



**LAN Cabling Systems
Copper**

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About Nexans

Nexans is the worldwide leader in the cable industry

With energy as the basis of its development, Nexans is a global player in the infrastructure, industry, building and Local Area Network (LAN) markets.

As a worldwide leader in the cable industry, it offers an extensive range of cables and cabling systems to raise **industrial productivity, improve business performance, enhance security, enrich the quality of life, and assure long-term network reliability.**

With an industrial presence in 40 countries and commercial activities worldwide, Nexans employs 23,700 people and had sales in 2010 of 6 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A. More information on www.nexans-fi.com

Infrastructure

Nexans provides complete cables and cabling solutions for **power transmission and distribution.** New technologies, which are environmentally-friendly, increase capacity and reduce the danger of blackouts.

To reinforce rail safety and efficiency, we have products especially designed for the demanding railroad environment.

And to meet diverse needs of incumbent and new telecoms operators, Nexans has customized solutions aimed at lowering capital expenditure and operating costs.

For the world's busy airports, we offer cables and cabling systems for energy and communication networks, terminals, baggage handling systems, runway lights, control towers, etc.

Industry

Nexans offers a complete portfolio of cables and solutions for market segments as diverse as the **automotive, rolling stock and aerospace industries, shipbuilding, nuclear power, oil & gas and petrochemicals, medical and wind applications, material handling and automation.**

We add value through advanced technologies and durable high-performance products.

Building

Nexans supplies cables and network solutions for structures of all types: from small residences to public and office buildings and big industrial complexes.

Nexans pioneered fire-performance cables for public safety, created industrial Ethernet solutions to unite the office and the factory floor platform, and ensured the highest standards of environmental friendliness and recyclability.

From standard products to renewable energy solutions, these products contribute to the sustainable buildings of the future.

Local Area Networks

Nexans provides copper and optical fiber cabling systems for new resource-intensive applications, like Data Centers, Security services, and Storage Area Networks.

Nexans' advanced solutions are handling core business data, protecting operations in sensitive conditions, and giving organizations highspeed transmission and the ability to protect and retrieve vital information.

Copper

Nexans offer the full range of copper LAN systems to ensure we can provide the solution most suited for your needs.

- All performance levels: Cat 5e, Cat 6, Cat 7 & voice grade
- All construction types : UTP, FTP, S-FTP, PIMF
- Modular connectivity based on 'Snap-in' and '808' connectivity
- Guaranteed Application support with extended distance



Essential Cat 5e Cable

- U/UTP, F/UTP & SF/UTP construction
- Complies to latest Cat 5E standards
- Supports Gigabit Ethernet
- Guaranteed performance to 100MHz
- Single foil offers EMC performance

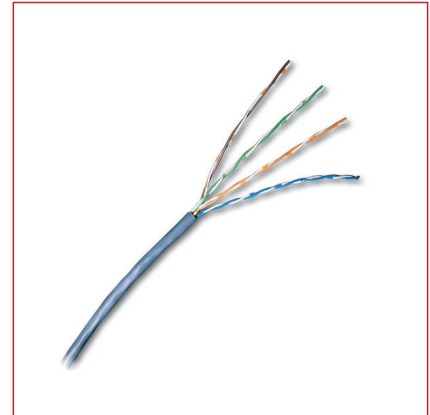
Description

Application

Category 5e cables are the standard 100MHz offering from Nexans. Manufactured in accordance with TIA 568-B and IEC 61156-5, they are suitable for basic voice & data installations. Available in Light Grey PVC or Orange LSZH.

Performance

Nexans Category 5e cables are compliant with the requirements of the TIA 568-B and IEC 61156-5.



