



Cat6 RJ45 Unshielded Modular Plug

Standard (Non-Pass-Through) | 8P8C | Cat6 UTP | Gold-Plated Contacts



1. GENERAL DESCRIPTION

Cat6 RJ45 unshielded modular plug is an 8P8C connector for field termination of Category 6 UTP cable. It is used to make patch cords and to terminate equipment cables, giving reliable, low-crosstalk connections that meet Category 6 requirements when terminated according to the instructions. The clear, flame-retardant housing and gold-plated phosphor bronze contacts provide durable, stable electrical performance with Gigabit Ethernet and PoE.

2. KEY FEATURES

- Category 6 (250 MHz) performance, unshielded (UTP) construction
- Gold-plated phosphor bronze contacts for low contact resistance and corrosion resistance
- Standard (non-pass-through) design with internal wire guide / load bar for accurate pair positioning
- Clear, flame-retardant polycarbonate housing, UL 94 V-0, lets you check the conductor order and seating
- Suitable for solid and stranded Cat6 UTP cable, [23–26 AWG]
- Strong strain relief and latch: positive snap with standard RJ45 jacks

3. APPLICATIONS

- Making Cat6 patch cords and equipment cords of custom length
- Termination of Cat6 UTP cable for switches, routers, servers and workstations
- Repair and re-termination of damaged plugs; PoE, CCTV and access-point connections

4. APPLICABLE STANDARDS

- ANSI/TIA-568.2-D — Category 6 connecting hardware and cords
- ISO/IEC 11801 — Class E generic cabling
- IEC 60603-7-4 — 8-position modular connector, Category 6 (RJ45)
- FCC 47 CFR Part 68 — Modular plug requirements
- UL 94 V-0 — Flammability of plastic housing; RoHS [Compliant — Directive 2011/65/EU]

5. CONSTRUCTION & MATERIALS

Connector	RJ45 (8P8C) modular plug, unshielded (UTP)
Housing	Clear polycarbonate, UL 94 V-0
Contacts	Phosphor bronze, gold-plated — [50 µin / 1.27 µm], [3-prong / 2-prong]
Wire Guide / Load Bar	[Included — internal / separate] for pair alignment
Strain Relief	Integrated strain-relief tab
Compatible Cable	Cat6 UTP, solid or stranded, [23–26 AWG], jacket OD [5.5–6.5 mm]
Termination Tool	Standard RJ45 (8P8C) crimping tool



6. ELECTRICAL CHARACTERISTICS

Contact Resistance	[$\leq 20 \text{ m}\Omega$]
Insulation Resistance	[$\geq 500 \text{ M}\Omega$]
Dielectric Withstand (1 min)	[1000 V AC]
Current Rating per Contact	[1.5 A]
Max. Operating Voltage	[72 V]
Transmission Category	Category 6 — up to 250 MHz (when terminated with Cat6 cable per instructions)

7. WIRING (PIN ASSIGNMENT)

Pin	T568B Colour	T568A Colour
1	White / Orange	White / Green
2	Orange	Green
3	White / Green	White / Orange
4	Blue	Blue
5	White / Blue	White / Blue
6	Green	Orange
7	White / Brown	White / Brown
8	Brown	Brown

8. TERMINATION GUIDELINES

- Strip about 12–15 mm of the outer jacket without nicking the conductor insulation, then untwist the pairs and arrange them in T568A or T568B order.
- Flatten and align the conductors, cut them evenly, and insert them fully until each wire reaches the end of the plug.
- Check through the clear housing that the wire order is correct and the jacket sits behind the strain-relief position.
- Crimp in a standard RJ45 crimping tool in one firm squeeze, ensuring the contacts pierce the insulation and the strain relief grips the jacket.
- Test every terminated cord with a cable tester and do not re-use a crimped plug.