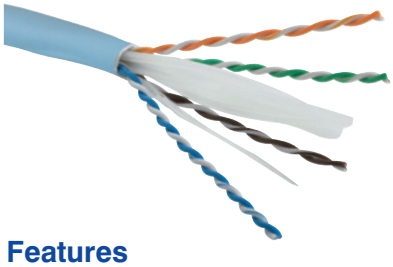
EXCEL
EXCELLENCE IN NETWORKING

Excel Category 6_A Unscreened Twisted Pair (U/UTP) Cable – LSOH

CAT6A EXCEL



DELTA

EC VERIFIED

25 Year System Warranty

Lightweight, Compact Design

Category 6_A compliant

Features

- Specified to 500MHz
- Category 6_A compliant
- Suitable for 10 Gigabit, Ethernet applications
- Conventional unscreened construction
- Compact, but robust, design
- Low Smoke Zero Halogen Outer Sheath
- 25 year system warranty

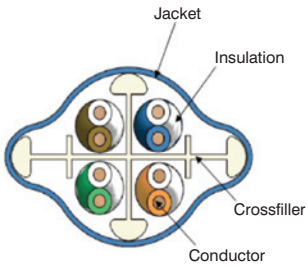
Product Overview

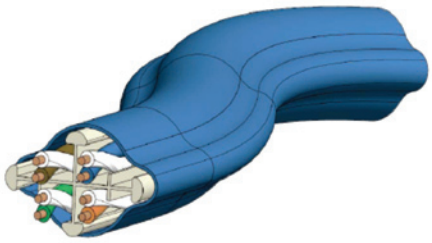
Excel Category 6_A cables, and associated connectors, take the performance capabilities of copper infrastructure to new levels. Designed to the current ISO EN and TIA standards for Class E_A / Category 6_A performance these products are intended to deliver reliable, high network performance over link 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 seperate 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 perfromance 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 6_A cables. Whereas the Category 6 cables are circular, with the central X filler used in the Excel Category 6_A 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 6_A 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.





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	-10°c to +50°c
Minimum Bend Radius during installation	70mm
Minimum Bend Radius during operation	40mm
Flame Retardance	IEC 60332-1
Smoke Emission	IEC 61034
NVP	66%

Performance Overview

Excel Category 6_A cables are designed, manufactured and tested in accordance with the ISO, EN and TIA standards for Category 6_A. 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)	
	Standard	Excel*	Standard	Excel*	Standard	Excel*	Standard	Excel*	Standard	Excel*	Standard	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*

System Warranty

When installed with Excel Category 6_A cables and components by an accredited Excel Cabling Partner, this product is supported by a comprehensive 25 year warranty programme.

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

Part Number Information

Part No.	Description
100-190	Excel Category 6_A U/UTP Cable, Ice Blue LSZH, 500 metre drum

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