped with Polarity Twist connectors.

Polarity Twist connectors offer several advantages:

- The polarity of the two fibers can be adjusted within seconds by rotating the outside of the connector.
- Halving the number of fanout cables by having two fibers instead of one fiber per connector.
- Thinner fanout cables, 2mm instead of 3mm thick a savings of 33%.

In addition to the Polarity Twist connectors, a divisible gland is also available for ACT 24-fold pre-terminated cables. For direct connection of equipment, point-to-point, in most cases no gland is needed. In 19" panels, however, a gland is often used to secure fiber optic cable. With the divisible gland you can easily add a gland. A diameter of 6.5mm and the fanouts of 2mm makes the installation cable compact and robust.



1. 2. Press both sides to unlock Remove the triggermodule in the triggermodul. the direction of the front.

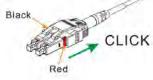
Flip the connection module upside down, gray dots are facing down.

Black

з.



Gray dots



Save space with prefabs: Up to 50% more capacity thanks to ultracompact cable

Due to their small diameter, ACT pre-terminated cables are suitable for High density solutions in data centers and server rooms. Our design of ultracompact thin diameter cables allows you to fit up to 50% more cables in the fiber raceway / cable tray or in your 19" cabinet. This provides better scalability and flexibility for future network expansions.

FIBE

ACT solutions for patching fiber and more

ACT has a wide range of solutions for patching fiber optic cabling. In this overview we present our 19" patch panels and enclosures in both standard as Multifunctional HD series. We also present our patch boxes in a variety of formfactors. You can find the different options and advantages to help you chose the best patching solution for your need.

ACT fiber optic patch panel enclosures

ACT fiber optic panel enclosures are designed for convenience and a complete solution for patching your fibers.

ACT panel enclosures come with the following accessories:

- 2 splice cassettes,
- 2 M20 glands,
- Management spools,
- Ty wraps and adhesive ty wrap cable mounts.



Fiber panels enclosures loaded

- Loaded
- Installation time: 2-5 minutes
- Customization: Low

Advantage of a preloaded panel is the short installation time. The adapters and accessories are already installed to save installation time. For pre-terminated cabling you do not need any extra's, for installation cable without connectors pigtails can be added. For an overview of ACT pigtails see the end of this chapter.



ACT Fiber panels loaded

Fiber connector OM3LC OM4LC OS2LC OM3SC OS2SC						
	Fiber connector	OM3LC	OM4LC	OS2LC	OM3SC	OS2SC
24 Ports FA2037 FA2040 FA2036 FA2039 FA2038	24 Ports	<u>FA2037</u>	<u>FA2040</u>	<u>FA2036</u>	<u>FA2039</u>	<u>FA2038</u>

Fiber panels enclosures unloaded

- Unloaded
- Installation time: 7-10 minutes
- Customization: High

ACT unloaded fiber optic patch panel enclosures are a flexible solution that can be equipped with a range of different kind of fiber optic adapters. Main advantage is the flexibility in choice of fiber optic adapters. If you only need a few adapters or a combination of different type of fiber optic adapters this is the panel of choice.



ACT Fiber panels unloaded

24 Ports	<u>FA2044</u>
48 Ports	<u>FA2095</u>

ACT fiber optic patch panels

ACT fiber optic patch panels

ACT patch panels are a lightweight solution which are used for preterminated cabling. Patch panels save space and cost because they don't have an enclosure. Instead of an enclosure the panels have a smaller cable management bar. Cabling can be fastened to the bar with Hook & Loop (velcro) cable ties.

• Installation time: 2-5 minutes

The loaded fiber optic patch panels are high density panels with 96 ports / 192 fibers per U. The panels are a lightweight solution and come with a cable management panel at the rear end.

25252525252525252525252

ACT Fiber panel loaded

Fiber panels loaded

Customization: Low

Loaded

Fiber connector	OM4LC	OS2LC
96 Ports	<u>FA2100</u>	<u>FA2101</u>

Fiber panels unloaded

- Unloaded
- Installation time: 7-10 minutes
- Customization: High

ACT unloaded fiber optic patch panel are a flexible and lightweight solution that can be equipped with a range of different kind of fiber optic adapters. Main advantage is the flexibility in choice of fiber optic adapters. If you only need a few adapters or a combination of different type of fiber optic adapters this is the panel of choice. The unloaded fiber optic panels come in standard density (FA2047) and double density (FA2095). At the end of the chapter there is an overview of the different adapters and which adapter fits in which panel.



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ACT Fiber panel unloaded

24 Ports	<u>FA2047</u>
48 Ports	FA2095



FIBER

ACT solutions for patching fiber and more

FIBER

ACT fiber patch boxes

ACT fiber patch boxes are smaller enclosures that are not for 19" use. The enclosures are unloaded, you can easily add adapters and the pigtails you need.

ACT Fiber patch boxes

Number of ports	8 Ports	16 Ports	12 Ports DIN RAIL	2 Ports
Туре	<u>FA2033</u>	<u>FA2034</u>	<u>FA2043</u>	<u>FA2032</u>

ACT fiber optic adapters

Here is an overview of the ACT fiber optic adapters and in which panels they fit. An LC connector is half of the size of SC, ST, MTP and FC connector. That's why duplex LC has the same dimensions as simplex SC.



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Panels and boxes that fit duplex LC	/ simplex S	C:	
Uploaded 10" fiber	EA 2044	EA2047	

Unloaded 19" fiber	FA2044	FA2047		
Unloaded patchboxes fiber	FA2033	FA2034	FA2043	FA2032

ACT Fiber optic adapters

Description	OM1	OM2	OM3	OM4	OM5	OS1/2	OS1/2 APC	Metal
MTP(MPO)-MTP(MPO) flange	<u>EA9010</u>							
LC-LC duplex flange	<u>EA1005</u>	<u>EA1005</u>	<u>EA9005</u>	<u>EA9006</u>	<u>EA1016</u>	<u>EA1004</u>	<u>EA9007</u>	
SC-SC simplex flange	<u>EA1023</u>	<u>EA1023</u>	<u>EA1024</u>	<u>EA1025</u>	<u>EA1026</u>	<u>EA2003</u>	<u>EA3005</u>	
LC-SC simplex flange								<u>EA8001</u>
SC-ST simplex flange	<u>EA1036</u>	<u>EA1036</u>	<u>EA1036</u>	<u>EA1036</u>	<u>EA1036</u>	<u>EA1036</u>		
LC-FC simplex flange	<u>EA1041</u>	<u>EA1041</u>	<u>EA1041</u>	<u>EA1041</u>	<u>EA1041</u>	<u>EA1041</u>		
SC-FC simplex flange	<u>EA1042</u>	<u>EA1042</u>	<u>EA1042</u>	<u>EA1042</u>	<u>EA1042</u>	<u>EA1042</u>		

Panels that fit Quad LC, Duplex SC:

Unloaded 19" patch panels FA2095 FA2097	loaded 19" patch panels
-----------------------------------------	-------------------------

ACT Fiber optic adapters

Description	OM1	OM2	OM3	OM4	OM5	OS1/2	OS1/2 APC
LC-LC quad flange	<u>EA1018</u>	<u>EA1018</u>	<u>EA9008</u>	<u>EA9009</u>	<u>EA1019</u>	<u>EA1020</u>	<u>EA1021</u>
SC-SC duplex flange	<u>EA1006</u>	<u>EA1006</u>	<u>EA3003</u>	<u>EA3004</u>	<u>EA1027</u>	<u>EA3002</u>	<u>EA1028</u>
SC-ST duplex flange	<u>EA2002</u>	<u>EA2002</u>	<u>EA2002</u>	<u>EA2002</u>	<u>EA2002</u>	<u>EA2002</u>	

Adapters with other mounting:

ACT Fiber optic adapters

Metal
<u>EA1001</u>
Multimode
<u>EA9002</u>



Pre-terminated cabling

For pre-terminated cabling you only need the right adapters, for installation cable without connectors pigtails can be added. For an overview of the ACT adapters and pigtails see the end of this chapter.

MARINE RAILWAY

Fiber optic pigtails and splicing

All the ACT patch panel enclosures, both loaded and unloaded and the patch boxes can be used for housing pigtails that are spliced on an installation cable. The fiber optic patch panels without enclosures are not suited for splicing pigtails because they don't have anywhere the splice cassettes can be mounted.

12 pack of ACT pigtails.

When in 12 pack they come in different colours. When ordered per piece the colour is the same as colour scheme for the fiber type, so yellow of OS2, aqua for OM3 and Erika Violet for OM4.

ACT Pigtails

Connector		SC			
Туре	1m / 1pcs	1m / 12pcs	2m / 1pcs	2m / 12pcs	1m / 1pcs
OM3	RL9695	<u>RL9680</u>			<u>RL8695</u>
OM4	<u>RL8795</u>	<u>RL3780</u>			<u>RL8795</u>
OS2	<u>RL9995</u>	<u>RL9980</u>	<u>RL9996</u>	<u>RL9982</u>	<u>RL8995</u>

Fiber optic protection

For protecting splices ACT offers the following splice protectors.



Type Thermo 45mm Thermo 60mm ANT crimp 30mm FA2028 FA2048 FA2041

ACT also offers the SK121 splice cassette (FA2082) which is both suited for termo as crimp splice protectors. The SK121 cassettes are stackable and need a cover and have space for 2 splice holders per cassette.

ACT SK121 splice casse	ette			
Туре	Cassette	Cover	Thermo holder 6x	Crimp holder 12x
	<u>FA2082</u>	FA2083	FA2084	<u>FA2081</u>

ACT Accessoiries		
ACT Cableguide for fiber optic panel	FA2068	
ACT Cableguide with front for fiber optic panel	FA2069	
Compatible with: FA2036, FA2037, FA2038, FA203	39, FA2040, FA2050, FA2095	

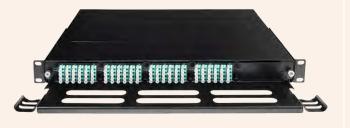


ACT Multifunctional HD fiber optic patch panel enclosures

- Installation time: 3-6 minutes
- Customization: High
- Extra: Also suited for twisted pair Cat5E-Cat8 and USB-C, USB-A and HDMI

Multifunctional HD fiber optic patch panel enclosures can be easily equipped with cassettes and adapter plates. The cassettes and adapter plates can be added to the panel in a matter of seconds. The use of ACT Multifunctional HD fiber optic patch panel enclosures provide flexibility, short installation time and high density. For even more flexibility the adapter plates fit products with a keystone formfactor. This means that the panels can be equipped with twisted pair Cat5E up to Cat8 but also USB-A, USB-C and HDMI.

The ACT Multifunctional HD fiber optic patch panel enclosures are high density panel enclosures. This means that it can have up to 60 connections / 120 fibers in the 1U version and 144 connections / 288 fibers in the 2U version.



ACT	Multifunctional	HD	fiber	optic	patch	panel	enclosures
-----	-----------------	----	-------	-------	-------	-------	------------

5 slots 1U	12 slots 2U
FA2050	FA2056

Cassettes

Cassettes are made up from an adapter plate with a small enclosure behind it. The enclosure in the ACT cassettes are used for the housing of the MTP to LC cable and the adapter plate is filled with LC duplex adapters.

ACT Cassettes

	OM4	OS2
1x MTP-12xLC	<u>FA2054</u>	<u>FA2055</u>
2x MTP-24xLC	<u>FA2052</u>	<u>FA2053</u>

Adapter plates

ACT provides adapter plates for LC to LC for fiber connections and adapter plates which can be fitted with keystone modules.

Photo: Adapter plate that is equipped with HDMI, USB-A and USB-C adapters

ACT Adapter plates

	OM4	OS2	OS2 APC		Unschielded	Shielded					
24x LC-LC	<u>FA2152</u>	FA2153	<u>FA2151</u>	4x keystone/coupler	FA2057	<u>FA2058</u>					
12x LC-LC	<u>FA2155</u>	FA2156	<u>FA2154</u>								
12x SC-SC	<u>FA2158</u>	<u>FA2159</u>	<u>FA2157</u>								
6x SC-SC		<u>FA2162</u>	<u>FA2160</u>								
Blind plate			<u>FA2</u>	2049							
Adapter plate Brush		<u>FA2148</u>									
Adapter plate 2X20mm slots			<u>FA2</u>	2149							



Keystone / Coupler

The keystones and couplers add extra flexibility because the panels can be equipped with twisted pair Cat5E up to Cat8 but also USB-A, USB-C and HDMI.

Keystones and couplers that are compatible with FA2057 and FA2058:



ACT Keystone / Coupler

	CAT5E	CAT6	CAT6	CAT8	Shielded
Keystone	<u>TD5012</u>	<u>TD6013</u>	<u>TD6012</u>	<u>TD8511</u>	FA2058
	CAT5E	CAT5E	CAT6	CAT6	CAT6A
Coupler	<u>SD5009</u>	<u>SD5019</u>	<u>SD6009</u>	<u>SD6019</u>	<u>SD6519</u>
	LC	HDMI	HDMI 90gr	USB-A	USB-C
Coupler	<u>TD4101</u>	<u>TD4102</u>	<u>TD4103</u>	<u>TD4104</u>	<u>TD4105</u>

Fiber optic attenuator

ACT Fiber optic at	tenuator					No.	
Description	1dB	2dB	3dB	5dB	7dB	10dB	15dB
SC	<u>EA4001</u>	<u>EA4002</u>	<u>EA4003</u>	<u>EA4005</u>	<u>EA4007</u>	<u>EA4010</u>	EA4015
LC	EA4021	<u>EA4022</u>	<u>EA4023</u>	EA4025	<u>EA4027</u>	<u>EA4030</u>	EA4035

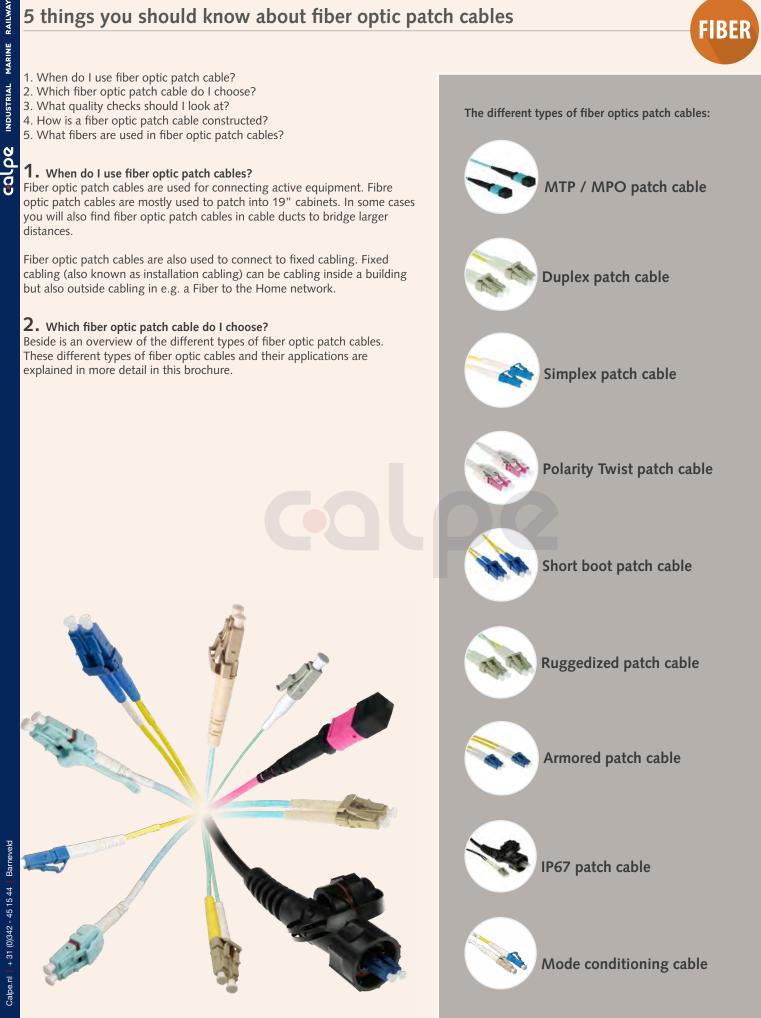
Fiber optic attenuator

ACT Fiber optic too	
Fiber optic cable tester	<u>CX1007</u>
Fiber optic microscope	<u>CX1008</u>



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5 things you should know about fiber optic patch cables





3

3. What quality characteristics should I look for as a minimum? Based on the appearance of a cable, it is impossible to determine the quality of a cable. But how do you determine the quality of a fiber optic patch cable? There are a number of points that you should at least pay attention to in order to determine the quality.

Grades

The International Electrotechnical Commission (IEC) has established various grades of quality. Grade A to C, where at Grade A you are assured of the best quality fibers and connectors. For professional applications where reliability is paramount we recommend Grade A.

Test report

We also recommend that you choose fiber optic cables that come with an individual test report. This means that each fiber in the cable has been tested for how much light is attenuated. This attenuation has a direct impact on the speed and reliability of your network. By choosing fiber optic patch cables with an individual test report you are assured of a cable that has been tested and you know the attenuation values in your network.

Quality control in the production process

Fibre type and an individual test report do not tell the whole story, however. Of great importance is the production process and its quality assurance. An incorrectly polished connector can cause the optical performance of your connector to deteriorate within a short time after installation. This is not visible in the test report because it is measured directly after production. Reduced optical performance can also occur with Grade A parts due to errors in the manufacturing process.

If you choose a reputable brand, the chance of errors in your network is minimal.

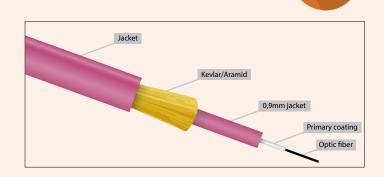
ACT is a reputable brand and has built a reputation over the years for delivering consistent quality. At ACT, we are proud of this and we will do everything to continue to deliver high consistent quality. With ACT cables you are assured of this and you will notice it through a reliable network.

4. How is a fiber optic patch cable constructed?

A fiber optic patch cable is composed of the following elements: - The fiberglass / fiber

- Primary and secondary coating: strengthens the fiber and makes it suitable for installation.
- Kevlar*: the fiber is protected from tensile stress by the kevlar/ aramid around the secondary coating.
- The outer jacket m(also called jacket): strengthens the
- construction and protects the cable from external influences.

*Kevlar's main property is that it is very strong. For example, kevlar is used in bulletproof vests and high-end speaker systems. It is therefore ideal for protecting the fiber.



5. What fibers and connectors are used in patch cables? Fiber optic patch cables are available with different types of fibers and connectors.

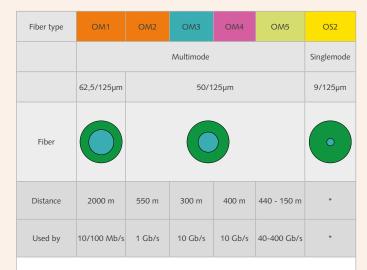
Multimode fiber for short distances

Multimode fibers are used for short distances and have as light source an LED or VCSEL. These fibers are limited in length and speed. There are several generations of multimode fibers available, from OM1 to OM5. Which variant you can best use depends on the application and if you are going to extend an existing network. You can find more information in the table.

Single-mode fiber for long distances

Single-mode fibers are used for longer distances and have almost infinite bandwidth. The light source of a singlemode fiber is a laser, therefore it is more powerful and accurate, but also more expensive than an LED or VCSEL. In recent years, however, the price differential has continued to drop, so singlemode is increasingly used for short distances as well.

Below you can find an overview of different fiber optics types.



* The maximum length is related to the most suitable speed and depends on the transceiver

FIBER

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MTP / MPO patch cable

If you want to make connections with high speeds (40G and more) an MTP/MPO patchcord is an excellent choice. The connector is able to connect 12 fibers at once over 1 compact cable. This cable is typically applied in situations where the bandwidth is high and the distance short, mostly up to 100 meters making this the high speed cable of choice in datacenters and server rooms. For lengths from 20 meters see our Trunk cables.

ACT MTP/MPO to MTP/MPO patch cables

Colour	1m	2m	3m	5m	7m	10m	12m	15m	20m
OM4 Polarity A	<u>RL7741</u>	<u>RL7742</u>	<u>RL7743</u>	<u>RL7745</u>	<u>RL7747</u>	<u>RL7750</u>	<u>RL7752</u>	<u>RL7755</u>	<u>RL7760</u>
OM4 Polarity B	<u>RL7761</u>	<u>RL7762</u>	<u>RL7763</u>	<u>RL7765</u>	<u>RL7767</u>	<u>RL7770</u>	<u>RL7772</u>	<u>RL7775</u>	<u>RL7780</u>
OS2 Polarity A	<u>RL7781</u>	<u>RL7782</u>	<u>RL7783</u>	<u>RL7785</u>	<u>RL7787</u>	<u>RL7790</u>	<u>RL7792</u>	<u>RL7795</u>	<u>RL7800</u>

ALT MTP/MPO to LC fanout cables

Colour	1m	2m	3m	5m
OM4 8 fibers	<u>RL7841</u>	<u>RL7842</u>	<u>RL7843</u>	<u>RL7845</u>
OM4 12 fibers	<u>RL7851</u>	<u>RL7852</u>	<u>RL7853</u>	<u>RL7855</u>
OS2 8 fibers	<u>RL7861</u>	<u>RL7862</u>	<u>RL7863</u>	<u>RL7865</u>
OS2 12 fibers	<u>RL7871</u>	<u>RL7872</u>	<u>RL7873</u>	<u>RL7875</u>

Duplex patch cable – Most commonly used

Duplex patchcords are the most commonly used patchcords. Duplex patchcords consist of two connected cables with one fiber per cable. The two cables can easily be seperated by zipping them apart, for this reason duplex patchcords are also known as zipcords. Duplex patchcords use one fiber for sending and one for receiving, enabling two way communication for applications like internet and interactive tv. Most of the following cables are modern variants of duplex patchcords with an improvement. This applies to uniboot (HD), short boot ruggedized and armored patchcords.

ACT 50/125µm OM5 Multimode patch cable LSZH

Colour	Connectors	0.5m	1m	1.5m	2m	3m	5m
Lime	LC-LC	<u>RL5800</u>	<u>RL5801</u>	<u>RL5851</u>	<u>RL5802</u>	<u>RL5803</u>	<u>RL5805</u>
Lime	LC-SC	<u>RL5900</u>	<u>RL5901</u>	<u>RL5951</u>	<u>RL5902</u>	<u>RL5903</u>	<u>RL5905</u>

ACT 50/125µm OM4 Multimode duplex patch cable LSZH

Colour	Connectors	0.25m	0.5m	1m	1.5m	2m	3m	5m	10m	15m	20m	25m	30m	50m
Erika Violet	LC-LC	<u>RL9752</u>	<u>RL9700</u>	<u>RL9701</u>	<u>RL9751</u>	<u>RL9702</u>	<u>RL9703</u>	<u>RL9705</u>	<u>RL9710</u>	<u>RL9715</u>	<u>RL9720</u>	<u>RL9725</u>	<u>RL9730</u>	<u>RL9750</u>
Erika Violet	LC-SC			<u>RL8701</u>	<u>RL8751</u>	<u>RL8702</u>	<u>RL8703</u>	<u>RL8705</u>	<u>RL8710</u>	<u>RL8715</u>	<u>RL8720</u>	<u>RL8725</u>	<u>RL8730</u>	<u>RL8750</u>
Erika Violet	SC-SC			<u>RL3701</u>	<u>RL3751</u>	<u>RL3702</u>	<u>RL3703</u>	<u>RL3705</u>	<u>RL3710</u>	<u>RL3715</u>	<u>RL3720</u>		<u>RL3730</u>	<u>RL3750</u>

ALT 50/125µm OM3 Multimode duplex patch cable LSZH

Colour	Connectors	0.25m	0.50m	1m	1.5m	2m	2.5m	3m	4m	5m	7m	10m	15m	20m	25m	30m	50m
Aqua	LC-LC	<u>RL9652</u>	<u>RL9600</u>	<u>RL9601</u>	<u>RL9651</u>	<u>RL9602</u>	<u>RL9653</u>	<u>RL9603</u>	<u>RL9604</u>	<u>RL9605</u>	<u>RL9607</u>	<u>RL9610</u>	<u>RL9615</u>	<u>RL9620</u>	<u>RL9625</u>	<u>RL9630</u>	<u>RL9650</u>
Aqua	LC-SC		<u>RL8600</u>	<u>RL8601</u>	<u>RL8651</u>	<u>RL8602</u>		<u>RL8603</u>		<u>RL8605</u>	<u>RL8607</u>	<u>RL8610</u>	<u>RL8615</u>	<u>RL8620</u>		<u>RL8630</u>	<u>RL8650</u>
Aqua	LC-ST			<u>RL7601</u>	<u>RL7651</u>	<u>RL7602</u>		<u>RL7603</u>		<u>RL7605</u>	<u>RL7607</u>	<u>RL7610</u>		<u>RL7620</u>			
Aqua	SC-SC		<u>RL3600</u>	<u>RL3601</u>	<u>RL3651</u>	<u>RL3602</u>		<u>RL3603</u>		<u>RL3605</u>	<u>RL3607</u>	<u>RL3610</u>	<u>RL3615</u>	<u>RL3620</u>		<u>RL3630</u>	<u>RL3650</u>



Fiber optic cable

ACT 50/125µm OM2 Multimode duplex patch cable LSZH

													-
Colour	Connectors	0.50m	1m	1.5m	2m	3m	5m	10m	15m	20m	25m	30m	50m
Orange	LC-LC	<u>RL9500</u>	<u>RL9501</u>	<u>RL9551</u>	<u>RL9502</u>	<u>RL9503</u>	<u>RL9505</u>	<u>RL9510</u>	<u>RL9515</u>	<u>RL9520</u>	<u>RL9525</u>	<u>RL9530</u>	<u>RL9550</u>
Orange	LC-SC	<u>RL8500</u>	<u>RL8501</u>	<u>RL8551</u>	<u>RL8502</u>	<u>RL8503</u>	<u>RL8505</u>	<u>RL8510</u>	<u>RL8515</u>	<u>RL8520</u>		<u>RL8530</u>	<u>RL8550</u>
Orange	LC-ST		<u>RL7501</u>	<u>RL7551</u>	<u>RL7502</u>	<u>RL7503</u>	<u>RL7505</u>	<u>RL7510</u>	<u>RL7515</u>	<u>RL7520</u>		<u>RL7530</u>	<u>RL7550</u>
Orange	SC-SC	<u>RL3500</u>	<u>RL3501</u>	<u>RL3551</u>	<u>RL3502</u>	<u>RL3503</u>	<u>RL3505</u>	<u>RL3510</u>	<u>RL3515</u>	<u>RL3520</u>		<u>RL3530</u>	<u>RL3550</u>
Orange	SC-ST	<u>RL2500</u>	<u>RL2501</u>	<u>RL2551</u>	<u>RL2502</u>	<u>RL2503</u>	<u>RL2505</u>	<u>RL2510</u>	<u>RL2515</u>	<u>RL2520</u>		<u>RL2530</u>	<u>RL2550</u>
Orange	ST-ST	<u>RL1500</u>	<u>RL1501</u>	<u>RL1551</u>	<u>RL1502</u>	<u>RL1503</u>	<u>RL1505</u>	<u>RL1510</u>	<u>RL1515</u>	<u>RL1520</u>		<u>RL1530</u>	<u>RL1550</u>
				•				•				•	

