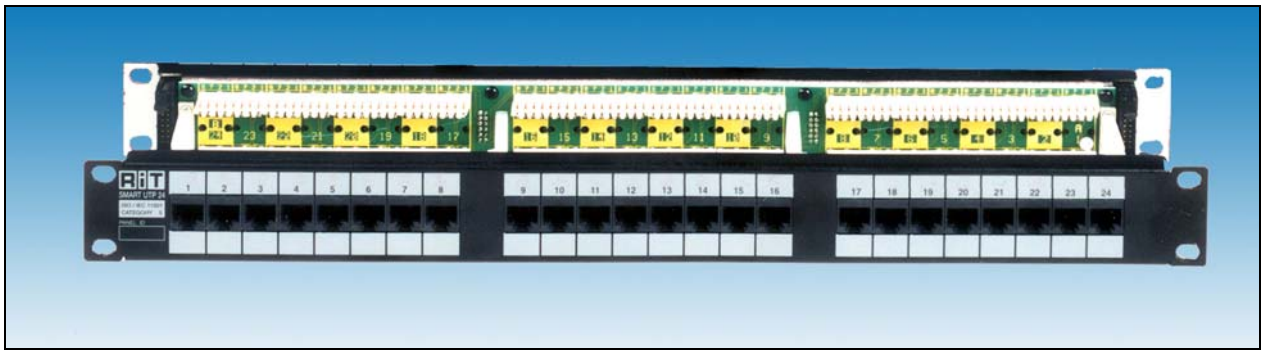
# SMART Giga 24/48 UTP Patch Panel

## *Feature*



- High Density:
  UTP 24 - 1U high - 24 ports
  UTP 48 - 2U high - 48 ports
- High performance, supports 100 MHz data rates.
- Conforms to ANSI/TIA/EIA-568-B.2, ISO/IEC 11801 2nd edition (2002) and CENELEC EN50173 (2002) for Category 5e/Class D.
- Particularly suitable for patching LAN cabling systems
- Two cable termination options: eight-position Mod blocks or 110 IDC blocks

- Compatible with Category 1 to 5 cables, accommodates 22-26 AWG solid or stranded wires
- Cable management clamps on back side
- Models with optional cable retention fixture for enhanced strain relief and cable management available

## PatchView™ Capability

- Special SMART Giga UTP 24/48 models, when used in conjunction with RiT's PatchView System, are able to scan the wiring center configuration and subsequently report the connectivity status
- Patching information is displayed on the management station for cabling management applications
- LED indicators on panels identify any two ports patched together. Extremely useful for facilitating maintenance in mid-to-large size wiring centers which are over congested with patch cords.
- Computerized LED displays guide the technician when performing Moves, Adds and Changes (MACs)

# SMART Giga 24/48 UTP Patch Panel

## *Description*


The RiT SMART Giga UTP 24/48 line of data communications patch panels is a cost effective solution for high density cross-connect equipment in today's high performance computing environment. SMART Giga UTP 24/48 feature a wide variety of models which cover many different applications and customer requirements, including modern voice systems.
With the ever increasing need for faster data transmission rates, these panels minimize cross-talk, and insertion-loss, and exceed Category 5e (100 MHz) performance.

Special SMART Giga UTP models, when used in conjunction with RiT's PatchView system, are able to perform remote or on-site scanning of the patching configuration. The entire wiring center's patching configuration is continuously monitored by a scanner which reports the data to a remote terminal. The network administrator uses this data as a vital part of his cabling management system. The data may be displayed on the panel itself by LED indicators.
Servicing time is dramatically reduced as computerized LED displays guide the technician when performing Moves, Adds and Changes (MACs).

# SMART Giga 24/48 UTP Patch Panel
## *Specification*

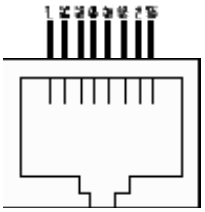
## Interface

- **Front Interconnection (patch cords side)**
- **Back Interconnection (cabling side)**

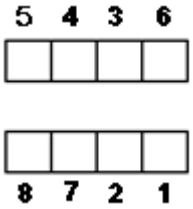
24/48 eight-position 110 IDC blocks, accept 22 to 26 AWG wires, solid or stranded. Rated for up to a minimum of 200 retermination cycles.

Note: Termination tools must be ordered separately.

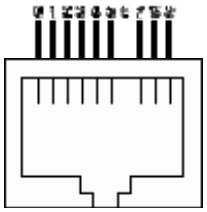
### SMART-Giga UTP 24/48



Models with 8-Position RJ-45 jacks




Pin arrangement for a port



Models with 10-Position RJ-45 jacks (for PatchView)

- **Cable Routing and Clamping**

  Cable management clamps on the back side of the panel provide cable routing.

  An optional cable retention fixture is available for enhanced cable strain relief using cable ties. 4.8mm wide ties, such as PANDUIT P/N PLT 25, are recommended. Cables-ties can be ordered from RiT.

