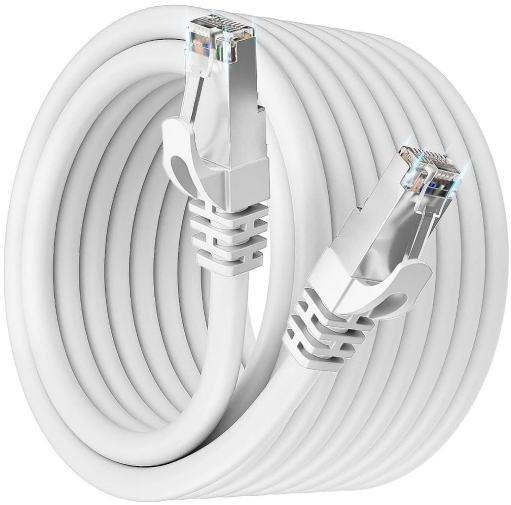
Cat7 S/FTP Patch Cord — LSZH

4 Pairs | 23 AWG Copper | 600 MHz | RJ45 to RJ45



1. GENERAL DESCRIPTION

Cat7 S/FTP patch cord is a factory-terminated shielded Ethernet cable for connecting network equipment such as switches, routers, patch panels, servers and wall outlets in LANs. It features four twisted pairs of 23 AWG copper conductors, each pair wrapped in aluminium foil, an overall copper braid screen, shielded RJ45 plugs at both ends and a Low Smoke Zero Halogen (LSZH) jacket, making it suitable for indoor installations in buildings, offices and data rooms where low smoke and halogen-free emission are required. The 23 AWG conductors give low attenuation and stable high-speed performance. It supports 10/100/1000BASE-T and 10GBASE-T Ethernet. Characterised up to 600 MHz.

2. KEY FEATURES

- 23 AWG copper conductors — low attenuation and stable high-speed performance
- LSZH jacket: low smoke, zero halogen, reduced toxic and corrosive gas emission in fire
- Cat7 performance up to 600 MHz — suitable for 10GBASE-T (10 Gbps) Ethernet
- Individually foiled pairs plus overall braid (S/FTP) — high immunity to interference and crosstalk
- Available in standard lengths from [0.5 m to 10 m]

3. APPLICATIONS

- Connecting switches, routers, patch panels, servers and wall outlets in LAN and data-room cabling
- 10GBASE-T and Gigabit Ethernet links, including electrically noisy environments
- High-density patching in data centres, server racks and telecom rooms
- Indoor installations that require low-smoke, halogen-free cabling

4. APPLICABLE STANDARDS

- ISO/IEC 11801 — Class F generic cabling (Category 7)
- IEC 61156-5 / -6 — Category 7 shielded balanced twisted-pair cable; IEC 60603-7 (RJ45 plug)
- IEC 60332-1 — Flame propagation (single vertical cable)
- IEC 60754-1 / -2 — Halogen content and acidity of gases
- IEC 61034 — Smoke density

5. CABLE CONSTRUCTION

Conductor	[Stranded bare copper, 23 AWG (7 × 0.23 mm)]

Insulation	Solid polyethylene (PE / HDPE)
Pairs	4 twisted pairs, different twist lengths to minimise crosstalk
Pair Colour Code	White-Blue / Blue, White-Orange / Orange, White-Green / Green, White-Brown / Brown
Screening	[Individual Al/PET foil per pair + overall tinned copper braid (S/FTP)]
Separator	[Cross filler]
Connectors	Shielded RJ45 (8P8C) plug at both ends, [metal housing, gold-plated contacts], strain-relief boot; wired straight-through [T568B]
Outer Jacket	LSZH (Low Smoke Zero Halogen) — colour: [Grey / Blue / White]
Marking	CAT7 S/FTP 4P 23AWG LSZH [standard]
Length / Packing	[0.5 / 1 / 2 / 3 / 5 m] — individually bagged [and labelled]

Pair colour code

Pair	Conductor 1 (Tip)	Conductor 2 (Ring)
1	White / Blue	Blue
2	White / Orange	Orange
3	White / Green	Green
4	White / Brown	Brown

6. MECHANICAL & ENVIRONMENTAL

Overall Diameter (approx.)	[7.5 ± 0.3 mm]
Min. Bending Radius (installation)	8 × overall diameter
Max. Pulling Tension	[110 N (25 lbf)]
Operating Temperature	[-20 °C to +60 °C]
Installation Temperature	[0 °C to +50 °C]
Flame Retardancy	IEC 60332-1

7. ELECTRICAL CHARACTERISTICS (AT 20 °C)

Characteristic Impedance (1–600 MHz)	[100 Ω ± 15 Ω]
Max. DC Resistance (per conductor)	[≤ 110 Ω/km (11 Ω/100 m)]
Max. DC Resistance Unbalance	5 %
Max. Mutual Capacitance (1 kHz)	5.6 nF/100 m
Max. Capacitance Unbalance (pair to ground)	330 pF/100 m
Max. Propagation Delay (600 MHz)	[≤ 536 ns/100 m]
Nominal Velocity of Propagation (NVP)	[~ 0.64]
Max. Operating Voltage	[72 V]

Dielectric Strength (DC, 1 min)	[1.0 kV]

8. TRANSMISSION PERFORMANCE (PER 100 M)

Frequency (MHz)	Insertion Loss — max (dB)	NEXT — min (dB)
1	2.0	75.0
4	3.7	75.0
10	5.9	75.0
16	7.4	75.0
31.25	10.4	75.0
100	19.0	72.4
250	31.0	66.4
500	45.3	61.9
600	50.1	60.7

9. INSTALLATION & HANDLING GUIDELINES

- Do not exceed the max. pulling tension (110 N) or the min. bending radius (8 × OD).
- Avoid kinks, sharp bends, crushing and over-tight cable ties — do not exceed the bend radius to keep crosstalk within limits.
- Keep separation from power cables according to local wiring standards (EN 50174-2 / TIA-569).
- Do not pull the cord by the cable; unplug using the plug body and release the latch first.
- Connect only to Cat7-rated (or shielded Cat6A) jacks, patch panels and equipment, and ground the screen through shielded connectors, to maintain channel performance.
- Keep the total channel, including all patch cords, within 100 m and test it with a certified cable tester (Category 7 channel).