ALT 62,5/125 μ M OM1 Multimode duplex patch cable LSZH

Connectors	0.50m	1m	1.5m	2m	3m	5m	10m	15m	20m	25m	30m	50m
LC-LC	<u>RL9000</u>	<u>RL9001</u>	<u>RL9051</u>	<u>RL9002</u>	<u>RL9003</u>	<u>RL9005</u>	<u>RL9010</u>	<u>RL9015</u>	<u>RL9020</u>	<u>RL9025</u>	<u>RL9030</u>	<u>RL9050</u>
LC-SC	<u>RL8000</u>	<u>RL8001</u>	<u>RL8051</u>	<u>RL8002</u>	<u>RL8003</u>	<u>RL8005</u>	<u>RL8010</u>	<u>RL8015</u>	<u>RL8020</u>		<u>RL8030</u>	
LC-ST		<u>RL7001</u>	<u>RL7051</u>	<u>RL7002</u>	<u>RL7003</u>	<u>RL7005</u>	<u>RL7010</u>	<u>RL7015</u>	<u>RL7020</u>		<u>RL7030</u>	<u>RL7050</u>
SC-SC	<u>RL3000</u>	<u>RL3001</u>	<u>RL3051</u>	<u>RL3002</u>	<u>RL3003</u>	<u>RL3005</u>	<u>RL3010</u>	<u>RL3015</u>	<u>RL3020</u>			<u>RL3050</u>
SC-ST	<u>RL2000</u>	<u>RL2001</u>	<u>RL2051</u>	<u>RL2002</u>	<u>RL2003</u>	<u>RL2005</u>	<u>RL2010</u>	<u>RL2015</u>	<u>RL2020</u>		<u>RL2030</u>	<u>RL2050</u>
ST-ST	<u>RL1000</u>	<u>RL1001</u>	<u>RL1051</u>	<u>RL1002</u>	<u>RL1003</u>	<u>RL1005</u>	<u>RL1010</u>	<u>RL1015</u>	<u>RL1020</u>		<u>RL1030</u>	<u>RL1050</u>
	LC-LC LC-SC LC-ST SC-SC SC-ST	LC-LC RL9000 LC-SC RL8000 LC-ST SC-SC RL3000 SC-ST RL2000	LC-LC RL9000 RL9001 LC-SC RL8000 RL8001 LC-ST RL7001 SC-SC RL3000 RL3001 SC-ST RL2000 RL2001	LC-LC RL9000 RL9001 RL9051 LC-SC RL8000 RL8001 RL8051 LC-ST RL7001 RL7051 SC-SC RL3000 RL3001 RL3051 SC-ST RL2000 RL2001 RL2051	LC-LC RL9000 RL9001 RL9051 RL9002 LC-SC RL8000 RL8001 RL8051 RL8002 LC-ST RL8000 RL7001 RL7051 RL7002 SC-SC RL3000 RL3001 RL3051 RL3002 SC-ST RL2000 RL2001 RL2051 RL2051	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 LC-ST RL8000 RL7001 RL7051 RL7002 RL7003 SC-SC RL3000 RL3001 RL3051 RL3002 RL3003 SC-ST RL2000 RL2001 RL2051 RL2002 RL2003	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 RL9051 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 RL8005 LC-ST RL3000 RL7001 RL7051 RL7002 RL7003 RL7005 SC-SC RL3000 RL3001 RL3051 RL3002 RL3003 RL3005 SC-ST RL2000 RL2001 RL2051 RL2002 RL2003 RL2005	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 RL9005 RL9010 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 RL8005 RL8010 LC-ST RL7001 RL7051 RL7002 RL703 RL7050 RL7010 SC-SC RL3000 RL2001 RL2051 RL2002 RL2003 RL2005 RL2010	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 RL9055 RL9010 RL9015 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 RL8005 RL8010 RL8015 LC-ST RL7001 RL7051 RL7002 RL7003 RL7005 RL7010 RL7015 SC-SC RL3000 RL2001 RL2051 RL2002 RL2003 RL2005 RL2010 RL2015	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 RL9055 RL9010 RL9015 RL9020 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 RL8005 RL8010 RL8015 RL8020 LC-SC RL8000 RL8001 RL8051 RL8002 RL8003 RL8055 RL8010 RL8015 RL8020 LC-ST RL3000 RL3001 RL3051 RL7002 RL7003 RL7055 RL7010 RL7015 RL7020 SC-SC RL3000 RL2001 RL2051 RL2002 RL2003 RL3005 RL3010 RL3015 RL3020 SC-ST RL2000 RL2001 RL2051 RL2002 RL2003 RL2055 RL2010 RL2015 RL2015	LC-LC RL9000 RL9001 RL905 RL9002 RL903 RL905 RL9010 RL9015 RL9020 RL9025 LC-SC RL8000 RL8001 RL8015 RL8002 RL8003 RL8005 RL8010 RL8015 RL8020 RL9025 LC-SC RL8000 RL8001 RL8015 RL8002 RL8003 RL8005 RL8010 RL8015 RL8020 LC-ST RL7001 RL7051 RL7002 RL7003 RL7005 RL7010 RL7015 RL7020 SC-SC RL3000 RL3001 RL3051 RL3020 RL3002 RL3003 RL3005 RL3010 RL3015 RL3020 SC-ST RL2000 RL2001 RL2051 RL2005 RL2010 RL2015 RL2020	LC-LC RL9000 RL9001 RL9051 RL9002 RL9003 RL9005 RL9010 RL9015 RL9020 RL9025 RL9030 LC-SC RL8000 RL8001 RL8001 RL8002 RL8002 RL8003 RL8005 RL8010 RL8015 RL8020 RL8030 RL8030 LC-ST RL3000 RL3001 RL7010 RL7010 RL7010 RL7010 RL7020 RL7030 RL7030 RL7010 RL7015 RL7020 RL7030 RL7030 RL7010 RL7015 RL7020 RL7030 RL7030 RL7010 RL7015 RL7020 RL7030 RL7030 RL7030 RL7030 RL7010 RL7015 RL7020 RL7030 RL7030 SC-ST RL2000 RL2010 RL2010 RL2010 RL2010 RL2010 RL2020 RL2030 RL2030

ALT 9/125µm OS2 Single mode duplex patch cable LSZH

				pron pare													
Colour	Connectors	0.25m	0.5m	1m	1.5m	2m	2.5m	3m	4m	5m	7m	10m	15m	20m	25m	30m	50m
Yellow	LC-LC	<u>RL9952</u>	<u>RL9900</u>	<u>RL9901</u>	<u>RL9951</u>	<u>RL9902</u>	<u>RL9953</u>	<u>RL9903</u>	<u>RL9904</u>	<u>RL9905</u>	<u>RL9907</u>	<u>RL9910</u>	<u>RL9915</u>	<u>RL9920</u>	<u>RL9925</u>	<u>RL9930</u>	<u>RL9950</u>
Yellow	LC-SC		<u>RL8900</u>	<u>RL8901</u>	<u>RL8951</u>	<u>RL8902</u>		<u>RL8903</u>		<u>RL8905</u>	<u>RL8907</u>	<u>RL8910</u>	<u>RL8915</u>	<u>RL8920</u>	<u>RL8925</u>	<u>RL8930</u>	<u>RL8950</u>
Yellow	LC-ST			<u>RL7901</u>	<u>RL7951</u>	<u>RL7902</u>		<u>RL7903</u>		<u>RL7905</u>		<u>RL7910</u>	<u>RL7915</u>	<u>RL7920</u>		<u>RL7930</u>	<u>RL7950</u>
Yellow	SC-SC		<u>RL3900</u>	<u>RL3901</u>	<u>RL3951</u>	RL3902		<u>RL3903</u>		<u>RL3905</u>		<u>RL3910</u>	<u>RL3915</u>	<u>RL3920</u>		<u>RL3930</u>	<u>RL3950</u>
Yellow	SC-ST			<u>RL2901</u>	<u>RL2951</u>	<u>RL2902</u>		<u>RL2903</u>		RL2905		<u>RL2910</u>	<u>RL2915</u>	<u>RL2920</u>			
Yellow	LC/APC-LC/APC		<u>RL2600</u>	RL2601	<u>RL2651</u>	RL2602		<u>RL2603</u>		RL2605		RL2610		<u>RL2620</u>			
Yellow	LC/APC-SC/APC			<u>RL2701</u>		<u>RL2702</u>		<u>RL2703</u>		RL2705		<u>RL2710</u>					
Yellow	LC/APC-LC/UPC			<u>RL2801</u>		<u>RL2802</u>		<u>RL2803</u>		RL2805		<u>RL2810</u>					
Yellow	SC/APC8-LC/PC		<u>RL8800</u>	<u>RL8801</u>	<u>RL8851</u>	<u>RL8802</u>		<u>RL8803</u>		<u>RL8805</u>		<u>RL8810</u>	<u>RL8815</u>	<u>RL8820</u>	<u>RL8825</u>	<u>RL8830</u>	<u>RL8850</u>
Yellow	SC/APC8-SC/PC		<u>RL3800</u>	<u>RL3801</u>		<u>RL3802</u>		<u>RL3803</u>		<u>RL3805</u>		<u>RL3810</u>	<u>RL3815</u>	<u>RL3820</u>	<u>RL3825</u>	<u>RL3830</u>	<u>RL3850</u>
Yellow	SC/APC8-SC/APC8		<u>RL1600</u>	<u>RL1601</u>		<u>RL1602</u>		<u>RL1603</u>		<u>RL1605</u>		<u>RL1610</u>	<u>RL1615</u>	<u>RL1620</u>			
Yellow	E2000/APC-SC/UPC			<u>RL3101</u>		<u>RL3102</u>		<u>RL3103</u>		<u>RL3105</u>	<u>RL3107</u>	<u>RL3110</u>					
Yellow	E2000/APC-LC/UPC			<u>RL3201</u>		<u>RL3202</u>		<u>RL3203</u>		<u>RL3205</u>	<u>RL3207</u>	<u>RL3210</u>					

Simplex patchcords - sending and receiving over a single fiber

You can cut your need of the fibers/cables in half by using simplex patchcords. This works with fiber optic modules that enable two way communication over one fiber. These kind of patchcords are used a lot in FTTH applications for minimizing the usage of fibers. Simplex patchcords are only available in Singlemode and not in Multimode.



ACT 9/125µm OS2	single mode simplex p	atch cable LSZH				*
Colour	Connectors	0.5m	1m	1.5m	2m	3m
Yellow	LC-LC	<u>RL9990</u>	<u>RL9991</u>	<u>RL9999</u>	<u>RL9992</u>	<u>RL9993</u>



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Short boot patchcords - When space is limited

When you have limited space for the connector because of a small housing or short distance between the panel and door of a 19" cabinet short boot patchcords are a great solution. Short boot differs from duplex patchcords by having a shorter boot on the connector.

ACT 9/1	25µm OS2 Sing	le mode dup	olex patch ca	ble LSZH								24
Colour	Connectors	0.5m	1m	2m	3m	5m	10m	15m	20m	25m	30m	50m
Yellow	LC-LC short boot	<u>RL1700</u>	<u>RL1701</u>	<u>RL1702</u>	<u>RL1703</u>	<u>RL1705</u>	<u>RL1710</u>	<u>RL1715</u>	<u>RL1720</u>	<u>RL1725</u>	<u>RL1730</u>	<u>RL1750</u>
Yellow	LC short boot -SC	<u>RL1800</u>	<u>RL1801</u>	<u>RL1802</u>	<u>RL1803</u>	<u>RL1805</u>	<u>RL1810</u>	<u>RL1815</u>	<u>RL1820</u>	<u>RL1825</u>	<u>RL1830</u>	<u>RL1850</u>



Polarity Twist patch cables - for high density panels and easy cable management

Polarity Twist connectors offer several advantages:

- The polarity of the two fibers can be adjusted within seconds.
- You do this by twisting the outside of the connector.
- Halving the number of fanout cables by having two fibers instead of one fiber per connector.
- Thinner fanout cables, 2mm instead of 3mm thick a savings of 33%.



					•													also.
Colour	Connectors	0.25m	0.5m	1m	1.5m	2m	3m	5m	7m	10m	12m	15m	17m	20m	22m	25m	27m	30m
Yellow	LC-LC	<u>RL8252</u>	<u>RL8200</u>	<u>RL8201</u>	<u>RL8251</u>	<u>RL8202</u>	<u>RL8203</u>	<u>RL8205</u>	<u>RL8207</u>	<u>RL8210</u>	<u>RL8212</u>	<u>RL8215</u>	<u>RL8217</u>	<u>RL8220</u>	<u>RL8222</u>	<u>RL8225</u>	<u>RL8227</u>	<u>RL8230</u>

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Ruggedized patchcords - better mechanical protection

You can use ruggedized patchcords for longer distances, 10 meter or more. Normal patchcords are suited for short distances within a 19" cabinet. Ruggedized patchcords have an extra jacket for improved mechanical protection. They are also called Flatoval fiber optic cables because of the oval shape of the extra jacket.

			50/125µm	OM3	Duplex	ruggedized	patch	cable	LSZH
--	--	--	----------	-----	--------	------------	-------	-------	------

Colour	Connectors	10m	20m	30m	40m	50m
Aqua	LC-LC	<u>RL5101</u>	<u>RL5102</u>	<u>RL5103</u>	<u>RL5104</u>	<u>RL5105</u>
Aqua	LC-SC	<u>RL5201</u>	<u>RL5202</u>	<u>RL5203</u>	<u>RL5204</u>	<u>RL5205</u>
Aqua	SC-SC	<u>RL5301</u>	<u>RL5302</u>	<u>RL5303</u>	<u>RL5304</u>	<u>RL5305</u>

ALT 9/125µm OS2 duplex ruggedized patch cable LSZH

Colour	Connectors	10m	20m	30m	40m	50m
Yellow	LC-LC	<u>RL5401</u>	<u>RL5402</u>	<u>RL5403</u>	<u>RL5404</u>	<u>RL5405</u>
Yellow	LC-SC	<u>RL5601</u>	<u>RL5602</u>	<u>RL5603</u>	<u>RL5604</u>	<u>RL5605</u>
Yellow	SC-SC	<u>RL5701</u>	<u>RL5702</u>	<u>RL5703</u>	<u>RL5704</u>	<u>RL5705</u>



Armored patchcords – the best mechanical protection

When your patchcords are exposed to extreme conditions in harsh environments you can chose armored patchcords. These are patchcords with a metal armor offering the best protection. This type of patchcord is commonly used in industrial or offshore environments.

ACT 9	/125µm O	S2 duplex	armored	fiber patch	1 cable										44
Colour	Connectors	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m	40m	50m
Yellow	LC-LC	<u>RL3300</u>	<u>RL3301</u>	<u>RL3351</u>	<u>RL3302</u>	<u>RL3303</u>	<u>RL3305</u>	<u>RL3307</u>	<u>RL3310</u>	<u>RL3315</u>	<u>RL3320</u>	<u>RL3325</u>	<u>RL3330</u>	<u>RL3340</u>	<u>RL3350</u>

ACT 5	0/125µm (OM3 dupl	ex armore	d fiber pa	tch cable										44
Colour	Connectors	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m	25m	30m	40m	50m
Aqua	LC-LC	<u>RL3400</u>	<u>RL3401</u>	<u>RL3451</u>	<u>RL3402</u>	<u>RL3403</u>	<u>RL3405</u>	<u>RL3407</u>	<u>RL3410</u>	<u>RL3415</u>	<u>RL3420</u>	<u>RL3425</u>	<u>RL3430</u>	<u>RL3440</u>	<u>RL3450</u>

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IP67 patch cable

INDUSTRIAL MARINE RAILWAY

ماله

For outside use there are patchcords with an extra housing for IP67 water- and dust resistance. These cables are commonly used for connecting antenna's in mobile base stations to ground cabling for wireless applications like wifi and mobile internet.

Colour Connectors 1m 2m 5m 10m 15m 20m 30m 40m 50m District District District District District District District	АСТ омз									•	1
	Colour	Connectors	1m	2m	5m	10m	15m	20m	30m	40m	50m
Back LC(IP67)-LC <u>RL7101</u> <u>RL7102</u> <u>RL7105</u> <u>RL7110</u> <u>RL7115</u> <u>RL7120</u> <u>RL7130</u> <u>RL7130</u> <u>RL7140</u> <u>RL7150</u>	Black	LC(IP67)-LC	<u>RL7101</u>	<u>RL7102</u>	<u>RL7105</u>	<u>RL7110</u>	<u>RL7115</u>	<u>RL7120</u>	<u>RL7130</u>	<u>RL7140</u>	<u>RL7150</u>

АСТ ОМЗ										44
Colour	Connectors	1m	2m	5m	10m	15m	20m	30m	40m	50m
Black	LC(IP67)-LC (IP67)	<u>RL7201</u>	<u>RL7202</u>	<u>RL7205</u>	<u>RL7210</u>	<u>RL7215</u>	<u>RL7220</u>	<u>RL7230</u>	<u>RL7240</u>	<u>RL7250</u>

ACT OS2										-14
Colour	Connectors	1m	2m	5m	10m	15m	20m	30m	40m	50m
Black	LC(IP67)-LC	<u>RL7301</u>	<u>RL7302</u>	<u>RL7305</u>	<u>RL7310</u>	<u>RL7315</u>	<u>RL7320</u>	<u>RL7330</u>	<u>RL7340</u>	<u>RL7350</u>

ACT OS2										44
Colour	Connectors	1m	2m	5m	10m	15m	20m	30m	40m	50m
Black	LC(IP67)-LC (IP67)	<u>RL7401</u>	<u>RL7402</u>	<u>RL7405</u>	<u>RL7410</u>	<u>RL7415</u>	<u>RL7420</u>	<u>RL7430</u>	<u>RL7440</u>	<u>RL7450</u>

Mode conditioning cable

- Applied by Single Mode Gigabit ethernet equipment over Multimode installed fiber optic cabling.
- Developed for Longwave (-LX) Multi Mode applications for Gigabit ethernet in accordance with IEEE-802.3Z.
- Masks Differential Mode Delay (DMD) signal quality reduction.

	ode conditio	ning 2x LC 50/12	25 μm - 1x LC 50/125 μm + 1x LC 9/125 μm patch cable	
Colour Connectors 2m				
Yellow	Aqua	LC-LC	<u>RL9998</u>	



SFP modules

Nowadays, more and more devices are equipped with a port for an SFP module. To discover what SFP module you need and what to pay attention to read the following article.

What is an SFP module?

An SFP module is a plug-in module for in a device that provides fiber optic communication. The SFP module is equipped with both a light source, LED or laser, and a sensor that detects light.

A traditional network cable with an RJ45 connector is connected directly to the device. With fiber optics, there is an extra step, the cable connects to the SFP module, which plugs into the device as shown below:

On the right, a network cable connected directly to the media converter. On the left, a fiber optic patch cable connected to the SFP module, the SFP module is plugged into the media converter.

The SFP module serves as an interface between the cable and the equipment and is responsible for optical communication.

3 advantages of SFP modules

The 3 biggest advantages of using SFP fiber modules are:

- 1. Standardization
- 2. Flexibility
- 3. Continuity

1 SFP modules are the standard for fiber optic communication

Manufacturers of network equipment support the SFP, SFP+ and QSFP standards. SFP modules are used in different devices such as switches, routers, firewalls, servers, media converters and storage devices. The equipment has a port where an SFP module can be plugged in. The abbreviation SFP stands for Small Form Factor Pluggable.

The standard for the use of SFP modules was established in cooperation with the various manufacturers. This standard is therefore called an MSA, which stands for Multi-Source Agreement.

2 SFP modules ensure maximum flexibility in a fiber optic network

A fiber optic cable is connected to an SFP module, which is placed in the switch. The SFP module serves as an interface between the fiber optic cable and the equipment. This ensures maximum flexibility because the SFP can be adapted without having to modify or replace the equipment.

Situations in which only the SFP module can be changed, instead of replacing the entire equipment:

- Transition to a network with a different type of fiber; for example, from single-mode to multimode.
- Changing distance; for example, from 100 meters to 80 kilometers.
- Change to another speed; for example, if the speed of the switch changes from 1G to 10G.
- LC, an SC connector is placed on the cabling.

3 Network continuity through the use of hot swappable SFP modules

In case of changes in fiber type, distance, speed and connector, the SFP module will be adapted. An important advantage is that the equipment does not have to be switched off or restarted when the SFP modules are installed, which ensures network continuity.

Keeping equipment operational while placing and/or replacing fiber optic (SFP) modules is called 'hot swappable'.



What are the different types and names of SFP modules?

There are two common formats of SFP modules, these formats are also called form factor. **The SFP form factor and the QSFP form factor.**



A 100G QSFP28 module with the QSFP form factor.



A 1G SFP module with the SFP form factor.

The SFP form factor includes:

- SFP module 100Mb or 1Gb
- SFP+ module 10Gb
- SFP28 module 25Gb
- SFP56 module 50Gb
- The QSFP form factor includes:
- QSFP+ 40Gb
- QSFP28 -100Gb

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- QSFP56- 200Gb
- QSFP-DD -200/400Gb

Because SFP modules are responsible for optical communication they are also called optics. Another term is transceiver, which is a combination of the words transmitter and receiver. What do I need to consider when buying an SFP module? / How do I choose the right SFP module?



Just because an SFP module physically fits into a port on a device does not mean that the speed of the transceiver matches the speed of the port. Check the device specifications to see what speed is supported and choose an SFP module with the same speed.

Encoding

Do I need another SFP module for a Cisco switch?

Well-known big brands in the field of network and telecom equipment often do require coding for an SFP module to be compatible with the brand. For 100% brand compatibility, ACT offers encoded SFP modules. Many other manufacturers including ACT work with open coding; SFP modules with open coding are interchangeable. Open coding is also called generic coding.

Fiber type
 What about SFP's and multimode/singlemode cables?

It is important to use the appropriate SFP module for the type of fiber. The ACT modules SFP SX and SFP+ SR are suitable for multimode. The SFP LX and SFP+ LR are suitable for singlemode cabling.

Support
 Where do I turn for technical support?

It is important to choose a brand with knowledge and support in the field of optics. Choose a brand with a good reputation such as ACT. If you have any questions, please contact our support team.

• Distance What distance can I cover?

Think about how long the connection needs to be. The distance that can be covered differs per type of SFP and fiber type. With multimode the maximum distance is 550 metres, for longer distances it is better to choose single mode.

VIDE

Introduction of video cables:

- HDMI (High-Definition Multimedia Interface)
- DisplayPort
- DVI (Digital Visual Interface)
- VGA (Video Graphics Array)

Quick summary:

HDMI is the most common video cable and supports video and audio over a single cable, including 8K video resolutions. It defines todays standard for all kind of modern Audio/Video systems. The recommended cable length for HDMI is 5 meter, with an exception for HDMI premium certified and AOC cables. DisplayPort is the latest video interface and offers a higher level then HDMI, including 8K resolutions and higher. DisplayPort is compatible with many display connections, making it the universal AV video source connection. With simple adapters it's even backward compatible with HDMI, VGA and DVI. For DisplayPort we advise a maximum cable length of 3 meter.

VGA is the oldest video interface and suitable for analogue signals, perfect for older monitor systems. The maximum length recommended for VGA cables is 15 meter. Compared to VGA, the DVI connection is more versatile. Its convertible to both VGA and HDMI when using suitable adapters. Providing a digital signal for better video quality and due to higher bandwidth, it can achieve maximum resolutions of 2560×1600 at 60Hz using DVI Dual Link. Cable lengths up to 5m will work for display resolutions up to 1920 \times 1200.

For non UHD displays the best, cost saving, option will be an HDMI 1.4 cable with a max resolution of 2560×1600 at 75Hz as well as 1920×1080 at 144Hz. These resolutions are very popular amongst online competitive PC gamers. 4K resolutions are still supported with a max refresh rate of 30Hz.

HDMI v1.4 also supports HDMI-CEC. This protocol gives possibilities to let devices communicate with each other. For example, a complete home cinema set with speakers and TV can be powered by switching on the Blu-ray player.

HDMI v2.0 is recommended when a 4K@60Hz resolution needs to be supported. It also supports HDR: High Dynamic Range. HDR provides higher contrast, rich colours, deep black value and more intense white tones. To ensure the highest 4K@60Hz quality a premium certified cable approved by the HDMI.org is a good option.

For certain business solutions we advise using a lockable HDMI cable to prevent signal loss from the device. Combining this feature with a HDMI premium certified cable provides the most secured business solution.

Active Optical Cables (AOC cable) are equipped with fiber and copper conductors. The cable is lighter and more flexible. Which makes it perfect for installation where space is limited and longer distances need to be covered.

Normally the maximum advised distance is around 5 meters, with an AOC cable it is possible to cover a length of 100m. With resolutions up to 8K@60Hz without any signal loss. In terms of installation this cable excels. It can be equipped with a Mini HDMI or Mini DP connector, including draw bar eye, which makes it much easier to guide the cable through holes or pipes. In the end, simply add an adapter to make it full size again. A proper solution to use for conference rooms, classrooms, displays and more.

HDMI



Let's start with HDMI, the most common video cable used in the market. You can find it in al modern TVs, monitors, and graphics cards. Compared to the other types of video cables, HDMI is the most common interface for TV.

HDMI is available in many versions, the most common are 1.4 and 2.0 HDMI High Speed. The latest version is v2.1, HDMI Ultra High Speed. To ensure the best quality an HDMI Premium Certified cable up to 4K @60Hz resolution or an HDMI Ultra High Speed 8K Certified cable is recommended. Both type of cables are certified and approved by the HDMI.org standard, which assures you of a high quality cable that supports all of the corresponding HDMI features.



HDMI v2.1 is the latest HDMI version and features the highest specifications. This version increases the overall data rate to 48Gb/s, supporting resolutions up to 8K@60Hz and 4K@120Hz. HDMI 2.1 is labeled as Ultra HDMI High Speed and the best option to get the most out of 8K or 4K HDMI video equipment.

DisplayPort



You can find DisplayPort in most of the modern monitors. Just like HDMI there are different versions, the most common one is DP 1.2. The maximum supported resolution for DP 1.2 is 4K at 60Hz. This is mandatory for gaming monitors that support Nvidia G-Sync or AMD Free Sync. In case of NVIDIA G-Sync, DisplayPort is required.

One of the main advantages of DisplayPort is the ability of multiple video streams (MST) through daisy-chaining. You can recognize daisy-chaining when the monitor has both an input and output DisplayPort. Connect the first monitor to the computer and the second monitor to the first monitor. If both the monitor and the computer support MST daisy-chaining, the two screens work as separate screens.

As we mentioned earlier, on TV screens you will mostly find HDMI connections. In case you want to connect your device with a DisplayPort source to your TV, there is the possibility to connect an HDMI to DisplayPort converter cable.

DisplayPort version 1.4, adds support for HDR10 as well as 8K@60Hz and 4K@144Hz by using DSC (Display Stream Compression) encoding with 3:1 compression ratio. As mentioned before, HDMI, as well as DisplayPort support AOC, covering much longer distances then standard specified without any signal loss. DisplayPort 2.0 recently has been introduced supporting 16K @60Hz and 10K @72Hz Displayport AOC (Active Optical Cable) features fiber and copper conductors making the cable lighter and more flexible. AOC cables are perfect for installations where space is limited and longer distances need to be covered. While normally the maximum recommended distance is 5 meters, you can easily reach up to 100 meters without any signal loss with this type of cable.

A proper solution to use for conference rooms, classrooms, displays and more. In terms of installation, we also offer AOC cables that comes with a detachable plug for easy installation through electrical conduits and plenum spaces.

DVI



The DVI interface is designed to transmit uncompressed digital video and can be configured to support multiple modes such as DVI-A (analog only), DVI-D (digital only) or DVI-I (digital and analog). Dual link DVI adds six pins, at the center of the connector, increasing the bandwidth and supporting resolutions up to 2560 × 1600 at 60 Hz. A connector with these additional pins is sometimes referred to as DVI-DL (dual link)

The main advantage of the DVI port is the fact that it is quite versatile, meaning it's convertible to both VGA and HDMI by using suitable adapters.

