

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.




The different cable types with the corresponding shielding

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 each wire pair plus additional braided shielding wrapped around all pairs.

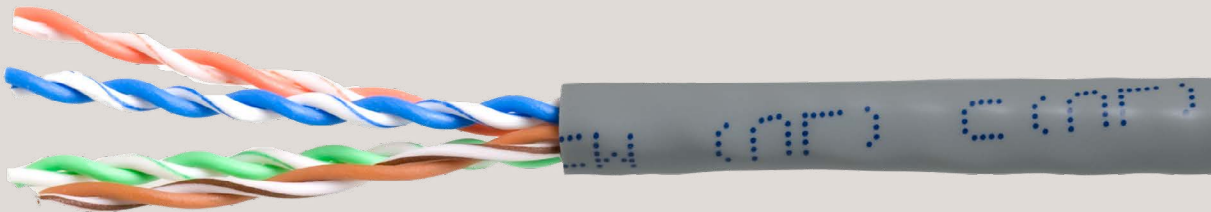


ACT CAT6A, U/UTP twisted pair installation cable

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

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	XS6103	XS6105
Purple	U/UTP	LSZH	23	Eca	1186891	XS6113	XS6115
Grey	F/UTP	PVC	24	Eca	1186889	FS6103	FS6105
Purple	F/UTP	LSZH	24	Eca	1186890	FS6113	FS6115
Grey	F/UTP	PVC	23	B2ca	1175345	XS6120	XS6121



ACT Modular surface mount box CAT6A



Description	Description	Connector	Type no.
Shielded	Modular surface mount box	1 x RJ45, 1 x IDC	FA7005
Shielded	Modular surface mount box	2 x RJ45, 2 x IDC	FA7004
Shielded	Modular surface mount box	8 x RJ45, 8 x IDC	FA7001
Keystone outlet	In-Wall keystone jack box	2 x keystone jack	FA6010

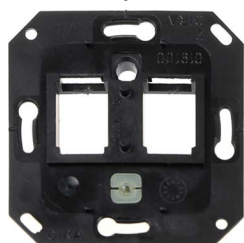
ACT Keystone CAT6A



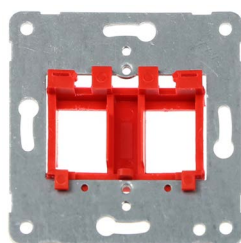
Description	Cable attachment	Colour	Type no.
Unshielded toolfree	Down	Black	TD6016
Unshielded toolfree	Down	White	TD6017
Shielded punch down	Back	Metal	TD6511
Shielded punch down	Down	Metal	TD6023
Shielded toolfree	Back	Metal	TD6510
Keystone coupler RJ45 Shielded	Back	Metal	SD6519

ACT keystones are compatible with all ACT connection hardware

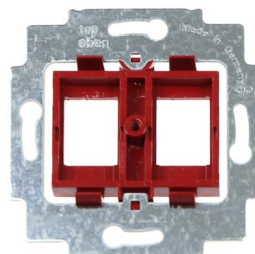
Compatible with all listed keystones



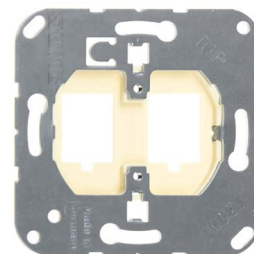
Gira*
19100



Peha*
740011



Busch-Jaeger*
2CKA001753A8055



Jung*
569-2NWE / CD569-2NWEWW

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

ACT Patch panel CAT6A



Description	Ports	Connector	Type no.
Shielded	24 Ports	RJ45, IDC	PP1020
Keystone panel	24 Ports	Suitable for mounting keystones	PP1030
Shielded	Consolidation point	8 x RJ45, 8 x IDC	FA7001

ACT Multimedia inserts/keystones



Description	Type no.
LC Duplex adapter Singlemode/Multimode	TD4101
HDMI 2.0 A-A female	TD4102
HDMI 2.0 A-A female angled	TD4103
USB 3.2 Gen1 A-A female	TD4104
USB 3.2 Gen2 C-C female	TD4105

Compatible with ACT hardware such as PP1030, FA6010/11/12

ACT Connectors CAT6A



Description	Type no.
Shielded	Suitable for solid and flexible cable with positioning block, AWG24 (1.2 mm) FA2000
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 64172K
UTP cable stripper	For flat and round cables FHT501
Punch tool	For 110 block TD060
Modular crimping tool	Strip, cut the cable - crimp the connectors on the cable (AWG23/24 cores) WL2000

