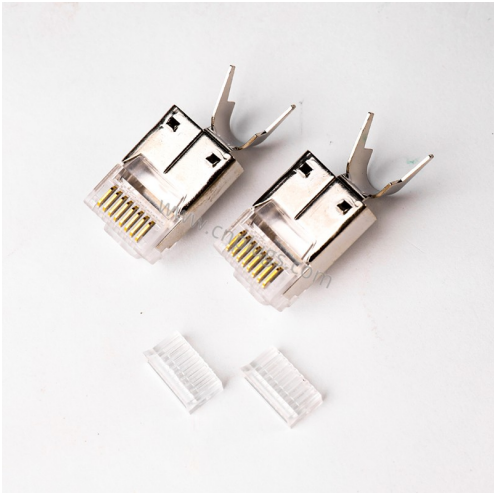


Cat6A & Cat8 Plugs

Industrial Cat6A Single-Row Shielded RJ45 Modular Plug with Full Metal Shell & 50μ" Gold-Plated Contacts



Key specifications

Plug Type	8P8C Cat6A Shielded Modular Plug (STP / FTP)
Conductor Channel Layout	Single-Row Straight Channel
Supported Wire Gauge	AWG 23, AWG 24, AWG 26 (Solid & Stranded Copper)
Insulation Diameter (OD)	1.0mm – 1.15mm

Product summary

- **Single-Row Wire Loading Design:** Engineered with a streamlined single-row conductor channel layout for simplified wire alignment and high-yield termination during mass production.
- **360° Full Metal Shielding Shell:** Features a heavy-duty zinc alloy / nickel-plated copper shell that effectively blocks Electromagnetic Interference (EMI) and Near-End Crosstalk (NEXT) in high-density rack deployments.
- **10Gbps High-Bandwidth Transmission:** Optimized for Cat6A 10-Gigabit Ethernet networks, providing stable 500MHz signal integrity compliant with ISO/IEC 11801 and TIA/EIA-568-C.2 standards.
- **50μ" Gold-Plated 3-Prong Contacts:** Built with phosphor bronze 3-prong contact blades featuring 50 micro-inches of real gold plating for long-term oxidation resistance and reliable connections on both solid and stranded wires.
- **Comprehensive OEM/ODM Customization:** Fully customizable logo branding, strain relief boot options, packaging configurations, and wire gauge compatibility (AWG 23-26).

Product page:
<https://www.cnplugs.com/product/cat6a-single-row-shielded-rj45-modular-plug/>
Category: Cat6A & Cat8 Plugs

Contact & technical support

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Product details

High-Performance Cat6A Single-Row Shielded RJ45 Modular Plugs

In modern data centers, high-speed telecom infrastructures, and noise-heavy industrial automation environments, unshielded connectors often fail to withstand severe electromagnetic interference. Our **Cat6A Single-Row Shielded RJ45 Modular Plug** is engineered specifically to meet the rigorous demands of 10-Gigabit high-frequency data transmission. By integrating a full metal shielding shell with a high-precision single-row wire alignment system, this connector delivers exceptional signal purity, structural endurance, and fast field termination.

Manufactured in ISO 9001-certified production facilities, every component is crafted from premium raw materials—from high-density polycarbonates to nickel-plated metal shielding shells. Whether deployed in enterprise server rooms, factory automation enclosures, or PoE+ device networks, our single-row shielded plugs ensure zero packet loss and decades of operational stability.

Key Features & Engineering Advantages

1. High-Density Single-Row Conductor Alignment

Unlike multi-layer or staggered wire channels that can complicate assembly line crimping, our single-row architecture streamlines wire sorting. Technicians can quickly insert the eight color-coded conductors side-by-side into the single-plane channel. This layout simplifies visual inspection before crimping, drastically reducing field rework costs and boosting first-pass yields. You can explore our full series of [pass-through RJ45 connectors](#) and modular plug accessories to match your production workflow.

2. 360° Heavy-Duty Metal EMI/RFI Shielding

High-frequency Cat6A signals running at 500MHz are vulnerable to Alien Crosstalk (AXT) and external electrical noise. Our modular plug is fully wrapped in a thick, nickel-plated metal shell. This full-coverage shield acts as a Faraday cage, grounding stray electrical currents and protecting data channels from noise generated by nearby power cables, heavy machinery, or wireless equipment.

3. Universal 3-Prong Contacts with 50µ" Gold Plating

Electrical stability hinges on the quality of the contact pins. We utilize high-purity phosphor bronze blades with a universal **3-Prong Design** that firmly pierces both solid and stranded copper wires (AWG 23 to 26). Covered with up to 50 micro-inches (50µ") of pure gold over a nickel sub-layer, these contacts prevent corrosion and maintain ultra-low contact resistance across thousands of insertion cycles, fully aligned with [Wikipedia's Modular Connector Technical Standards](#).

Target Industry Applications

Our single-row shielded Cat6A connectors are deployed globally across a wide range of mission-critical commercial and industrial installations:

- **Data Center Racks & Telecom Cabinets:** High-density 10Gbps server patching and switch links requiring total EMI immunity.
- **Industrial Ethernet & Automation:** Interfacing PLCs, robotic controllers, and industrial switches in high-vibration, high-EMI environments. Discover our specialized [industrial Ethernet connectors](#) for ruggedized field hardware.
- **Commercial Security & Surveillance:** Connecting high-definition IP cameras, access control gateways, and high-power PoE (Power over Ethernet) nodes.
- **Broadcast & Medical Facilities:** Precision data transmission lines compliant with [Wikipedia's Category 6A Cabling Standards](#).

Quality Control & Factory Testing Protocols

Every batch of Cat6A single-row shielded connectors undergoes rigorous quality assurance checks prior to factory dispatch:

- 1. **100% Dimensional & Gauge Inspection:** Automated optical sorting ensures pin height, housing tolerances, and shell dimensions strictly match RJ45 jack specifications.
- 2. **Fluke Versiv™ DSX-8000 Patch Cord Testing:** Sample plugs are crimped onto Cat6A cables and subjected to Fluke patch cord testing to verify 10Gbps transmission margins.
- 3. **Salt Spray Corrosion Testing:** Gold-plated pins and metal shielding shells undergo 24-to-48-hour salt spray testing to guarantee zero oxidation in coastal or humid environments.
- 4. **Crimp Retention & Tensile Force Test:** Verifies that the internal strain relief latch and ground clip withstand pulling forces exceeding 89N (20 lbs).

Technical specifications

Specification	Published value
Plug Type	8P8C Cat6A Shielded Modular Plug (STP / FTP)
Conductor Channel Layout	Single-Row Straight Channel
Supported Wire Gauge	AWG 23, AWG 24, AWG 26 (Solid & Stranded Copper)
Insulation Diameter (OD)	1.0mm - 1.15mm
Shielding Shell Material	Brass / Zinc Alloy with Nickel Plating
Housing Material	Transparent polycarbonate (PC)
Contact Material	High-Purity Phosphor Bronze with 3-Prong Blade
Contact Plating	Flash Gold / 3μ" / 15μ" / 30μ" / 50μ" Gold over Nickel
Transmission Rate & Bandwidth	10Gbps @ 500MHz
Mating Cycles	≥ 1,200 Insertion/Withdrawal Cycles
Dielectric Withstanding Voltage	1000V DC / AC Peak @ 60Hz for 1 Minute
Operating Temperature	-40°C to +85°C (-40°F to 185°F)
Standards & Certifications	RoHS, REACH, CE, TIA/EIA-568-C.2, ISO/IEC 11801