VGA

Compared to the other mentioned video interfaces, VGA cannot keep up, simply because it can only transmit analogue video signals. For older computer systems and monitors it's still possible to choose VGA with maximum resolutions of 1920 x 1200 at 60Hz. The maximum recommended length for VGA cables is 15 meter.



- VIDEO

Video cables

ACT offers a wide range of professional video cables (with full copper conductor) such as: DisplayPort, HDMI, VGA, DVI and USB adapters/converters. Below you can find an overview of the ACT video cables.



For each type of cable you can easily find the length you are looking for (including the item number). Please contact us if you can't find the cable or the length that you are looking for. We will assist you in finding the right solution.



DisplayPort cables

You can find DisplayPort in most of the modern monitors. Just like HDMI there are different versions, the most common one is DP 1.2. The maximum supported resolution for DP 1.2 is 4K at 60Hz. DisplayPort version 1.4, adds support for HDR10 as well as 8K@60Hz and 4K@144Hz by using DSC (Display Stream Compression) encoding with 3:1 compression ratio.

DisplayPort support AOC, covering much longer distances then standard specified without any signal loss. DisplayPort 2.0 recently has been introduced supporting 16K @60Hz and 10K @72Hz

ACT DisplayPort cable								
Colour	Description	Resolution	0.5m	1m	2m	3m	5m	
Black	DP male-DP male (Power Pin 20 connected) 1.2	4k@60Hz	<u>AK3977</u>	<u>AK3978</u>	<u>AK3980</u>	<u>AK3981</u>	<u>AK3982</u>	
Black DP male -DP male (Power Pin 20 not connected) 1.2 4k@60Hz AK3975 AK3976 AK3983 AK3984 AK3986								
Black	DP male-DisplayPort male 1.4	8K@60Hz		<u>AK4071</u>	<u>AK4073</u>	<u>AK4074</u>		
Black	DP male-DisplayPort male 1.4	8K@60Hz		<u>AC4071</u> *	<u>AC4073</u> *	<u>AC4074</u> *		
*Motal con	- notor bousing and rotail packaged							

*Metal connector housing and retail packaged

ACT DisplayPort, in Zip-bag

Colour	Description	1m	2m	3m
Black	DisplayPort 1.2	<u>AC3900</u>	<u>AC3902</u>	<u>AC3903</u>
Black	DisplayPort 1.4 (8K)	<u>AC3910</u>		

ACT	DisplayPort o	converter/adapter/cables,	Zip-bag
-----	---------------	---------------------------	---------

Colour	Description	0.15m	1.8m
Black	DP male-DVI female adapter	<u>AC7510</u>	
Black	DP male-DVI male cable		<u>AC7505</u>
Black	DP male-DVI female adapter	<u>AC7510</u>	
Black	DP male-VGA female adapter	<u>AC7515</u>	
Black	Mini DP male-HDMI female cable	<u>AC7525</u>	
Black	DP male-HDMI male cable		<u>AC7550</u>
Black	DP male-HDMI female adapter	<u>AC7555</u>	
Black Black Black	DP male-VGA female adapter Mini DP male-HDMI female cable DP male-HDMI male cable	AC7515 AC7525	<u>AC7550</u>

ACT Di	splayPort converter/adapter/cables									5
Colour	Description	Resolution	Adapter	0.15m	0.5m	1m	1.8m	2m	3m	5m
Black	DP male-HDMI-A female	4k@60Hz	<u>AB3985</u>							
Black	DP male-HDMI-A female	4k@30Hz		<u>AK3994</u>						
Black	DP male-HDMI-A male	4k@30Hz			<u>AK3987</u>	<u>AK3988</u>	<u>AK3990</u>		<u>AK3991</u>	<u>AK3992</u>
Black	DP male-DVI female		<u>AB3995</u>							
Black	DP male-DVI female			<u>AK3985</u>						
Black	DP male-DVI male				<u>AK3989</u>	<u>AK3993</u>	<u>AK3995</u>		<u>AK3997</u>	<u>AK3998</u>
Black	DP male-VGA female			<u>AK3996</u>						
Black	DP male-VGA male							<u>AK3999</u>		



VIDEC

DisplayPort- DisplayPort AOC cables

ACT Mini DisplayPort adapter / cables

									19
Colour	Description	Resolution	0.15m	0.5m	1m	1.5m	2m	3m	5m
White	Mini DP male-HDMI-A female	1080@60Hz	<u>AK4000</u>						
White	Mini DP male-Mini DP male 1.2	4K@60Hz		<u>AK3954</u>	<u>AK3959</u>	<u>AK3960</u>	<u>AK3961</u>	<u>AK3962</u>	<u>AK3969</u>
White	Mini DP male-Mini DP female 1.1	4K@30Hz			<u>AK3955</u>	<u>AK3956</u>		<u>AK3958</u>	
White	Mini DP male-DP male 1.2	4K@60Hz		<u>AK3968</u>	<u>AK3963</u>	<u>AK3964</u>	<u>AK3965</u>	<u>AK3966</u>	<u>AK3967</u>
White	Mini DP male-DVI-D female single link	1080@30Hz	<u>AK4001</u>						
White	Mini DP male-VGA female	1080@30Hz	<u>AK4002</u>						

ACT Conversion adapter mini DisplayPort | 1.2

Colour	Description	Resolution	Adapter
White	Mini DP male-DP female	4k@60Hz	<u>AB3996</u>
Black	Mini DP female-DP male	4k@60Hz	<u>AB3997</u>
			I

	Aini DisplayPort converter/adapter/cable	s, Zip-bag
Colour	Description	0.15m
Black	Mini DP male-HDMI/VGA/DVI Dual link	<u>AC7530</u>
Black	Mini DP male-HDMI female	<u>AC7525</u>

ACT DisplayPort extender over CAT | 1.2

	splay of extender over ext 11.2		
Colour	Description	Resolution	70m
Black	DP female - DP female v1.2, over CAT6a	4K@30Hz	<u>AC7770</u>

DisplayPort AOC cables (Active Optical Cable)

AOC (Active Optical Cable) features fiber and copper conductors making the cable lighter and more flexible. AOC cables are perfect for installations where space is limited and longer distances need to be covered. While normally the maximum recommended distance is 5 meters, you can easily reach up to 100 meters without any signal loss with this type of cable.

A proper solution to use for conference rooms, classrooms, displays and more. In terms of installation, we also offer AOC cables that comes with a detachable plug for easy installation through electrical conduits and plenum spaces.



ACT DisplayPort Active Opitcal Cable (AOC) 1.2													
Colour	Description	Resolution	10m	15m	20m	30m	40m	50m	60m	70m	80m	90m	100m
Black	DP male-DP male	4K@60Hz	<u>AK4030</u>	<u>AK4031</u>	<u>AK4032</u>	<u>AK4033</u>	<u>AK4034</u>	<u>AK4035</u>	<u>AK4036</u>	<u>AK4037</u>	<u>AK4038</u>	<u>AK4039</u>	<u>AK4040</u>
DisplayPort cables, made of copper and glass, for connecting different devices over long distances of up to 100 m without loss of quality.													

ACT D	ACT DisplayPort 1.4 8K AOC cable with detachable plug										
Colour	Description	Resolution	10m	15m	20m	25m	30m				
Black	DP male-DP male	8K@60Hz	<u>AK4150</u>	<u>AK4151</u>	<u>AK4152</u>	<u>AK4153</u>	<u>AK4154</u>				
DisplayPort /	DisplayPort Active Optical Cable, with detachable plug for easy installation through conduits and plenum spaces										

HDMI Premiun Certified/Ultra High Speed Certified

The HDMI standards are regulated by the HDMI.org. This HDMI.org also approves hdmi cables which meet and exceed their standards. ACT offers a range of approved cables by the HDMI.org.

You can recognize these cables by the official labels "HDMI Premium Certified" and "HDMI Certified Cable Ultra High Speed" Each cable comes with an official certificate which you scan to see that the cable is approved.

By using officiallycertified cables you are sure that you will get the best quality you need.



HOMI

REMILIM

ULTRA Certified Cabl

ALT HDMI High Speed premium certified cable | 2.0

	0 1							Gettind Dide	
Colour	Description	Resolution	0.5m	1m	1.5m	2m	3m	5m	6,10m
Black	HDMI-A male-HDMI-A male	4k@60Hz	<u>AK3941</u>	<u>AK3942</u>	<u>AK3943</u>	<u>AK3944</u>	<u>AK3945</u>	<u>AK3946</u>	<u>AK3947</u>

	DMI High Speed premium certified cable 2.0, locking	g cable			PREMIUM Development
Colour	Description	Resolution	1m	2m	3m
Black	HDMI-A male-HDMI-A male, locking cable	4K@60Hz	<u>AK3861</u>	<u>AK3862</u>	<u>AK3863</u>
			·	^ 	·

ALT HDMI 8K Ultra High Speed Ultra Certified cable

			HIGH SPEED
Colour	Description	Resolution	2m
Black	HDMI-A male-HDMI-A male, Ultra Certified Cable	8K@60Hz	<u>AK3916</u>

cpood with cpood with	2.1 DMI Ultra gh Speed
HDMI standardHDMI standardHDMI standardHDMI standardHDMI speed with ethernetspeed with 	gh Speed ✓ ✓ ✓
720p / 1080i	√ √
	√
1080n	
	\checkmark
Dolby Digital \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark	
DTS \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark	\checkmark
8-canal-PCM, 192kHz / 24 bit \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark	\checkmark
Consumer Electronics Control (CEC) \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark	\checkmark
DVD-audio $- \sqrt{\sqrt{-1}} \sqrt{\sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1} \sqrt{-1}$	\checkmark
SACD (DSD)	\checkmark
Deep colour \checkmark \checkmark \checkmark	\checkmark
Enhanced Colour Space \checkmark	\checkmark
Dolby True-HD - - - √ √ √	\checkmark
DTS-HD Master Audio	\checkmark
Auto Lip-Sync \checkmark	\checkmark
HDMI Mini connector (Type-C) \checkmark	\checkmark
3D (Frame Packing) √ √	\checkmark
4K @ 24/30Hz √ √	\checkmark
HDMI Micro Connector (Type D) √ √	\checkmark
Ethernet-channel (100 Mbit/s) √ √	\checkmark
Audio Return Channel (ARC)	\checkmark
Static HDR (HDR10/HLG) √	\checkmark
Updated list of CEC commands (CEC Extensions)	\checkmark
1080p @ 120Hz √	\checkmark
4K @ 50/60Hz √	\checkmark
4K @ 144Hz	\checkmark
8K	\checkmark
Dynamic HDR-format (Dolby Vision)	\checkmark
Enhanced Audio Return Channel (eARC)	\checkmark
Variable Refreshrate (VRR) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - </td <td>\checkmark</td>	\checkmark
Quick Media switch (QMS) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <td>\checkmark</td>	\checkmark
Quick Frame Transport (QFT) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -<	\checkmark
Automatic Low-latency-Mode (ALLM) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	\checkmark
VESA DSC 1.2a	✓



VIDEO

HDMI cables

HDMI, the most common video cable used in the market. You can find it in al modern TVs, monitors, and graphics cards. Compared to the other types of video cables, HDMI is the most common interface for TV.







HDMI is available in many versions, the most common are 1.4 and 2.0 HDMI High Speed. The latest version is v2.1, HDMI Ultra High Speed. To ensure the best quality an HDMI Premium Certified cable up to 4K @60Hz resolution or an HDMI Ultra High Speed 8K Certified cable is recommended. Both type of cables are certified and approved by the HDMI.org standard, which assures you of a high quality cable that supports all of the corresponding HDMI features.

ACT HDMI Ultra high speed cable | 2.1

Colour	Description	Resolution	1m	1.5m	2m	3m
Black	HDMI-A male-HDMI-A male	8K@60Hz	<u>AK3907</u>	<u>AK3908</u>	<u>AK3909</u>	<u>AK3910</u>
Black	HDMI-A male-HDMI-A male	8K@60Hz			AC3810 Zip-bag	
Black	HDMI-A male-HDMI-A male	8K@60Hz			<u>AC3909</u> *	
* Metal con	nector housing and retail packaged					

ACT HDMI high speed cable | 2.0

									42
Colour	Description	Resolution	0.5m	1m	1.5m	2m	3m	5m	7m
Black	HDMI-A male-HDMI-A male	4k@60Hz	<u>AK3900</u>	<u>AK3901</u>		<u>AK3902</u>	<u>AK3903</u>	<u>AK3904</u>	<u>AK3905</u>
Black	HDMI-A male-HDMI-A male	4k@60Hz	<u>AK3749</u>	<u>AK3755</u>		<u>AK3750</u>	<u>AK3751</u>	<u>AK3752</u>	
Black	HDMI-A male-HDMI-A male angled	4k@60Hz	<u>AK3675</u>	<u>AK3676</u>		<u>AK3678</u>	<u>AK3679</u>		
Black	HDMI-A male-HDMI-A male Zip-bag	4k@60Hz			<u>AC3800</u>				

ALT HDMI high speed cable | 1.4

Resolution	0.5m	1m	1.5m	2m	2.5 m	3m	5m
I-A male 4K@30Hz	<u>AK3789</u>	<u>AK3790</u>	<u>AK3791</u>	<u>AK3792</u>		<u>AK3793</u>	
I-C male 4K@30Hz				<u>AK3757</u>			
I-A male 4K@60Hz					<u>AC3802</u>		<u>AC3805</u>
٨	AI-A male 4K@30Hz AI-C male 4K@30Hz	AI-A male 4K@30Hz AK3789 AI-C male 4K@30Hz 4K@30Hz	AI-A male 4K@30Hz AK3789 AK3790 AI-C male 4K@30Hz	Al-A male 4K@30Hz AK3789 AK3790 AK3791 Al-C male 4K@30Hz 4K@30Hz 4K3790 4K3791	Al-A male 4K@30Hz AK3789 AK3790 AK3791 AK3792 Al-C male 4K@30Hz AK3790 AK3791 AK3792	Al-A male 4K@30Hz AK3789 AK3790 AK3791 AK3792 Al-C male 4K@30Hz AK3789 AK3790 AK3791 AK3792	Al-A male 4K@30Hz AK3789 AK3790 AK3791 AK3792 AK3793 Al-C male 4K@30Hz AK3789 AK3790 AK3791 AK3792 AK3793

ALT HDMI high speed cable fully shielded | 1.4

Colour	Description		0.5m	1m	1.5m	2m	3m	5m
Black	HDMI-A male-HDMI-A male	4K@30Hz	<u>AK3813</u>	<u>AK3814</u>	<u>AK3815</u>	<u>AK3816</u>	<u>AK3817</u>	<u>AK3818</u>
Black	HDMI-A male-HDMI-D male	4K@30Hz				<u>AK3798</u>		

ACT HDMI high speed slimline cable | 1.4

Colour	Description	Resolution	0.5m	1m	2m
Black	HDMI-A male-HDMI-C male	4K@30Hz	<u>AK3670</u>	<u>AK3671</u>	<u>AK3673</u>

ACT HDMI adapter

Colour	Description	Fully shielded	Unshielded
Black	HDMI-A male-female flex		<u>AB3769</u>
Black	HDMI-A female-female flex		<u>AB3770</u>
Black	HDMI-A male-female down		<u>AB3771</u>
Black	HDMI-A male-female left		<u>AB3775</u>
Black	HDMI female female straight	<u>AB3768</u>	<u>AP1005</u>

ACT HDMI cable SLAC (super low attenuation cable) | 1.4

	· •					
Colour	Description	Resolution	7m	10m	15m	20m
Black	HDMI-A male-HDMI-A male	4k@30Hz	<u>AK3753</u>			
Black	HDMI-A male-HDMI-A male	4k@30Hz		<u>AK3754</u>	<u>AK3756</u>	
Blue	HDMI-A male-HDMI-A male	4k@30Hz		<u>AK3804</u>	<u>AK3805</u>	<u>AK3806</u>

HDMI AOC cables

AOC (Active Optical Cable) features fiber and copper conductors making the cable lighter and more flexible. AOC cables are perfect for installations where space is limited and longer distances need to be covered. While normally the maximum recommended distance is 5 meters, you can easily reach 100 meters without any signal loss with this type of cable.

A proper solution to use for conference rooms, classrooms, displays and more. In terms of installation, we also offer AOC cables that comes with a detachable plug and protector with pulling eye for easy installation through conduits and plenum spaces.

HDMI High Speed AOC Active Optical Cable with detachable plug	
---------------------------------------------------------------	--

Colour Description Resolution 10m 15m 20m 25m 30m 40m 50m 60m 70m 80m 90m 100m HDMI-A male-HDMI-A male | 2.0 4k@60Hz <u>AK4100</u> <u>AK4101</u> <u>AK4102</u> <u>AK4103</u> <u>AK4104</u> <u>AK4105</u> <u>AK4106</u> <u>AK4107 AK4108 AK4109</u> <u>AK4110</u> <u>AK4111</u> Black g eye for easy installation through conduits and plenum spaces. USB power cable included for optionally Al port of the transmitter delivers insufficient power.

ACT HDMI cable AOC Active Optical Cable

Colour	Description			15m	20m
Black	HDMI-A male-HDMI-A male 2.0	4K@60Hz	<u>AK4117</u>	<u>AK4118</u>	<u>AK4119</u>
HDMI Prem	ium Active Optical Cable, made of cop	per and glass,	for connecting different devices over lo	ng distances of up to 100 m without lo	ss of quality.

ALT HDMI Premium AOC Active Optical Cable

	-													
Colour	Description	Resolution	10m	15m	20m	25m	30m	40m	50m	60m	70m	80m	90m	100m
Black	HDMI-A male-HDMI-A male 2.0	4k@60Hz	<u>AK3930</u>	<u>AK3931</u>	<u>AK3932</u>	<u>AK3929</u>	<u>AK3933</u>	<u>AK3934</u>	<u>AK3935</u>	<u>AK3936</u>	<u>AK3937</u>	<u>AK3938</u>	<u>AK3939</u>	<u>AK3940</u>
Black	HDMI-A male-HDMI-A male 2.1	8k@60Hz	<u>AK4120</u>	<u>AK4121</u>	<u>AK4122</u>	<u>AK4123</u>	<u>AK4124</u>	<u>AK4125</u>	<u>AK4126</u>	<u>AK4127</u>	<u>AK4128</u>	<u>AK4129</u>	<u>AK4130</u>	<u>AK4131</u>
HDMI Prem	ium Active Optical Cable made of cor	ner and glass	for conne	ecting diffe	erent devi	res over la	nø distan	ces of up t	-100 m	without lo	ss of aual	itv		





VIDEO



DVI

INDUSTRIAL MARINE RAILWAY

colpe

ALT HDMI, DVI and VGA adapter cable, SQ

HDMI, DVI and VOX adapter cable, 50											
Colour	Description	1m	1.8m	2m	3m	5m	10m	15m			
Black	HDMI-A male-DVI-D male single link	<u>AK3739</u>		<u>AK3740</u>	<u>AK3741</u>	<u>AK3742</u>					
Black	DVI-A male-VGA male			<u>AK3850</u>							
lvory	DVI-A male-VGA male		<u>AK3650</u>		<u>AK3651</u>	<u>AK3652</u>	<u>AK3654</u>				
Grey	VGA male-5x BNC male		<u>AK8116</u>								

Adapter cable, SLAC (Super Low Attenuation cable)

Black	HDMI-A male-DVI-D male single link			<u>AK3744</u>	<u>AK3746</u>

ACT HDMI and DVI adapter

Colour	Description	HQ Adapter fully shielded	SQ Adapter
White	HDMI-A female-DVI-D 18+1 male single link	<u>AB3760</u>	<u>AP1004</u>
White	HDMI-A male-DVI-D 24+5 female single link	<u>AB3765</u>	<u>AP1006</u>
White	HDMI-A male-DVI-D female links	<u>AB3766</u>	
White	DVI-I 24+5 female-DVI-I 24+5 female	<u>AB3730</u>	
White	DVI-I 24+5 female-DVI-D 18+1 male	<u>AB3740</u>	<u>AP1001</u>
White	DVI-A 12+5 female-VGA female	<u>AB3750</u>	<u>AP1002</u>
White	DVI-I 24+5 female-VGA male	<u>AB3755</u>	<u>AP1003</u>

ACT DV	'I cable										
Colour	Description	0.5m	1m	1.5m	1.8m	2m	3m	5m	10m	15m	
DVI-D cable, HQ											
Ivory	Dual link male-male				<u>AK3630</u>		<u>AK3631</u>	<u>AK3632</u>	<u>AK3634</u>		
lvory	Single link male-male				<u>AK3620</u>		<u>AK3621</u>	<u>AK3622</u>	<u>AK3624</u>		
lvory	Single link male-female					<u>AK3760</u>					
DVI-I cable,	HQ										
Ivory	Dual link male-male					<u>AK3720</u>	<u>AK3721</u>	<u>AK3722</u>	<u>AK3724</u>		
DVI-D cable	e, SQ										
Black	Dual link male-male	<u>AK3829</u>	<u>AK3833</u>	<u>AK3834</u>	<u>AK3829</u>	<u>AK3830</u>	<u>AK3831</u>	<u>AK3832</u>			
Black	Dual link male-female					<u>AK3970</u>	<u>AK3971</u>				
Black	Single link male-male	<u>AK3819</u>	<u>AK3823</u>	<u>AK3824</u>		<u>AK3820</u>	<u>AK3821</u>	<u>AK3822</u>			
DVI-I cable,	SQ										
Black	Dual link male-male			<u>AK3953</u>		<u>AK3950</u>					
DVI-D cable	e, SLAC (super low attenuation cable)										
Black	Single link male-male								<u>AK3625</u>	<u>AK3626</u>	

COAX

ACT Coax cable RG58/RG59 . Colour Description 0.25m 0.5m 1.5m 2m 3m 5m 7m 10m 15m 1m Black RG58 <u>Q70025</u> <u>Q70050</u> <u>Q70100</u> <u>Q70150</u> <u>Q70200</u> <u>Q70300</u> <u>Q70500</u> <u>Q70700</u> <u>Q7015M</u> <u>Q7010M</u> Black RG59 <u>Q71025</u> <u>Q71050</u> <u>Q71100</u> <u>Q71150</u> <u>Q71200</u> <u>Q71300</u> <u>Q71500</u> <u>Q71700</u> <u>Q7110M</u> <u>Q7115M</u>

VGA

VIDEO

ACT vo	JA cable												
Colour	Description	0.25m	0.5m	1m	1.8m	3m	5m	7m	10m	15m	20m	25m	30m
Molded hoo	ods												
Black	male-female		<u>AK4210</u>	<u>AK4211</u>	<u>AK4220</u>	<u>AK4223</u>	<u>AK4225</u>	<u>AK4227</u>	<u>AK4229</u>	<u>AK4231</u>	<u>AK4233</u>	<u>AK4235</u>	<u>AK4237</u>
Black	male-male		<u>AK4250</u>	<u>AK4251</u>	<u>AK4260</u>	<u>AK4263</u>	<u>AK4265</u>	<u>AK4267</u>	<u>AK4269</u>	<u>AK4271</u>	<u>AK4273</u>	<u>AK4275</u>	<u>AK4277</u>
Metal hood	S												
Black	male-female				<u>AK9020</u>	<u>AK9023</u>	<u>AK9025</u>	<u>AK9027</u>	<u>AK9029</u>	<u>AK9031</u>			<u>AK9037</u>
Black	male-male				<u>AK9060</u>	<u>AK9063</u>	<u>AK9065</u>	<u>AK9067</u>	<u>AK9069</u>	<u>AK9071</u>	<u>AK9073</u>	<u>AK9075</u>	<u>AK9077</u>
Molded hoo	ods, ultra high performance												
Black	male-female		<u>AK4918</u>	<u>AK4919</u>	<u>AK4920</u>	<u>AK4923</u>	<u>AK4925</u>		<u>AK4929</u>				
Black	male-male		<u>AK4958</u>	<u>AK4959</u>	<u>AK4960</u>	<u>AK4963</u>	<u>AK4965</u>	<u>AK4967</u>	<u>AK4969</u>	<u>AK4971</u>	<u>AK4973</u>		<u>AK4977</u>
Metal hood	s, ultra high performance												
Black	male-male				<u>AK9360</u>	<u>AK9363</u>	<u>AK9365</u>	<u>AK9367</u>	<u>AK9369</u>	<u>AK9371</u>	<u>AK9373</u>	<u>AK9375</u>	<u>AK9377</u>
VGA cable,	SQ												
lvory	male-female				<u>AK3220</u>								
Ivory	male-male				<u>AK3225</u>								
Black	1x male-2x female, split cable	<u>AK3187</u>											

	iA + audio cable							\$
Colour	Description	2m	3m	5m	7m	10m	15m	20m
Black	male-female	<u>AK4980</u>	<u>AK4981</u>	<u>AK4982</u>		<u>AK4984</u>		
Black	male-male	<u>AK4990</u>	<u>AK4991</u>	<u>AK4992</u>	<u>AK4993</u>	<u>AK4994</u>	<u>AK4995</u>	<u>AK4996</u>

Video adapter cables - High lights

			_				
Туре по.	<u>AC7515</u>	<u>AC7535</u>	<u>AC7545</u>	<u>AC7555</u>	<u>AC7550</u>	<u>AC7565</u>	<u>AC7505</u>
		50	U		A A		
Description	DisplayPort to VGA adapter	HDMI to VGA adapter with audio	VGA to HDMI adapter with audio	DisplayPort to HDMI adapter	DisplayPort to HDMI adapter cable, 1.8 m	Adapter DVI-D male - HDMI A female	DisplayPort to DVI adapter cable, 1.8m
Input	DisplayPort male (x1)	HDMI A (full- size) male (x1)	VGA male (x1)	DisplayPort male (x1)	DisplayPort male (x1)	DVI-D male	DisplayPort male (x1)
Output	VGA HD D-sub 15-pin female (x1)	VGA female (x1)	HDMI A (full- size) female (x1)	HDMI A (full- size) female (x1)	HDMI A (full- size) female (x1)	HDMI A female	DVI 24+1-pin male (x1)
Cable part length (cm)	15	23	25	15	180	-	180
4K compatible	No	No	No	Yes	Yes		
Max. resolution	1920 x 1080 @ 60Hz	1920 x 1200	1920 x 1080	3840 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	3840 x 2160 @ 30Hz 1920 x 1080 @ 60Hz		1920 x 1080 @ 60Hz
Video signal	DisplayPort, VGA	HDMI, VGA	HDMI	DisplayPort, HDMI	HDMI		DVI, DisplayPort
Video specifications	DisplayPort 1.1, VGA	VGA, HDMI standard	VGA	DisplayPort 1.2	DisplayPort 1.2, HDMI High Speed with Ethernet		DisplayPort 1.1
Material housing	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic

AV Solutions - HDMI / DisplayPort Extenders

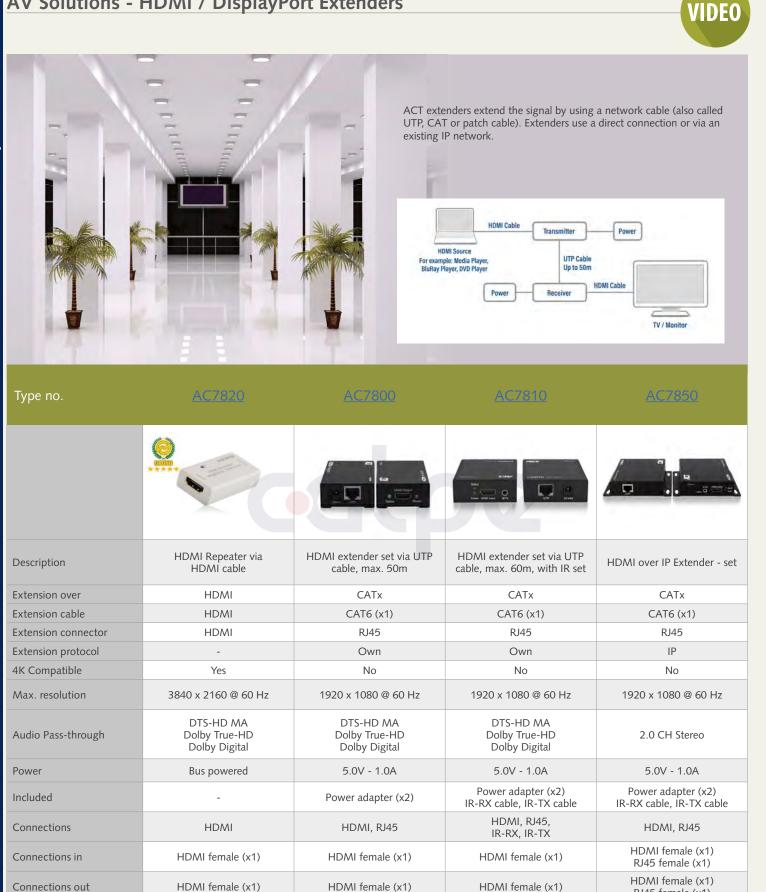
40m 1920x1080 @60Hz

25m 3840x2160 @60Hz

HDMI

EDID – CEC passthrough – HDCP 2.2 & 1.4 compliant

HDMI High Speed



50 m

HDMI

EDID

HDMI High Speed

Max. extension distance

HDMI/ DisplayPort spec.