- **Interconnection to RiT's PatchView system (in selected models)**
  Two 14-pin headers on the back of the panel are used for connection to the PatchView Scanner. Select Scanner to Group B Patch Panel Attachment Cord according to the required length. The scanning signal is transmitted over pin 9 of the RJ-45. Pin 9 exists in ten-position RJ-45 jack and plug designs, used for these patch panel models. A special patch cord - SMART Jumper, including an extra wire and special RJ-45 plugs is needed. Please refer to the PatchView System and the Copper Cables and Cords sections for further details.

- **Indicators (in models adapted to PatchView only)**
  Port identification indicators - 24/48 red LEDs. Connected ports are identified by a pair of activated LEDs. A single port can be identified and the corresponding LED activated by a remote control command from the network management station.

## Electrical Specifications

Category 5e

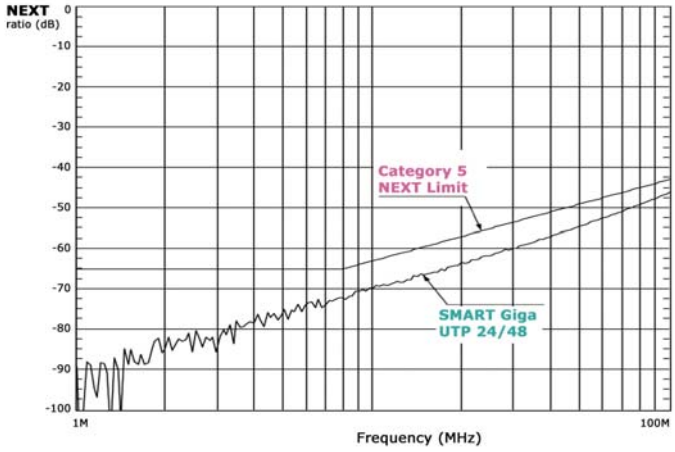
| Standard | Performance Requirements |
|---|---|
| Conforms to ANSI/TIA/EIA-568-B.2, ISO/IEC 11801 2nd edition (2002) and CENELEC EN50173 (2002) for Category 5e/Class D. | Meets all connecting hardware requirements |

## Electrical Performance

## SMART-Giga UTP 24/48 Patch Panels

NEXT ratio plot is shown for worst pair combination. The following are typical NEXT measurement results at 100 MHz for all pair combinations.

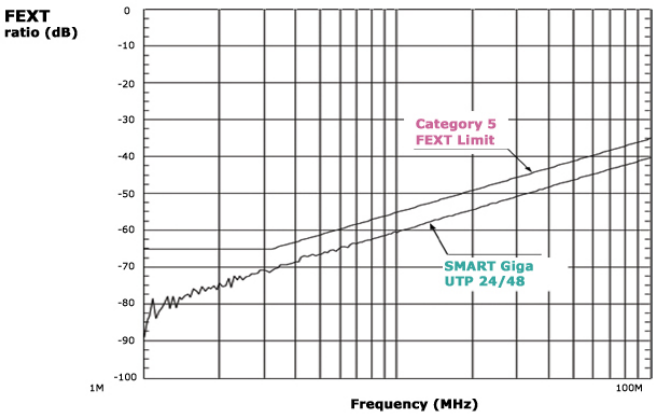
| Pairs | NEXT (dB) 100 MHz |
|---|---|
| 12-36 | -53.02 |
| 12-45 | -49.22 |
| 12-78 | -65.19 |
| 36-45 | -46.28 |
| 36-78 | -48.23 |
| 45-78 | -50.12 |




All pair combinations exceed Category 5e requirements.

FEXT ratio plot is shown for worst pair combination. The following are typical FEXT measurement results at 100 MHz for all pair combinations.

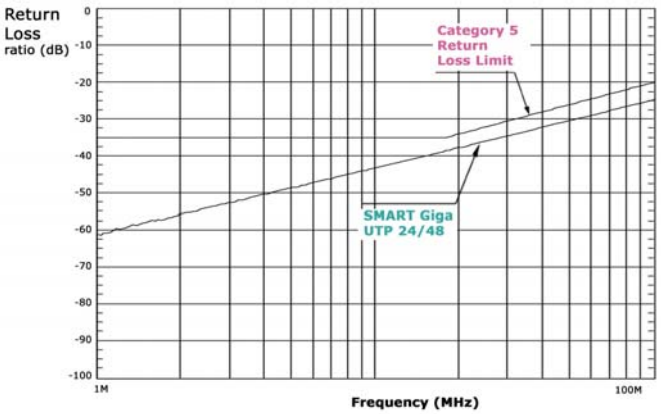
| Pairs | FEXT (dB) 100 MHz |
|---|---|
| 12-36 | -51.59 |
| 12-45 | -40.27 |
| 12-78 | -55.5 |
| 36-45 | -41.06 |
| 36-78 | -49.16 |
| 45-78 | -44.96 |




All pair combinations exceed Category 5e requirements.

Return Loss ratio plot is shown for worst pair. The following are typical Return Loss measurement results at 100 MHz for all pairs.

