# LANmark-6A Cable

**LANMARK-6A F/FTP AWG23 CAT 6A LSZH DCA S2 D1 A1 ORANGE 500M REEL**

**Aginode Ref:** N100.694G-OD

- Ideal cable for 10GBase-T application
- Full compliance to latest standards for Category 6A and Class EA
- Guaranteed performance up to 500MHz
- Individual pair shielding offering Alien Crosstalk immunity



## STANDARDS

ANSI/TIA 568.2-D
EN 50173-1
EN 50288-4-1
IEC 61156-5
IEEE 802.3bt (PoE++)
ISO/IEC 11801

## Application

LANmark-6A cables are the ideal solution for a 10G Ethernet network. The range has been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, while maintaining full backwards compatibility with today's needs. All LANmark-6A cables are shielded, in order to ensure immunity to Alien Crosstalk and other external interferences.

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

## Performance

With guaranteed performance to 500MHz, Aginode LANmark-6A cables exceed the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568.2-D

When used in combination with Aginode LANmark-6A connectors and LANmark-6A Ultim 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.

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# Installation

To support the correct set-up of hand held 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.

## Electrical Performance LANmark-6A FFTP Cable

| Freq | Attn | | NEXT | | PSNEXT | | ACR-F | | PS ACR-F | | PS ANEXT | | PS AACR-F | | RL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in dB | | in dB | | in dB | | in dB | | in dB | | in dB | | in dB | | in dB | |
| in MHz | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. |
| **1** | 2,1 | 2,1 | 74,3 | 104,3 | 72,3 | 102,3 | 67,8 | 92,8 | 64,8 | 89,8 | 67,0 | 90,0 | 67,0 | 76,7 | 20,0 | 26,0 |
| **4** | 3,8 | 3,8 | 65,3 | 95,3 | 63,3 | 93,3 | 55,8 | 80,8 | 52,8 | 77,8 | 67,0 | 90,0 | 66,2 | 75,9 | 23,0 | 29,0 |
| **10** | 5,9 | 5,9 | 59,3 | 89,3 | 57,3 | 87,3 | 47,8 | 72,8 | 44,8 | 69,8 | 67,0 | 87,0 | 58,2 | 67,9 | 25,0 | 31,0 |
| **16** | 7,5 | 7,5 | 56,2 | 86,2 | 54,2 | 84,2 | 43,7 | 68,7 | 40,7 | 65,7 | 67,0 | 85,0 | 54,1 | 63,8 | 25,0 | 31,0 |
| **20** | 8,4 | 8,4 | 54,8 | 84,8 | 52,8 | 82,8 | 41,8 | 66,8 | 38,8 | 63,8 | 67,0 | 84,0 | 52,2 | 61,9 | 25,0 | 31,0 |
| **31,25** | 10,5 | 10,5 | 51,9 | 81,9 | 49,9 | 79,9 | 37,9 | 62,9 | 34,9 | 59,9 | 67,0 | 82,1 | 48,3 | 58,0 | 23,6 | 29,6 |
| **62,5** | 15,0 | 15,0 | 47,4 | 77,4 | 45,4 | 75,4 | 31,9 | 56,9 | 28,9 | 53,9 | 65,6 | 79,0 | 42,3 | 52,0 | 21,5 | 27,5 |
| **100** | 19,1 | 19,1 | 44,3 | 74,3 | 42,3 | 72,3 | 27,8 | 52,8 | 24,8 | 49,8 | 62,5 | 77,0 | 38,2 | 47,9 | 20,1 | 26,1 |
| **155** | 24,1 | 24,1 | 41,4 | 71,4 | 39,4 | 69,4 | 24,0 | 49,0 | 21,0 | 46,0 | 59,6 | 74,1 | 34,4 | 44,1 | 18,8 | 24,8 |
| **200** | 27,6 | 27,6 | 39,8 | 69,8 | 37,8 | 67,8 | 21,8 | 46,8 | 18,8 | 43,8 | 58,0 | 72,5 | 32,2 | 41,9 | 18,0 | 24,0 |
| **250** | 31,1 | 31,1 | 38,3 | 68,3 | 36,3 | 66,3 | 19,8 | 44,8 | 16,8 | 41,8 | 56,5 | 71,0 | 30,2 | 39,9 | 17,3 | 23,3 |
| **300** | 34,3 | 34,3 | 37,1 | 67,1 | 35,1 | 65,1 | 18,3 | 43,3 | 15,3 | 40,3 | 55,3 | 69,8 | 28,7 | 38,4 | 16,8 | 22,8 |
| **500** | 45,3 | 45,3 | 33,8 | 63,8 | 31,8 | 61,8 | 13,8 | 38,8 | 10,8 | 35,8 | 52,0 | 66,5 | 24,2 | 33,9 | 15,2 | 21,2 |

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# LANmark-6A F/FTP AWG23 Cat 6A LSZH Dca s2 d1 a1 Orange 500m reel

## Characteristics

| | |
|---|---|
| **Construction characteristics** | |
| Colour | Orange |
| Outer sheath | LSZH |
| Type of cable | F/FTP |
| **Dimensional characteristics** | |
| Approximate weight | 49 kg/km |
| Conductor cross-section (AWG/KCMIL) | 23 |
| Diameter over insulation | 1.36 mm |
| Nominal outer diameter (mm) | 7.0 mm |
| **Electrical characteristics** | |
| Mutual capacitance | 45 nF/km |
| Characteristic impedance | 100 Ohm |
| Max. transfer impedance at 30 MHz (Ohm/km) | 120 Ohm/km |
| Max. DC resistance of the conductor at 20°C | 80 Ohm/km |
| **Mechanical characteristics** | |
| Maximum operating pulling force | 100 N |
| **Transmission characteristics** | |
| Skew | 30 ns/100m |
| Nominal Velocity of Propagation (NVP) | 82 % |
| Coupling attenuation at 30 MHz | >85 dB |
| Propagation delay, max. 100 MHz | 536 ns/100m |
| **Usage characteristics** | |
| Range | LANmark-6A |
| Gases corrosivity | IEC 60754-1; IEC 60754-2 |
| Length | 500 m |
| Operating temperature, range | -20...60 °C |

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| | |
|---|---|
| Category | Cat. 6A |
| Flame retardant | IEC 60332-1 |
| Smoke density | IEC 61034 |
| Packaging | Reel |
| Ambient installation temperature, range | -10...60 °C |
| Minimum Bend Radius - During Installation (under Tension) | 56 mm |
| Minimum Bend Radius - Installed | 28 mm |

## Documentation

Freetable LM6A FFTP V3.xls xls — 25.5 KB Download

## Declaration of Performance

LANmark-6A F/FTP AWG23 Cat 6A LSZH Dca s2 d1 a1 Orange 500m reel pdf — 141.21 KB Download

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