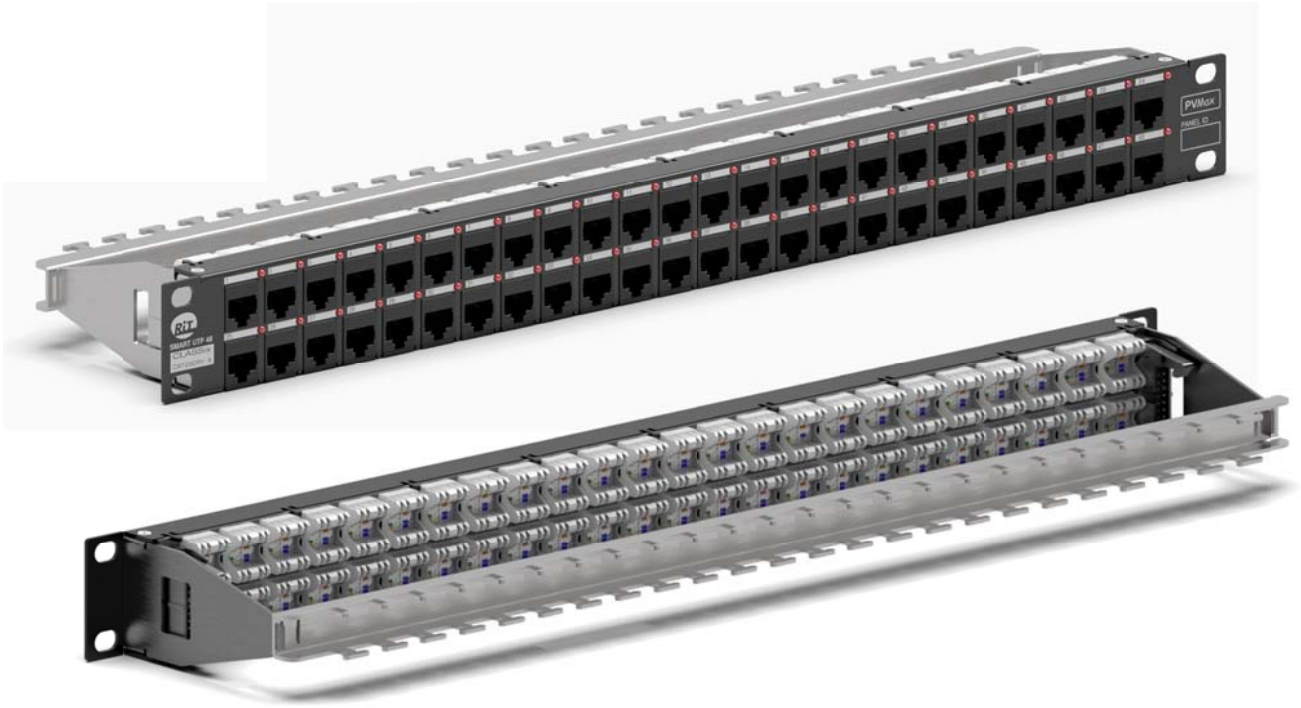
SMART CLASSix 48 1U
Patch Panels (High Density)

Features



- Extremely high density Panel supports 48 ports, using only a rack space height of 1U
- Compatible with Unshielded Twisted Pairs (UTP) cabling systems
- Conforms to ANSI/TIA/EIA-568-B.2-1, ISO/IEC 11801 2nd edition (2002) and CENELEC EN50173 (2002) for Category 6/Class E.
- Cable termination using standard 110 Block termination tools
- Enhanced cable retention fixture
- Compatible with 22-26 AWG solid or stranded wire cables
- High durability and reliability

SMART CLASSix 48 1U
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Features

CLASSix™

RiT SMART CLASSix STP Patch Panels are part of the RiT SMART CLASSix Cabling System™, featuring Category 6 performance. The system is designed to Conforms to ANSI/TIA/EIA-568-B.2-1, ISO/IEC 11801 2nd edition (2002) and CENELEC EN50173 (2002) for Category 6/Class E.

PatchView™ Capability

Special SMART CLASSix 48 1U UTP Patch Panels 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).

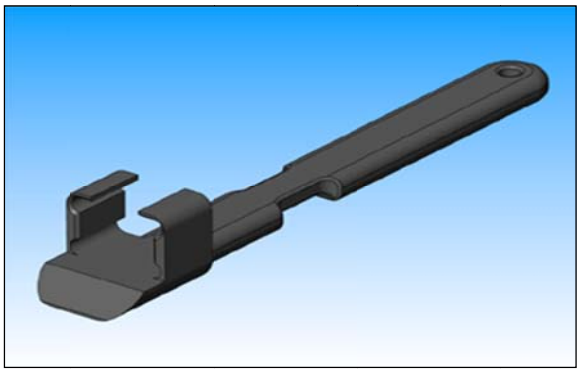
SMART CLASSix 48 1 UTP Patch Panels (High Density)

Description

SMART CLASSix 48 1U UTP Panel is an innovative patch panel providing a high-density solution, especially designed to save rack and floor space while ensuring top Category 6 performance requirements. Provides RiT's worldwide-recognized PatchView Technology with a real-time cabling management system.