CAT6A - patch cable

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ACT 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
Ivory	IB3352	IB3300	IB3301	IB3351	IB3302	IB3303	IB3305	IB3307	IB3310	IB3315	IB3320
Grey	IB3452	IB3400	IB3401	IB3451	IB3402	IB3403	IB3405	IB3407	IB3410	IB3415	IB3420
Red		IB3700	IB3701	IB3751	IB3702	IB3703	IB3705	IB3707	IB3710	IB3715	IB3720
Blue		IB3800	IB3801	IB3851	IB3802	IB3803	IB3805	IB3807	IB3810	IB3815	IB3820
Green		IB3900	IB3901	IB3951	IB3902	IB3903	IB3905	IB3907	IB3910	IB3915	IB3920
Yellow		IB4100	IB4101	IB4151	IB4102	IB4103	IB4105	IB4107	IB4110	IB4115	IB4120
Black		IB4200	IB4201	IB4251	IB4202	IB4203	IB4205	IB4207	IB4210	IB4215	IB4220
Orange		IB4300	IB4301	IB4351	IB4302	IB4303	IB4305	IB4307	IB4310	IB4315	IB4320
Brown		IB4400	IB4401	IB4451	IB4402	IB4403	IB4405	IB4407	IB4410	IB4415	IB4420
Purple		IB6600	IB6601	IB6651	IB6602	IB6603	IB6605	IB6607	IB6610	IB6615	IB6620
Pink		IB7300	IB7301	IB7351	IB7302	IB7303	IB7305	IB7307	IB7310	IB7315	IB7320
White		IB9300	IB9301	IB9351	IB9302	IB9303	IB9305	IB9307	IB9310	IB9315	IB9320

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



Colour	0.9m	2m	5m	10m
Black	AC4000	AC4002	AC4005	AC4010

ACT CAT6A 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
Ivory	IB3252	IB3200	IB3201	IB3251	IB3202		IB3203		IB3205	IB3207	IB3210	IB3215	IB3220
Grey	IB3052	IB3000	IB3001	IB3051	IB3002	IB3053	IB3003	IB3004	IB3005	IB3007	IB3010	IB3015	IB3020
Red	IB2552	IB2500	IB2501	IB2551	IB2502		IB2503		IB2505	IB2507	IB2510	IB2515	IB2520
Blue	IB2652	IB2600	IB2601	IB2651	IB2602		IB2603		IB2605	IB2607	IB2610	IB2615	IB2620
Green	IB2752	IB2700	IB2701	IB2751	IB2702		IB2703		IB2705	IB2707	IB2710	IB2715	IB2720
Yellow	IB2852	IB2800	IB2801	IB2851	IB2802		IB2803		IB2805	IB2807	IB2810	IB2815	IB2820
Black	IB2952	IB2900	IB2901	IB2951	IB2902		IB2903		IB2905	IB2907	IB2910	IB2915	IB2920
Orange		IB2100	IB2101	IB2151	IB2102		IB2103		IB2105	IB2107	IB2110	IB2115	IB2120
Brown		IB2200	IB2201	IB2251	IB2202		IB2203		IB2205	IB2207	IB2210	IB2215	IB2220
Purple		IB2300	IB2301	IB2351	IB2302		IB2303		IB2305	IB2307	IB2310	IB2315	IB2320
Pink		IB2400	IB2401	IB2451	IB2402		IB2403		IB2405	IB2407	IB2410	IB2415	IB2420
White		IB6300	IB6301	IB6351	IB6302		IB6303		IB6305	IB6307	IB6310	IB6315	IB6320

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
Ivory	IB1052	IB1000	IB1001	IB1051	IB1002	IB1003	IB1005	IB1007	IB1010	IB1015	IB1020
Grey	IB1152	IB1100	IB1101	IB1151	IB1102	IB1103	IB1105	IB1107	IB1110	IB1115	IB1120
Red		IB1200	IB1201	IB1251	IB1202	IB1203	IB1205	IB1207	IB1210		
Blue		IB1300	IB1301	IB1351	IB1302	IB1303	IB1305	IB1307	IB1310		
Green		IB1400	IB1401	IB1451	IB1402	IB1403	IB1405	IB1407	IB1410		
Yellow		IB1900	IB1901	IB1951	IB1902	IB1903	IB1905	IB1907	IB1910		
Black		IB3500	IB3501	IB3551	IB3502	IB3503	IB3505	IB3507	IB3510		