essential

Standards

International ISO/IEC 11801

National TIA/EIA-568-B.2

Essential Cat 5e Cable

Characteristics

Usage characteristics	
Range	essential

Product List

☎ = Make to order, 📦 = Make to stock

Nexans ref.	Name	Type of cable	Length (m)	Outer sheath	Packaging
☎ N100.453	Essential F/UTP Cat 5e 0,5MM Dual LSZH 500M REEL	F/UTP Shotgun	500	LSZH	Reel
☎ N100.463	Essential F/UTP Cat 5e 0,5MM Dual PVC 500M REEL	F/UTP Shotgun	500	PVC	Reel
☎ N100.452	Essential F/UTP Cat 5e 0,5MM LSZH 1000M REEL	F/UTP	1000	LSZH	Reel
☎ N100.454	Essential F/UTP Cat 5e 0,5MM LSZH 500M REEL	F/UTP	500	LSZH	Reel
☎ N100.451	Essential F/UTP Cat 5e 0,5MM LSZH BOX 305M	F/UTP	305	LSZH	Box
☎ N100.462	Essential F/UTP Cat 5e 0,5MM PVC 1000M REEL	F/UTP	1000	PVC	Reel
☎ N100.464	Essential F/UTP Cat 5e 0,5MM PVC 500M REEL	F/UTP	500	PVC	Reel
☎ N100.461	Essential F/UTP Cat 5e 0,5MM PVC BOX 305M	F/UTP	305	PVC	Box
☎ N100.420	Essential SF/UTP Cat 5e 0,5MM DUAL PVC 500M REEL	SF/UTP Shotgun	500	PVC	Reel
☎ N100.407	Essential SF/UTP Cat 5e 0,5MM LSZH 1000M REEL	SF/UTP	1000	LSZH	Reel
☎ N100.417	Essential SF/UTP Cat 5e 0,5MM PVC 1000M REEL	SF/UTP	1000	PVC	Reel
☎ N100.476	Essential SF/UTP Cat 5e 0,5MM PVC 500M REEL	SF/UTP	500	PVC	Reel
☎ N100.552	Essential U/UTP Cat 5e 0,5MM LSZH 1000M REEL	U/UTP	1000	LSZH	Reel
☎ N100.554	Essential U/UTP Cat 5e 0,5MM LSZH 500M REEL	U/UTP	500	LSZH	Reel
☎ N100.551	Essential U/UTP Cat 5e 0,5MM LSZH BOX 305M	U/UTP	305	LSZH	Box
☎ N100.562	Essential U/UTP Cat 5e 0,5MM PVC 1000M REEL	U/UTP	1000	PVC	Reel
☎ N100.564	Essential U/UTP Cat 5e 0,5MM PVC 500M REEL	U/UTP	500	PVC	Reel
☎ N100.561	Essential U/UTP Cat 5e 0,5MM PVC Box 305M	U/UTP	305	PVC	Box

☎ = Make to order, 📦 = Make to stock

Electrical Performance

all values are specified at 20°C

Frequency	Attenuation dB/100m	NEXT dB	ACR dB/100m	PS NEXT (*) dB	ELFEXT dB/100m	PSELFEXT dB/100m	RL dB
4	4.1	56.3	52.2	53.3	51.7	49.0	23.0
10	6.5	50.3	43.8	47.3	43.8	41.0	25.0
16	8.3	47.2	38.9	44.3	39.7	36.9	25.0
20	9.3	45.8	36.5	42.8	37.7	35.0	25.0
31.25	11.7	42.9	31.2	39.9	33.9	31.1	23.6
62.5	17.0	38.4	21.4	35.4	27.9	25.1	21.5
100	22.0	35.3	13.3	32.3	23.8	21.0	20.1

(*) Dual cable versions additionally comply to the additional PSNEXT requirements for multi-unit cables as specified in the relevant TIA and IEC cable standards.

LANmark-6 Cable

- Complies to all Category 6 cable standards
- Supports Class E applications
- Central cross member maintains geometry and performance
- Tested up to 350MHz

Description

Application

LANmark-6 cable is the ultimate solution for a future proof network. It is specifically designed to support the exacting requirements for tomorrow's protocols, yet is fully backwards compatible with today's needs. It is the recommended cable for all forthcoming installations.

- 10baseT Ethernet
- 100baseTX Fast Ethernet
- 1000baseTX Gigabit Ethernet
- 155 MBit ATM
- 622 MBit ATM
- 1.2 Gbit ATM
- Future class E applications

LANmark-6 is independently verified to exceed the requirements of the ISO/IEC 11801:2002 Category 6 requirements.

Performance

Tested to 350 MHz and with guaranteed performance to 250 MHz, Nexans LANmark-6 cables provide guaranteed headroom and bandwidth over and above the requirements of all international, european and american cable standards, including ISO/IEC 11801:2002, IEC 61156-5, EN 50173, EN 50288, TIA/EIA 568-B.2-1.