Video signal

Video support



RJ45 female (x1)

100 m

HDMI

EDID

HDMI High Speed

60 m

HDMI

EDID

HDMI High Speed



HDMI High speed

HDMI High Speed

DisplayPort 1.2



HDMI High speed

VIDEO

ACT AV Solutions - Splitters / Switches

ACT AV solutions are used in meeting rooms, waiting rooms and in companies to show presentations and information on screens. With a splitter it is possible to show the same information on several screens. With these ACT products you choose for reliability in daily use.

Туре по.	<u>AC7830</u>	<u>AC7840</u>	<u>AC7860</u>	<u>AC7900</u> <u>AC7910</u>	AC7702 AC7704
			#" . <u>(70.2</u> (70.2 (70.2 (70.2		ACT :
Description	HDMI Splitter via HDMI cable	5x1 HDMI Switch	HDMI 4K Matrix Switch 4x4 with 4K @ 60Hz support	KVM Switch	400MHz Videosplitter AC7702: 2-Ports AC7704: 4-Ports
Extension cable/connector	HDMI	HDMI	HDMI	AC7900: DisplayPort AC7910: HDMI	VGA HD D-Sub
4K compatible	Yes	Yes	Yes	Yes	No
Max. resolution	3840 x 2160 @ 30 Hz	38 <mark>40 x</mark> 2160 @ 30 Hz	3840 x 2160 @ 60 Hz	4096 x 2160 @ 30Hz/60Hz	2048 x 1536 @ 60Hz
3D support	1080p @ 30/60 Hz	1080p @ 60 Hz		-	-
Audio Passthrough	DTS-HD MA, Dolby True-HD, Dolby Digital	DTS-HD MA, Dolby True-HD, Dolby Digital	DTS-HD MA, Dolby True-HD, Dolby Digital	Analog audio	-
Power	5.0V - 1.0A	5.0V - 1.0A	5.0V - 3.0A	Bus powered	12.0V - 1.0A
Included	Power adapter	Power adapter, remote control	Power adapter, Remote control, IR-RX cable, Phoenix plug for RS-232 cable, Montage kit + screws	-	Power adapter
Connections	HDMI	HDMI	HDMI, RJ45, IR, SPDIF, RS-232	3.5 mm Jack, USB, DisplayPort or HDMI	VGA HD D-sub
Connections in	HDMI female 1x	HDMI female 5x	HDMI female 4x	3.5 mm Jack male (x4), DisplayPort or HDMI male (x2), USB A male (x2)	VGA HD D-sub 15-pin female (x1)
Connections out	HDMI female 4x	HDMI female 1x	HDMI female 4x, SPDIF 4x, RJ45 1x, RS232, IR-RX Jack	3.5 mm Jack female (x2), DisplayPort or HDMI female (x1), USB A female (x2)	VGA HD D-sub 15-pin female (x2) AC7702 (x4) AC7704
Video signal	HDMI	HDMI	HDMI	DisplayPort or HDMI	VGA
Video support	EDID, HDCP 1.4 compliant	EDID – CEC passthrough - HDCP 1.4 compliant	EDID, HDCP 2.2/1.4	-	VGA/SVGA/XGA/ QXGA/UXGA/MultiSync
HDMI/ DisplayPorts spec.	HDMI High Speed	HDMI High Speed	HDMI High Speed	AC7900: DisplayPort 1.2 AC7910: HDMI High Speed	-
Management method	-	-	-	Remote control (wired), Hot-key, Software	Remote control (wired), Hot-key, Software

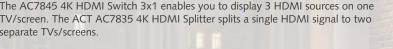
Calpe.nl + 31 (0)342 - 45 15 44 Barneveld



VIDEO

The AC7845 4K HDMI Switch 3x1 enables you to display 3 HDMI sources on one TV/screen. The ACT AC7835 4K HDMI Splitter splits a single HDMI signal to two separate TVs/screens.







Type no.



1

	HDMI Switch
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	Long P
738	
1 1 2 2 1 2 2	A Lawrenced Second Second Second

Description	4K HDMI Switch 3 ports	4K HDMI Splitter 1x2			
Connectors (in)	HDMI A (full-size) female (x3)	HDMI A (full-size) female (x1)			
Connectors (uit)	HDMI A (full-size) female (x1)	HDMI A (full-size) female (x2)			
4K Compatible	Yes	Yes			
Max. resolution @ 30Hz	3840 x 2160	3840 x 2160			
Max. resolution @ 60Hz	3840 x 2160	1080p			
Video signal	HDMI	HDMI			
Supported functions	EDID, HDCP 1.4	EDID, HDCP 1.4			
HDMI specifications	HDMI High Speed	HDMI High Speed			
Other signals	HD audio, IR	HD audio			
Power	USB powered	USB powered			
Included	Remote control + battery, IR-RX cable, USB power cable	USB power cable			

All the second second





AUDIO

Audio cables

INDUSTRIAL MARINE RAILWAY مالع

- Microphone cables
 DMX cables
 Standard audio cables





AUDIO

Audio cables

ACT High quality audio cable, Zip-bag

	gh quality audio cable, Zip-bag							100
Colour	Description	0.15m	1.5m	2m	3m	5m	10m	15m
Black	3,5mm stereo jack male - 2x RCA male		<u>AC3605</u>			<u>AC3607</u>		
Black	3,5mm stereo jack male - male		<u>AC3610</u>		AC3611	AC3612	<u>AC3613</u>	AC3614
Black	3,5mm stereo jack male - female			<u>AC3615</u>		<u>AC3617</u>		
Black	2x RCA male - 2x RCA male		<u>AC3601</u>					
Black	3,5mm split cable male- 2x female	<u>AC3620</u>						

ACT Audio cable

ACT Au	dio cable									
Colour	Description	0.15m	0.20m	1.20m	1.5m	2.5m	3m	5m	10m	15m
Black	3,5mm stereo jack male - male				<u>AK2035</u>	<u>AK2036</u>		<u>AK2037</u>	<u>AK2038</u>	<u>AK2039</u>
Black	3,5mm stereo jack male - female						<u>AK2030</u>	<u>AK2031</u>		
Black	1x 3,5mm stereo jack male - 2x RCA female	<u>AK2026</u>								
Black	1x 3,5mm stereo jack female - 2x RCA male	<u>AK2027</u>								
Black	1x 3,5mm stereo jack male - 2x RCA male			<u>AK2075</u>		<u>AK2076</u>		<u>AK2077</u>	<u>AK2078</u>	
Black	2x RCA male - male			<u>AK2014</u>		<u>AK2015</u>				
Black	1x RCA male - 2x RCA female		<u>AK2025</u>							

ACT High quality audio cable

	ACT High quality audio cable							
Colour	Description	2m	3m	5m	10m	15m		
White	2x tulp male - 1x 3,5mm stereo jack male	<u>AK2230</u>	<u>AK2232</u>	<u>AK2234</u>	<u>AK2236</u>	<u>AK2237</u>		
White	3,5mm stereo jack male - male	<u>AK2240</u>	<u>AK2242</u>	<u>AK2244</u>	<u>AK2246</u>	<u>AK2247</u>		
White	3,5mm stereo jack male - female	<u>AK2250</u>	<u>AK2252</u>	<u>AK2254</u>	<u>AK2256</u>			
White	Audio video 1x tulp male - male	<u>AK2270</u>	<u>AK2272</u>					
White	Audio 2x tulp male - male	<u>AK2220</u>						

ACT POF audio cable

Colour	Description	1.20m	2m	3m
Black	Optical audio TOS to TOS		<u>AK2462</u>	<u>AK2463</u>
Black	SPDIF optical audio TOS to TOS	<u>AC3690</u>		

ALT U	ACT USB-C male - 3.5mm audio jack female PD-passthrough, retail package					
Colour	Description	Cable length	Type no.			
Space grey	USB-C male - 3.5mm audio jack female PD-passthrough 65W	15cm	<u>AC7005</u>			



-

POWER

year WARRANTY

Power cables

Power cables provide power to your devices. ACT supplies many types of different power cables. All of these cables stand for excellent performance (quality) and durability.

Types

ACT has many types of power cables: CEE7/7, IEC60320 C5, C7, C13, C14, C15, C19, C20, IEC60309 CEE1. ACT also provides different types of power split cables.

Power cables in different colours

In addition to the traditional Black power cables, we supply the IEC60320 C13, C14, C19 and C20 cables in different Colours to make your power network more organized.

ACT offers a wide range of high quality power cables:

- 230 V power ables
- Euro power cables
- IEC 60320 power cables
- International power cables
- 230 V splitter cables

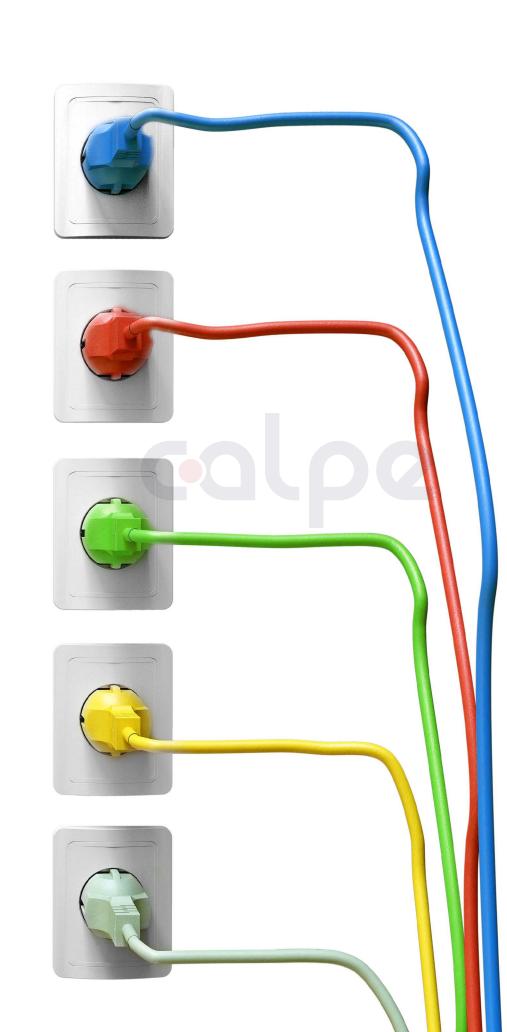
Male	Female	Form	Max. power	Max. temp.
C6	C5	A	2.5 A	70 °C
C8	C7	00	2.5 A	70 °C
C14	C13		10 A	70 °C
C16	C15		10 A	120 °C
C20	C19		16 A	70 °C
C22	C21		16 A	155 °C
CEE1		•	16 A	
CEE7/7			16 A	





POWER

ACT power cables



CALPE.NL

Power cables

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ACT 230V power cables

	•													-
Colour	Description	0.5m	0.6m	1m	1.2m	1.5m	1.8m	2m	2.5m	3m	4m	5m	7m	10m
Black	CEE 7/7 male angled - C13	<u>AK5145</u>		<u>AK5146</u>		<u>AK5012</u>		<u>AK5015</u>	<u>AK5010</u>	<u>AK5124</u>	<u>AK5125</u>	<u>AK5016</u>	<u>AK5126</u>	<u>AK5127</u>
White	CEE 7/7 male angled - C13	<u>AK5401</u>		<u>AK5402</u>		<u>AK5235</u>		<u>AK5236</u>	<u>AK5237</u>	<u>AK5238</u>		<u>AK5239</u>		
lvory	CEE 7/7 male - C13					<u>AK5013</u>			<u>AK5009</u>					
Black	CEE 7/7 male - C13					<u>AK5014</u>			<u>AK5017</u>					
Black	CEE 7/7 male angled - C13, Zip-bag							<u>AC3305</u>						
Black	CEE 7/7 male angled - C13 angled							<u>AK5018</u>						
	CEE 7/7 male angled - C13		<u>AK5128</u>		<u>AK5129</u>		<u>AK5130</u>			<u>AK5131</u>		<u>AK5403</u>		
	CEE 7/7 male angled - C13		<u>AK5132</u>		<u>AK5133</u>		<u>AK5134</u>			<u>AK5135</u>		<u>AK5404</u>		
	CEE 7/7 male angled - C13		<u>AK5136</u>		<u>AK5137</u>		<u>AK5138</u>			<u>AK5139</u>		<u>AK5405</u>		
Yellow	CEE 7/7 male angled - C13		<u>AK5140</u>		<u>AK5141</u>		<u>AK5142</u>			<u>AK5143</u>		<u>AK5406</u>		
Black	CEE 7/7 male angled - C15					<u>AK5001</u>								
Black	CEE 7/7 male angled - C5, Zip-bag							<u>AC3310</u>						
Black	CEE 7/7 male angled - C5	<u>AK5407</u>		<u>AK5162</u>		<u>AK5408</u>		<u>AK5144</u>		<u>AK5024</u>		<u>AK5163</u>	<u>AK5188</u>	<u>AK5189</u>
Black	CEE 7/7 male angled - C5 angled			<u>AK5409</u>			<u>AK5005</u>			<u>AK5006</u>		<u>AK5007</u>		
Black	CEE 7/7 male recht - C19	<u>AK5410</u>		<u>AK5147</u>		<u>AK5411</u>		<u>AK5412</u>		<u>AK5022</u>		<u>AK5148</u>		
	CEE 7/7 male angled - C19		<u>AK5167</u>		<u>AK5168</u>		<u>AK5169</u>			<u>AK5170</u>				
	CEE 7/7 male angled - C19		<u>AK5171</u>		<u>AK5172</u>		<u>AK5173</u>			<u>AK5174</u>				
	CEE 7/7 male angled - C19		<u>AK5175</u>		<u>AK5176</u>		<u>AK5177</u>			<u>AK5178</u>				
Yellow	CEE 7/7 male angled - C19		<u>AK5179</u>		<u>AK5180</u>		<u>AK5181</u>			<u>AK5182</u>				
Black	CEE 7/7 male angled - C19		<u>AK5183</u>		<u>AK5184</u>		<u>AK5185</u>			<u>AK5186</u>				
White	CEE 7/7 male angled - C19		<u>AK5413</u>		<u>AK5414</u>		<u>AK5415</u>			<u>AK5416</u>				

ACT 230 V power cables LSZH

Colour	Description	1m	1.5m	2m	2.5m	5m
Black	CEE 7/7 male angled - C13	<u>AK5209</u>	<u>AK5210</u>	<u>AK5211</u>	<u>AK5212</u>	<u>AK5213</u>

ACT Euro power cable

				1				
Colour	Description	1m	1.5m	2m	3m	5m		
Black	Euro male - C7 female in Zip-bag		<u>AC3300</u>					
Black	Euro male - C7 female	<u>AK5417</u>	<u>AK5020</u>	<u>AK5418</u>	<u>AK5242</u>	<u>AK5419</u>		
Wit	Euro male - C7 female		<u>AK5240</u>		<u>AK5241</u>			
Black	Euro male - C7 female (angled down)			<u>AK5008</u>				
Black	Euro male - C7 female (angled left/right)	<u>AK5420</u>		<u>AK5019</u>	<u>AK5421</u>			

ACT IEC 60320 power cable

				1										_	7
Colour	Description	0.3m	0.5m	0.6m	0.9m	1m	1.2m	1.8m	2m	2.5m	3m	4m	5m	7m	10m
Black	C13-C14, Zip-bag							<u>AC3315</u>							
Black	C13-C14	<u>AK5164</u>		<u>AK5029</u>	<u>AK5165</u>		<u>AK5120</u>	<u>AK5030</u>			<u>AK5031</u>	<u>AK5149</u>	<u>AK5032</u>	<u>AK5121</u>	<u>AK5122</u>
White	C13-C14	<u>AK5422</u>		<u>AK5243</u>			<u>AK5244</u>	<u>AK5245</u>			<u>AK5427</u>		<u>AK5428</u>		
Red	C13-C14	<u>AK5423</u>		<u>AK5104</u>			<u>AK5105</u>	<u>AK5106</u>			<u>AK5107</u>		<u>AK5429</u>		
Blue	C13-C14	<u>AK5424</u>		<u>AK5108</u>			<u>AK5109</u>	<u>AK5110</u>			<u>AK5111</u>		<u>AK5430</u>		
Green	C13-C14	<u>AK5425</u>		<u>AK5112</u>			<u>AK5113</u>	<u>AK5114</u>			<u>AK5115</u>		<u>AK5431</u>		
Yellow	C13-C14	<u>AK5426</u>		<u>AK5116</u>			<u>AK5117</u>	<u>AK5118</u>			<u>AK5119</u>		<u>AK5432</u>		
Black	C13 - C20					<u>AK5440</u>			<u>AK5026</u>						
Black	C19 - C20			<u>AK5085</u>			<u>AK5086</u>		<u>AK5023</u>		<u>AK5087</u>				
Red	C19 - C20			<u>AK5088</u>			<u>AK5089</u>	<u>AK5090</u>			<u>AK5091</u>				
Blue	C19 - C20			<u>AK5092</u>			<u>AK5093</u>	<u>AK5094</u>			<u>AK5095</u>				
Green	C19 - C20			<u>AK5096</u>			<u>AK5097</u>	<u>AK5098</u>			<u>AK5099</u>				
Yellow	C19 - C20			<u>AK5100</u>			<u>AK5101</u>	<u>AK5102</u>			<u>AK5103</u>				
Black	CEE1 - C19									<u>AK5021</u>					
Black	C14 - C5		<u>AK5218</u>			<u>AK5433</u>			<u>AK5028</u>		<u>AK5434</u>				
Black	C14 - C15			<u>AK5232</u>			<u>AK5233</u>		<u>AK5003</u>	<u>AK5234</u>					
White	C14 - C15			<u>AK5435</u>			<u>AK5436</u>		<u>AK5437</u>						
Black	C14-C19		<u>AK5438</u>			<u>AK5439</u>			<u>AK5025</u>						
Black	C14 - Type F female (max.10 A)			<u>AK5219</u>											



POWER

Power cables

IEC 6032	20 cable LSZH				and the second s
Colour	Description	1.2m	1.8m	3m	5m
Black	C13-C14	<u>AK5214</u>	<u>AK5215</u>	<u>AK5216</u>	<u>AK5217</u>
ACT 2	30 V Split cable				

ACT 230 V Split cable

Colour	Description	1m	1.2m	1.8m
Black	CEE 7/7 male - 2x C13	<u>AK5050</u>	<u>AK5055</u>	
Black	CEE 7/7 male - C5+C13			<u>AK5166</u>
Black	CEE 7/7 male - 2x C5			<u>AK5208</u>
Black	C14 - 2x C13			<u>AK5052</u>

ACT 230 V UK power cable

				- Martin
Colour	Description	1m	1.8m	2.5m
Black	UK power connector - C5		<u>AK5072</u>	
Black	UK power connector - C7		<u>AK5070</u>	
Black	UK power connector - C13	<u>AK5441</u>	<u>AK5442</u>	<u>AK5060</u>
Diacit	or power connector ers	<u>/////////////////////////////////////</u>	<u>////2</u>	1113000

ACT 120 V USA power cable

Black	USA power connector - C5		<u>AK5076</u>							
Black	USA power connector - C7		<u>AK5074</u>							
Black	USA power connector - C13	<u>AK5443</u>	<u>AK5444</u>	<u>AK5062</u>						
Black	USA power connector - C19		<u>AK5445</u>							
1	ACT 230 V international power cable									
ACT 2	30 V international power cable									
ACT 2 Black	30 V international power cable Danish power cable - C13			<u>AK5064</u>						
			<u>AK5446</u>	<u>AK5064</u> <u>AK5066</u>						
Black	Danish power cable - C13		<u>AK5446</u>							

Type no.	<u>AC2450</u>	<u>AC2455</u>	<u>AC2460</u>		
	50	ACCCCCCC	<u>k</u>		
Description	Power strip 6x	Power strip 5x	Power strip 6x		
Input connector	CEE 7/7 angled male	CEE 7/7 angled male	CEE 7/7 angled male		
Socket type	Type F female	Type F female	Type F female		
Cable type	H05VV-F3G 1.5	H05VV-F3G 1.5	H05VV-F3G 1.5		
Max. load	230V AC / 16 A	230V AC / 16 A	250V AC / 16 A		
Number of sockets	6	5	6		
USB charging ports	-	-	-		
USB output	-	-	-		
Cable length (m)	1.5	1.5	3		
Switching	Illuminated switch	Illuminated switch	-		
Surge protection	Yes	No	No		
Child protection	Yes	Yes	Yes		
Extra	Outlets with 45 degree angle Suited for wall and table mount	Outlets with 45 degree angle, with flat plug	Outlets with 45 degree angle		
Colour	Black	White	Black		



POWER

Power - Line Interactive UPS

A UPS supplies the connected equipment uninterrupted voltage so that a server, r continues to function for a while in the failure. This allows the equipment to be A UPS provides a more stable voltage a offers better protection against voltage overload, voltage fluctuations and volta	outer or computer event of a power securely closed. nd frequency, and drop, short circuit,		
Type no.	<u>AC2300</u>	<u>AC2305</u>	<u>AC2310</u>
Description	UPS 600VA - 360W with 6 earthed sockets	UPS 600VA - 360W	UPS 1000VA - 600W
Input voltage	230V~50/60Hz	230V~50/60Hz	230V~50/60Hz
	600VA (360W)	600VA (360W)	1000VA/ (600W)
Capacity Mounting	Wall	600VA (560VV)	-
Back-up time in minutes @ 120W load	10	- 10	50
Sound alarm	Yes	Yes	Yes
Led indicator	Yes	Yes	Yes
LCD display	No	No	No
Type F female earthed socket	бх	1x	2x
IEC C13	-	1x	2x
RS232	-	-	1x
USB incl. software	-	-	Yes
IEC C14	1x	1x	1x
Cable	Detachable	Detachable	Fixed power cable
AVR-function	Yes	Yes	Yes
4-fold protection: over temperature pro- tection, over voltage protection, over cur- rent protection and short circuit protection	Yes	Yes	Yes
Dimensions (LxWxH) mm.	360x240x130	298x101x142	353x149x162

Power - Laptop chargers

			safety system voltage, ove of your netb automatically Free tip serv Always the r tips with the apply throug The tip will b technology,	op chargers come with a q n that protects against ove r current and short circuit. ook or notebook is full, th y stops charging. ice! ight tip for your laptop! A charger. Is your tip missin th: https://supportcom/h be sent for free. Due to a c it is not possible to provide h a USB-C tip.	erheating, over If the battery e ACT charger CT offers several g? You can easily ic/requests/new. lifferent loading
Туре по.	<u>AC2000</u>	<u>AC2005</u>	<u>AC2050</u>	<u>AC2055</u>	<u>AC2060</u>
			N.	Ø.s.	Ø.
Description	USB-C Laptop charger 15.6 inch with PD	USB-C Laptop charger 15.6 inch with PD	Slim Size notebook charger 15.6 inch	Slim Size notebook charger 15.6 inch	Slim Size notebook charger 17.3 inch

65W

100V-240V AC 1.5A

50/60 Hz

PD (Power Delivery)

profiles:

5.0V up to 3.0A

9.0V up to 3.0A

12.0V up to 3.0A

15.0V up to 3.0A

20.0V up to 3.25A

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Yes

Yes

1.50

1.25

55x25x95

Smartphone/tablet

without PD support

are charged

@ 5.0V-3.0A

45W

100V-240V AC 1.0A

50/60 Hz

18.5V-2.43A

19.0V-2.37A

19.5V-2.31A

20.0V-2.25A

8

No

Yes

1.20

1.80

51x24x91

Free tip service

65W

100V-240V AC 1.5A

50/60 Hz

18.5V-3.5A

19.0V-3.42A

19.5V-3.33A

20.0V-3.25A

8

No

Yes

1.20

1.80

55x25x95

Free tip service

90W

100V-240V AC 1.2A

50/60 Hz

18.5V-4.87A

19.0V-4.74A

19.5V-4.62A

20V-4.5A

8

No

Yes

1.20

1.80

70x25x116

Free tip service

Extra

Max. power

Input

Output

Number of included tips

USB-C compatible

Fourfold protection

Cable length input (m)

Cable length output (m)

Dimensions in mm (BxHxD)

45W

100V-240V AC 1.0A

50/60 Hz

PD (Power Delivery)

profiles:

5.0V up to 3.0A

9.0V up to 3.0A

12.0V up to 3.0A

15.0V up to 3.0A

20.0V up to 2.25A

_

Yes

Yes

1.50

1.25

51x24x91

Smartphone/tablet

without PD support

are charged

@ 5.0V-3.0A

83	
CALPE.NL	

INDUSTRIAL MARINE RAILWAY

مالم

10000

USB

year WARRANTY

USB cables

ACT offers a wide range of USB cables (USB 3.2, USB C, USB 2.0) and USB adapters. For each type of cable you can quickly and easily find the lenght you are looking for (including the item number).

Please contact us if you cannot find the cable or the lenght you are looking for. We will help you find the right solution.



What is USB-C?

30

Many people associate USB-C or USB Type-C directly with USB 3.2. However, USB-C is much more! Below we will explain USB-C / USB Type-C and the advantages and applications of this standard.

USB generations

First, we want to explain all USB generations. As mentioned above, many people think that USB 3.2 (a.k.a. USB3.1) is the same as USB-C. The main reason for this association is that USB 3.1 (nowadays known as USB3.2) was equally released with the USB-C standard. Could it be more confusing? Yes it can!

USB 3.2 has three versions: USB 3.2 Gen1, USB 3.2 Gen2 and USB 3.2 Gen2x2. Gen1 has a maximum speed of 5Gbit/s, Gen2 a maximum speed of 10Gbit/s and Gen2x2 a maximum speed of 20Gbit/s. USB 3.2 Gen1 is also called USB 3.1 Gen1, USB 3.0 or SuperSpeed. SuperSpeed+ is the name of USB 3.2 Gen2 and USB 3.1 Gen2.

