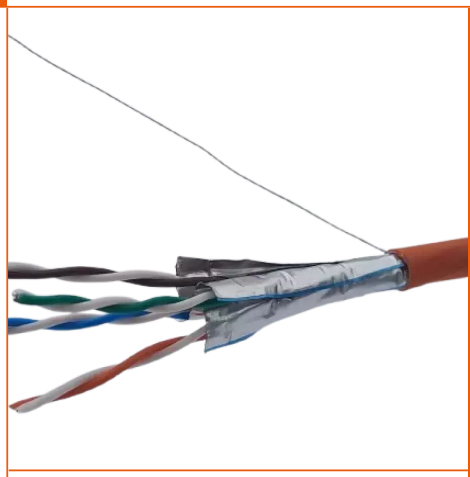
# LANmark-6A ULTIM EXTP Cable

**LANMARK-6A ULTIM EXTP AWG22 CAT 6A 650MHZ LSZH DCA S2 D2 A1 ORANGE 500M REEL**





**Aginode Ref:** N100.964G-OD

- Extended Twisted Pair transmission support for Ethernet applications beyond 100m
- AWG22 copper conductors enabling scalability to support future technologies
- Innovative aluminium foil design combining global and individual pair shielding
- Alien Crosstalk immunity
- Facilitates ease of installation
- Full compliance to latest standards for Category 6A and Class EA
- Tested to 650 MHz
- Guaranteed performance up to 500MHz
- Ideal cable for 10GBase-T application

## Application

LANmark-6A ULTIM EXTP cables are the ideal solution for a future proof network. The range has been designed specifically to support Ethernet application transmissions, including PoE, exceeding the 100m channel boundaries of the International, American and European cabling standards.

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 2.5GBase-T 2.5 Gigabit Ethernet
- 5GBase-T 5 Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet
- future Cat 6A and Class EA applications
- PoE++ Type 4 (IEEE 802.3bt)

## Design

LANmark-6A ULTIM EXTP cable is constructed with AWG22 copper conductors, ensuring excellent PoE transmission up to 90W and allowing Ethernet application support up to 160m Channel distance.

The cable features an ingenious metal foil construction forming a central cross and shaped around each pair, acting as global screen and individual pair shielding at the same time. Compared to traditional U/FTP, F/FTP and S/FTP cables, this clever design allows for quick and effortless cable preparation, whilst offering outstanding electrical performance.

## STANDARDS

ANSI/TIA 568.2-D
EN 50173-1
IEC 61156-5
IEEE 802.3bt (PoE++)
ISO/IEC 11801

*All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Aginode is indicative only and shall not be binding on Aginode or be treated as constituting a representation on the part of Aginode.*

## Performance

Tested to 650MHz with guaranteed performance to 500MHz, LANmark-6A ULTIM EXTP cables exceed the requirements of the International, European and American cable standards. When used in combination with LANmark-6A ULTIM connectors and patch cords, the system supports the 10GBase-T applications as defined in IEEE 802.3an and meets or exceeds the link and channel requirements for Category 6A and Class EA as defined in TIA/EIA 568.2-D and ISO/IEC 11801.

In addition, extended distance can be reached for all Ethernet applications, including 10GBase-T (*)

| | | LANmark Channel | | | | | |
|---|---|---|---|---|---|---|---|
| | | unscreened | screened | | | | |
| Application drive distance (m) | | Cat 6 | Cat 6 | Cat 6A AWG 23 | Cat 6A AWG 22 | Cat 7A AWG 23 | Cat 7A AWG 22 |
| 10BASE-T / Ethernet | without PoE | 177 | 177 | 177 | 177 | 177 | 177 |
| | with PoE | 130 | 130 | 145 | 160 | 165 | 177 |
| 100BASE-T / Fast Ethernet | without PoE | 140 | 140 | 145 | 160 | 145 | 160 |
| | with PoE | 130 | 130 | 145 | 160 | 145 | 160 |
| 1000BASE-T / Gigabit Ethernet | without PoE | 100 | 115 | 145 | 160 | 145 | 160 |
| | with PoE | 100 | 115 | 145 | 160 | 145 | 160 |
| 2.5GBASE-T / 2.5 Gigabit Ethernet | without PoE | 100 | 100 | 125 | 135 | 125 | 135 |
| | with PoE | 100 | 100 | 125 | 135 | 125 | 135 |
| 5GBASE-T / 5 Gigabit Ethernet | without PoE | 100 | 100 | 125 | 135 | 125 | 135 |
| | with PoE | 100 | 100 | 125 | 135 | 125 | 135 |
| 10GBASE-T / 10 Gigabit Ethernet | without PoE | N/A | N/A | 105 | 125 | 105 | 125 |
| | with PoE | N/A | N/A | 100 | 100 | 100 | 100 |

(*) Distances are in metres and are valid for 2-connector channel configurations, including 5m total cordage.
PoE = Type 4 (IEEE 802.3bt)
Distances are valid at 20°C. For operating temperatures up to 60°C, the length shall be reduced according to ISO/IEC 11801-2

## Installation

LANmark-6A EXTP cables offer the same ease of installation as their F/UTP equivalents, enabling removal of the aluminium foil in one go, whilst no plastic cross nor individual pair foils need to be removed.
To support the correct set-up of handheld analysers for installation testing, the actual cable NVP value is given in the cable's print legend.

## Guarantees

Traceability codes on both cable and packaging ensure quality validation of the installed cable.

Installations with LANmark-6A cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Channel Performance, Application Support and Labour, as described in the Aginode Certified System Warranty.

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# LANmark-6A ULTIM EXTP AWG22 Cat 6A 650MHz LSZH Dca s2 d2 a1 Orange 500m reel

## Characteristics

| | |
|---|---|
| **Construction characteristics** | |
| Colour | Orange |
| Outer sheath | LSZH |
| Type of cable | U/FTP-F/FTP |
| **Dimensional characteristics** | |
| Approximate weight | 61 kg/km |
| Conductor cross-section (AWG/KCMIL) | 22 |
| Diameter over insulation | 1.53 mm |
| Nominal outer diameter (mm) | 7.8 mm |
| **Electrical characteristics** | |
| Characteristic impedance | 100 Ohm |
| Max. DC resistance of the conductor at 20°C | 60 Ohm/km |
| Mutual capacitance | 45 nF/km |
| **Mechanical characteristics** | |
| Maximum operating pulling force | 100 N |
| **Transmission characteristics** | |
| Coupling attenuation at 30 MHz | >70 dB |
| Nominal Velocity of Propagation (NVP) | 76 % |
| Propagation delay, max. 100 MHz | 536 ns/100m |
| Skew | 25 ns/100m |
| **Usage characteristics** | |
| Ambient installation temperature, range | -10...60 °C |
| Category | Cat. 6A |
| Flame retardant | IEC 60332-1 |
| Gases corrosivity | IEC 60754-1; IEC 60754-2 |
| Minimum Bend Radius - During Installation (under Tension) | 62 mm |
| Minimum Bend Radius - Installed | 31 mm |
| Operating temperature, range | -20...60 °C |
| Packaging | Drum 500 m |

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| | |
|---|---|
| Range | LANmark-6A |
| Smoke density | IEC 61034 |

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