Installation

LANmark-6 is installed in exactly the same way as Category 5 cables. The C³ central cross member reduces the risk of crushing and kinking.

Guarantees

Nexans LANmark-6 cable is covered by the guarantee that it is Category 6 and by a parts and labour warranty as described in the Nexans Certified System Warranty.





LANmark-6



Standards

International EN 50288;
IEC 61156-5; ISO/IEC 11801
National TIA/EIA-568-B.2-1

LANmark-6 Cable

Product List

Nexans ref.	Name	Type of cable	Category	Outer sheath	Conductor cross-section (AWG)
 N100.662	LANmark-6 F ² /UTP LSZH 500m reel	F ² TP	Cat. 6	LSZH	24
 N100.661	LANmark-6 F ² /UTP PVC 500m reel	F ² TP	Cat. 6	PVC	24

 = Make to order,  = Make to stock

Electrical Performance

All values are specified at 20°C

Frequency	Attenuation dB/100m	NEXT dB	ACR dB/100m	PSNEXT(*) dB	ELFEXT dB/100m	PSELFEXT dB/100m	RL dB
1	2.0	74.3	72.3	72.3	70.0	67.0	20.0
4	3.8	65.3	61.5	63.3	58.0	55.0	23.0
10	6.0	59.3	53.3	57.3	50.0	47.0	25.0
16	7.6	56.2	48.6	54.3	45.9	42.9	25.0
20	8.5	54.8	46.3	52.8	44.0	41.0	25.0
31.25	10.7	51.9	41.2	49.9	40.5	37.5	23.6
62.5	15.4	47.4	32.0	45.4	34.1	31.1	21.5
100	19.8	44.3	24.5	42.3	30.0	27.0	20.1
155	25.2	41.4	16.2	39.5	26.2	23.2	18.8
200	29.0	39.8	10.8	37.8	24.0	21.0	18.0
250	32.8	38.3	5.5	36.3	22.0	19.0	17.3
300	36.4	37.1	1.5	35.2	20.5	17.5	16.8
350	39.8	36.1	-	34.2	19.1	16.1	14.1

(*) Dual cable versions additionally comply to the additional PSNEXT requirements for multi-unit cables as specified in the relevant TIA and IEC cable standards.

LANmark-6A Cable

- Ideal Cable for 10GBase-T application
- Complies fully with new standards for Category 6A and Class EA
- Small diameter
- Guaranteed performance up to 500MHz
- Fully screened for alien crosstalk immunity

Description

Application

LANmark-6A cable is the ideal solution for a 10 Gigabit Ethernet network. The range consists of cables which have been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, while maintain to be fully backwards compatible with today's needs. All LANmark-6A products are screened cables to ensure immunity from Alien Crosstalk and other external interference and are specified up to frequencies of 500MHz.

- 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

Performance

With guaranteed performance to 500MHz, Nexans LANmark-6A cables provide guaranteed headroom and bandwidth over and above the Category 6A requirements of international, european and american cable standards, including of IEC 61156-5, EN 50173, EN 50288, TIA/EIA 568-B.2-1 Ad.10. When used in combination with Nexans LANmark-6A Evo connectors and LANmark-6A Ultim patch cords, the system supports the 10GBase-T applications as defined in IEEE 802.3an, and the full 100m four-conductor links and channels meet Category 6A and Class EA requirements as defined in TIA/EIA568B.2 Addendum 10 and ISO/IEC11801 2002/A1:2008.

Installation

The LANmark-6A cables have the advantage of offering equal dimensions and flexibility as the equivalent LANmark-6 screened cables with the same ease of installation and termination.

Guarantees

Nexans LANmark-6A 10G cable is covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with other LANmark-6A 10G components, a 25 year channel warranty can be obtained.