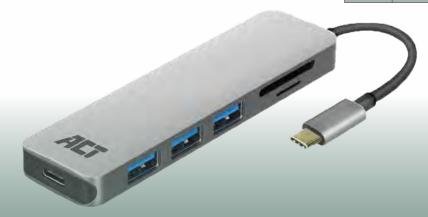
USB 4

USB 4 is the most recent version of USB supporting dataspeed up to 40Gbps. USB 4 is based on the Thunderbolt™ protocol. USB 4 support DisplayPort 2.0 over DP-Alt Mode supporting 8K resolutions @60Hz.

On this page a short overview of how the USB 3.2 is categorized:

- USB 3.2 Gen1: originally known as USB 3.0, and previously renamed to USB 3.1 Gen1. It's the original USB 3.0 specification, and it can transfer data at up to 5Gbps.
- USB 3.2 Gen2: Previously known as USB 3.1, and then later as USB 3.1 Gen2. It offers speeds at up to 10Gbps.
- USB 3.2 Gen2x2: formally known as USB 3.2 speeds at up to 20Gbps (by using two lanes of 10Gbps at once therefor it is called Gen2x2 instead of Gen3).
- USB 4.0 is the latest version and offers a speed of 20Gbps or 40Gbps. USB 4.0 only uses USB-C connectors.

Version	Name	Other name	Current	Voltage	Power	Bandwidth
USB 1.0	LowSpeed		0.15A	5V	0.75W	1.5 Mbit/s
USB 1.1	FullSpeed	Universal	0.15A	5V	0.75W	12 Mbit/s
USB 2.0	Highspeed	Enhanced	0.5A	5V	2.5W	480 Mbit/s
			2A	5V	10W	
USB 3.2 Gen1	Superspeed 5Gbps	USB 3.0 USB 3.1 Gen1	ЗA	9V	27W	5 Gbit/s
			ЗA	12V	36W	
			2A	5V	10W	
			ЗA	9V	27W	
USB 3.2 Gen2	Superspeed 10Gbps	USB 3.1 USB 3.1 Gen2	ЗA	12V	36W	10 Gbit/s
			ЗA	15V	45W	
			5A	20V	100W	
	SuperSpeed	USB 3.2	2A	5V	10W	
			ЗA	9V	27W	
			ЗA	12V	36W	
USB 3.2			ЗA	15V	45W	20 Gbit/s
Gen2x2	20Gbps		5A	20V	100W	20 0017 3
			5A	28V	140W	
			5A	36V	180W	
			5A	48V	240W	
			2A	5V	10W	
			ЗA	9V	27W	
			ЗA	12V	36W	
USB 4.0	SuperSpeed 20Gbps	USB 4.0	ЗA	15V	45W	20 Gbit/s or 40 Gbit/s
030 4.0	or 40Gbps	050 4.0	5A	20V	100W	40 Gbit/s
			5A	28V	140W	
			5A	36V	180W	
			5A	48V	240W	







USB

The advantages of USB-C:

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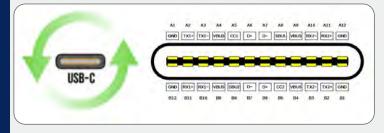
The advantages of USB-C:

• Symmetrical reversible connection

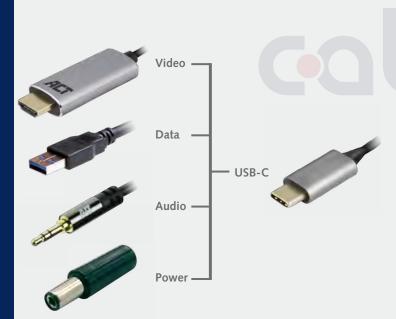
- Small connector
- Charge faster and more safe with Power Delivery (PD)
- Thunderbolt[™] 3 support: one cable for both images and power
- Support for DisplayPort Alternate Mode

A compact reversible connection

Are you always struggling with USB-A cables? When connecting a USB-A plugin into your computer, you always try the wrong side first. Always! This struggle belongs to the past with this USB-C connector. The USB-C connector doesn't have a top or bottom side. You can plug the connector either way into your device. The other big advantage of this connector is its compact size. This makes new laptops, smartphones and other devices with USB-C smaller and more light-weight.



4 in 1: Video, Data, Audio and Power are combined in one cable:



Additional Protocols using USB-C

Attention: the protocols below aren't supported by every device. Please check the manual of the device for more information about the supported protocols.

USB-C: intelligent chip (e-marker)

An intelligent chip takes care of the fast charging possibilities. A DFP (Downstream Facing Port) determines via the e-marker chip which features are supported. Like: fast charging via Power Delivery (PD), Thunderbolt™ 3 or DisplayPort Alternate Mode (DP Alt mode). Active cables and converters: each cable end can have a different active function. All active USB-C cables need an e-marker chip to restore the USB signals. This is the case with USB booster cables.

DisplayPort Alternate Mode (DP Alt mode) for connecting (4K) monitors USB Type-C supports DisplayPort Alternate Mode (DP Alt mode). This makes it possible to transfer (4K) videos simultaneously with data and power.

Port Configuration	DisplayPort 1.4a		DisplayPort 2.0	
4 Lanes, max link rate	5k (5120x2800)@60)fps 24bpp	10k (10240x4320)@60fps 24bpp	
2 Lanes, max link rate	4k (3840x2160)@60)fps 24bpp	8k (7680x4320)@30fps 30bpp	
With Compression (DSC)				
4 Lanes, max link rate	8k (7680x4320)@60)fps 30bpp	16k (15360x8460)@60fps 30bpp	
2 Lanes, max link rate	5k (5120x2800)@60)fps 24bpp	10k (10240x4320)@72fps 30bpp	
Notes:		Кеу:		
-2 Lanes configuration is common for USB-C DP Alt mode -All above modes assume full 4:4:4 colour encoding -30bpp is required for DisplayHDR operation		- DSC = Display Stream Compression - fps = frames per second - bpp = bits per pixel		

DP 2.0 Mandates Support for Display Signal Compression (DSC)

- VESA released DSC 1.2a in January 2017.
- DSC is now the industry standard data compression across the display interface.
- DSC was purposely designed to offer low latency, low complexity codec for visually lossless image compression to increase the amount of data carried by a display interface data rate, saving power.
- Key features include
- Native 4:2:0 and 4:2:2 coding, Up to 16 bits per colour, High Dynamic Range (HDR)
- DSC is mandated in DP 2.0 specification and is a powerful feature to allow designers to optimize BW, performance and power for Native DP, DP Alt mode products and tunnelled DP over USB4.

USB-C: Video output over USB-C for tablets and phones

In the past, some Android phones were supported by MHL "Mobile Highdefinition Link". To be able to use MHL, you still had to have a special MHL cable and your TV / monitor / beamer also needed MHL support to view the images of your phone on a TV / monitor / beamer.

Now more and more phones are released that use "Display over USB" instead of MHL support. Giving you the opportunity to easily convert images via your USB-C to your TV / monitor / beamer without having to use MHL support.



DSC for better compression

Next generation video products need a higher level of compression to be able to deliver for example 8K output or dual/triple display support at 4K. Therefor in USB-C there has been the introduction of Display Stream Compression (DSC). DSC was the first to offer a low latency, low complexity codec expressly designed for this purpose.

For mobile applications, DSC 1.1 mainly serves to reduce the video interface data rate, which reduces system power, prolongs battery life and reduces interconnects to enable sleeker designs. For external display interfaces, DSC 1.2a extends resolution across existing connectors and cables, enabling 8K video and legacy support from the same connection.

DSC 1.2a is an additional standard to DP 1.4. So if you buy A USB-C device that needs DSC you will need to check if your PC or Notebook supports both DP 1.4 and DSC 1.2a to get the maximum out of your device. Since DP 2.0 DSC is supported by default.

DSC was purposely designed to offer low latency, low complexity codec for visually lossless image compression to increase the amount of data carried by a display interface data rate, saving power.

Native 4:2:0 and 4:2:2 coding, Up to 16 bits per colour, High Dynamic Range (HDR) DSC is mandated in DP 2.0 specification and is a powerful feature to allow designers to optimize BW, performance and power.



Thunderbolt™ 3 support

It is possible to name Thunderbolt[™] 3 in the same line with USB-C. Other Thunderbolt[™] versions are using their own interface. The third Thunderbolt[™] generation is using USB-C. Only one connection is used for multiple protocols: USB-C. Convenient right?!

The biggest advantage of Thunderbolt[™] 3 is the throughput speed of up to 40Gbit/s. This is four times faster than the throughput of USB 3.2 Gen2: 10Gbits/s. Besides, Thunderbolt[™] 3 can provide power and images to two 4K screens of max. 60Hz. All used peripherals, like a laptop, screens and cables, must support Thunderbolt[™] 3. Devices that require the protocols mentioned before (Power Delivery and/or DP Alt mode) will also work on Thunderbolt[™] 3 devices.

USB 4

USB 4 is the most recent version of USB supporting dataspeed up to 40Gbps. USB 4 is based on the Thunderbolt™ protocol. USB 4 support DisplayPort 2.0 over DP-Alt Mode supporting 8K resolutions @60Hz.

Thunderbolt™ 4

The specifications of USB 4 are part of the Thunderbolt[™] 4 protocol. The video capacity compared to Thunderbolt[™] 3 has doubled to 1x 8K @ 60Hx or 2x 4K @60Hz

Charge faster and safer with Power Delivery

USB-C additionally can support Power Delivery (PD). This protocol enables your smartphone to charge up to 70% faster than by using a normal charger. One footnote: both the charger and the connected device must support Power Delivery. They both have built-in chips that communicate with each other to decide the best PD profile. Did you connect a USB-C accessory with PD support between the charger and the device? This USB-C accessory will communicate as well with the charger and the device. Besides this all, USB-C with PD enables charging in two directions. For example, you can charge your smartphone with your tablet but also your tablet with your smartphone. Which Power Delivery profiles are available? 5V, 9V, 12V, 15V and 20V.

With USB Power Delivery it is possible to charge your device with a high power output up to 100W therefor you will be able to Power/charge even Notebooks/Ultrabooks/Displays All these Chips together will determine which Power profile is safe to use for the entire setup. For example if you have a USB-C charger that can supply 100W (20V 5A) and your laptop needs to be powered at 60W (20V 3A) the USB-C charger will provide a 60W (20V 3A) output. Now for example you will use a USB-C cable that has an e-marker chip of a max power throughput up to 45W in the same setup the USB-C charger will provide a max power output of 45W. If the USB-C cable or one of the

attached products do not have a PD chip the USB-C charger will no longer provide a PD profile and will power the entire setup at 5V default USB power profile

ERP technology

Recently there has been an update from the USB Implementers forum. It has been announced that there will be an addition to the PD protocol: Extended Power Range. This is also known as EPR.

EPR will add two new PD profiles. Namely 28.0V, 36.0V and 48.0V as voltage which both can go up to a maximum current of 5.0A. This also increases the maximum power that can go over a USB-C cable to 240.0W.

This power is not needed for most applications. Gaming laptops, however, will require more than 100.0W.

For EPR, all devices will have to support EPR to be able to pass this maximum 240.0W. This will be indicated via the E-marker chips and will also be made optically recognisable on the cables. How exactly this will happen is not yet clear.

With the advent of EPR, the previous version that went up to 60.0W and 3.0A has been renamed SPR (Standard Power Range).

Which technology or protocol does my USB-C laptop support?

Each technology/protocol has its own logo. In the best case these logos are visible next to the USB-C port on your laptop. The only thing is that suppliers aren't obligated to put the logos on the laptop. No symbol next to the USB-C port on your laptop? Please consult the manual of the laptop's supplier to check which technology/protocol this Type-C port supports.

USB-C cables, one cable for all applications, right?

You can use a cable with USB-C connector for every purpose (charging/data transfer), right? Nothing could be further from the truth. The quality of a USB-C cable can be completely different than the quality of another USB-C cable. It is of great importance to use qualified cables to prevent irreparable damage to your valuable equipment.

What are the qualities of a good cable:

The most important factor is the connector. This connector must have a seamless design.

Some manufactures are recommending some cables that can be safely used. Charging your laptop requires a more powerful cable than a plain data cable. Please pay attention to this!

What is MST (Multi Stream Transport)?

MST is part of the DisplayPort 1.2 standard, with which monitors and computers can support "daisy-chaining". You usually recognize daisy-chaining when the monitor has both an input and output DisplayPort, so that you can connect the first monitor to the computer and the second monitor to the first monitor. If both the monitor and the computer support MST daisy-chaining, the two screens work as separate screens. Exactly as if they were connected directly to the computer.

USB-C and MST

Within the USB-C it is possible that the DP-alt mode (DisplayPort alternate mode) is supported by your laptop / PC. If this is the case it will also support MST, and you can choose to use a USB-C to MST adapter, this adapter has multiple video outputs that you can use to have multiple monitors (even if they don't support MST) to connect to an MST (daisy chain). The connected screens can now be recognized as separate screens on your laptop / PC and be used as an extended desktop.



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MST on macOS

Please note!!! macOS does not support MST Daisy chaining. macOS only supports Daisy-chaining with the Thunderbolt[™] 3 standard. So the MST adapters will not provide the desired result for macOS devices, the connected screens in this case only show a clone (copy) of your main screen on the connected screens also called SST (Single Stream Transport).

USB-C summarized for you

- New standard for compact connector
- Supports transfer speed up to a maximum of 20 Gbps (40Gbps when used with Thunderbolt™ 3
- Compatible with all other USB devices
- Faster charging by PD, with power supply in two directions
- · Possibility to send video up to a 8K resolution through a USB cable
- Alternate Mode (DP Mode) for simultaneous image, audio and data
- Thunderbolt™ 3 for even faster data transfer
- USB 4 is the latest development using only USB-C connectors and USB 4 devices



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USB-A

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ACT USB 3.0 cable (USB 3.2 Gen1)

ption	0.5m	1m	1.5m	2m	3m	5m
.2 Gen1 A male - A male Double shielded				<u>SB3002</u>	<u>SB3003</u>	<u>SB3005</u>
.2 Gen1 A male - A male	<u>SB3010</u>	<u>SB3011</u>		<u>SB3013</u>	<u>SB0001</u>	<u>SB0002</u>
.2 Gen1 A male - A female	<u>SB3040</u>	<u>SB3041</u>	<u>SB3042</u>	<u>SB3043</u>		
.2 Gen1 A male - B male	<u>SB3016</u>	<u>SB3017</u>		<u>SB3019</u>	<u>SB0003</u>	<u>SB0004</u>
.2 Gen1 A male - USB 3.0 micro B male	<u>SB3028</u>	<u>SB3029</u>		<u>SB3031</u>		
	2 Gen1 A male - A male Double shielded 2 Gen1 A male - A male 2 Gen1 A male - A female 2 Gen1 A male - B male	2 Gen1 A male - A male Double shielded 2 Gen1 A male - A male 2 Gen1 A male - A female 2 Gen1 A male - A female 2 Gen1 A male - B male	2 Gen1 A male - A male Double shielded SB3010 SB3011 2 Gen1 A male - A male SB3040 SB3041 2 Gen1 A male - B male SB3016 SB3017	2 Gen1 A male - A male Double shielded SB3010 SB3011 2 Gen1 A male - A male SB3040 SB3041 2 Gen1 A male - A female SB3040 SB3041 2 Gen1 A male - B male SB3016 SB3017	R Gen1 A male - A male Double shieldedSB3010SB3011SB3002R Gen1 A male - A maleSB3010SB3011SB3013R Gen1 A male - A femaleSB3040SB3041SB3042SB3043R Gen1 A male - B maleSB3016SB3017SB3019	R Gen1 A male - A male Double shielded SB3010 SB3011 SB3002 SB3003 R Gen1 A male - A male SB3010 SB3011 SB3013 SB3001 R Gen1 A male - A male SB3040 SB3041 SB3042 SB3043 R Gen1 A male - B male SB3016 SB3017 SB3019 SB0003

ACT USB 2.0 cable

	36 2.0 cable						
Colour	Description	0.5m	1m	1.8m	2m	3m	5m
Black	USB 2.0 A male - USB 2.0 A male, Zip-bag		<u>AC3030</u>	<u>AC3032</u>		<u>AC3033</u>	<u>AC3045</u>
Black	USB 2.0 A male - USB 2.0 A female, Zip-bag			<u>AC3040</u>		<u>AC3043</u>	
Black	USB 2.0 A male - USB 2.0 A female	<u>SB2218</u>		<u>SB2220</u>		<u>SB2230</u>	<u>SB2250</u>
Black	USB 2.0 A male - USB 2.0 A female (AWG20)					<u>SB0036</u>	
Yvory	USB 2.0 A male - USB 2.0 A female	<u>SB2198</u>	<u>SB2199</u>	<u>SB2200</u>		<u>SB2203</u>	<u>SB2205</u>
Yvory	USB 2.0 A male - USB 2.0 A male				<u>SB2502</u>	<u>SB2503</u>	
Black	USB 2.0 A male - USB 2.0 A male			<u>SB2520</u>		<u>SB2530</u>	<u>SB2550</u>
Black	USB 2.0 A male - USB 2.0 B male	<u>SB2398</u>	<u>SB2401</u>	<u>SB2402</u>		<u>SB2403</u>	<u>SB2405</u>
Black	USB 2.0 A male - USB 2.0 B male angled			<u>SB2408</u>			
Black	USB 2.0 A male - USB 2.0 mini B male			<u>AC3050</u>			
Black	USB 2.0 A male - USB 2.0 mini B male			<u>SB2412</u>		<u>SB2413</u>	<u>SB2415</u>
Black	USB 2.0 A male - USB 2.0 mini B male			<u>SB2432</u>			
Black	USB 2.0 A male - USB 2.0 micro B male	<u>SB0005</u>	<u>SB0006</u>		<u>SB2498</u>	<u>SB0007</u>	<u>SB0008</u>
Black	USB 2.0 micro B male - USB 3.0 micro B male				<u>SB2602</u>		
Black	USB 2.0 mini A male - USB 2.0 B male			<u>SB2482</u>			
Black	USB 2.0 mini A male - USB 2.0 mini B male			<u>SB2452</u>			

ALT USB Extender over CAT cable

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Colour	Description	Max. cable length 50m	
Grey	USB A 1.1 male - USB A 1.1 female, RJ45 (x2)	<u>AC6060</u>	
Black	USB A 2.0 male - USB A 2.0 female, RJ45 (x2)	<u>AC6063</u>	

ACT USB booster cable Colour Description Bandwidth Cascadable 5m 10m Black USB 2.0 A male - USB 2.0 A female 480Mbps 4x <u>AC6005</u> <u>AC6010</u> USB 3.2 Gen1 A male - USB 3.2 Gen1 A female Black 5Gbps 2x <u>AC6105</u> <u>AC6110</u> Black USB 3.2 Gen1 C male - USB 3.2 Gen1 C female 5Gbps Зx <u>AC7060</u>

ACT USB 3.2 Gen1 booster cable

Colour	Description	5m	10m
Black	USB 3.2 A male - USB 3.2 A female, cascadable 2x	<u>AC6105</u>	<u>AC6110</u>
Black	USB 3.2 C male - USB 3.2 C female, cascadable 2x	<u>AC7060</u>	

ACT USB adapters

		12
Colour	Description	Туре по.
Black	USB 2.0 A female - USB 2.0 mini B male	<u>SB4040</u>
Black	USB 3.2 Gen1 C male - USB A female adapter	<u>SB0037</u>

Thunderbolt[™]2

ACT Thunderbolt™2

	hunderbolt™2	N. N.
Colour	Description	1m
Black	Thunderbolt [™] 2 male - Thunderbolt [™] 2 male	<u>SB0010</u>
Yvory	Thunderbolt [™] 2 male - Thunderbolt [™] 2 male	<u>SB0009</u>



USB-C

ALT USB-C cable

USB-	C					USB
	JSB-C cable					
Colour	Description	USB 2.0	USB 3.2 Gen1	USB 3.2 Gen2	Length	Туре по.
Black	USB 3.2 Gen2 connection cable C male - C male 1.00m (Thunderbolt™3)	Х	X	\checkmark	1m	<u>SB0028</u>

ACT USB-C cable

Colour	Description	USB 2.0	USB 3.2 Gen1	USB 3.2 Gen2	Length	Type no.
Black	USB 3.2 Gen1 connection cable C male - C male 1.00 m	Х	\checkmark	X	1m	<u>SB0011</u>
Black	USB 3.2 Gen1 connection cable C male - C male 1.00 m	Х	\checkmark	X	1m	AC7345 Zip-bag
Blaxk	USB 3.2 Gen1 connection cable C male - C male 2.00 m	Х	\checkmark	X	2m	<u>SA7360</u> Zip-bag
Black	USB 2.0 connection cable C male - C male 1.00 m	\checkmark	X	X	1m	<u>AC3096</u>
Black	USB 2.0 connection cable C male - A male 1.00 m in Zip-bag	\checkmark	Х	X	1m	AC7350 Zip-bag
Black	USB 2.0 connection cable C male - A male 1.00 m	\checkmark	X	X	1m	<u>SB0014</u>
Black	USB 3.2 Gen1 connection cable C male - A male 1.00 m	Х	\checkmark	X	1m	AC7370 Zip-bag
Black	USB 3.2 Gen1 connection cable C male - A male 1.00 m	Х	\checkmark	X	1m	<u>SB0012</u>
Black	USB 3.2 Gen2 connection cable C male - C male 1.00m (Thunderbolt [™] 3)	Х	X	\checkmark	1m	AC7365 Zip-bag
Black	USB 3.2 Gen2 connection cable C male - C male 1.00m (Thunderbolt™3)	Х	X	\checkmark	1m	<u>SB0028</u>
Black	USB 3.2 Gen1 connection cable C male - C male 2.00 m	Х	\checkmark	X	2m	<u>SB0029</u>
	-					

ACT USB-C adapters, Zip-bag

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Colour	Description	USB 2.0	USB 3.2 Gen1	USB 3.2 Gen2	Length	Туре по.
Black	USB-C to USB-A female OTG adapter USB 3.2	×	\checkmark	X	20 cm	<u>AC7340</u>
Black	USB-C to USB-A Adapter	X	\checkmark	X	-	<u>AC7355</u>

ALT USB-C video adapters

ACT U	SB-C video adapters					2
Colour	Description	1080@60Hz	4K@30Hz	4K@60Hz	MST	Туре по.
Space grey	USB C male - VGA female	\checkmark	X	X	×	<u>AC7000</u>
Black	USB C male - VGA female, Zip-bag	\checkmark	X	×	X	<u>AC7300</u>
Space grey	USB C male - HDMI female	√	\checkmark	\checkmark	Х	<u>AC7010</u>
Space grey	USB C male - 2x HDMI male	✓	\checkmark	\checkmark	\checkmark	<u>AC7012</u>
Black	USB-C to HDMI female adapter, 15cm - 4K @ 30Hz, Zip-bag	√	\checkmark			<u>AC7305</u>
Black	USB-C to HDMI female adapter, 15cm - 4K @ 60Hz, Zip-bag			\checkmark		<u>AC7310</u>
Space grey	USB C male - DisplayPort female	✓	\checkmark	\checkmark	X	<u>AC7030</u>
Black	USB-C to DisplayPort female adapter, 15cm - 4K @ 60Hz, Zip-bag		\checkmark	\checkmark		<u>AC7320</u>
White	USB-C to DisplayPort female adapter, 15cm - 4K @ 60Hz		\checkmark	\checkmark		<u>SB0020</u>
White	USB C male - Mini DisplayPort female, 15cm - 4K @ 60Hz		\checkmark	\checkmark		<u>SB0021</u>
Black	USB C male - DVI male, 2m		\checkmark			<u>SB0033</u>
Black	USB C male - VGA male, 2m	√				<u>SB0032</u>
The USB C	port must support DisplayPort alternate mode or Thunderbolt TM 3 and can be	identified by the l	DP or Thunderbo	t™ 3 logo near th	e USB C port (as	s e.g. a MacBook).

ALT USB-C video adapter cable

ALT USB-C video adapter cable						
Colour	Description	4K@60Hz	Length	Туре по.		
Space grey	USB C male - HDMI male	\checkmark	1.8m	<u>AC7015</u>		
Black	USB C male - HDMI male	\checkmark	2.0m	<u>SB0030</u>		
Black	USB-C to HDMI male adapter cable, 2m - 4K @ 60Hz, Zip-bag	\checkmark	2.0m	<u>AC7315</u>		
Space grey	USB C male - DisplayPort male	\checkmark	1.8m	<u>AC7035</u>		
Black	USB C male - DisplayPort male	\checkmark	2.0m	<u>SB0031</u>		
Black	USB-C to DisplayPort male adapter cable, 2m - 4K @ 60Hz, Zip-bag	1	2.0m	<u>AC7325</u>		
The USB C	C port must support DisplayPort alternate mode or Thunderbolt™ 3 and can be i	identified by the	DP or Thunderbolt™ 3 logo near the USB C port (a	s e.g. a MacBook).		



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Type no.

<u>AC7070</u>

USB-C

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ACT USB-C 3.2 Gen1 hubs, retail package

ACT USB-C 3.2 Gen1 hubs, retail package						0	n
Colour	Description	USB-A	USB-C	PD	Ethernet	Card reader	Type no.
Space grey	USB-C Hub with card reader and PD Pass-Through	3	0	65W	×	\checkmark	<u>AC7050</u>
Space grey	USB-C Hub with card reader	3	0	X	X	\checkmark	<u>AC7051</u>
Space grey	USB-C Hub with card reader and PD Pass-Through	3	0	65W	X	\checkmark	<u>AC7052</u>
Space grey	USB-C Hub with PD Pass-Through	4	0	65W	X	X	<u>AC7053</u>
Space grey	USB-C Hub with Gigabit ethernet port	3	0	Х	\checkmark	X	<u>AC7055</u>

ACT u	ACT USB-C 3.2 Gen2 hubs, retail package					
Colour	Description	USB-A				
Space grey	USB-C Hub with USB-C en USB-A	2				

ACT USB-C male - 3.5mm audio jack female PD-passthrough, retail package			
Colour	Description	Cable length	Type no.
Space grey	USB-C male - 3.5mm audio jack female PD-passthrough 65W	15cm	<u>AC7005</u>

ALT USB-C Gigabit network adapter retail package

OSB-C digabit network adapter, retail package					
Colour	Description	Cable length	Type no.		
Space grey	USB-C Gigabit network adapter	15cm	<u>AC7080</u>		

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PIEL USB-C hub with HDMI, retail package								
Colour	Description	USB-A	USB-C	4K@30Hz	Card reader	PD	Type no.	
Space grey	rey USB-C to HDMI 4K@30Hz adapter with hub and card reader		1	\checkmark	\checkmark	60W	<u>AC7021</u>	
Space grey	USB-C to HDMI 4K@30Hz adapter with USB-A port		0	\checkmark	×	60W	<u>AC7022</u>	
Space grey	rey USB-C to HDMI 4K@30Hz adapter with USB Hub and card reader		0	\checkmark	\checkmark	60W	<u>AC7023</u>	
Space grey	grey USB-C to HDMI 4K@30Hz adapter with USB Hub		1	\checkmark	×	85W	<u>AC7024</u>	
Space grey	USB-C Thunderbolt™ 3 to HDMI 4K@30Hz adapter	2	2	\checkmark	\checkmark	100W	<u>AC7025</u>	
The USB C port must support DisplayPort alternate mode or Thunderbolt™ 3 and can be identified by the DP or Thunderbolt™ 3 logo near the USB C port (as e.g. a MacBook).								