The SMART CLASSix 48 1U UTP Panel Conforms to ANSI/TIA/EIA-568-B.2-1, ISO/IEC 11801 2nd edition (2002) and CENELEC EN50173 (2002) for Category 6/Class E. Exceeds all Category 6 connecting hardware requirements.

Extraction Tool - CLASSix UTP Plug



The Extraction Tool is especially designed for RiT CLASSix UTP Plug in order to ease the disconnection of patch cords or SMART Jumpers in a high-density environment.
The Extraction Tool should be ordered separately.

SMART CLASSix 48 1 UTP Patch Panels (High Density)

Specifications

Interface

- **Front Interconnection (patch cords side)**
  48 nine-position RJ-45 unshielded modular jacks. Use of patch cords with RiT CLASSix RJ-45 plugs is recommended.
- **Back Interconnection (cabling side)**
  48 eight-position 110 tool-compatible blocks; accept 22 to 26 AWG wires, solid or stranded. Rated for up to a minimum of 200 re-termination.

Note: Termination tools must be ordered separately.

Interconnection to RiT's PatchView system:

- **PVMax Panels -** Two 14-pin headers on the back of the panel are used for connection to the PVMax Scanner.
  Use one **Group B** Scanner Attachment Cord according to the required length
- The scanning signal is transmitted over pin 9 of the RJ-45. Pin 9 exists in nine-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 - 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

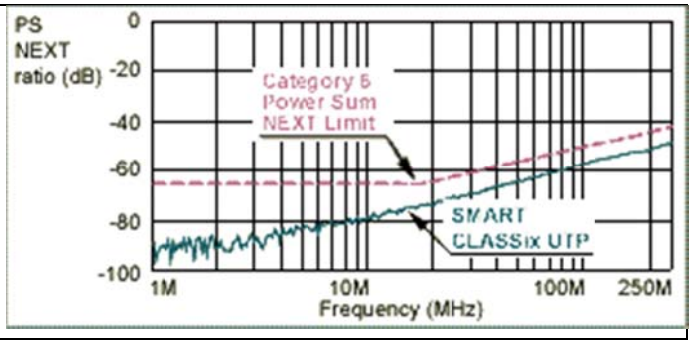
SMART CLASSix 48 1 UTP Patch Panels (High Density)

Specifications

Electrical Specifications

PowerSum NEXT ratio plot is shown for worst pair. The following are typical Power Sum NEXT measurement results at 100, 200 and 250 MHz for all pairs.

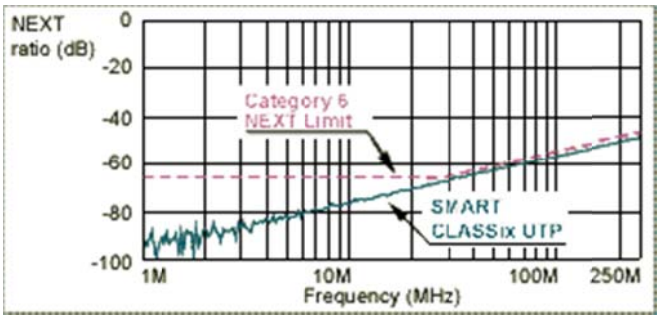
Pair (to all other pairs)	PowerSum NEXT (dB)		
	100 MHz	200 MHz	250 MHz
1-2	-60.0	-50.3	-46.4
3-6	-56.3	-48.3	-44.9
4-5	-55.8	-50.6	-48.0
7-8	-58.9	-51.1	-48.3



All pairs exceed Category 6 requirements.

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

Pair Combination	NEXT (dB)		
	100 MHz	200 MHz	250 MHz
1-2 & 3-6	-62.7	-52.5	-48.3
1-2 & 4-5	-63.6	-55.2	-51.9
1-2 & 7-8	-74.8	-61.9	-58.1
3-6 & 4-5	-58.6	-54.1	-51.8
3-6 & 7-8	-63.4	-52.7	-49.7
4-5 & 7-8	-60.9	-57.4	-55.6



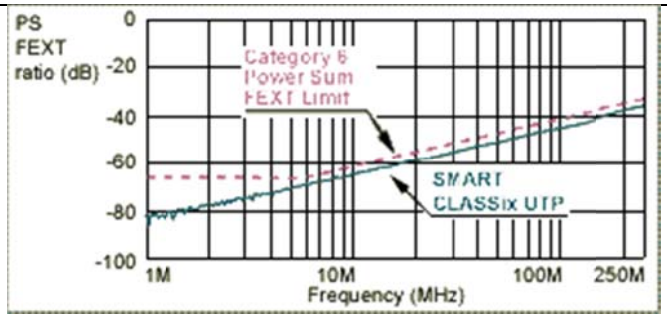
All pair combinations exceed Category 6 requirements.