LANmark-6A

Standards

International EN 50288-4-1;
IEC 61156-5; IEEE 802.3an; ISO/
IEC 11801:2002/A2:2008; ISO/
IEC 24764; ISO/IEC TR24750;
ISO11801:2002/A1:2008

National ANSI/TIA-568-C.2; TIA/
EIA TSB-155

LANmark-6A Cable

Product List

☎ = Make to order, 📦 = Make to stock

Nexans ref.	Name	Outer sheath
📦 N100.693G	LANmark-6A F/FTP Cat 6A 500MHz Dual LSZH 500m reel	LSZH
☎ N100.698G	LANmark-6A F/FTP Cat 6A 500MHz Dual PVC 500m reel	PVC
📦 N100.692G	LANmark-6A F/FTP Cat 6A 500MHz LSZH 1000m reel	LSZH
📦 N100.694G	LANmark-6A F/FTP Cat 6A 500MHz LSZH 500m reel	LSZH
☎ N100.697G	LANmark-6A F/FTP Cat 6A 500MHz PVC 1000m reel	PVC
☎ N100.699G	LANmark-6A F/FTP Cat 6A 500MHz PVC 500m reel	PVC
📦 N100.623G	LANmark-6A F1/UTP Cat 6A 500MHz Dual LSZH 500m reel	LSZH
📦 N100.622G	LANmark-6A F1/UTP Cat 6A 500MHz LSZH 1000m reel	LSZH
📦 N100.624G	LANmark-6A F1/UTP Cat 6A 500MHz LSZH 500m reel	LSZH

☎ = Make to order, 📦 = Make to stock

Electrical Performance LANmark-6A 10G F1UTP cable

Freq in MHz	Attn in dB		NEXT in dB		PSNEXT in dB		ACR-F in dB		PS ACR-F in dB		PS ANEXT in dB		PS AACR-F in dB		RL in dB	
	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1	2.1	2.1	74.3	79.3	72.3	77.3	67.8	92.8	64.8	>60	67.0	90.0	67.0	87.9	20.0	26.0
4	3.8	3.8	65.3	70.3	63.3	68.3	55.8	80.8	52.8	57.2	67.0	90.0	66.2	75.9	23.0	29.0
10	5.9	5.9	59.3	64.3	57.3	62.3	47.8	72.8	44.8	49.3	67.0	87.0	58.2	67.9	25.0	31.0
16	7.5	7.5	56.2	61.2	54.2	59.2	43.7	68.7	40.7	45.2	67.0	85.0	54.1	63.8	25.0	31.0
20	8.4	8.4	54.8	59.8	52.8	57.8	41.8	66.8	38.8	43.2	67.0	84.0	52.2	61.9	25.0	31.0
31.25	10.5	10.5	51.9	56.9	49.9	54.9	37.9	62.9	34.9	39.4	67.0	82.1	48.3	58.0	23.6	29.6
62.5	15.0	15.0	47.4	52.4	45.4	50.4	31.9	56.9	28.9	33.3	65.6	79.0	42.3	52.0	21.5	27.5
100	19.1	19.1	44.3	49.3	42.3	47.3	27.8	52.8	24.8	29.3	62.5	77.0	38.2	47.9	20.1	26.1
155	24.1	24.1	41.4	46.4	39.4	44.4	24.0	49.0	21.0	25.5	59.6	74.1	34.4	44.1	18.8	24.8
200	27.6	27.6	39.8	44.8	37.8	42.8	21.8	46.8	18.8	23.2	58.0	72.5	32.2	41.9	18.0	24.0
250	31.1	31.1	38.3	43.3	36.3	41.3	19.8	44.8	16.8	21.3	56.5	71.0	30.2	39.9	17.3	23.3
300	34.3	34.3	37.1	42.1	35.1	40.1	18.3	43.3	15.3	19.7	55.3	69.8	28.7	38.4	16.8	22.8
500	45.3	45.3	33.8	38.8	31.8	36.8	13.8	38.8	10.8	15.3	52.0	66.5	24.2	33.9	15.2	21.2

all values are specified at 20°C

LANmark-7 Cable

- Exceeds Category 7 using 4 individually screened pairs
- Optimised for use with LANmark-7 GG45 connector
- Small outer diameter
- Easy to install due to a tight foil construction

Description

Description

LANmark-7 cable is a 4pr S/FTP with individual pair foils and an overall braid offering superior performance in terms of ACR. It is fully compliant with the Category 7 standards and when installed together with the GG45 LANmark-7 connector as a system is guaranteed to exceed all channel requirements in all configuration scenarios (up to 4-connector channels).

Application

LANmark-7 will support all current and planned data applications developed for cabling up to Class F.

- All Ethernet applications including
- 1000Base-T
- 1000Base-TX
- 10GBase-T
- CATV up to 862MHz
- Any future Class F application

Installation

Ease of Installation is one of the unique features of LANmark-7 cable. Extra attention has been paid to ensure screen coverage is maintained both during and after installation. The cable has been designed specifically to offer both optimum performance and ease of termination when used in conjunction with the LANmark-7 GG45 connector.