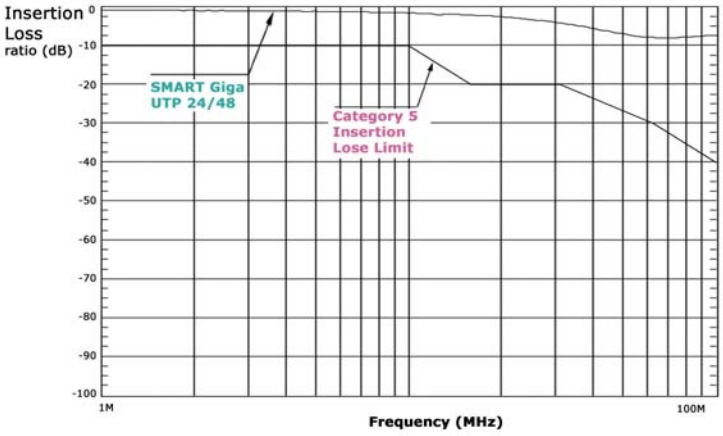
| Pairs | Return Loss (dB) 100 MHz |
|---|---|
| 1-2 | -25.88 |
| 3-6 | -34.06 |
| 4-5 | -29.76 |
| 7-8 | -24.77 |




All pair combinations exceed Category 5e requirements.

Insertion Loss ratio plot is shown for worst pair. The following are typical Insertion Loss measurement results at 100 MHz for all pairs.

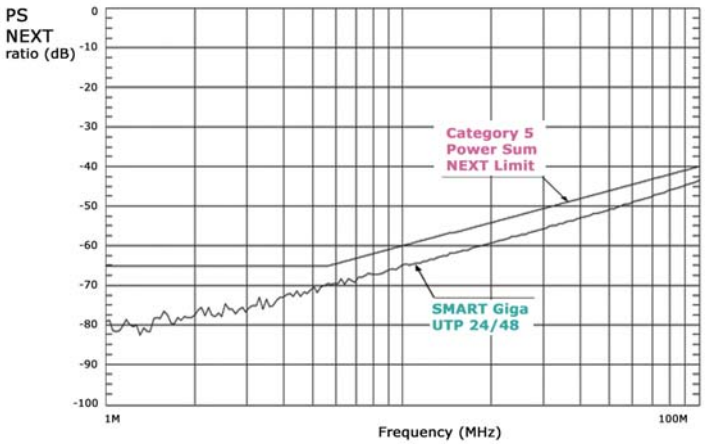
| Pairs | Insertion Loss (dB) 100 MHz |
|---|---|
| 1-2 | -0.066 |
| 3-6 | -0.057 |
| 4-5 | -0.062 |
| 7-8 | -0.073 |




All pair combinations exceed Category 5e requirements.

PowerSum NEXT ratio plot is shown for worst pair. The following are typical Power Sum NEXT measurement results at 100 MHz for all pairs.

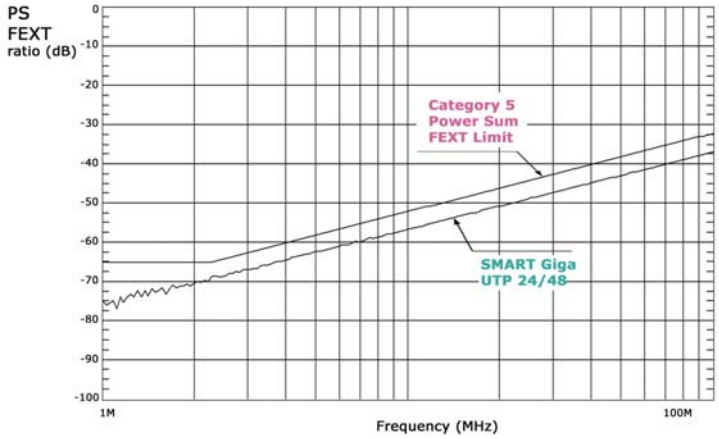
| Pairs | Power Sum NEXT (dB)<br>100<br>MHz |
|---|---|
| 1-2 | -47.63 |
| 3-6 | -43.61 |
| 4-5 | -43.44 |
| 7-8 | -46.01 |




All pairs exceed Category 5e requirements.

PowerSum FEXT ratio plot is shown for worst pair. The following are typical Power Sum FEXT measurement results at 100 MHz for all pairs.

| Pairs | Power Sum FEXT (dB)<br>100<br>MHz |
|---|---|
| 1-2 | -39.85 |
| 3-6 | -40.11 |
| 4-5 | -36.9 |
| 7-8 | -43.29 |




All pairs exceed Category 5e requirements.

## General

- **Physical**

  **SMART Giga UTP 24**

  Height: 44.0 mm / 1.75" (1U)
  Width: 482.6 mm / 19"
  Depth: 35.0 mm / 1.375"
  Depth with Cable Retention
  Fixture: 91.0 mm / 35.8"
  Weight: 0.46 kg (1.0 lb)

  **SMART Giga UTP 48**

  Height: 88.0 mm / 3.5" (2U)
  Width: 82.6 mm / 19"
  Depth: 5.0 mm / 1.375"
  Depth with Cable Retention
  Fixture: 91.0 mm / 35.8"
  Weight: 0.85 kg (1.9 lb)

- **Material**
  Aluminum

- **Colors**
  Black background with gray silk screened markings