ACT 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	IB6200	IB6201	IB6251	IB6202	IB6203	IB6205

CAT6A - patch cable

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

ACT 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	IB3652	IB3600	IB3601	IB3651	IB3602	IB3603	IB3605	IB3607	IB3610	IB3615	IB3620	IB3625	IB3630
Grey	IB4052	IB4000	IB4001	IB4051	IB4002	IB4003	IB4005	IB4007	IB4010	IB4015	IB4020	IB4025	IB4030
Red		IB5000	IB5001	IB5051	IB5002	IB5003	IB5005	IB5007	IB5010				
Blue		IB5300	IB5301	IB5351	IB5302	IB5303	IB5305	IB5307	IB5310				
Green		IB7400	IB7401	IB7451	IB7402	IB7403	IB7405	IB7407	IB7410				
Yellow		IB9100	IB9101	IB9151	IB9102	IB9103	IB9105	IB9107	IB9110				
Black		IB9200	IB9201	IB9251	IB9202	IB9203	IB9205	IB9207	IB9210				

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



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

ACT CAT6A U/FTP PVC High Flex Tangle-Free patch cable, AWG26 CU, 50µ gold-plated contacts



Colour	0.5m	1m	1.5m	2m	3m	5m	7m	10m	15m	20m
Black	FB5000	FB5001	FB5051	FB5002	FB5003	FB5005	FB5007	FB5010	FB5015	FB5020

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.

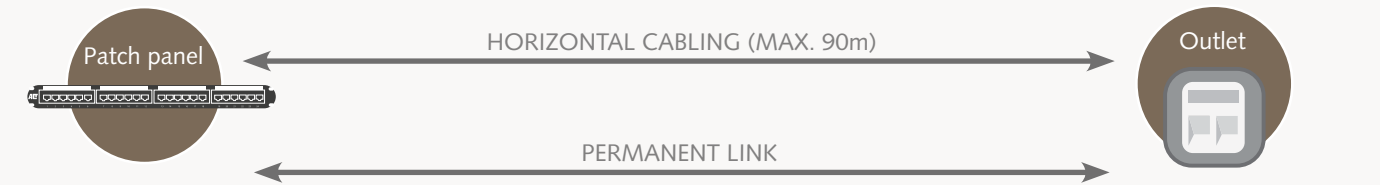


ACT CAT6A U/FTP LSZH datacenter slimline patch cable, AWG32 CU, 50µ gold-plated contacts

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

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

Flexibility

Flexibility in your network is achieved by using consolidation points.

Challenge

Consolidation points add an extra transition to your cabling. Additional transitions provide additional attenuation.

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.