ACT USB-C multiport video adapters and laptop docking, retail package

Colour	Description	USB-A	USB-C	Card reader	PD	MST	
Space grey	USB-C Multiport video adapter	1	0	×	\checkmark	X	<u>AC7040</u>
Space grey	USB-C Multiport video adapter with cardreader	2	0	\checkmark	\checkmark	X	<u>AC7041</u>
Space grey	USB-C Multiport video adapter	3	0	X	\checkmark	X	<u>AC7042</u>
Space grey	USB-C Multiport video adapter with cardreader and 3.5mm audio jack	3	0	\checkmark	\checkmark	X	<u>AC7043</u>
Space grey	USB-C 4K Multiport docking station MST	3	1	\checkmark	\checkmark	\checkmark	<u>AC7046</u>
Black	USB-C 4K Multiport Dock - 4K @ 30Hz, Zip-bag	1	0	×	X	X	<u>AC7330</u>
The USB C port must support DisplayPort alternate mode or Thunderbolt™ 3 and can be identified by the DP or Thunderbolt™ 3 logo near the USB C port (as e.g. a MacBook).							



Charging Only

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USB Docking stations

2

Q Q Q Q

docking stations from You can also connect charging port with Por	a complete workstation with just one USB-C cable? It's possible with the USB-C ACT. The ACT Multiport Docks offer you the possibility to connect a 4K monitor. various devices via a Gigabit Ethernet port, USB-A port and a USB-C pass-through wer Delivery support. ations with USB-C connection, ACT also offers docking stations with USB-A
Туре по.	<u>AC7046</u>
Description	USB-C Docking station 3 monitors HDMI, DisplayPort, with ethernet, USB hub, cardreader and audio
Input	USB-C male
Output	3.5 mm jack female (x1) DisplayPort female (x2) HDMI A female (x1) RJ45 female (x1) SD card slot (x1), Micro SD card slot (x1)USB A female (x3) USB C female (x1)
USB Standard	USB 3.2 Gen1 (SuperSpeed USB)
USB port specification	USB 3.2 Gen1 - SuperSpeed (USB 3.0) (x4)
Data transfer rate	5 Gbps
USB-C	
Power Delivery ports*	1
Max PD power	100 W
Supported PD profiles	12.0V 3.0A, 15.0V 3.0A, 20.0V 5.0A, 5.0V 3.0A, 9.0V 3.0A
Video signal	DisplayPort, HDMI
Video specification	HDMI Ultra Highspeed, DisplayPort 1.4
Resolution	4096 x 2160 @ 30Hz, 4096 x 2160 @ 60Hz
4K compatible	Yes
Cable length cm.	100
System requirements**	USB-C PD charger for PD charging, USB-C port with DisplayPort Alternate Mode (DP Alt Mode)**
Ethernet	1x Gigabit
Cardreader	Yes
Material enclosure	Aluminium
Extra	External power supply, MST support Dual and Triple display support, Micro SD card reader, SD card reader

MST => Multiple monitors with each monitor having its own view A docking station offers the possibility of connecting several monitors. MST is used for this purpose. In most cases, you connect one extra monitor via HDMI and a second and sometimes third extra monitor via DisplayPort. These extra monitors should all show a different view, so that you can work on Word on one screen and read your e-mail on another.

MST is not supported by Mac. To connect an additional monitor to your Macbook, use a video adapter with Thunderbolt[™] 3 support or connect the AC7049 or AC6150 USB docking station with DisplayLink to your Macbook. Thanks to DisplayLink technology it is possible to connect multiple monitors via the USB port.

<u>AC7049</u>



USB Dual Docking station with DisplayLink, 2x HDMI, 2x USB 3.2 Gen 1 (USB 3.0) , 4x USB 2.0, Ethernet and 2x 3.5mm

USB-C/ USB-A male

HDMI female x2 USB-A 2.0 x4 USB-A 3.2 Gen1 x2 RJ45 x1 3.5mm jack x2

USB 3.2 Gen1 (SuperSpeed USB)

USB 2.0 - HighSpeed (Enhanced) (x4) USB 3.2 Gen 1 - SuperSpeed (USB 3.0) (x2)



<u>AC6150</u>

USB Dual Docking station with DisplayLink, HDMI, DVI, 2x USB 3.2 Gen 1 (USB 3.0) , 4x USB 2.0, Ethernet and 2x 3.5mm

USB-A male

HDMI female x1 DVI x1 USB-A 2.0 x4 USB-A 3.2 Gen1 x2 RJ45 x1 3.5mm jack x2

USB 3.2 Gen1 (SuperSpeed USB)

USB 2.0 - HighSpeed (Enhanced) (x4) USB 3.2 Gen 1 - SuperSpeed (USB 3.0) (x2)

5 Gbps (USB 3.2 Gen 1)	5 Gbps (USB 3.2 Gen 1)
Yes	No
-	-
-	-
HDMI	HDMI, DVI
HDMI Highspeed	HDMI Highspeed
2560 x 1440 @ 30Hz	2560 x 1440 @ 30Hz
No	No
100	100
DisplayLink	DisplayLink
1x Gigabit	1x Gigabit
No	No
ABS	ABS
USB-C and USB-C cable included	DVI to VGA adapter included





USB-C Multiport adapters

The ACT USB-C Multiport Adapters turn your laptop into a complete workstation by connecting just one flexible USB-C cable. USB-C allows video at 4K resolution or more to be transmitted through the USB cable, allowing it to also function as a monitor connection. One monitor with 4K resolution or several monitors with a lower resolution can be connected. This is done using the Display Alternate Mode (DP mode) technology. Make sure your laptop or PC supports this.

The Alternate Mode ensures that multiple signals are sent simultaneously via the USB-C cable. For example power, data, image and audio.

Foldable cable

Туре по.	ype no. <u>AC7021</u>		<u>AC7023</u>	<u>AC7024</u>	<u>AC7025</u>
	WITH FOLDABLE CABLE			2	*
Description	USB-C to HDMI adapter with PD, 4K @ 60Hz, USB-A, USB-C, Card Reader	USB-C to HDMI adapter with PD, 4K @ 60Hz, USB-A	USB-C to HDMI multiport adapter 4K, USB hub, card reader, PD pass through	USB-C to HDMI multiport adapter 4K, USB hub, PD pass through	USB-C Thunderbolt™ 3 to HDMI multiport adapter 4K, USB hub, card reader and PD pass through
Input	USB C male	USB C male	USB C male	USB C male	USB C male (x2)
Output	HDMI A (full-size) female (x1) USB-C female (x1) USB-A female (x2) SD slot (x1), microSD slot (x1)	HDMI A (full-size) female (x1)	HDMI A (full-size) female (x1) USB-A female (x2) SD slot (x1), microSD slot (x1)	HDMI A (full-size) female (x1) USB-A female (x4)	HDMI A (full-size) female (x1) USB-C female (x1) USB-A female (x2) SD slot (x1), microSD slot (x1)
Cable part length (cm)	12	12	13	13	-
Power Delivery ports*	1	1	1	1	1
Max. PD power	60 W	60 W	60 W	85 W	100 W
4K compatible	Yes	Yes	Yes	Yes	Yes
Max. resolution	4096 x 2160 @ 30 Hz 1920 x 1080 @ 60Hz	3840 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	3840 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	3840 x 2160 @ 30Hz 1920 x 1080 @ 60Hz
Video signal	HDMI	HDMI	HDMI	HDMI	HDMI
Video specifications	HDMI High Speed	HDMI High Speed	HDMI High Speed	HDMI High Speed	HDMI High Speed
Video support	HDCP	-	HDCP	-	Thunderbolt™ 3
USB compatibility	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 2 - SuperSpeed 10Gbit/s
Data transfer rate	5 Gbps	5 Gbps	5 Gbps	5 Gbps	10 Gbps
Ethernet	No	No	No	No	No
Card reader	Yes	No	Yes	No	Yes
System requirements**	DP Alt mode	DP Alt mode	DP Alt mode	DP Alt mode	MacBook with two Thunderbolt™ 3 ports
Material housing	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
	- I I I I I I				

Extra

* USB-C pass through charging port with PD (Power Delivery) support. Max. 60W (for charging USB-C devices only) ** The USB-C port of your laptop needs to support DisplayPort alternate mode (or Thunderbolt ™3) which can be recognized by the DP logo near the USB-C port. (like MacBook)

USB-C Multiport adapters

USB-C Multipe	ort adapters				USB
• 1 • 5 • 2 • 2	5%	24 50 16 34 50 16 44 0 00 10 10 10 10 10 10 10 10 10 10 10 10 1			
<u>AC7040</u>	<u>AC7041</u>	<u>AC7042</u>	<u>AC7043</u>	<u>AC7330</u>	<u>AC7044</u>
		WITH FOLDABLE CABLE	WITH FOLDABLE CABLE		and the second
USB-C to HDMI multiport adapter with ethernet, USB hub and cardreader	USB-C to HDMI multiport adapter with ethernet, USB hub, cardreader and PD pass through	USB-C to HDMI multiport adapter with ethernet and USB hub	USB-C to HDMI or VGA multiport adapter with ethernet, USB hub, card reader, audio and PD pass through	USB-C to HDMI/VGA adapter 4K with ethernet and hub	USB-C Thunderbolt™ 3 to Multiport Adapter 4K
USB-C male	USB-C male	USB-C male	USB-C male	USB C male	USB C male (x2)
HDMI female x1 USB-A female x1 USB-C female x1 RJ45 x1	HDMI female x1 USB-A female x2 USB-C female x1 RJ45 x1 SD + Micro SD slot	HDMI A female (x1) RJ45 female (x1) USB 3 A female (x3) USB C female (x1)	3,5 mm jack female (x1), HDMI A (full-size) female (x1), Micro SD card slot (x1), RJ45 female (x1), SD card slot (x1), USB A female (x3), USB C female (x1), VGA HD D-sub 15- pin female (x1)	HDMI A (full-size) female (x1) VGA, RJ45, USB	HDMI A (full-size) female (x1) USB-C female (x2) USB-A female (x1) SD slot (x1) microSD slot (x1) RJ45 (x1)
15	15	12	12	15	-
1	1	1	1	No	1
60 W	60 W	60 W	60 W	-	100 W
Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	Yes 4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz
HDMI	HDMI	HDMI	HDMI, VGA	HDMI, VGA	HDMI
HDMI High Speed	HDMI High Speed	HDMI High Speed	HDMI High Speed, VGA	HDMI High Speed, VGA	HDMI High Speed
HDCP 2.2	HDCP 2.2	HDCP 2.2	-		Thunderbolt™ 3
USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1(SuperSpeed USB)	USB 3.2 Gen 2 - SuperSpeed 10Gbit/s
5 Gbps	5 Gbps	5 Gbps	5 Gbps	5 Gbps	10 Gbps
1x Gigabit	1x Gigabit	1x Gigabit	1x Gigabit	1x Gigabit	1x Gigabit
No DP Alt mode**	Yes DP Alt mode**	- DP Alt mode**	Yes DP Alt mode**	No DP Alt mode**	Yes MacBook Pro 016/2017/2018/2019) with two free USB C ports
Aluminium	Aluminium	Aluminium	Aluminium	Plastic	Aluminium
-	-	Foldable cable	Foldable cable	-	-

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USB-C Video adapters

USB

With USB-C, it is possible to transmit video at 4K resolution or more through the USB cable, allowing it to also function as a monitor connection. One monitor with 4K resolution or several monitors with a lower resolution can be connected. This is done using the Display Alternate Mode (DP mode) technology. Check whether your laptop or PC supports this. The Alternate Mode ensures that multiple signals are sent simultaneously via the USB-C cable. For example, power, data, image and audio.

USB-C and MST

Within USB-C it is possible that the DP-alt mode (DisplayPort alternate mode) is supported by the laptop/PC. If this is the case, it will also support MST, and you can use a USB-C to MST adapter. This adapter has multiple video outputs that you can use to connect multiple monitors (even if they do not support MST) in a MST (daisy-chain). Now the connected displays can be recognised as separate displays on a laptop/PC and used as an extended desktop.

MST on macOS

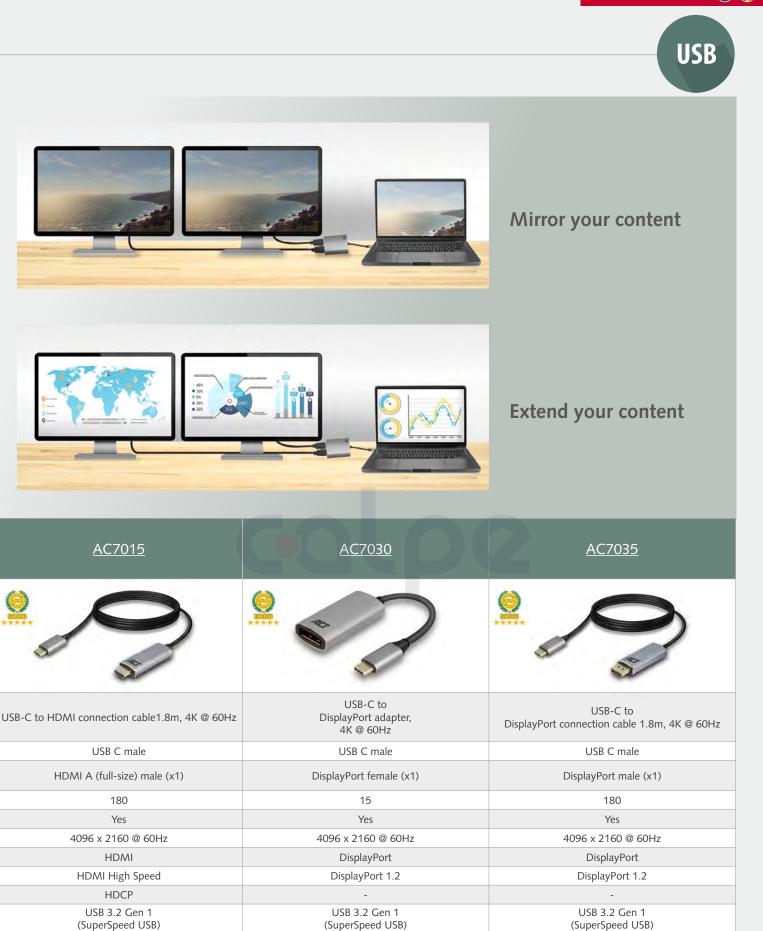
ATTENTION: macOS does not support MST daisy-chaining. So the MST adapters will not provide the desired result for macOS devices. In this case, the connected screens only show a clone (copy) of the main screen on the connected screens also called SST (Single Stream Transport).



Туре по.	<u>AC7000</u>	<u>AC7010</u>	<u>AC7012</u>
Description	USB-C to VGA adapter	USB-C to HDMI adapter, 4K @ 60Hz	USB-C to HDMI Dual monitor MST adapter, 4K @ 60Hz ***
Input	USB C male	USB C male	USB C male
Output	VGA HD D-sub female 15-pin female (x1)	HDMI A (full-size) female (x1)	HDMI A (full-size) female (x2)
Cable part length (cm)	12	15	12
4K compatible	No	Yes	Yes
Max. resolution	1920 x 1080 @ 60Hz	4096 x 2160 @ 60Hz	4096 x 2160 @ 60Hz
Video signal	VGA	HDMI	HDMI
Video specifications	VGA	HDMI High Speed	HDMI High Speed
Video support	-	HDCP	HDCP
USB compatibility	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
Data transfer rate	5 Gbps	5 Gbps	5 Gbps
Chipset	VL100+IT6516BFN	VL100+PS176	VL100+LT8712EXI
System requirements**	DP Alt mode	DP Alt mode	DP Alt mode
Material housing	Space grey	Aluminium	Aluminium

* USB-C pass through charging port with PD (Power Delivery) support. Max. 60W (for charging USB-C devices only)

** The USB-C port of your laptop needs to support DisplayPort alternate mode or ThunderboltTM 3 which can be recognized by the DP logo near the USB-C port. (like MacBook) *** AC7012 This video adapter can't be use on a Macbook©



5 Gbps

VL100

DP Alt mode

Aluminium

5 Gbps VL100+PS176

DP Alt mode

Aluminium



5 Gbps

VL100+IT6516BFN

DP Alt mode

Aluminium

USB-C Video adapters

With Type-C it's possible to send video with a 4K resolution or higher through the USB cable (Type-C can function as a display connection).

You can connect one monitor with 4K resolution or multiple monitors with a lower resolution with our USB-C video adapters (your laptop or PC need to support Alternate Mode technology).

The Alternate Mode ensures that multiple signals are sent simultaneously via the USB-C cable. For example, power, data, image and audio.



officieel distributeur

USB

Туре по.	<u>AC7305</u>	<u>AC7310</u>	<u>AC7315</u>	<u>AC7320</u>	<u>AC7325</u>
Description	USB-C to 4K HDMI Adapter 4K @ 30Hz	USB-C to 4K HDMI Adapter 4K @ 60Hz	USB-C to HDMI cable 2.0 meter	USB-C to DisplayPort Adapter 4K @ 60Hz	USB-C to DisplayPort Adapter cable 2.0 meter
Input	USB C male	USB C male	USB C male	USB C male	USB C male
Output	HDMI A (full-size) female (x1)	HDMI A (full-size) female (x1)	HDMI A (full-size) female (x1)	DisplayPort female (x1)	DisplayPort male (x1)
Cable part length (cm)	15	15	200	15	200
4K compatible	Yes	Yes	Yes	Yes	Yes
Max. resolution	4096 x 2160 @ 30Hz 1920 x 1080 @ 60Hz	4096 x 2160 @ 60Hz	4096 x 2160 @ 30/60Hz	4096 x 2160 @ 30/60Hz	4096 x 2160 @ 30/60Hz
Video signal	HDMI	HDMI	HDMI	DisplayPort	DisplayPort
Video specifications	HDMI High Speed	HDMI High Speed	HDMI High Speed	DisplayPort 1.2	DisplayPort 1.2
Video support	HDCP	HDCP	HDCP	HDCP	-
USB compatibility	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
Data transfer rate	5 Gbps	5 Gbps	5 Gbps	5 Gbps	5 Gbps
Chipset	RTD2171	RTD2171	RTD2172U	FL7102	WGE19FN
System requirements**	DP Alt mode	DP Alt mode	DP Alt mode	DP Alt mode	DP Alt mode
Material housing	Plastic	Plastic	Plastic	Plastic	Plastic

* USB-C pass through charging port with PD (Power Delivery) support. Max. 60W (for charging USB-C devices only) ** The USB-C port of your laptop needs to support DisplayPort alternate mode or Thunderbolt™ 3 which can be recognized by the DP logo near the USB-C port. (like MacBook)

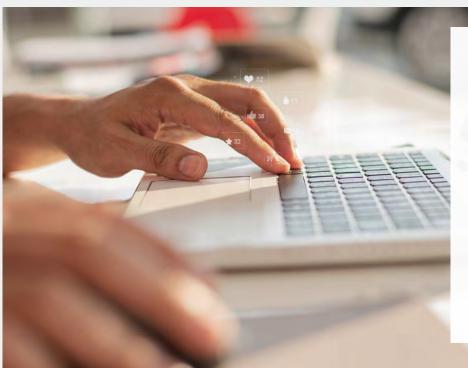
98

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- A

USB-hubs



ACT Hubs allow you to connect multiple USB-A and/ or UCB-C devices to your laptop with USB-C.

The hubs are ready to use and operate without an external power source.

USB is the standard for connecting peripherals such as hubs. The name of the connectors has been changed a number of times over the years.

This can lead to confusion. The current name of the ACT hubs: USB 3.2 Gen 1 also called SuperSpeed USB and has a speed up to 5Gbps. Previous names: USB 3.1 Gen 1 and USB 3.0.

Type no.	<u>AC6405</u>	<u>AC6410</u>	<u>AC6415</u>	<u>AC7050</u>	<u>AC7051</u>
			and the	O Contraction of the second se	
Description	USB-C Hub 3 port with Card Reader	4 Port-C Hub with power supply	4 Port-C Hub	USB-C Hub 3 port with card reader, PD Pass-Through	USB-C Hub 3 port with card reader
Input	USB-C male	USB-C male	USB-C male	USB-C male	USB-C male
Output	USB-A female x3 SD + Micro SD slot	USB-A female x4	USB-A female x4	USB-A female x3 USB-C female (PD pass- through only) SD + Micro SD slot	USB-A female x3 SD + Micro SD slot
USB Standard	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
Data transfer rate	5 Gbps	5 Gbps	5 Gbps	5 Gbps	5 Gbps
Туре-С	Yes	Yes	Yes	Yes	Yes
Cable part length (cm)	12	50	30	15	15
PD Pass-through port*	No	No	No	Yes (60W)	No
Ethernet	-	-	-	-	-
Card reader	Yes	No	No	Yes	Yes
Material housing	Plastic	Plastic	Plastic	Aluminium	Aluminium
Extra	-	External power supply	-	-	-
* Power delivery Pass-Through port, max. 60W, for charging your connected USB-C device					



<u>AC7052</u>	<u>AC7053</u>	<u>AC7055</u>	<u>AC7070</u>	<u>AC6400</u>	<u>AC6120</u>
WITH FOLDABLE CABLE		O and the	-	Carles)	Constant Sign
USB-C Hub 3x USB-A, card reader, PD pass through	USB-C Hub 4x USB-A, PD pass through	USB-C Hub with Gigabit ethernet port	USB-C Hub with USB-C & USB-A	3 Port-Hub with Gigabit LAN port	USB-A hub
USB-C male	USB-C male	USB-C male	USB-C male	USB-C male	USB-A male
Micro SD slot (x1) SD slot (x1) USB-A female (x3) USB-C female (PD pass- through only)	USB-A female (x4) USB-C female (PD pass- through only)	USB-A female x3 RJ45 x1	USB-A female x2 USB-C female x2 (data only)	USB-A female x3	USB-A female x4
USB 3.2 Gen1 (SuperSpeed USB)	USB 3.2 Gen1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 2 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
5 Gbps	5 Gbps	5 Gbps	10 Gbps	5 Gbps	5 Gbps
Yes	Yes	Yes	Yes	Yes	No
13	12	15	15	15	50
Yes (60W)	Yes(60W)	No	No	No	No
-	-	1x Gigabit	-	-	-
Yes	No	No	No	No	No
Aluminium	Aluminium	Aluminium	Aluminium	Plastic	Aluminium
Foldable cable	-	-	-	1x Gigabit LAN	-



AC6200

USB

USB-hubs & cardreaders

Transfer your files and photos quickly with the ACT USB card readers. Thanks to the compact design, you can easily take the card reader with you.

Get transfer speeds up to 5Gbit/s with the SuperSpeed USB 3.1 Gen1 (USB 3.0).

AC6300 <u>AC6310</u> <u>AC6215</u> Type no. AC6205 3 Port-Hub with Description 4 Port-Hub 7-Port Hub 4-Port Hub Gigabit LAN port Input USB-A male USB-A male USB-A male USB-A male USB-A female x4 USB-A female x3 USB-A female x7 USB-A female x4 Output USB 3.2 Gen 1 USB 3.2 Gen 1 USB Standard USB 2.0 USB 2.0 (SuperSpeed USB) (SuperSpeed USB) Data transfer rate 5 Gbps 5 Gbps 480 Mbps 480 Mbps No No Туре-С No No Cable part length (cm) 50 15 65 12 PD Pass-through port* No No No No Ethernet _ _ _ _

No

Plastic

1x Gigabit LAN

No

Plastic

With on/off switch

102

Extra

Card reader

Material housing

No

Plastic

Led-lighting

No

Plastic

AC6200: White

AC6205: Black

Smartcard ID readers

Do you need a card reader for your eID or Smart Card? The compact ACT Smart Card Readers allow you to read your eID or Smart Card easily and safely anywhere! The Smart Card Readers are easy to install and to use.

Support all common Smart Cards

Designed to meet all major Smart Card standards and specifications in ID-1 card format, including personal identification cards. The Card Readers are convenient for e-Commerce, e-Business, digital signatures, authentication and access protection. The card readers are CAC approved and compliant with PC/SC as well as WHQL.

No additional power needed

You do not need additional power adapters or extra cables. The card reader is bus powered, just plug in the 1m USB cable to your computer and use it instantly.

- Read your EID or Smart Card anywhere
- Compatible with Belgium eID cards
- Supports ISO 7816, T=0 or T=1 protocols
- Complies with PC/SC 1.0/2.0, EMV 4.1 and WHQL
- Suitable for Windows and Macintosh

Suitable for CIE & eID cards



Туре по.	<u>AC6370</u>	<u>AC6025</u>	<u>AC6015</u> <u>AC6020</u>	
		HEA		
Description	Card Reader	Card Reader	Smartcard reader	
Input	USB-A/USB-C	USB-A male	AC6015: USB-A AC6020: USB-C	
USB Standard	USB 3.2 Gen1 (SuperSpeed USB)	USB 2.0	USB 2.0 - HighSpeed (Enhanced)	
Data transfer rate	5 Gbps	480 Mbps	480 Mbps	
Туре-С	Yes	No	AC6015: No AC6020: Yes	
Cable part length (cm)	-	-	100 cm	
PD Pass-through port*	-	-	No	
Material housing	Plastic	Plastic	Plastic	
Extra	Supports the most common used memory cards	Supports the most common used memory cards	Reads your EID or Smart Card anywhere Compatible with Belgium eID cards	



USB accessories

			Ethernet adapt your device (e., network port a Gigabit networ and play device The AC7005 3.	80 and AC7335 USB-C to Fers are the solution when the g. a notebook) is broken or t all. Upgrade your notebook k connection. The ethernet e and it can be used on ever 5mm Audio Adapter lets you to your laptop/tablet/sma	ne network port of your device has no ok with a physical adapter is a plug ry USB-C port. ou connect your
Type no.	<u>AC7080</u>	<u>AC7335</u>	<u>AC7005</u>	<u>AC6000</u> <u>EM1016</u>	<u>AC6030</u>
Description	USB-C Gigabit network adapter	USB-C Gigabit network adapter	Audio adapter USB-C to 3.5mm jack	USB to Serial converter	Micro USB Bluetooth Receiver Class 1 v4.0
Input	USB-C male	USB-C male	USB-C male	USB-A male	USB-A male
Output	RJ45	RJ45	3.5 mm jack	D-sub 9-pin male	-
USB Standard	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	-	AC6000: USB 1.1 EM1016: USB 2.0	
Data transfer rate	5 Gbps	5 Gbps	-	250Kbps	
Туре-С	Yes	Yes	Yes	No	No
Cable part length	15 cm	15 cm	15 cm	AC6000: 1.5 m EM1016: 0.6 M	-
Ethernet	1x Gigabit	1x Gigabit	-	-	-
Card reader	No	No	No	No	No
Material housing	Aluminium	Plastic	Aluminium	Plastic	Plastic
Extra	-	-	Power Delivery Pass- Through-port 65W Built-in DAC 16/24-bit High res audio up to 24-bit/96Hz	Connect a serial device to your USB port	Data transfer speed up to 3 Mbps Max. range 10 m



USB boosters and extenders

				7	
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Type no.	<u>AC7060</u>	<u>AC6005</u> <u>AC6010</u>	AC6105 AC6110	<u>AC6060</u>	<u>AC6063</u>
Description	USB-C Booster (USB 3.2 Gen 1)	USB-A Booster (USB 2.0)	USB-A Booster (USB 3.2 Gen 1)	USB Extender set over UTP up to 60 meter	USB Extender set over UTP, up to 50 meter
Input	USB-C male	USB-A male	USB-A male	USB A male (x1) RJ45 (x1)	USB A male (x1) RJ45 (x1)
Output	USB-C female	USB-A female	USB-A female	USB A female (x1) RJ45 (x1)	USB A female (x1) RJ45 (x1)
USB Standard	USB 3.2 Gen 1 - SuperSpeed (USB 3.0)	USB 2.0	USB 3.2 Gen 1 - SuperSpeed (USB 3.0)	USB 1.1	USB 2.0
Data transfer rate	5 Gbps	480 Mbps	5 Gbps	12 Mbps	480 Mbps
Туре-С	Yes	No	No	No	No
Cable part length	5 meter	5 meter: AC6005 10 meter: AC6010	5 meter: AC6105 10 meter: AC6110	30 cm	14 cm
Material housing	Aluminium	Plastic	Plastic	Plastic	Plastic
Extra	Possibility to cascade the USB Signal Booster up to 3 times (max. 15m)	Possibility to cascade the USB Signal Booster up to 2 times	Possibility to cascade the USB Signal Booster up to 2 times	1x DC jack for connecting an optional power supply Extend the USB connection via UTP cable with a max. of 60 meters	External power supply included Extend the USB connection via UTP cable with a max. of 50 meters

105 CALPE.NL

Cable management



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Choose cable management to:

- 1. Organise and guide bundeled cables
- 2. Separate cables per application
- 3. Identify individual ports

Tips cable management:

Below we will explain how these three goals can be reached and we will give you tips how to apply this in real life business applications. Cabling is a broad term, in this article we focused on network cabling (like UTP cables and CAT5E/CAT6/CAT6A/CAT8 cables) fiber optic cables and power cords.



