

✓ RoHS & CE	✓ UL 94V-0/V-2
✓ Fluke Tested	✓ OEM / ODM

CAT6 RJ45 CONNECTOR SERIES

Professional Cat6 Unshielded RJ45 Connector - 8P8C Pure Copper Modular Plug with 50µ" Gold Plating for Gigabit Ethernet

Online Product Page: https://www.hxplug.com/cat6-utp-rj45-connector-pure-copper/

KEY PRODUCT HIGHLIGHTS

- High-Purity Pure Copper : Utilizes 100% pure copper (solid copper) contacts for ultra-low electrical resistance and superior signal conductivity.
- 50µ" Industrial Gold Plating : Genuine 50 micro-inch gold plating over pure copper ensures the highest oxidation resistance and 750+ insertion cycles.
- Optimized for Gigabit Speed : Engineered for Cat6 UTP cabling, providing stable 1000Mbps transmission for high-bandwidth server and office environments.
- Superior Heat Dissipation : Pure copper contacts offer excellent thermal conductivity, making them ideal for high-power PoE (Power over Ethernet) applications.
- Flexible Locking Tab : Molded from premium UL 94V-2 Polycarbonate, ensuring the latch remains flexible and snap-resistant during complex installations.

TECHNICAL SPECIFICATIONS & PARAMETERS

Parameter	Specification / Standard
Features	Technical Details
Product Model	Cat6 UTP Pure Copper Series
Interface Structure	8P8C (8 Positions, 8 Contacts)
Contact Material	100% Pure Copper (Electrolytic Copper)
Gold Plating	Genuine 50µ" (Micron) Gold
Blade Design	3-Prong (Fits both Solid & Stranded)
Housing Material	Clear Polycarbonate (PC)
Performance Standard	Gigabit Ethernet (1000Base-T)
Wire Gauge Support	23AWG - 24AWG
Flammability	UL 94V-2 / 94V-0 Optional

ENGINEERING OVERVIEW & APPLICATIONS

This Cat6 UTP RJ45 Connector is the ultimate choice for high-speed networking In high-density networking, the quality of the contact point is the critical factor for network uptime. Our Cat6 Unshielded RJ45 Connector is built with high-purity Pure Copper contacts, a significant upgrade over standard phosphor bronze. Pure copper offers the lowest possible electrical resistance, which translates to minimal signal loss and zero lag during peak data loads. For B2B infrastructure projects—such as data centers and smart office buildings—these pure copper modular plugs provide the reliable physical layer foundation needed for high-performance networking.

With the rise of high-power PoE (Power over Ethernet) devices like IP cameras and Wi-Fi 6 access points, connectors are carrying more current than ever. Standard connectors can heat up, leading to signal degradation. Our Pure Copper Cat6 8P8C plugs dissipate heat much more effectively, preventing thermal buildup and ensuring that both power and data flow seamlessly through the network without compromising cable integrity.

Environmental corrosion is the silent enemy of network performance. To combat this, HXPLUG applies an industrial-grade 50 micro-inch (50µ") gold plating directly over the pure copper contacts. This thick gold layer creates a

gas-tight connection that is immune to humidity and oxidation. Whether your installation is in a controlled server room or a humid warehouse, these connectors are designed to maintain their 1Gbps performance for decades.

The mechanical design of our Cat6 Unshielded RJ45 Connector features a precision-engineered 3-prong blade . This design is superior to 2-prong alternatives because it pierces the wire insulation and "wraps" around the copper conductor from three sides. This ensures a vibration-proof connection and makes the plug compatible with both Solid horizontal cables (for fixed installations) and Stranded patch cord wires (for flexible connections).

Gold Plating Options FU" / 3μ" / 6μ" / 15μ" / 30μ" / 50μ" Custom Gold Plating	**100% Quality Assurance** Fluke Versiv / DSX Tested, Salt-Spray & ≥750–2000 Mating Cycles
OEM / ODM Customization Custom Mold Tooling, Housing Colors, Cable Lengths & Private Label	**Certifications & Compliance** ISO 9001:2015, RoHS, REACH, CE, UL 94V-0 / UL 94V-2 Rated

Need Custom Gold Plating (3μ"–50μ"), Custom Molding, Private Label Packaging, or Bulk Factory Pricing?
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