LANmark-7

Standards

International EN 50173;
EN 50288-4-1; ISO/IEC 11801; ISO/
IEC 61156-5

LANmark-7 Cable




Characteristics



Transmission characteristics

Velocity of propagation

80.0 %

Product List

Nexans ref.	Name	Type of cable	Category
 N100.376	LANmark-7 Lloyd's S/FTP Cat 7 23 AWG LSZH Blue 500m Reel	S/FTP	Cat. 7
 N100.365 New	LANmark-7 S/FTP Cat 7 600MHz 23 AWG LSZH Orange 1000m Reel	S/FTP	Cat. 7
 N100.367 New	LANmark-7 S/FTP Cat 7 600MHz Dual 2x23AWG LSZH Orange 500m Reel	S/FTP Shotgun	Cat. 7

 = Make to order,  = Make to stock

Electrical Performance LANmark-7 600 S/FTP Cable

Electrical Performance LANmark-7 600 S/FTP Cable

Frequency (MHz)	Attenuation (dB/100m)		NEXT (in dB)		ACR (in dB)		PS-NEXT (in dB)		ACR-F (in dB)		PS-ACR-F (in dB)		Return Loss (in dB)	
	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1.00	4.0	1.8	75.0	100.0	71.0	98.2	72.0	98.0	75.0	98.0	75.0	96.0	20.0	
4.00	4.0	3.5	75.0	100.0	71.0	96.5	72.0	98.0	75.0	98.0	75.0	96.0	23.0	26.0
10.00	5.9	5.5	75.0	100.0	69.1	94.5	72.0	98.0	75.0	98.0	72.3	96.0	25.0	28.0
16.00	7.4	6.8	75.0	100.0	67.6	93.2	72.0	98.0	71.2	96.0	68.2	94.0	25.0	28.0
20.00	8.3	7.7	75.0	100.0	66.7	92.3	72.0	98.0	69.3	94.0	66.3	92.0	25.0	28.0
31.25	10.4	9.6	75.0	100.0	64.6	90.4	72.0	98.0	65.4	90.0	62.4	88.0	23.6	26.0
62.50	14.9	14.0	75.0	100.0	60.1	86.0	72.0	98.0	59.4	84.0	56.4	82.0	21.5	25.0
100.00	19.0	17.7	72.4	100.0	53.4	82.3	69.4	98.0	55.3	75.0	52.3	73.0	20.1	24.0
155.00	24.0	22.8	69.5	96.0	45.6	73.2	66.5	93.0	51.5	70.0	48.5	68.0	18.8	23.0
250.00	31.0	29.0	66.4	94.0	35.5	65.0	63.4	91.0	47.3	66.0	44.3	64.0	17.3	22.0
300.00	34.2	32.1	65.2	92.0	31.1	59.9	62.2	88.0	45.8	54.0	42.8	52.0	17.3	20.0
600.00	50.1	45.5	60.7	90.0	10.6	44.5	57.7	86.0	39.7	54.0	36.7	52.0	17.3	20.0

all values are specified at 20°C

LANmark-7A Cable

- Exceeds Category 7A in terms of ACR and Frequency Range
- Suitable for channels with capacity above 40GBps
- Superior Performance with positive ACR over the full frequency range
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with Cat 7 connectivity through special foil construction

Description

Description

LANmark-7A is a 4 pair S/FTP cable with individual pair foils and an overall braid offering superior performance up to 1200MHz. It is fully compliant with the new Category 7A standard and offers even large headroom above the Cat 7A requirement. Due to this excellent electrical performance and positive ACR up to 1000 / 1200MHz the cable is suited for transmission channels with a capacity of >40Gbps.

Application

LANmark-7A is the highest performing standardised cabling solution in the market and will support all current data applications and all planned applications using cabling up to Class FA (see discussions at IEEE about 40/100Gbps).

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-T
- CaTV up to 862MHz
- Cable sharing applications including CATV
- Any future Class FA application

Installation

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.



LANmark-7A

Standards

International EN 50173;
EN 50288-4-1; ISO/IEC 11801; ISO/
IEC 61156-5

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Global expert in cables and cabling systems

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