Organise and guide cables in bundles

Network cables and fiber cables from a switch or server are often bundeled before bridging a distance of a few meters. This could be in a network cabinet or server room within an office network or datacenter. Cables in a server cabinet or networking cabinet are bundeled by cable management panels and cable ties (also called zip tie and zap strap).

Cable management panel

In a 19" cabinet, it is wise that every third panel consist a cable management panel/shunting panel. In this way you will create optimum cable management. Velcro and cable ties, combined with tie wrap, can be used for vertical guidance.





Seperate cables per application

Within a network you will find cables suitable for different applications. In a data network this can be telephony, data and backup cabling. In the power supply different cabling is used for the main data source and the backup supply which typically come from the UPS.

To make a clear distinction between these applications it's best to use coloured cabling. By using coloured cables it is possible to distinguish different applications at once.

Identify individual ports

In a data network you want to know which port of the switch is connected to which desk. This can be achieved by labeling individual cables and record what cable is used by what connection. Most common is usage of alfanumerical series with the same label on both sides.

There are different solutions for this:

A) Pre-printed labels

Labels with a pre-printed text are easy in use. We offer an assortment with pre-printed labels with letters, numbers and colour. Click here for our assortment.

B) Order cables including labels

ACT you can have your cables labeled. This is possible for nearly all of our cabling like network cables (CAT5E/CAT6/CAT6A/CAT8), fiber optic cables, power cords etc. Advantages of labeled cables: No investment in printers or other equipment Freedom to specify what should be labeled and which place on the cable. Saving on labour time and costs because the cables are already labeled.

C) Print and attach your own labels

For printing your own labeling we offer a professional printer of Phoenix.



Cable management



A

ACT Cable tie transparent

Description	Packaging	Width	Length	Туре по.
Cable tie	Bag 100 pieces	2.5 mm	100 mm	<u>CT1010</u>
Cable tie	Bag 100 pieces	3.6 mm	150 mm	<u>CT1030</u>
Cable tie	Bag 100 pieces	3.6 mm	203 mm	<u>CT1040</u>
Cable tie	Bag 100 pieces	4.6 mm	203 mm	<u>CT1050</u>
Cable tie	Bag 100 pieces	4.8 mm	280 mm	<u>CT1060</u>
Cable tie	Bag 100 pieces	4.8 mm	385 mm	<u>CT1070</u>
Cable tie	Bag 100 pieces	7.6 mm	38 mm	<u>CT1080</u>
	Cable tie Cable tie Cable tie Cable tie Cable tie Cable tie	Cable tieBag 100 piecesCable tieBag 100 pieces	Cable tieBag 100 pieces2.5 mmCable tieBag 100 pieces3.6 mmCable tieBag 100 pieces3.6 mmCable tieBag 100 pieces4.6 mmCable tieBag 100 pieces4.8 mmCable tieBag 100 pieces4.8 mm	Cable tieBag 100 pieces2.5 mm100 mmCable tieBag 100 pieces3.6 mm150 mmCable tieBag 100 pieces3.6 mm203 mmCable tieBag 100 pieces4.6 mm203 mmCable tieBag 100 pieces4.8 mm280 mmCable tieBag 100 pieces4.8 mm385 mm

ACT Cable tie black

ACT Cable tie black					Ŵ
Colour	Description	Packaging	Width	Length	Туре по.
Black	Cable tie	Bag 100 pieces	2.5 mm	100 mm	<u>CT1015</u>
Black	Cable tie	Bag 100 pieces	3.6 mm	150 mm	<u>CT1035</u>
Black	Cable tie	Bag 100 pieces	3.6 mm	203 mm	<u>CT1045</u>
Black	Cable tie	Bag 100 pieces	4.6 mm	203 mm	<u>CT1055</u>
Black	Cable tie	Bag 100 pieces	4.8 mm	385 mm	<u>CT1075</u>
Black	Cable tie	Bag 100 pieces	8 mm	450 mm	<u>CT1090</u>

ACT Cable tie with label, transparent					
Colour	Description	Packaging	Width	Length	Туре по.
Transparent	Cable tie with label	Bag 100 pieces	2.5 mm	100 mm	<u>CT1300</u>
Transparent	Cable tie with label	Bag 100 pieces	2.5 mm	200 mm	<u>CT1310</u>
-					

ACT Cable tie cable mount adhesive, transparent					
Colour	Description	Packaging	Width	Length	Туре по.
Transparent	Cable tie mount adhesive	Bag 100 pieces	4.6 mm	-	<u>CT1260</u>
Transparent	Cable tie mount adhesive	Bag 100 pieces	5.5 mm	-	<u>CT1270</u>

ACT Cable tie mount s	191919			
Colour	Description	Packaging	Size	Type no.
Transparent	Cable tie mount screw	Bag 100 pieces	16x23x9 mm	<u>CT1200</u>

ACT Cable tie tie gun				
Colour	Description	Packaging	Size	Type no.
Transparent	Cable tie gun, Economy	Bag 100 pieces	For cables of 2.5 - 5.0 mm	<u>CT3000</u>
Transparent	Cable tie gun, Professional	Bag 100 pieces	For cables of 2.5 - 5.0 mm	<u>CT3010</u>

ACT Cable tie					<pre>%</pre>
Colour	Description	Packaging	Width	Length	Туре по.
Black	Cable tie	Bag 20 pieces	12 mm	125 mm	<u>CT4003</u>
Black	Cable tie	Bag 20 pieces	12 mm	150 mm	<u>CT4004</u>
Black	Cable tie	Bag 20 pieces	12 mm	180 mm	<u>CT4005</u>
Black	Cable tie	Bag 20 pieces	16 mm	210 mm	<u>CT4006</u>
Black	Cable tie	Bag 20 pieces	16 mm	240 mm	<u>CT4007</u>
Black	Cable tie	Bag 20 pieces	16 mm	310 mm	<u>CT4008</u>



CABL MANAGEMENT

Cable management



ACT Cable management panels

Colour	Description	Туре по.
Black	Cable pass-through with brush 1U	<u>FA2070</u>
Black	Cable pass-through with brush 1U, including management bar	<u>FA2071</u>
Black	DUCT Cable management panel with cover 1U	<u>FA2072</u>
Black	DUCT Cable management panel with cover 2U	FA2073
Black	Cable management panel 5 plastic rings 1U	<u>FA2074</u>
Black	Cable management panel 5 metal rings 1U	FA2075
Black	Shunting eye horizontal / vertical 1U	FA2076
Black	Cable pass-through with brush and 5 plastic rings 1U	FA2077

ACT Cable tie on reel

Cable tie off feet					
Colour	Description	Packaging	Width	Length	Type no.
Black	Cable tie	Reel 10 meter	15 mm	10 m	<u>CT4009</u>
Black	Cable tie	Reel 10 meter	20 mm	10 m	<u>CT4010</u>
Black	Cable tie	Reel 25 meter	12 mm (extra strong)	25 m	<u>CT4041</u>
Black	Cable tie	Reel 25 meter	20 mm (extra strong)	25 m	<u>CT4043</u>
Black	Cable tie	Reel 25 meter	10 mm	25 m	<u>KL10</u>
Black	Cable tie	Reel 25 meter	12 mm	25 m	<u>KL12</u>
Black	Cable tie	Reel 25 meter	16 mm	25 m	<u>KL16</u>
Black	Cable tie	Reel 25 meter	20 mm	25 m	<u>KL20</u>
Black	Cable tie	Reel 25 meter	25 mm	25 m	<u>KL25</u>

ACT Knot cable tie, transparent

Colour	Description	Packaging	Size	Type no.
Transparent	Knot cable tie	bag 100 pieces	150 mm	<u>CT4013</u>

ACT Twist cable tie, transparent					
Colour	Description	Packaging	Diameter	Type no.	
Transparent	Twist cable tie	bag 100 pieces	11 mm	<u>CT4014</u>	
Transparent	Twist cable tie	bag 100 pieces	22 mm	<u>CT4015</u>	
Transparent	Twist cable tie	bag 100 pieces	28 mm	<u>CT4016</u>	

ACT Spiral cord on reel, black

				-
Colour	Description	Width	Length	Туре по.
Black	Spiral cord	15 mm	50 m	<u>CT4029</u>
Black	Spiral cord	20 mm	30 m	<u>CT4030</u>
Black	Spiral cord	25 mm	20 m	<u>CT4031</u>

	LT	Tool	for	spiral	cord	
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Туре по.
<u>CT4032</u>
<u>CT4033</u>
<u>CT4034</u>
_

ACT Markers

Colour	Description	Description	Width	Length	Type no.
Colourd	Cable markers	Set of 10x10 cable markers (number 0 to 9)			<u>FA1500</u>
Colourd	Cable markers 0~9	One set of 0~9	5.6 mm	33 mm	<u>CT4011</u>
Colourd	Cable markers self-adhesive A~Z,/,+,-,0~15	Cable markers self-adhesive A~Z,/,+,-,0~15	5.6 mm	33 mm	<u>CT4012</u>
					· · · · · · · · · · · · · · · · · · ·

CABLE MANAGEMENT

ACT cables and accessories in Zip-bag

ALT

Zip-bag

ACT offers a selection of the high runners in Zip-bag. The ACT items in Zip-bags are designed for an easy sell in your shop, showroom or online. Integrate the Zip-bag items into your store concept for an easy choice by your customers.

The products are always visible and the packaging can be opened and closed. Use the integrated euro lock in the Zip-bag to create an attractive store presentation.

ACT	JSB-C accessoriese in Zip-bag		
Colour	Description	Length	Type no.
Black	USB-C to VGA female adapter, 15cm	0.15 m	<u>AC7300</u>
Black	USB-C to HDMI female adapter, 15cm - 4K @ 30Hz	0.15 m	<u>AC7305</u>
Black	USB-C to HDMI female adapter, 15cm - 4K @ 60Hz	0.15 m	<u>AC7310</u>
Black	USB-C to HDMI male adapter cable, 2m - 4K @ 60Hz	2.00 m	<u>AC7315</u>
Black	USB-C to DisplayPort female adapter, 15cm - 4K @ 60Hz	0.15 m	<u>AC7320</u>
Black	USB-C to DisplayPort male adapter cable, 2m - 4K @ 60Hz	2.00 m	<u>AC7325</u>
Black	USB-C 4K Multiport Dock - 4K @ 30Hz	0.15 m	<u>AC7330</u>
Black	USB-C Gigabit network adapter	0.15 m	<u>AC7335</u>
Black	USB-C to USB-A female OTG adapter, 20cm	0.20 m	<u>AC7340</u>
Black	USB-C to USB-A male Connection Cable, 1m	1.00 m	<u>AC7350</u>
Black	USB-C to USB-A Adapter	-	<u>AC7355</u>
Black	USB-C to USB-C Connection Cable, 2m	2.00 m	<u>AC7360</u>
Black	USB-C to USB-C male Connection Cable, 1m, Thunderbolt [™] 3, USB 3.2 Gen2	1.00 m	<u>AC7365</u>
Black	USB-A to USB-C male Connection Cable, 1m, USB 3.2	1.00 m	<u>AC7370</u>

ACT Video adapters in Zip-bag

Colour	Description	Length	Type no.
Black	DisplayPort male to DVI male cable, 1.8m - 1080p @60Hz	1.80 m	<u>AC7505</u>
Black	DisplayPort male to DVI female adapter, 15cm - 1080p @60Hz	0.15 m	<u>AC7510</u>
Black	DisplayPort male to VGA female adapter, 15cm - 1080p @60Hz	0.15 m	<u>AC7515</u>
Black	Adapter cable MIni DisplayPort male to HDMI female	0.15 m	<u>AC7525</u>
Black	Adapter VGA male to HDMI female with audio	0.34 m	<u>AC7545</u>
Black	DisplayPort to HDMI Adapter cable, 1.8m - 4K@30Hz	1.80 m	<u>AC7550</u>
Black	DisplayPort male to HDMI female adapter, 15cm - 4K@30Hz	0.15 m	<u>AC7555</u>
Black	DVI-D to HDMI-A female adapter - 1080p @60Hz	-	<u>AC7565</u>

ACT DisplayPort cables in Zip-bag

Colour	Description	Length	Type no.
Black	DisplayPort cable	1.00 m	<u>AC3900</u>
Black	DisplayPort cable	2.00 m	<u>AC3902</u>
Black	DisplayPort 1.4 Connection Cable 8K, 2.0 Meter	1.00 m	<u>AC3910</u>





ACT Audio cables in Zip-bag

Colour	Description	Length	Туре по.
Black	Audio Connection Cable 3.5mm to 2x RCA, 1.5m	1.5 m	<u>AC3605</u>
Black	3.5mm Audio Connection Cable, 1.5m	1.5 m	<u>AC3610</u>
Black	3.5mm Audio Connection Cable, 5m	5 m	<u>AC3612</u>
Black	SPDIF Optical audio cable TOSlink male / TOSlink male 1.2 Meter Black	1.2 m	<u>AC3690</u>

ACT Data cables in Zip-bag

Colour De	escription	Length	Туре по.
Black US	SB 2.0 Connection Cable	1 m	<u>AC3030</u>
Black US	SB 2.0 Extension Cable	1.8 m	<u>AC3040</u>
Black US	SB 2.0 Connection Cable	5 m	<u>AC3045</u>

ACT Networking Cables CAT6 U/UTP in Zip-bag

Black CAT6 Networking Cable copper 0.9 Meter Black 0.9 m AC4000 Black CAT6 Networking Cable copper 2 Meter Black 2 m AC4002 Black CAT6 Networking Cable copper 5 Meter Black 5 m AC4005	Colour	Description	Length	Type no.
Black CAT6 Networking Cable copper 5 Meter Black 5 m AC4005	Black	CAT6 Networking Cable copper 0.9 Meter Black	0.9 m	<u>AC4000</u>
	Black	CAT6 Networking Cable copper 2 Meter Black	2 m	<u>AC4002</u>
	Black	CAT6 Networking Cable copper 5 Meter Black	5 m	<u>AC4005</u>
Black CAT6 Networking Cable copper 10 Meter Black 10 m AC4010	Black	CAT6 Networking Cable copper 10 Meter Black	10 m	<u>AC4010</u>

ACT Networking accessories in Zip-bag

Description	package	Type no.
Modular Connector RJ45, Round Stranded	10 pcs	<u>AC4110</u>
Modular CAT6 Connector RJ45, Round Stranded or Round Solid	10 pcs	<u>AC4115</u>
		·

ALT Power cables in Zip-bag

Colour	Description	Length	Туре по.
Black	Power Cord Connection Cable C7, 1.5m	1.5 m	<u>AC3300</u>
Black	Power Connection Cable C5, 2m	2 m	<u>AC3310</u>
Black	Power Extension Cable C13 - C14, 1.8m	1.8 m	<u>AC3315</u>
Black	Power CEE 7/7 male (angled) - C13	2 m	<u>AC3305</u>

ACT Smartphone cables

Colour	Description	Length	Type no.
Black	Micro USB Cable - Sync & Charge, Zip-bag	1 m	<u>AC3000</u>
Black	USB-A to USB-C Cable - Sync & Charge, Zip-bag	1 m	<u>AC3020</u>
White	USB Lightning cable for Apple, giftbox	1 m	<u>AC3011</u>
White	USB Lightning cable for Apple, giftbox	2 m	<u>AC3012</u>
White	USB Lightning cable for Apple, Zip-bag	1 m	<u>AC3014</u>
White	USB Lightning cable for Apple, Zip-bag	2 m	<u>AC3015</u>
Black	Apple Lightning USB cable 1.0m with MFI official Apple license for Jar display	1 m	<u>AC3092</u>
Black	USB-C to USB-A cable 1.0m for Jar display	1 m	<u>AC3094</u>

ACT Various in Zip-bag

Colour	Description	Length	Туре по.
Black	HDMI High Speed Cable, 2.5m 4K @60Hz, Zip-bag	2.5 m	<u>AC3800</u>
Black	USB 2.0 - serial	0.6 m	<u>EM1016</u>

accessories

ICT accessories - desk mounts

COLPC INDUSTRIAL MARINE RAILWAY

Create an ergonomic and space-saving work environment by using the ACT Desk Mounts. Place your monitor to your ideal height and viewing angle for a better posture and thus avoid back, neck and shoulder complaints.

The ACT desk mounts are easy attachable to your desk with the enclosed clamp our gromment mount. The desk mounts can easily be adjusted in height and depth without tools. Tilt, swivel and rotate the screens to create an ideal ergonomic work environment. All cables are kept out of sight thanks to the cable management system.

The AC8311 and AC8312 desk mounts are equipped with a convenient gas spring system to adjust your monitor to your ideal height and viewing angle with just one hand. Ideal for flexible workspaces! Furthermore, they have integrated extension ports for USB 3.2 Gen1 (USB 3.0), microphone and speaker jack.



Type no.	<u>AC8301</u>	<u>AC8302</u>	<u>AC8303</u>	<u>AC8304</u>
	*	•	***	*
Description	Desk Mount for 1 screen	Desk Mount for 2 screens	Desk Mount for 3 screens	Desk Mount for 4 screens
Type of mount	Desk mount	Desk mount	Desk mount	Desk mount
Number of screens	1	2	3	4
Screen size min./max.	10-32 inch	10-32 inch	10-27 inch	10-32 inch
Mounting		Desk clamp and	grommet mount	
Max. weight	8 kg	8 kg	7 kg	8 kg
Pivot points	3	3	3	3
Tilt	180 °	180 °	180 °	180 °
Rotation	360 °	360 °	360 °	360 °
Swivel	360 °	360 °	360 °	360 °
Adjustable height cm	0 - 45	0 - 45	0 - 45	0 - 88
Adjustable depth cm	10 - 44	10 - 44	15 - 66	10 - 40
VESA min./max.	75x75 100x100	75x75 100x100	75x75 100x100	75x75 100x100
Extra	-	-		-

AC8320			<image/>
-			
<u>AC8315</u>	<u>AC8311</u>	<u>AC8312</u>	<u>AC8320</u>
			M
Desk Mount for 2 screens - crossbar	Desk Mount with gas spring for 1 screen	Desk Mount with gas spring for 2 screens	Dual monitor desk stand
Desk mount	Desk mount	Desk mount	Desk mount
2	1	2	2
13-27 inch	13-27 inch	13-27 inch	13-32 inch
Desk clamp and grommet mount	Desk clamp and grommet mount	Desk clamp and grommet mount	Desk stand
10 kg	6,5 kg	6,5 kg	8 kg
2	3	3	3
60 °	135 °	135 °	90 °
360 °	360 °	360 °	360 °
30 °	360 °	360 °	180 °
0 - 45	0 - 48	0 - 48	2 - 46
-	11 - 45	11 - 45	-
75x75 100x100	75x75 100x100	75x75 100x100	75x75 100x100
Crossbar: create more working space on your desk	Adjustable in height by its gas spring system Extension ports for USB 3.2 Gen1, microphone + speaker jack	Adjustable in height by its gas spring system Extension ports for USB 3.2 Gen1, microphone + speaker jack	-



accessorie

ICT accessories - laptop stands & laptop locks

The ergonomic design and adjustable position of the Notebook Stands help you to reduce wrist injuries. Adjust your monitor position to prevent yourself from back and neck injuries. The ACT AC8105 and AC8110 notebook stands with cooling protect your notebook from overheating thanks to the metal surface and powerful fans. The stands are powered by USB and have adjustable viewing angles.

The ACT Notebook Lock protects your notebook and your desktop from theft. Just roll the steel cable of 1.5 meters around an immovable object such as a wall, radiator or desk. The AC9015 has a notebook lock with number combination.

Туре по.	<u>AC5700</u>	<u>AC5480</u>	<u>AC9015</u>	
		800	Q	
Description	Wireless keyboard with wireless mouse set	Nummeric Keypad	laptop lock with number combination	
Connection	Wireless (USB nano)	Wired (USB)		
Layout	QWERTY			
Cable length (m)	-	1.35	1.50	
LED indicators	Numlock, Capslock, Power status	-		
Dimensions BxHxD mm	447x140x22	91x140x18		
Additional	12 media keys and wi <mark>reless</mark> optical mouse 1600 dpi. Necessary batteries included			

Туре по. <u>АС8100</u>		<u>AC8105</u>	<u>AC8110</u>	
	e k	State State		
Description Notebook Stand DeLuxe		Notebook Cooling Stand with USB	Notebook Cooling Stand with USB	
Туре	Laptop standard	Laptop stand	Laptop stand	
Scherm/ monitor up to	14-19 inch	17 inch	17 inch	
Fan	No	Yes 2x 125mm Ø	Yes 1x 125mm Ø	
USB-ports	4x USB 2.0	4 x USB 2.0	2x USB 2.0	
Adjustable viewing angle	Yes	Yes	Yes	
Power	-	via USB	via USB	
Extra	Six gears adjustable setting position	Protective pads prevents your notebook from sliding	ON/OFF button to enable and disable the fan Non-slip rubber feet	

Calpe.nl + 31 (0)342 - 45 15 44 Barneveld



Enjoy working on your computer with the optical mice of ACT!

The optical precision of these mice ensures everything you need to continue working. The ACT mice are equipped with a scroll wheel and work on almost every surface. The wireless optical mice come with a Nano USB receiver and feature intelligent energy-saving mode to extend the battery life.

Туре по.	<u>AC5010</u>	<u>AC5005</u>	<u>AC5150</u>	<u>AC5100</u>	<u>AC5105</u>	<u>AC5110</u> <u>AC5115</u> <u>AC5120</u>	<u>AC5125</u> <u>AC5135</u> <u>AC5140</u>
		A		0		80	
Description	Vertical Ergonomic Mouse USB	Optical Mouse USB	Dual-Connect Mouse Wireless	Ergonomic Mouse Wireless	Wireless Mouse	Wireless Mouse	Wireless Mouse
Туре	Vertical optical mouse with scroll wheel	Optical mouse with scroll wheel	Optical wireless mouse USB-C/USB-A combi dongel	Optical wireless vertical mouse with scroll wheel	Optical mouse	Optical mouse	Optical mouse
Interface	Wired USB	Wired USB	Wireless	Wireless	Wireless	Wireless	Wireless
DPI optical sensor max.	1000	1000	2400	1600	1000	1200	1600
DPI selectable	No	No	Yes	Yes	No	Yes	Yes
Number of buttons	5	2	7	5	3	4	4
Scroll wheel	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable length (m)	1.25	1.60	N/A	1.5	-	-	-
Ergonomic, for improved hand, wrist and arm comfort	Yes	-	Yes	Yes	-	-	-
Intelligent stand-by power saving function	-	-	Yes	Yes	Yes	Yes	Yes
Included	-	USB	Batteries 1x AA, 2 receivers	Battery USB charging cable	2x AAA batterijen	1x AA battery	2x AAA battery
For right and left handers	-	-	-	-	Yes	Yes	Yes
Extra	-	-	Switch between 2 different devices Connect via USB-C or USB-A	Built-in rechargeable Li-ion battery	-	Also available: AC5115 Red AC5120 Blue	Also available: AC5135 Red AC5140 Blue

Type no.

<u>AC9000</u>

Description	Smartphone car holder				
Connection	placement in the air vent, metal clip				
Viewing angle	Instelbaar				
Adjustable Width	5 - 8 cm				
Extra	Packed per 25 pieces in a counter display				

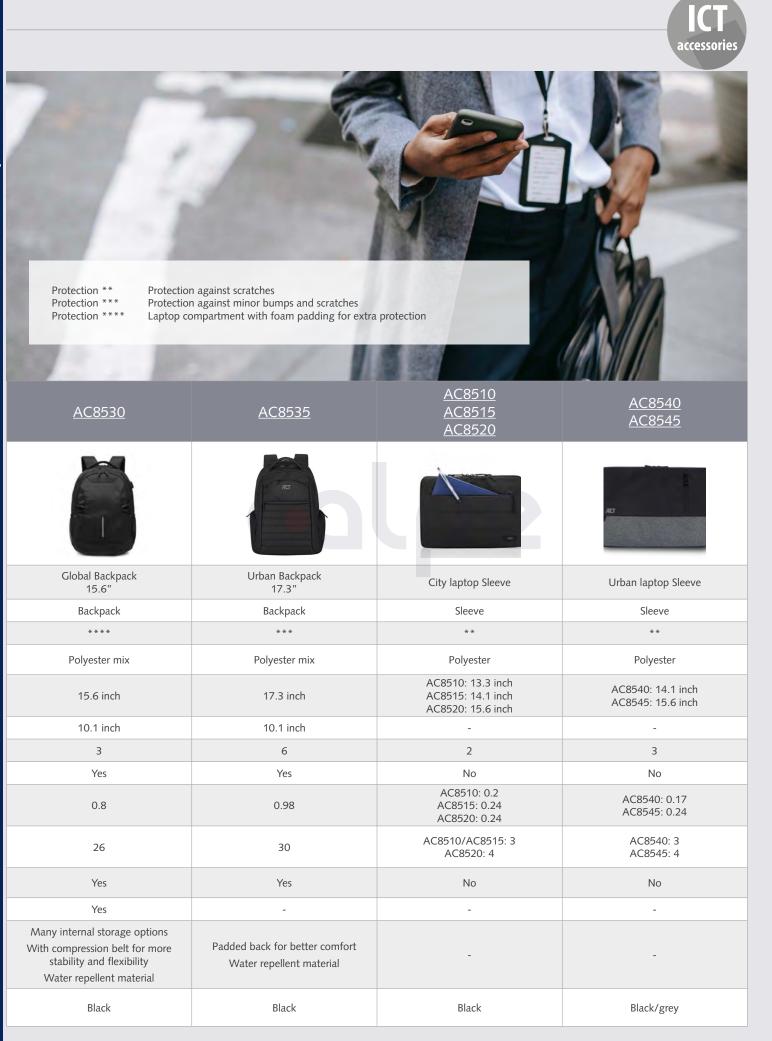


ICT accessories - laptop bags, backpacks and sleeves

				accessories
Laptop cases and s laptop bags that m	sleeves come in many shapes and neet today's user requirements of a	sizes. ACT has selected a series of a laptop bag.		
Туре	<u>AC8500</u>	<u>AC8505</u>	<u>AC8525</u>	<u>AC8550</u> <u>AC8555</u>
			ACT	
Description	City Office Case 16"	City Slim laptop case 16"	Urban Bailhandle 16"	Metro Bailhandle 15.6″
Type of bag	Shoulder bag	Shoulder bag	Shoulder bag	Shoulderbag
Protection	***	**	* * *	***
Material	Nylon 600D	Polyester	Polyester mix	Polyester
Laptop size	16 inch	16 inch	16 inch	15.6 inch
Tablet size	-	-	10.1 inch	10.1 inch
Compartiments	2	2	3	3
Additional storage	No	Yes	Yes	Yes
Weight (kg.)	0.7	0.4	0.6	0.48
Volume (litre)	11	10	10	10
Adjustable shoulder strap	Yes	Yes	Yes	Yes
USB charging port	-	-	-	-
Extra	Hard frame for optimum protection	Water repellent material With trolley strap	Water repellent material With trolley strap	Water repellent material With trolley strap
Colour	Black	Black/red	Black	Black : AC8550 Blue: AC8555

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ICT





Are you going to replace your internal hard drive with a SSD or a new hard drive? The ACT external hard drive enclosures are the ideal solution to give your old internal hard drive a new life. You will have quick and easy additional storage space that you can easily take along with you. ACT offers a solution for every type of hard drive. The 2.5 inch enclosures are suitable for HDDs and SSDs with a SATA or M.2 interface. They are connected to your laptop or PC via the supplied connection cable.