SMART CLASSix 48 1 UTP Patch Panels (High Dendity)

Specifications

PowerSum FEXT ratio plot is shown for worst pair. The following are typical Power Sum FEXT measurement results at 100, 200 and 250 MHz for all pairs

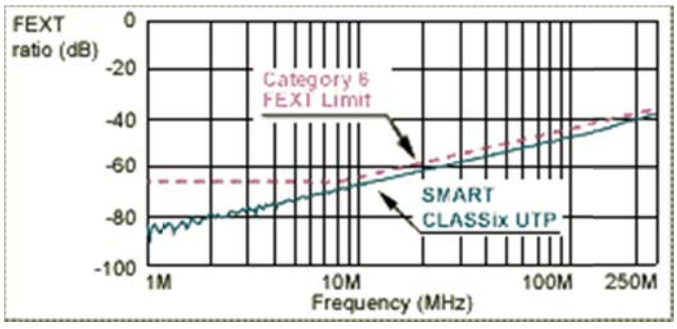
Pair (to all other pairs)	PowerSum FEXT (dB)		
	100 MHz	200 MHz	250 MHz
1-2	-47.1	-41.1	-39.3
3-6	-61.1	-48.5	-45.9
4-5	-43.8	-37.2	-35.1
7-8	-46.4	-39.4	-37.2



All pairs exceed Category 6 requirements.

FEXT ratio plot is shown for worst pair combination. The following are typical FEXT measurement results at 100, 200 and 250 MHz for all pair combinations.

Pair Combination	FEXT (dB)		
	100 MHz	200 MHz	250 MHz
1-2 & 3-6	-71.8	-57.0	-54.5
1-2 & 4-5	-47.1	-41.3	-39.5
1-2 & 7-8	-66.9	-58.3	-55.4
3-6 & 4-5	-68.5	-50.9	-48.1
3-6 & 7-8	-62.4	-54.1	-51.6
4-5 & 7-8	-46.5	-39.6	-37.4



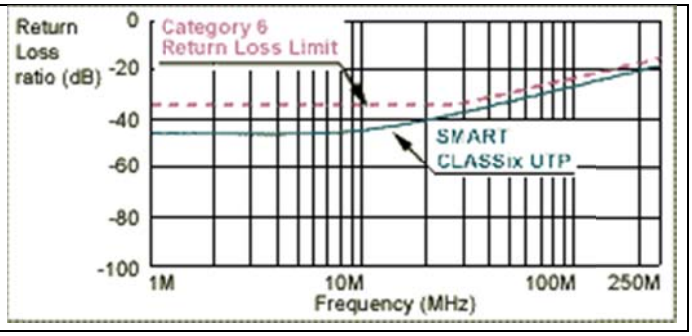
All pair combinations exceed Category 6 requirements.

SMART CLASSix 48 1 UTP Patch Panels (High Dendity)

Specifications

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

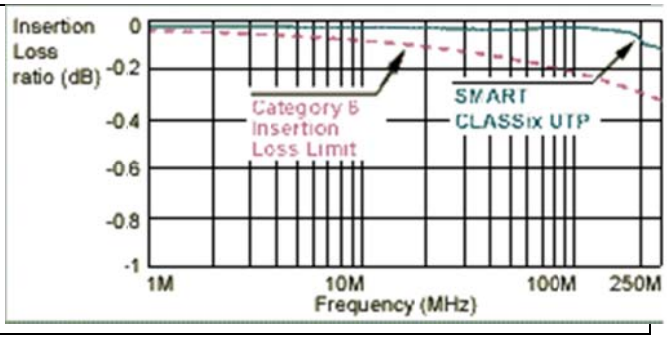
Pair (to all other pairs)	Return Loss (dB)		
	100 MHz	200 MHz	250 MHz
1-2	-37.9	-30.8	-28.1
3-6	-35.9	-27.2	-24.4
4-5	-27.2	-21.0	-19.1
7-8	-41.6	-32.0	-28.6



All pairs exceed Category 6 requirements.

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

Pair (to all other pairs)	Insertion Loss (dB)		
	100 MHz	200 MHz	250 MHz
1-2	0.00152	-0.0557	-0.14
3-6	-0.00594	-0.0623	-0.16
4-5	0.0178	-0.0903	-0.26
7-8	-0.00648	-0.0658	-0.1



All pairs exceed Category 6 requirements.

SMART CLASSix 48 1 UTP Patch Panels (High Dendity)

Specifications

General

Physical –

- **Height**: 44.0mm/1.75" (1U)
- **Width**: 482.6mm/19"
- **Depth**: 46mm/1.8"
- Depth with Cable Retention Fixture: 97.0mm/3.8"
- **Weight**: 0.6kg (1.2lb)
- **Material**
  Carbon Steel (SAE 1020)
- **Colors**
  Black background with gray silk screened markings
- **Environment**
  Temperature: -40° to 85°C
  Humidity: 0-90% non-condensing
- **Compliance with International EMC Standards:**
  The SMART CLASSix 48 1U UTP line of patch panels is designed to comply with EN-55022, Class B (Europe) and FCC Part 15, Subpart J, Class A (USA).

SMART CLASSix 48 1 UTP Patch Panels (High Dendity)

Ordering Information

Number	Description
R3916014	SMART CLASSix UTP Panel, 48 1U, PVMax