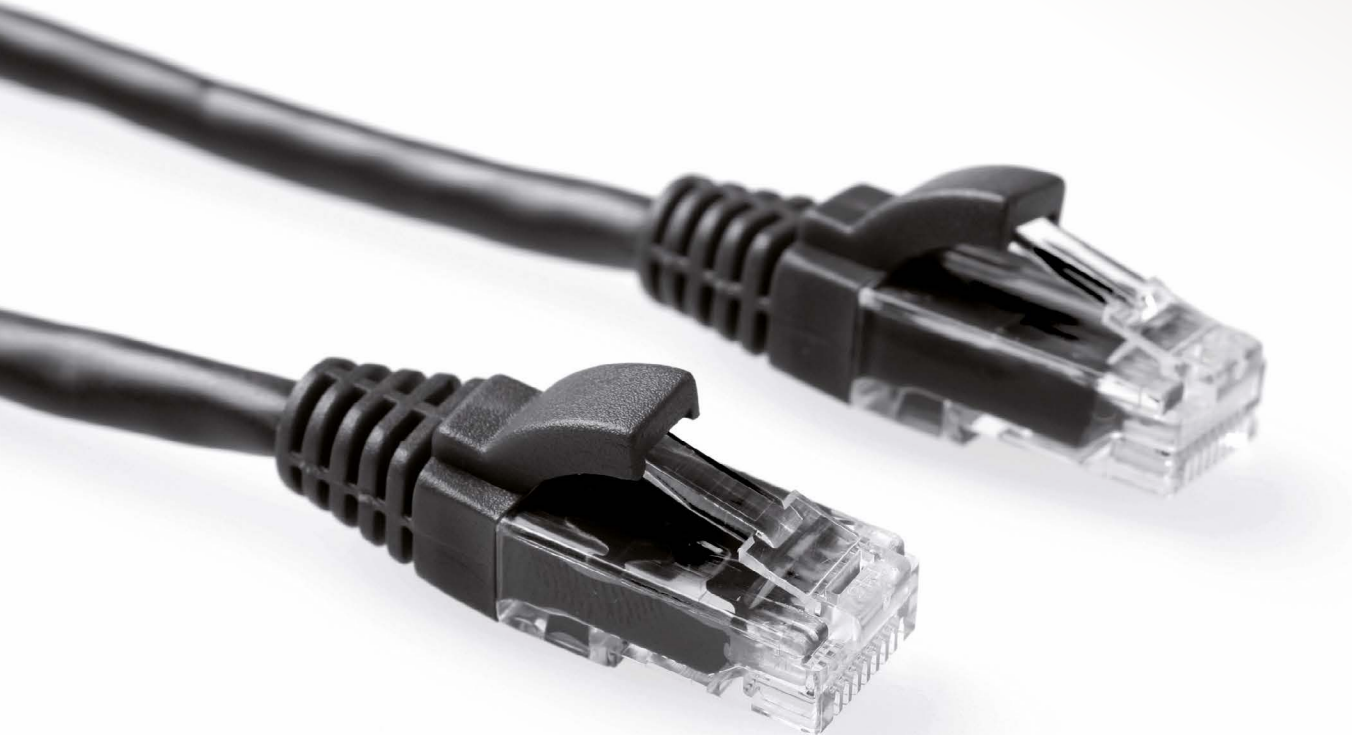
Length of consolidation connections in CAT6 class E and CAT6A class EA

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



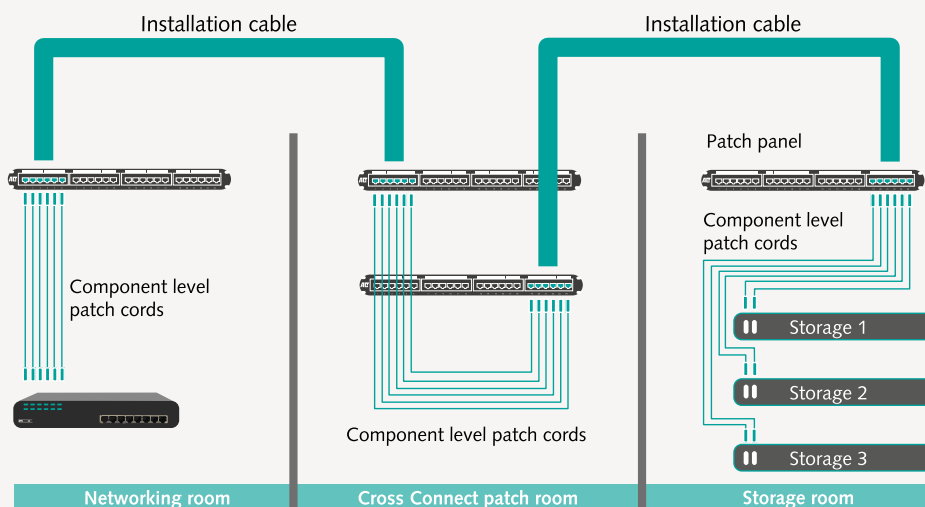
Cross connects in datacenters – Another use for component level patch cables

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.

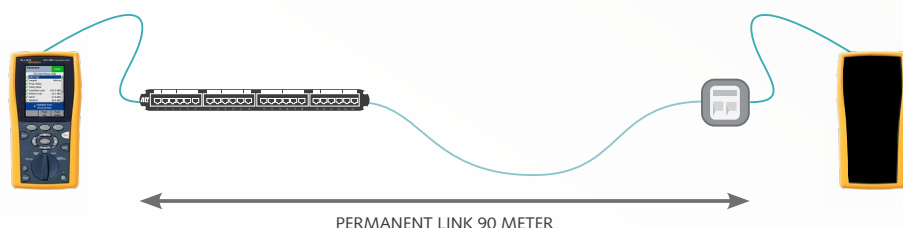
Most common mistakes during installation:

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.