

Copper Structured Cabling, Cable, CAT6A SFTP, Shielded

Features and benefits

- Category 6A/Class EA compliant
- Pairs individually shielded and with an overall braided shield
- Compliant to ISO/IEC 11801 Ed 2.2, ANSI/TIA-568-C.2, EN 50173-1
- IEC 61156-5, EN 50288-10-1
- IEC 60332-1-2, IEC 60754-2, IEC 61034-2
- Reliable performance
- Super-standard performance margin



Description

Opterna Category 6A 4-pair S/FTP copper cable forms the foundation of 10 Gigabit Ethernet networks. The cable exceeds Category 6A performance ensuring reliability in delivering 10G network speed and high data throughput.

The category 6A solid cables (S/FTP) has been designed for indoor applications fully supporting the more demanding office and industrial communications requirements including voice, data, VoIP, Video Conferencing, security, IP based cameras and other demanding real-time applications. The cable covers the category 6A requirements for shielded twisted pair cables of 100 Ω and is characterized up to 500 MHz suitable for transmitting data over local area networks (LANs).

The cable's 8 conductors (4-Pairs) are of solid bare copper with skin-foam polyethylene (PE) insulation and a PVC/LSZH jacket. The two insulated conductors are twisted together to form a pair and the four pairs with its unique pair lay are bundled up to form the basic cable unit. Each twisted pair shielded with an aluminum foil to add physical separation between the four pairs and prevent internal cross talk.

All four pairs are covered with an overall braided screen to provide immunity from electromagnetic interferences. Category 6A S/FTP cables provides better immunity and covers a wider spectrum of low frequency with the braided shield and high frequency immunity with the foil shield.

Applications

- Horizontal Distribution and Backbone Cabling
- 4/16 Mbps Token Ring (IEEE 802.5)
- 10/100/1000/10G BASE-T (IEEE 802.3)
- 155 Mbps 1.2G ATM
- 155 Mbps TP-PMD
- Analogue Voice, ISDN, ADSL
- HVAC alarm systems and other signalling

Standards

- UL 444
- ANSI/TIA/568-C.2
- ISO/IEC 11801:2011 (Ed 2.2) Class EA

- CENELEC EN 50173-1:2011
- IEC 61156-5
- EN 50288-10-1

Technical data

Mechanical data	Value
Dimensions (W x D x H)	See technical drawing
Material	Conductor material - Solid bare copper Conductor insulation - Skin Foam PE Inner Shielding Material - Aluminium foil tape for each pair Outer Shielding Material - Braided Shield over pairs Cable jacket - PVC/LSZH
Conductor diameter	23 AWG
Insulated conductor diameter	1.34 ± 0.05 mm
Outer cable diameter	7.8mm ± 0.5 mm
Jacket thickness	0.55mm ± 0.05 mm
Pulling strength	110N
Minimum bend-radius	8 times outer diameter
Fire rating	
PVC jacket	IEC60332-1-2
LSZH jacket	IEC 60332-1-2, IEC 60754-1,2 & IEC 61034-2

Electrical data

Frequency (MHZ)	RL (≥dB)	ATT 20°C (≤dB)	NEXT (≥dB)	PS NEXT (≥dB)	ELFEXT (≥dB)	PSELFEXT (≥dB)	PSANEXT (≥dB)	PSAELFEXT (≥dB)
1	20.0	1.9	74.3	72.3	68.0	65.0	67.0	67.0
4	23.0	3.8	65.3	63.3	56.0	53.0	67.0	66.2
8	24.5	5.3	60.8	58.8	49.9	46.9	67.0	60.1
10	25.0	5.9	59.3	57.3	48.0	45.0	67.0	58.2
16	25.0	7.5	56.2	54.2	43.8	40.9	67.0	54.1
20	25.0	8.4	54.8	52.8	42.0	39.0	67.0	52.2
25	24.3	9.4	53.3	51.3	40.0	37.0	67.0	50.2
31.25	23.6	10.5	51.9	49.9	38.1	35.1	67.0	48.3
62.5	21.5	15.0	47.4	45.4	32.1	29.1	65.6	42.3
100	20.1	19.1	44.3	42.3	28.0	25.0	62.5	38.2
200	18.0	27.6	39.8	37.8	22.0	19.0	58.0	32.2
250	17.3	31.1	38.3	36.3	20.0	17.0	56.5	30.2
300	16.8	34.3	37.1	35.1	18.5	15.5	55.3	28.7
400	15.9	40.1	35.3	33.3	16.0	13.0	53.5	26.2
500	15.2	45.3	33.8	31.8	14.0	11.0	52.0	24.2

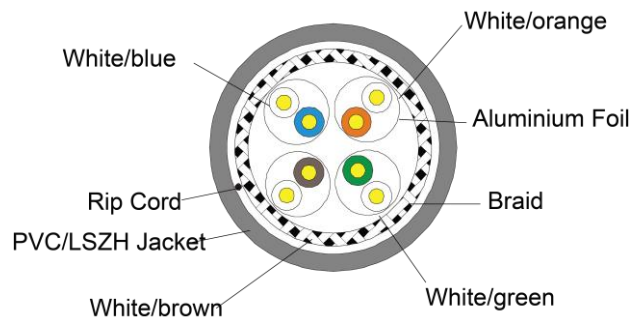
Electrical characteristics	Value
DC resistance max	9.38 Ohm/100m
DC resistance unbalance	Max 2%
Mutual capacitance	Max 5.6 nF/100m
Capacitance unbalance pair	Max 330pF/100m
Impedance 1-500 MHz	100 ± 15Ω
Propagation delay	Max. 534 ns/100m@ 500 MHz
Dielectric strength	DC KV/sec. 2.5/2

Propagation delay skew	Max 45 ns/100m
Insulation resistance - MΩ/km	Min.5000

Environmental data

Temperature range	Value
Operation	-20° C to +75° C

Technical drawing



Ordering information

Description	Part code
Shielded Twisted Pair Cable (S/FTP), Category 6A, 4 Pairs, solid PVC, 305m box	SCS-SFTP-C6A-PVC-GY
Shielded Twisted Pair Cable (S/FTP), Category 6A, 4 Pairs, solid LSZH, 305m box	SCS-SFTP-C6A-LSZH-GY