

UltraMag Modular Magnetic Connectors



The Xmultiple UltraMag series is an RJ45 Magnetic connector with integrated LAN magnetics which are designed to save board space and provide a way to increase the RJ port density on every printed circuit board.

The UltraMag Series includes the XRJF, XRJG and XRJH product line. This Modular Design of Structured Magnetic Jacks has integrated magnetic components inside the shielded jack housing to save valuable board space and to reduce discrete component placements. The XRJH technology enhances a product's electromagnetic compatibility. The UltraMag RJ/ LED/Magnetic modular jacks are designed as shielded and unshielded jacks. The UltraMag jack's are a thru-hole PC board mount product. These high performance category 5 and 5e jacks conform to TIA/EIA-568A requirements.

UltraMag connectors have been designed with removable sections which permit testing of the magnetic section of the connector before this section is inserted into the housing body of the connector. With this design, the quality of the magnetics is assured before the final assembly of the connector during the production process thereby reducing the cost of manufacturing. The UltraMag design guarantees the quality of the completely assembled connector before the final production stage.

UltraMag is an advanced patent pending design for integrated magnetics with a module to insert the magnetics as a subassembly. The subassembly includes the magnetics, contact pin, and a base section which can be tested before it is inserted into the housing. The section with the base, contact pin insert and printed circuit board with magnetics is assembled easily slides into the slots on the housing of the UltraMag. In addition, the UltraMag connectors permit designers to reduce board size or to dedicate more space to essential circuitry

PRODUCT FACTS

- Stackable 2xN RJ45 with Integrated Magnetics in a Internal Modular Design Structure
- Removable/Replaceable Magnetics Module
- RoHS compliant
- LEDs provided in a variety of color options
- Designed to be compatible with standard wave solder, I/R and vapor phase manufacturing processes.
- The UltraMag XRJF, XRJG and XRJH are available with 10/100Mbps and 1 Gigabit specifications.
- The UltraMag Series is available in 1 and 4 ports as well as stackable 2x1, 2x4, 2x6 and 2x8 connectors.
- Minimum 1500 Vrms Isolation to IEEE 802.3i/u/af Requirement
- 350uH Minimum OCL with 8 mA Bias Current
- Lower labor cost during assembly of PCB with integration of magnetic, RJ connector and LEDs
- Meets or exceeds IEEE 802.3i/u/af Standard
- Maximum EMI Suppression with High Performance

LED MODULAR JACK SPECIFICATIONS

Electrical

- **Current Rating** - 1.5 amp max. at 25°C
- **Voltage Rating** - 150 VAC max.
- **Dielectric Withstanding Voltage** – 1000 VAC
- **Insulation Resistance** – 500 megohms min.
- **Shielding Effectiveness** - 20dB min., 10 to 200 MHz
- **Attenuation** - @ 100 MHz - .0.4 dB max.
- **Return Loss** - @ 100 MHz - 19 dB min.
- **Common Mode Rejection** - 16 dB at 155 MHz (For Common Mode Choke, Electrical Diagram 023)

Mechanical

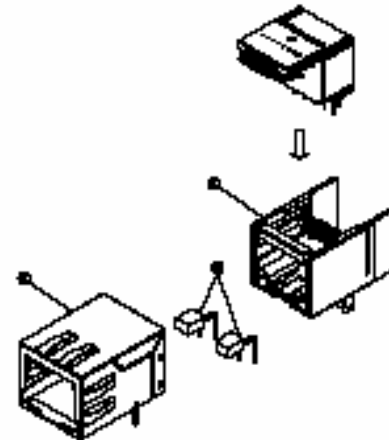
- **Durability** -1000 mating cycles (per IEC 603)
- **Mating/Unmating Forces** - 4.5 lbs. Max
- **Operating Temperature** - -40°C to 70°C

Material & Finish

- **Housing** - High temperature Nylon, Black, UL 94V-0 rated
- **Contact** - 0.33 [.013] Phosphor bronze, plated 0.00127 [.000050] gold in localized area and 0.00381 [.000150] tin-lead on solder tails, over 0.00127 [.000050] nickel underplate
- **Shield** - 0.25 [.010] copper alloy, tin-lead plated

The UltraMag Superior Modular Design.

The UltraMag Modular Design Structure is designed with the capability to assemble portions of the connector in a subassembly (mag base section) prior to the final assembly of the completed RJ connector. The mag base section can easily be removed and replaced. The UltraMag has the advantages of our patent pending design. In addition, the UltraMag design structure with removable and replaceable magnetics has footprint layouts which are pin to pin compatible with other manufacturer's connectors.



ORDERING INFORMATION

Part Number: XRJX-X-XX-X-X-X-XXX
Family: LED Modular Jacks with Integrated Magnetics
Version: Position, Through Hole or SMT
Number of Contacts & Positions: (8 to 13)
Shielding: Shielded or Unshielded
Number of Ports: 1, 4, and 2x1, 2x4, 2x6 and 2x8
LED1: Various Colors or Bi-LED Optional
LED2: Various Colors or Bi-LED Optional

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