USB specifications:

USB 2.0 HighSpeed (incl. USB 1.0 abd 1.1) speed up to 480Mbit/s USB 3.2 Gen 1 (SuperSpeed USB) speed up to 5Gbit/s USB 3.2 Gen 2 (SuperSpeed USB 10Gbps) speed up to 10 Gbit/s

Туре	<u>AC7090</u>	<u>AC1605</u>	<u>AC1600</u>	<u>AC1225</u>	<u>AC1220</u>	<u>AC1525</u>
Description	M.2 NVMe USB-C SSD external enclo- sure	USB-C M.2 SATA and NVMe SSD Enclosure	M.2 SATA SSD Enclosure	2.5" SATA HDD/SSD Enclosure USB-C (Screwless)	USB-C 3.2 Gen2 2.5 inch HDD/SSD Enclosure	USB-C to 2.5 inch SATA Adapter cable SSD/HDD
Input	USB-C male	USB-C male	USB-A male	USB-C/ USB-A	USB-C male	USB-C male
HDD/SSD interface	M.2 NVMe/PCle	M.2 SATA/NVMe/ PCle	M.2 SATA	SATA	SATA	SATA
USB Standard	USB 3.2 Gen 2 - SuperSpeed 10Gbit/s (USB 3.1)	USB 3.2 Gen 2 - SuperSpeed 10Gbit/s (USB 3.1)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen2	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
Data transfer rate	10 Gbps	10 Gbps	5Gbps	10Gbit/s	5Gbps	5Gbps
Туре-С	Yes	Yes	No	Yes	Yes	Yes
UASP-support	Yes	Yes	Yes	Yes	Yes	Yes
Cable part length	25 cm	45 cm	45 cm		40 cm	
Material housing	Aluminium	Aluminium	Aluminium	Plastic	Aluminium	Plastic
Extra/ included	For a M.2 NVMe/ PCIe SSD up to 80mm with M or B+M key with UASP support for higher data transfer	For a M.2 SATA/ NVMe/PCIe SSD up to 80mm with M key or B+M key with UASP support for higher data transfer	Blue LED indicator Light weight and compact USB-A-cable Screws, screwdriver	Screwless design Can also be connected to the USB-A port of the laptop USB-C to USB-C, USB-C to USB-A cables included	USB-C to C cable, USB-C to A cable, screw and screwdriver	UASP support for higher data transfer



accessories

USB

US

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accessories

XXX

When you replace a hard drive, you usually need to transfer the data from the existing hard disk to the new SSD or hard drive. The easiest way to do this is to use a hard disk adapter for cloning. The ACT HDD adapter cables are perfect for data migration, hard drive cloning and data backup applications.

Simply connect the hard drive to a PC or laptop with the SATA adapter cable and then transferring data, cloning disks or making a backup is easy. When the HDD adapter cable supports USAP (USB Attached SCSI Protocol), you will also enjoy fast data transfer. Use special software for cloning your old disk. In some cases this is included or you can search for special software on Internet. Some are free, some you have to pay for.



<u>AC1200</u>	<u>AC1215</u>	<u>AC1205</u>	<u>AC1510</u>	<u>AC1515</u>	<u>AC1520</u>
2.5" SATA HDD/SSD Enclosure	2.5" SATA HDD/SSD Enclosure (screwless)	2.5" SATA HDD/SSD Enclosure (screwless + keylock encrypted)	2.5" SATA Adapter cable	USB 3.1 Gen1 to 2.5/3.5 inch SATA Adapter cable SSD/HDD	2.5" + 3.5" IDE/ SATA Adapter
USB-A	USB-A male	USB-A male	USB-A	USB-A male	USB-A
SATA	SATA	SATA	SATA	SATA	SATA
USB 3.2 Gen1	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen1	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen1
5Gbit/s	5Gbps	5Gbps	5Gbit/s	5Gbps	5Gbit/s
No	No	No	No	No	No
Yes	Yes	Yes	Yes		No
60 cm	60 cm	50 cm	15 cm	45 cm	45 cm
Aluminium	Plastic	Plastic	Plastic	Plastic	Plastic
USB-A cable 60cm	USB-A-cable	256-bit AES (Advanced Encryption Standard) encryption USB-A to Micro-B USB cable		UASP support for higher data transfer	SATA- and IDE cables, power adapter



accessories

SATA HDD enclosures



Create backups and bring your files, photos and movies everywhere with the ACT Portable Hard disk Enclosure SATA. Keep your backup and files safe and cool with this aluminum case and enjoy high speed data transfers.



Туре	AC1405	AC1410	<u>AC1400</u>	<u>AC1500</u>	<u>AC1504</u>
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		ALL			
Description	3.5" SATA HDD Enclosure (screwless)	3.5" SATA IDE USB 2.0 HDD Enclosure	3.5" SATA HDD Enclosure	2.5" and 3.5" SATA Docking station	2.5 + 3.5" SATA Dual Docking Station
Input	USB-A male	USB-A male	USB-A male	USB-A male	USB-A male
HDD/SSD interface	SATA	SATA + IDE	SATA	SATA	SATA
USB Standard	USB 3.2 Gen 1 (SuperSpeed USB)	USB 2.0	USB 3.2 Gen1	USB 3.2 Gen 1 (SuperSpeed USB)	USB 3.2 Gen 1 (SuperSpeed USB)
Data transfer rate	5Gbps	480Mbps	5Gbps	5Gbps	5Gbps
Туре-С	No	No	No	No	No
UASP-support	Yes	No	Yes	Yes	Yes
Cable part length	60 cm	75 cm		80 cm	
Material housing	Plastic	Aluminium	Aluminium	Plastic	Plastic
Extra/ included	USB-A-cable 12V adapter	Supports HDD up to 8TB USB-A-cable Power adapter	USB-A cable Power adapter	Led indicator ON/OFF button USB-A-cable 12V 2A power adapter	Dual bay LED indicator ON/OFF button Clone-function USB-A-cable 12V 3A power adapter



Video conferencing



AC7990 | Full HD camera with microphone, pan, tilt and zoom

- Full HD camera with 2 Megapixel Sony CMOS sensor, EPTZ and USB-C interface
- Solid full metal camera with wall mounting kit, prepared for
- tripod mount

INDUSTRIAL MARINE RAILWAY

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- Wide viewing angle of 105 degrees
- Image optimization: auto white balance, gain control and backlight compensation
 Two integrated microphones with a 360 degrees audio pickup range of 5 meters
- Noise reduction, echo cancellation and gain control
- Controllable via Remote Control: Zoom, OSD Menu, Picture in Picture (PIP), Mic Mute, Increase/ Decrease Brightness, Turn ON/OFF camera
- Works with video / chat programs like Zoom, Teams and Google Meet
- Including USB-C to USB-A cable 3m.









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Expand your available network connection with the ACT PoE (Power over Ethernet) Switches.

Power your network equipment such as: an access point or VOIP telephone via a single network cable with the AC4438 Gigabit PoE+ Injector.

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accessories

Туре	<u>AC4430</u>	<u>AC4434</u>	<u>AC4438</u>	<u>AC4450</u>
		•Creation ()	A La	
Description	6-Ports 10/100Mbps Switch 4x PoE+ ports	24-ports switch, 10/100Mbps 24x PoE+ (30W) ports, 2 Gigabit combo/uplink ports for 2 uncoded SFP modules	Gigabit PoE+ Injector 30W	Gigabit SFP Media Converter
LAN speed	10/100Mbps	10/100Mbps	10/100/1000Mbps	10/100/1000 Mbps
Standard	IEEE802.3af and IEEE802.3at compliant Powered Device	IEEE802.3af and IEEE802.3at compliant Powered Device	IEEE802.3af and IEEE802.3at compliant Powered Device	802.3ab 1000Base-T, 802.3z 1000Base SX/LX
Layer function	Layer 2 (unmanaged)	Layer 2 (unmanaged)	-	-
Power max.	60 W	390 W	30 W	-
Power over Ethernet (PoE) max.	30 W per port	30 W per port	30 W	-
Dimensions (LxBxH) cm	16.8 x 9.4 x 3.2	44 x 20.6 x 4.2	11.7 x 3.4 x 5.8	7 x 2.5 x 5.3
Power	Build in power supply	Build in power supply	Build in power supply	External power adapter (5.0V - 1.0A)
Input voltage	230V AC	230V AC	230V AC	100 - 240V ~ 50/60Hz, 0.2A Max.
Included	Power cable CEE7/7 male to C13	Power cable CEE7/7 male to C13, mounting brackets and screws	Power cable CEE7/7 male to C5	Power cable and power adapter
RJ45 ports	б	26	2	1
SFP slots	-	2x SPF (uncoded)	_	1x SPF (uncoded)
PoE+ ports	4	24	1	-
10/100 Mbps Ports	б	24	-	-
10/100/1000 Mbps ports	-	2	2	1
Combo ports	-	2	_	
Status LED indicator	Power, link, activity,PoE	Power, link, activity, PoE	Power, PoE	FX, power, speed/ activity
Montage	-	19 inch rack	Integrated wall mount	-
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_	INDEX	AC361577	AC7005 104	AC7505 110	AK224077	AK386267	AK403966
		AC361777	AC701089	AC751065	AK224277	AK386367	AK404066
	64172K9	AC362077	AC701096	AC751065	AK224477	AK390068	AK407165
2	64172K 12	AC369077	AC701289	AC7510 110	AK224677	AK390168	AK407365
4	64172K 23	AC3690111	AC701296	AC751565	AK224077 AK224777	AK390268	AK407465
	64172K	AC380068	AC701296 AC701589	AC7515		AK390268 AK390368	AK407465 AK410069
¥.					AK225077	AK390368 AK390468	
-	AB3730 70	AC3800111	AC701597	AC7515 110	AK225277		AK410169
Ă	AB3740 70	AC380268	AC702190	AC752565	AK225477	AK390568	AK410269
ž	AB3750 70	AC380568	AC702194	AC752566	AK225677	AK390768	AK410369
5	AB3755 70	AC381068	AC702290	AC7525110	AK227077	AK390868	AK410469
z	AB3760 70	AC390065	AC702294	AC753066	AK227277	AK390968	AK410569
	AB3765 70	AC3900 110	AC702390	AC753571	AK246277	AK391068	AK410669
N	AB3766 70	AC390265	AC702394	AC754571	AK246377	AK391667	AK410769
ζ.	AB3768 68	AC3902110	AC702490	AC7545 110	AK318771	AK392969	AK410869
לב	AB3769 68	AC390365	AC702494	AC755065	AK322071	AK393069	AK410969
7	AB3770 68	AC390968	AC702590	AC755071	AK322571	AK393169	AK411069
J	AB3771 68	AC391065	AC702594	AC7550110	AK362070	AK393269	AK411169
	AB3775 68	AC3910110	AC703089	AC755565	AK362170	AK393369	AK411769
	AB3985 65	AC400013	AC703097	AC755571	AK362270	AK393469	AK411869
	AB3995 65	AC4000111	AC703589	AC7555110	AK362470	AK393569	AK411969
	AB3996 66	AC400213	AC703597	AC756571	AK362570	AK393669	AK412069
	AB3997 66	AC4002111	AC704090	AC7565110	AK362670	AK393769	AK412169
	AC1200 119	AC400513	AC704095	AC770274	AK363070	AK393869	AK412269
	AC1205119	AC4005111	AC704090	AC770474	AK363170	AK393969	AK412269
	AC1205119 AC1215119	AC4005 111 AC4010 13	AC704190 AC704195	AC770474 AC777066	AK363270	AK394069	AK412569 AK412469
						AK394069 AK394167	
	AC1220118	AC4010111	AC704290	AC777073	AK363470		AK412569
	AC1225 118	AC407165	AC704295	AC780072	AK365070	AK394267	AK412669
	AC1400120	AC407365	AC704390	AC781072	AK365170	AK394367	AK412769
	AC1405120	AC407465	AC704395	AC782072	AK365270	AK394467	AK412869
	AC1410 120	AC410531	AC704495	AC783074	AK365470	AK394567	AK412969
	AC1500 120	AC4110 111	AC704690	AC783575	AK367068	AK394667	AK413069
	AC1504120	AC4115111	AC704692	AC784074	AK367168	AK3947 67	AK413169
	AC1510 119	AC443027	AC704993	AC784575	AK367368	AK395070	AK415066
	AC1515119	AC4430122	AC705090	AC785072	AK367568	AK3953 70	AK415166
	AC1520 119	AC443427	AC7050 100	AC785173	AK367668	AK395466	AK4152 66
	AC1525118	AC4434 122	AC705190	AC786074	AK367868	AK395566	AK415366
	AC1600118	AC443827	AC7051100	AC787073	AK367968	AK395666	AK415466
	AC1605118	AC4438122	AC705290	AC787173	AK372070	AK395866	AK421071
	AC200083	AC4450122	AC7052 101	AC790074	AK372170	AK395966	AK421171
	AC200583	AC5005115	AC705390	AC791074	AK372270	AK396066	AK422071
	AC205083	AC5010115	AC7053 101	AC8100 114	AK372470	AK396166	AK422371
	AC205583	AC5100115	AC705590	AC8105 114	AK373970	AK396266	AK422571
	AC206083	AC5105115	AC7055101	AC8110 114	AK374070	AK396366	AK422771
	AC230082	AC5110115	AC7060	AC8301 112	AK374170	AK396466	AK422971
	AC230582	AC5115115	AC7060	AC8302 112	AK374270	AK396566	AK422971
	AC2305	AC5120115	AC7060105	AC8303 112	AK374470	AK396666	AK423371
	AC231082 AC245081	AC5125115	AC7080 105 AC707090	AC8304 112	AK374670	AK396766	AK423571
		AC5125115 AC5135115			AK374870 AK374968		
	AC245581		AC7070 101	AC8311113		AK396866	AK423771
	AC246081	AC5140115	AC708090	AC8312113	AK375068	AK396966	AK425071
	AC3000 111	AC5150 115	AC7080 104	AC8315 113	AK375168	AK397070	AK425171
	AC3011111	AC5480114	AC7090118	AC8320113	AK375268	AK397170	AK426071
	AC3012111	AC5700114	AC730089	AC8500 116	AK375368	AK397565	AK426371
	AC3014111	AC6000104	AC7300110	AC8505116	AK375468	AK397665	AK426571
	AC3015111	AC600588	AC730589	AC8510 117	AK375568	AK397765	AK426771
	AC3020111	AC6005105	AC730598	AC8515117	AK375668	AK397865	AK426971
	AC303088	AC601088	AC7305110	AC8520 117	AK3757 68	AK398065	AK427171
	AC3030111	AC6010 105	AC731089	AC8525116	AK376070	AK3981 65	AK427371
	AC3032 88	AC6015 103	AC731098	AC8530 117	AK378968	AK398265	AK427571
	AC303388	AC6020 103	AC7310 110	AC8535 117	AK379068	AK3983 65	AK427771
	AC3040 88	AC6025 103	AC731589	AC8540 117	AK379168	AK3984 65	AK491871
	AC3040111	AC6030 104	AC731598	AC8545 117	AK379268	AK398565	AK491971
	AC304388	AC606088	AC7315 110	AC8550 116	AK3793 68	AK398665	AK492071
	AC304588	AC6060 105	AC732089	AC8555116	AK379868	AK3987 65	AK492371
	AC3045111	AC606388	AC732098	AC9000 115	AK380468	AK398865	AK492571
	AC305088	AC6063105	AC7320110	AC9015 114	AK380568	AK398965	AK492971
	AC3092111	AC610588	AC732589	AK201477	AK380668	AK399065	AK495871
	AC3094111	AC610588	AC732598	AK201577	AK3813 68	AK3991 65	AK495971
	AC309689	AC6105105	AC7325110	AK202577	AK381468	AK399265	AK496071
	AC330080	AC611088	AC733090	AK202677	AK381568	AK3993 65	AK496371
	AC3300 111	AC611088	AC733095	AK202777	AK381668	AK399465	AK496571
σ	AC330580	AC6110 105	AC7330 110	AK203077	AK381768	AK399565	AK496771
Barneveld	AC3305111	AC6120 101	AC7335 104	AK203177	AK381868	AK399665	AK496971
arne	AC3310 80	AC615093	AC7335 110	AK203577	AK381970	AK399765	AK497171
ñ	AC3310111	AC6200102	AC734089	AK203677	AK382070	AK399865	AK497371
4	AC331580	AC6205 102	AC7340110	AK203777	AK382170	AK3999 65	AK497771
544 2	AC3315111	AC6205102 AC6215102	AC734589	AK2037	AK3822 70	AK400066	AK498071
45 15	AC360177	AC6300102	AC7350110	AK203877 AK203977	AK382370	AK4000	AK498071 AK498171
	AC360777 AC360577	AC6300 102 AC6310 102	AC7350110 AC735089	AK203977 AK207577	AK382370 AK382470	AK400166 AK400266	AK498171 AK498271
342	AC3605111	AC6370102	AC735589 AC735589	AK207577 AK207677	AK382470 AK382970	AK400266 AK403066	AK498271 AK498471
Ĵ)	AC360577	AC6370103 AC6400101	AC735589 AC7355110	AK207677 AK207777			AK4984 71 AK4990 71
+ 31 (U)342					AK382970	AK403166	
+	AC361077	AC6405100	AC7360 110	AK207877	AK383070	AK403266	AK499171
Ę	AC3610111	AC6410 100	AC7365110	AK222077	AK383170	AK403366	AK499271
lpe	AC361177	AC6415100	AC736589	AK223077	AK383270	AK403466	AK499371
Cal	AC361277	AC700089	AC7370 110	AK223277	AK383370	AK403566	AK499471
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	AC361377	AC700577	AC750565	AK223677	AK385070	AK403766	AK499671
	AC361477	AC700590	AC750571	AK223777	AK386167	AK403866	AK5001 80

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		AKE440 90	CT4000 400	DCE412 42	DC7052 15	FA2002 40
AK5003 80 AK5005 80	AK513480 AK513580	AK541980 AK542080	CT4009 108 CT4010 108	DC541343 DC541443	DC7852 15 DC7900 15	EA2002 48 EA2002 48
AK500580	AK513680	AK542080 AK542180	CT4010 108 CT4011 108	DC541543	DC7901 15	EA2002 48 EA2002 48
AK500780	AK513780	AK542280	CT4012 108	DC541643	DC790215	EA2002 48
AK500880	AK513880	AK542380	CT4012 108	DC545043	DC7903 15	EA2002 48
AK500980	AK513980	AK542480	CT4014 108	DC545143	DC790515	EA2002 48
AK501080	AK514080	AK542580	CT4015 108	DC545243	DC7951 15	EA2003 48
AK501280	AK514180	AK542680	CT4016 108	DC545343	DC795215	EA3002 48
AK501380	AK514280	AK542780	CT4029 108	DC545443	DC900025	EA3003 48
AK501480	AK514380	AK542880	CT4030 108	DC545543	DC900125	EA3004 48
AK501580	AK514480	AK542980	CT4031 108	DC545643	DC900225	EA3005 48
AK501680	AK514580	AK543080	CT4032 108	DC545743	DC900325	EA400151
AK5017 80	AK514680	AK543180	CT4033 108	DC545843	DC900525	EA400251
AK501880	AK514780	AK543280	CT4034 108	DC545943	DC905125	EA400351
AK501980	AK514880	AK5433 80	CT4041 108	DC546043	DC905225	EA400551
AK5020 80	AK514980	AK543480	CT4043 108	DC546143	DC950025	EA400751
AK502180	AK516280	AK543580	CX100751	DC546243	DC950125	EA401051
AK502280	AK516380	AK543680	CX100851	DC546343	DC950225	EA401551
AK502380	AK516480	AK543780	DC5000 43	DC546443	DC950325	EA402151
AK502480	AK516580	AK543880	DC500143	DC546543	DC950525	EA402251
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AK5026 80	AK5167 80 AK5168 80	AK544080	DC500343	DC550043	DC955225 DC960025	EA4025 51
AK502880	AK516880 AK516980	AK544181 AK544281	DC500443 DC500543	DC550143	DC960025 DC960125	EA402751 EA403051
AK502980 AK503080	AK517080	AK544281 AK544381	DC500643	DC5502 43 DC5503 43	DC960125 DC960225	EA4030 51 EA4035 51
AK503180	AK517180	AK5444 81	DC500743	DC550443	DC960325	EA8001 48
AK503280	AK517280	AK544581	DC500843	DC550543	DC960525	EA9002 48
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AK508680	AK518680	AK906771	DC5200 43	DC555343	DC980525	EA9901 38
AK508780 AK508880	AK518880 AK518980	AK9069 71 AK9071 71	DC520143	DC55554 43 DC55555 43	DC985125 DC985225	EA9901 38 EA9901 38
AK508980	AK520881	AK907171	DC520243 DC520343	DC5555643	DC985225 DC990025	EA9901 38
AK509080	AK520981	AK907571	DC5204 43	DC555743	DC990125	EA9901 38
AK509180	AK521080	AK907771	DC520543	DC555843	DC990225	EA9902 38
AK509280	AK521180	AK936071	DC5206 43	DC555943	DC990325	EA9902 38
AK509380	AK521280	AK936371	DC520743	DC556043	DC990525	EA9902 38
AK509480	AK521380	AK936571	DC520843	DC556143	DC995125	EA9902 38
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AK510080	AK521980	AK937771	DC5214 43	DC700115	EA1006 48	EA9905 38
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AK510380	AK523480	AP1003 70	DC525043	DC700515	EA1018 48	EA9911 38
AK510480	AK523580	AP1004 70	DC525143	DC705115	EA1018 48	EA9911 38
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AK510780	AK523980	CT1015 107	DC525443 DC525543	DC750115 DC750215	EA1021 48 EA1023 48	EM1016 104
AK510880	AK524080	CT1015107 CT1030107	DC525643	DC750315	EA1023 48 EA1023 48	EP100H 29
AK511080	AK524180	CT1035 107	DC5257 43	DC7505 15	EA1024 48	EP305B29
AK511180	AK524280	CT1040 107	DC5258 43	DC7551 15	EA1025 48	EP355B29
AK511280	AK524380	CT1045 107	DC5259 43	DC755215	EA1026 48	EP356B29
AK511380	AK524480	CT1050 107	DC526043	DC760015	EA1027 48	EP357B29
AK511480	AK524580	CT1055 107	DC526143	DC760115	EA1028 48	EP358B29
AK511580	AK5401 80	CT1060 107	DC5262 43	DC760215	EA1036 48	EP359B29
AK511680	AK540280	CT1070 107	DC526343	DC760315	EA1036 48	EP360B29
AK511780	AK5403 80	CT1075 107	DC526443	DC7605 15	EA1036 48	EP380B21
AK511880	AK540480	CT1080 107	DC5265 43	DC765115	EA1036 48	EP384B21
AK511980	AK540580	CT1090 107	DC526643	DC765215	EA1036 48	EP385B21
AK512080	AK540680	CT1200 107	DC540043	DC770015	EA1036 48	EP386B21
AK512180	AK540780	CT1260 107	DC540143	DC770115	EA1041 48	EP387B21
AK512280	AK540880	CT1270 107	DC540243	DC770215	EA1041 48	EP388821
AK512480	AK540980	CT1300 107 CT1310 107	DC540343	DC7703 15 DC7705 15	EA1041 48 EA1041 48	EP389B21 EP400B11
AK512580 AK512680	AK541080 AK541180	CT1310 107 CT3000 107	DC540443 DC540543	DC770515 DC775115	EA1041 48 EA1041 48	EP400B11 EP455B11
AK512680	AK541280	CT3010 107	DC540543	DC7752 15	EA1041 48	EP455B11 EP456B11
AK512780 AK512880	AK541380	CT4003 107	DC540743	DC780015	EA1042 48	EP457B11
AK512980	AK541480	CT4003 107 CT4004 107	DC540843	DC780115	EA1042 48	EP458B11
AK513080	AK541580	CT4005 107	DC540943	DC780215	EA1042 48	EP459B11
AK513180	AK541680	CT4006 107	DC5410 43	DC780315	EA1042 48	EP500A 29
AK513280	AK541780	CT4007 107	DC541143	DC7805 15	EA1042 48	EP550H 29
AK513380	AK541880	CT4008 107	DC541243	DC785115	EA1042 48	EP560H 29



EP570H 29	FA6010 12	FB501514	FB695114	FB781514	FB972024	IB120213
EP580H 29	FA6010 22	FB502014	FB700014	FB782014	FB972524	IB120313
EP590H 29	FA6010 30	FB505114	FB700114	FB783014	FB973024	IB120513
EP600H 29	FA6011 30	FB600014	FB700214	FB785114	FB975124	IB120713
EP800H 29 EP800H 21	FA6012 30	FB600014	FB700214	FB790014	FB980024	IB120713
EP840H 21	FA7001 12	FB600214	FB700514	FB790114	FB980124	IB125113
EP845A21	FA7001 12	FB600314	FB700714	FB790214	FB980224	IB130013
EP850H 21	FA7004 12	FB600514	FB701014	FB790314	FB980324	IB130113
EP860H 21	FA7005 12	FB600714	FB701514	FB790514	FB980524	IB130213
EP870H 21	FB200032	FB601014	FB702014	FB790714	FB980724	IB130313
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EP890H 21	FB200232	FB602014	FB705114	FB791514	FB981524	IB130713
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IB991024	IK880725	IS855224	RL101555	RL240142	RL320755	RL401139
IB995124	IK8810 25	IS860024	RL102055	RL240242	RL321055	RL401239
IK5400 33	IK885125	IS860124	RL103055	RL240342	RL330058	RL401339
IK540133 IK540233	IK8900 25 IK8901 25	IS860224 IS860324	RL105055 RL105155	RL240442 RL240542	RL330158 RL330258	RL405139 RL405239
IK5402 33 IK5403 33	IK890125 IK890225	IS860324 IS860524	RL105155 RL150055	RL240542 RL240642	RL330258 RL330358	RL405239 RL405339
IK5405 33	IK8903 25	IS860724	RL150055 RL150155	RL240642 RL240742	RL330558	RL4055
IK5407 33	IK890525	IS861024	RL150255	RL240742 RL240842	RL330758	RL410242
IK5410 33	IK8907 25	IS861524	RL150355	RL240942	RL331058	RL410342
IK5451 33	IK891025	IS862024	RL150555	RL241042	RL331558	RL410442
IK5500 33	IK895125	IS865124	RL151055	RL241142	RL332058	RL410542
IK5501 33	IS150024	IS865224	RL151555	RL241242	RL332558	RL410642



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RL410942	RL585154	RL777554	RL841057	RL903055	SB0009	TD410151
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RL411342	RL590354	RL778354	RL842057	RL950155	SB0012	TD410251
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