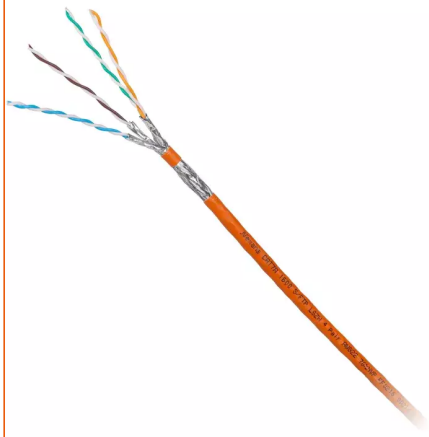
# LANmark-7A Cable

**LANMARK-7A 1600 S/FTP DUAL AWG22 CAT 7A 1600MHZ LSZH DCA S2 D1 A1 ORANGE 500M REEL**





**Aginode Ref:** N100.383-OD

- Exceeds Category 7A in terms of ACR and Frequency Range
- Suitable for channels with capacity above 25GBps
- AWG22 Wire Size
- Positive Attenuation to Crosstalk Ratio up to 1600MHz
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with Cat 7A connectivity through special foil construction
- Dual version (2 x 4 prs) permits two cables to be installed in one go

*Note: product picture showing 4pr version*

## Description

LANmark-7A are 4 pair S/FTP cables with individual pair foils and an overall braid offering upper frequencies of at least 1250MHz but up to 1600MHz. All cables are fully compliant with Category 7A standard and offer even large headroom above the Cat 7A requirement. Due to this excellent electrical performance and positive ACR all cables supports applications beyond 10GBASE-T, including 25GBASE-T.

## Application

LANmark-7A is the highest performing standardised cabling solution in the enterprise market and will support all current data applications and all planned applications using cabling up to Class FA.

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-T
- 25GBase-T up to 30m
- POE, POE+, POE++ (Draft)
- Cable sharing applications including CATV up to 862MHz
- Any future Class FA application

## Installation

## STANDARDS

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

*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.*

Ease of Installation is one of the main features of the LANmark-7A cable. Extra attention has been paid to ensure that the screen coverage is maintained and foils do not open during installation. The cable has been specially designed to be used in conjunction with the LANmark-7A GG45 12C connector.

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.

## Electrical Performance LANmark-7A 1600 Cable

| Frequency (in MHz) | Attenuation (dB/100m) | | NEXT (in dB) | | ACR (in dB) | | PS-ANEXT (in dB) | | ACR-F (in dB) | | TCL (in dB) | | Return Loss (in dB) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max. | Typical | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. |
| **1,00** | 2,1 | 1,9 | 75,0 | 105,0 | 72,9 | 103,1 | 80,0 | 87,5 | 88,0 | 83,0 | 40,0 | 43,0 | 20,0 | 30,0 |
| **4,00** | 3,7 | 3,5 | 75,0 | 105,0 | 71,3 | 101,5 | 80,0 | 87,5 | 88,0 | 83,0 | 34,0 | 37,0 | 23,0 | 33,0 |
| **10,00** | 5,8 | 5,4 | 75,0 | 105,0 | 69,2 | 99,6 | 80,0 | 87,5 | 88,0 | 83,0 | 30,0 | 33,0 | 25,0 | 34,0 |
| **16,00** | 7,3 | 6,8 | 75,0 | 105,0 | 67,7 | 98,2 | 80,0 | 87,5 | 88,0 | 83,0 | 28,0 | 31,0 | 25,0 | 34,0 |
| **20,00** | 8,2 | 7,6 | 75,0 | 105,0 | 66,8 | 97,4 | 80,0 | 87,5 | 88,0 | 83,0 | 27,0 | 30,0 | 25,0 | 34,0 |
| **31,25** | 10,3 | 9,5 | 75,0 | 105,0 | 64,7 | 95,5 | 80,0 | 87,5 | 88,0 | 83,0 | 25,1 | 28,1 | 23,7 | 32,7 |
| **62,50** | 14,6 | 13,4 | 75,0 | 105,0 | 60,4 | 91,6 | 80,0 | 87,5 | 88,0 | 83,0 | 22,1 | 25,1 | 21,6 | 30,6 |
| **100,00** | 18,5 | 17,1 | 75,0 | 102,4 | 56,5 | 85,4 | 80,0 | 87,5 | 85,3 | 80,3 | 20,0 | 23,0 | 20,1 | 29,1 |
| **155,00** | 23,2 | 21,3 | 72,5 | 97,6 | 49,3 | 76,3 | 80,0 | 87,5 | 80,5 | 75,5 | 18,1 | 21,1 | 18,8 | 27,8 |
| **300,00** | 32,7 | 29,9 | 68,2 | 90,5 | 35,6 | 60,6 | 80,0 | 87,5 | 73,4 | 68,4 | 15,2 | 18,2 | 17,3 | 26,3 |
| **600,00** | 47,1 | 42,7 | 63,7 | 82,9 | 16,6 | 40,3 | 75,8 | 83,3 | 65,8 | 60,8 | 12,2 | 15,2 | 17,3 | 26,3 |
| **800,00** | 54,9 | 49,6 | 61,9 | 79,8 | 6,9 | 30,2 | 74,0 | 81,5 | 62,7 | 57,7 | 11,0 | 14,0 | 16,1 | 23,6 |
| **1000,00** | 61,9 | 55,7 | 60,4 | 77,4 | -1,5 | 21,7 | 72,5 | 80,0 | 60,3 | 55,3 | 10,0 | 13,0 | 15,1 | 21,9 |
| **1200,00** | 68,4 | 61,3 | 59,2 | 75,4 | -9,1 | 14,1 | 71,3 | 78,8 | 58,3 | 53,3 | 9,2 | 12,2 | 14,3 | 20,3 |
| **1500,00** | 77,2 | 69,0 | 57,8 | 73,0 | -19,5 | 4,0 | 69,9 | 77,4 | 55,9 | 50,9 | 8,2 | 11,2 | 13,3 | 18,3 |
| **1600,00** | 80,0 | 71,4 | 57,3 | 72,3 | -22,7 | 0,9 | 69,4 | 76,9 | 55,2 | 50,2 | 8,0 | 11,0 | 13,0 | 17,8 |

