

X Category 6A compliant

X Lightweight, Compact Design

X 25 Year System Warranty

Features

- Category 6A compliant
- Lightweight, Compact Design
- Conventional unscreened construction
- Specified to 500MHz
- Suitable for 10 Gigabit, Ethernet applications
- Low Smoke Zero Halogen Outer Sheath
- Compact, but robust, design
- 25 Year System Warranty

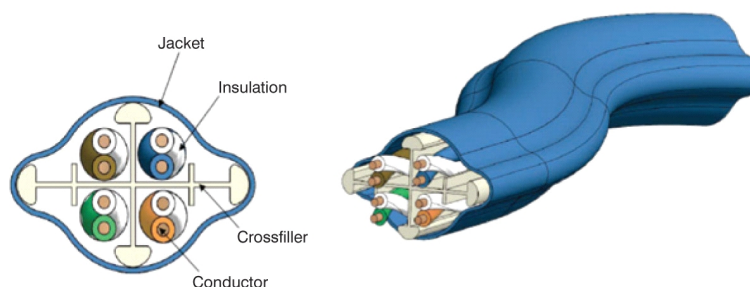
Product Overview

Excel Category 6A cables, and associated connectors, take the performance capabilities of copper infrastructure to new levels. Designed to the current ISO EN and TIA standards for Class EA / Category 6A performance these products are intended to deliver reliable, high network performance over link distances of up to 90 metres and channels up to 100m, including applications such as 10GBASE-T, 10 Gigabit Ethernet.

Each cable consists of 4 unscreened twisted pairs which are formed around a specifically designed X filler, manufactured from lightweight flexible polyethelene. The use of a X filler to separate and maintain the position of conductors within high frequency unscreened cable designs has become standard practice following their introduction into Category 6 cables some years ago. By controlling - and making consistent - the spacing and positioning of each pair in relation to the others within the cable performance levels can be assured and issues such as crosstalk within and between cables can be addressed.

The term 'Alien Crosstalk' refers to the influence on the signal from a source external to the jacket sheath. i.e. it is the crosstalk from the other Category 6A cables. Whereas the Category 6 cables are circular, with the central X filler used in the Excel Category 6A creates an oval shape. There is an overall twist along the length of cable. The oval shape, twisting along the length of the cable, forces air gaps between adjacent cables within any bundles. These resulting air gaps drastically reduce the risks of Alien Crosstalk. The risks are further mitigated by following good installation practices - refer to the Excel Installation Guide.

Excel Category 6A cables are jacketed in an Ice Blue low smoke zero halogen (LSZH) compound compliant with flame retardant standards as defined in IEC 60332-1, and smoke emission standards IEC61034. Supplied on 500 metre plywood drums, each cable has a print legend identifying the specification, part code and sequential metre marking which counts down from 500 metres to 1 metre, on each drum to reduce waste.



Typical Applications

- 10Base-T Ethernet
- 100BASE-TX Fast Ethernet
- 1000BASE-T Gigabit Ethernet
- 10GBASE-T 10 Gigabit Ethernet
- 1.2/2.4Gbs ATM
- Digital and analogue video

Construction

Conductor	23AWG, Solid Plain Copper
Insulation	Foamed Polyethylene
Outer Sheath	Flame resistant, Low Smoke Zero Halogen
Outer Diameter	7.8 x 9.2 +/- 0.3mm
Installation Temperature Range	0 °C to +50 °C
Operating Temperature Range	-20 °C to +60 °C
Minimum Bend Radius during installation	70mm
Minimum Bend Radius during operation	40mm
Flame Retardance	IEC 60332-1
Smoke Emission	IEC 61034
Impedance	100 Ohms
NVP	66%

Performance Overview

Excel Category 6A cables are designed, manufactured and tested in accordance with the ISO, EN and TIA standards for Category 6A. As such they are suitable for the support of high speed enterprise LAN and datacenter applications such as 10 Gigabit Ethernet.

The use of a purposely designed X filler together with the unique oval shape of the cable ensure that correctly installed systems are immune to performance concerns sometimes found in high speed, high frequency copper cable networks. Cables designed in this way act against Alien Crosstalk.

Freq. MHz	Insertion Loss (dB)		NEXT (dB)		RL (dB)		ACR-F (dB)		PS NEXT (dB)		PS ACR-F (dB)	
	Std.	Excel*	Std.	Excel*	Std.	Excel*	Std.	Excel*	Std.	Excel*	Std.	Excel*
1	-	-	-	-	20	28.7	-	-	-	-	-	-
4	3.8	3.3	66.3	101.9	23	36.2	56	93.4	63.3	90.5	53	85.4
10	5.9	5.2	60.3	88.9	25	48.7	48	82.5	57.3	84.5	45	75.8
16	7.5	6.6	57.2	90.9	25	41.5	43.9	81.3	54.2	80.8	40.9	72.7
20	8.4	7.4	55.8	92.1	25	47.9	42	80.3	52.8	77.2	39	72.5
31.25	10.5	9.2	52.9	86.3	23.6	43.2	38.1	82	49.9	79.8	35.1	71.5
62.5	15	13.1	48.4	81.5	21.5	35.8	32.1	64.4	45.4	73	29.1	58.1
100	19.1	16.7	45.3	93.4	20.1	37.2	28	55	42.3	64.8	25	50.7
200	27.6	23.7	40.8	77	18	35.9	22	53.7	37.8	59.6	19	51.7
250	31.1	26.7	39.3	68.5	17.3	38	20	46.3	36.3	63	17	43.3
300	34.3	29.4	38.1	67.9	17.3	28.3	18.5	47	35.1	58.8	15.5	44.7
400	40.1	34.1	36.3	73.9	17.3	27	16	48.3	33.3	60.9	13	41.8
500	45.3	38.2	34.8	59.5	17.3	25.4	14	41.2	31.8	54.1	11	31

* Typical result

Nominal velocity of propagation (NVP 66%)

Note 1: All tests include 401 points swept frequency measurements. **Note 2:** All electrical characteristics are given at 20°C

Part Number Information

Part No.	Description
100-190	Category 6A Unscreened U/UTP Cable LSOH Ice Blue 500m

System Warranty

The Excel System Warranty provides a 25-year product and applications assurance of compliance with the industry performance standard appropriate to the class of cabling installed. The warranty may be applied for by an accredited Excel Partner who has designed, supplied and installed the said system.



Excel is a world-class premium performing end-to-end infrastructure solution - designed, manufactured, supported and delivered - without compromise.

Contact us at sales@excel-networking.com

