

Campus & Backbone CopperTen™



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CopperTen™ Category 7 Cable

CopperTen™ Category 7 4PR S/FTP Horizontal Cable

The ADC KRONE S/FTP 600/AWG23 4PR cable is designed for applications up to 600 MHz and its connection properties exceed Category 7 specifications ISO/IEC 11801 (2002) and EN 50173-1 (2002).

Every pair is separately shielded – pairs in metal foil (PIMF). The twisted pairs are covered with a braided screen (S/FTP) which guarantees outstanding shielding properties.



Features

- Performance exceeding Category 7 specifications up to 600 MHz
- Shielding prevents alien crosstalk
- Guaranteed channel capacity that is equal to or greater than the capacity identified by the IEEE as the minimum requirement for operation of 10 Gigabit Ethernet
- Maximises productivity levels with 10 times the data throughput of Category 6
- True future proofing for tomorrow's network applications
- Covered by the TrueNet System Warranty

Ordering Information

Description	Catalogue Number
Category 7 Horizontal Cable S/FTP, 1000m Reel, Orange	7053 3 362-55
Category 7 Horizontal Cable S/FTP Duplex, 500m Reel, Orange	7053 3 762-54

Other cable types and colours are available upon request.

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CopperTen™ Category 7 4PR S/FTP Horizontal Cable

Technical data

Copper conductor	AWG 23
Fire load	0.57MJ/m
Halogen-free	Yes
Maximum tensile strength	145N
Outer diameter	7.4mm
Weight	58kg/km

Electrical Data

DC resistance at 20°C (max)	7.3 Ω /100m
DC resistance unbalanced (max)	1%
Insulation resistance	$\geq 5000 \text{ M}\Omega \times \text{km}$
Input impedance Z_0 at 0.064 MHz	125 $\Omega \pm 20\%$
Input impedance Z_0 at 1 to 100 MHz	100 $\Omega \pm 15\%$
Input impedance Z_0 at 100 to 600 MHz	100 $\Omega \pm 22\%$
Transfer impedance	$\leq 10 \text{ m}\Omega$ per metre at 10 MHz
Longitudinal conversion loss dB/Ref = 1000 m	$\geq 46 \text{ dB}$ at 64 kHz
Longitudinal conversion loss dB/Ref = 100 m	$\geq 40 \text{ dB}$ at 1 MHz
Longitudinal conversion loss dB/Ref = 100 m	$\geq 20 \text{ dB}$ at 100 MHz
Mutual capacitance	43 pF/m
Capacitance unbalance to ground	1000 pF/km
Nominal velocity of propagation	0.79%
Propagation delay at $\geq 10 \text{ MHz}$	4.2 ns/m
Worst case cable skew	4 ns/100m

Mechanical Characteristics

Cable insulation	LSZH
Insulation material	FRNC
Operating temperature	-20 to +60°C
Minimum bend radius	
– for one bend	40 mm (over flat side)
– during installation	60 mm (over flat side)

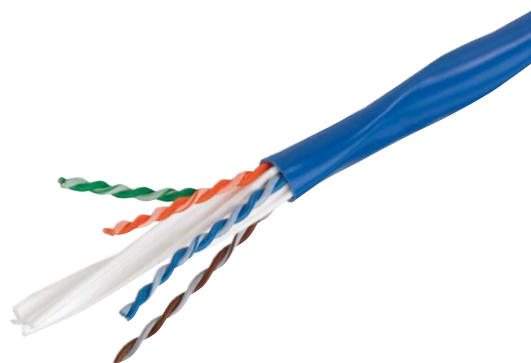
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Augmented Category 6 Horizontal Cable

CopperTen™ Category 6a 4PR LSZH UTP Horizontal Cable

TrueNet® CopperTen™ cable utilises patented designs and manufacturing processes that enable the product to overcome insertion loss and alien crosstalk.

The most noticeable difference when compared to Gigabit cables is the star filler which is elliptical. Not only does the filler maintain the distance between pairs within the cable, but also with the pairs in adjacent cables. The cable ellipse rotates along its length creating a larger air footprint. The distance between all pairs is now maintained removing alien crosstalk.



Features

- Supports 10Gigabit Ethernet to a full 100m up to 500MHz
- Exceeds the requirements of IEEE 802.3an (10GBASE-T) and channel requirements ISO/IEC 11801:2002 amendment channel
- Patented technology to minimise the effect of alien crosstalk and insertion loss
- Maximises productivity levels with 10 times the data throughput of Category 6
- True future proofing for tomorrow's network applications
- Covered by the TrueNet System Warranty

Ordering Information

Description	Catalogue Number
Cable Horizontal CopperTen LSZH, UTP 305m Reel, Blue	10G-A6TZ1-BLM2

Other cable types and colours are available upon request.

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Augmented Category 6 Horizontal Cable

CopperTen™ Category 6a 4PR LSZH UTP Horizontal Cable

Electrical Data

DC resistance at 20°C (max)	9.38Ω / 100m
DC resistance unbalanced (max)	2%
Mutual capacitance at 20°C (max)	5.6nF / 100m
Operating voltage (max)	300 V DC
Worse case cable skew	40 ns / 100m
Nominal velocity of propagation	67%

Construction

Conductor	23 AWG solid bare copper
Insulation	100% polyolefin
Separator	100% polyolefin
Jacket	Low Smoke Zero Halogen
Nominal outside diameter	7.62mm – 6.5mm x 8.4mm

Environmental

Transport and storage	-20° to 75°C
Installation	4° to 50°C
Operation	-20° to 75°C

Compliances

Flammability	IEC 60332-1
Smoke density	IEC 61034
Acid gas	IEC 60754-1
pH	IEC 60754-2
Fire load	828 KJ/m (.23 kWh/m)
Augmented Category 6 horizontal cable requirements	TIA/EIA 568-B.2-10 (draft)
Category 6A horizontal cable requirements	IEC 61156 series (draft) [ref. ISO/IEC 11801]
Channel testing	Latest ISO/IEC 11801:2002 Amendment/channel requirements

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