| | |
|---|---|
| Internal Description | UK MRO 130903 Electrical Performance LM7A 1600 |
| Title | Electrical Performance LANmark-7A 1600 Cable |
| Description | Typical Electrical Performance LANmark-7A 1600 Cable<br>Maximum/Minimum requirements according to IEC61156-9 NP Draft 2013 |
| Comment | |

| | |
|---|---|
| Squared | ☑ |
| Table width | 100 |
| Centered | ☐ |
| Use small font for PDF | ☐ |
| Online | ☑ |
| Page break allowed | ☐ |

*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.*

# LANmark-7A 1600 S/FTP Dual AWG22 Cat 7A 1600MHz LSZH Dca s2 d1 a1 Orange 500m reel

## Characteristics

| | |
|---|---|
| **Construction characteristics** | |
| Drain wire | No |
| Lead free | Yes |
| Outer sheath | LSZH |
| Screen | Aluminium foil + tinned copper braiding |
| Sheath colour | Orange |
| Type of cable | S/FTP Shotgun |
| **Dimensional characteristics** | |
| Approximate weight | 144 kg/km |
| Conductor cross-section (AWG/KCMIL) | 22 |
| Diameter over insulation | 1.53 mm |
| Nominal outer diameter (mm) | 7.8 mm |
| Number of pairs | 8 |
| **Electrical characteristics** | |
| Characteristic impedance | 100 Ohm |
| Max. DC resistance of the conductor at 20°C | 85 Ohm/km |
| Max. transfer impedance at 30 MHz (Ohm/km) | 50 Ohm/km |
| Mutual capacitance | 45 nF/km |
| **Mechanical characteristics** | |
| Maximum operating pulling force | 100 N |
| **Transmission characteristics** | |
| Coupling attenuation at 30 MHz | >85 dB |
| Nominal Velocity of Propagation (NVP) | 76 % |
| Propagation delay, max. 100 MHz | 536 ns/100m |
| Skew | 25 ns/100m |
| **Usage characteristics** | |

*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.*

| | |
|---|---|
| Ambient installation temperature, range | 0...50 °C |
| Category | Cat. 7A |
| Flame retardant | IEC 60332-1 |
| Gases corrosivity | IEC 60754-1; IEC 60754-2 |
| Length | 500 m |
| Minimum Bend Radius - During Installation (under Tension) | 69 mm |
| Minimum Bend Radius - Installed | 34 mm |
| Operating temperature, range | -20...60 °C |
| Packaging | Reel |
| Range | LANmark-7A |
| Smoke density | IEC 61034-2 |

## Documentation

Freetable LM7A 1600.xls xls — 35 KB Download

## Declaration of Performance

LANmark-7A 1600 S/FTP Dual AWG22 Cat 7A 1600MHz LSZH Dca s2 d1 a1 Orange 500m reel pdf — 141.13 KB Download

*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.*