Cat8 S/FTP Snagless RJ45 Patch Cord

4 Pairs | 24 AWG Copper | 2000 MHz | RJ45 to RJ45



1. GENERAL DESCRIPTION

Cat8 S/FTP snagless patch cord is a factory-terminated shielded Ethernet cable for high-speed connections between switches, servers, storage and patch panels in data centres and LANs. It features four twisted pairs of 24 AWG copper conductors, each pair wrapped in aluminium foil, an overall copper braid screen, and shielded RJ45 plugs at both ends with snagless boots that protect the latch and stop the cord catching on other cables. It supports 25GBASE-T and 40GBASE-T Ethernet over channels up to 30 m, and is backward compatible with lower-speed Ethernet. Characterised up to 2000 MHz.

2. KEY FEATURES

- 24 AWG copper conductors — lower attenuation and DC resistance for reliable high-speed performance
- Snagless boots protect the plug latch and prevent the cord catching on other cables
- Cat8 performance up to 2000 MHz — 25GBASE-T and 40GBASE-T over channels up to 30 m
- 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
- 25GBASE-T and 40GBASE-T links for data-centre servers, switches and storage
- High-density patching in data centres, server racks and telecom rooms
- Patch fields and test benches with frequent plugging and unplugging

4. APPLICABLE STANDARDS

- ANSI/TIA-568.2-D — Category 8 balanced twisted-pair cabling
- ISO/IEC 11801-1 — Class II generic cabling (Category 8.2); IEC 61156-9 / -10; IEC 60603-7 (RJ45 plug)
- IEC 60332-1 — Flame propagation (single vertical cable)
- [If LSZH] IEC 60754-1 / -2 — Halogen content and acidity of gases
- [If LSZH] IEC 61034 — Smoke density

5. CABLE CONSTRUCTION

Conductor	[Stranded bare copper, 24 AWG (7 × 0.20 mm)]
Insulation	[Foam-skin / solid polyethylene (PE)]
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], snagless strain-relief boot; wired straight-through [T568B]
Outer Jacket	[LSZH / PVC] — colour: [Grey / Blue / White]
Marking	CAT8 S/FTP 4P 24AWG [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.)	[7.0 ± 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 (1–2000 MHz)	[100 Ω ± 15 Ω]
Max. DC Resistance (per conductor)	[≤ 140 Ω/km (14 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 (2000 MHz)	[≤ 535 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	2.1	74.3
4	3.8	65.3
10	5.9	59.3
16	7.5	56.2
100	19.1	44.3
250	31.1	38.3
500	45.3	33.8

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 Cat8-rated jacks, patch panels and equipment, and ground the screen through shielded connectors, to maintain channel performance.
- Keep the total Category 8 channel within 30 m for 25GBASE-T / 40GBASE-T, and test it with a certified cable tester (Category 8 channel).