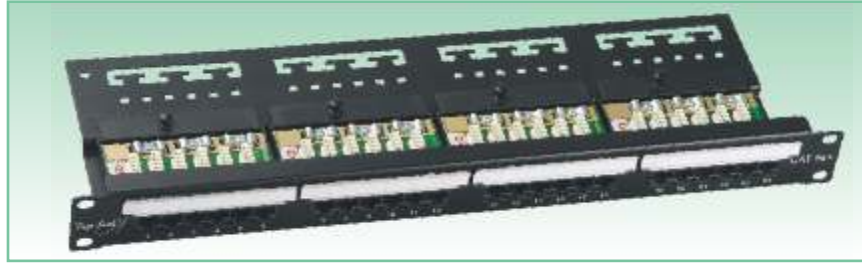


## Category 5e+ UTP Patch Panels



### Description

Patch panel is an array of 8P8C connectors, typically rack mounted that houses cable connections. One normally shorter patch cable will be plugged into the front side, while the back will hold the connection of a much longer and more permanent cable. The assembly of hardware is arranged so that a number of circuits, usually of the same or similar type, appear on jacks for monitoring, interconnecting, and testing circuits in a convenient, flexible manner.

Patch panels offer the convenience of allowing technicians to quickly change the path of select signals, without the expense of dedicated switching equipment. This was first used by early telephone companies, where there are switch boards (a massive array of patch panels) in a large roomful of telephone operators running it was ubiquitous.

### Applications

- Ethernet 10 Base T
- Fast Ethernet 100 Base TX
- Gigabit Ethernet 1000 Base T
- 10 Gigabit 10 GBASE T
- ISDN
- ATM
- CDDI
- TP PMD
- 4/16 MB Token Ring
- ADSL

### Benefits and Features

- ✓ Digi-Link offers modular patch panels for termination of horizontal and backbone cabling. It has robust construction and excellent cable management.
- ✓ It surpasses cat 5e+ requirements of EIA/TIA. The RJ 45 module jacks and the insulation displacement connectors (IDC) mounted on the printed circuit board give the design and unmatched modularity and elegance.
- ✓ The Print circuit design combines advanced balancing methodology with the pair isolation techniques which guarantee a EIA/TIA TSB 40A
- ✓ Performance at rated 100 Mbps. It Also meets or exceeds ANSI/ TIA/ EIA 568 B Cat 5e connecting hardware specification.

### Physical and Mechanical Properties

1.6 mm mild steel chassis 19"x 6.10" Rack mount frame 1U Fully powder coated

17"x 2" of cable management tray integrated with the chassis

Window provision for labeling.

Unshielded RJ 45 (6 port jack module).

Spring contact: Phosphor bronze 50µ" gold over 100µ" nickel plating

Current rating: 1.5A (Max)

Insulation resistance : 500 MΩ (Min)

Contact Resistance: 15m Ω (max)

Mating Cycles: 750

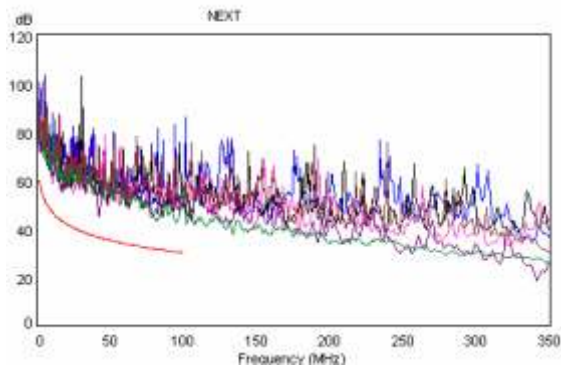
## Category 5e+ UTP Patch Panels

Performance Characteristics TIA/EIA-568-B2												
FREQUENCY (MHz)	INSERTION LOSS (Attenuation) dB/100m		NEXT (db)		PSNEXT (db)		ELFEXT (db)		PSELFEXT (db)		RETURN LOSS (db)	
	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link
0.72	1.8	1.3	67.0	80.2	64.0	77.20		86.6		70.0	17.0	21.8
1.00	2.3	2.0	62.8	74.2	59.8	72.20	56.8	77.3	53.8	69.5	17.0	22.7
4.00	4.4	4.0	53.6	73.0	50.6	63.00	45.4	65.0	42.4	57.3	17.0	29.8
8.00	6.3	5.8	48.6	70.7	45.6	59.20	39.3	58.7	36.3	50.9	17.0	32.0
10.00	7.1	6.5	47.0	67.3	44.0	56.80	37.4	49.6	34.4	49.0	17.0	34.6
16.00	9.1	8.2	43.6	63.0	40.6	54.00	33.3	45.5	30.3	44.9	17.0	31.3
20.00	10.2	9.2	42.0	58.2	39.0	51.30	31.4	43.6	28.4	42.9	17.0	29.4
25.00	11.4	10.4	40.3	52.0	37.3	49.40	29.4	41.9	26.4	40.9	16.0	23.7
31.25	12.9	11.6	38.7	48.0	35.7	46.60	27.5	46.0	24.5	39.1	15.1	24.8
62.50	18.6	16.7	33.6	42.9	30.6	40.80	21.5	41.8	18.5	33.9	12.1	19.0
100.00	24.0	21.4	30.1	40.2	27.1	36.90	17.4	39.4	14.4	31.2	10.0	18.4
200.00	**	31.1	**	35.0	**	31.90	**	30.8	**	24.0	**	15.3

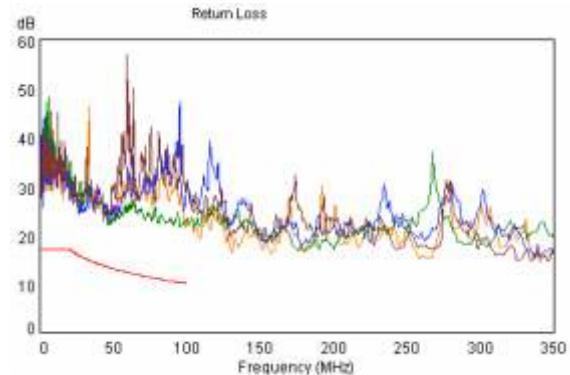
\*\* Extrapolated Values

Propagation Delay	2.5 nS max @ 1-100 MHz
Propagation Delay Skew	1.25 nS max @ 1-100 MHz
Current rating	1.5 A max.
Contact resistance	20 mΩ (max) per contact
Input/Output resistance	200 mΩ (max)
Input/Output resistance Unbalance	50 mΩ (max)
Voltage rating	72 Vdc max.
Dielectric strength	1000 V rms for 1 minute
Insulation Resistance	500 mΩ (min) @ 500 Vdc
DC Resistance	0.1 Ω (max) @ 20°C
TCL	28-20·Log(f/100) dB min @ 1-100 MHz
Transfer Impedance	N/A

Typical NEXT Loss



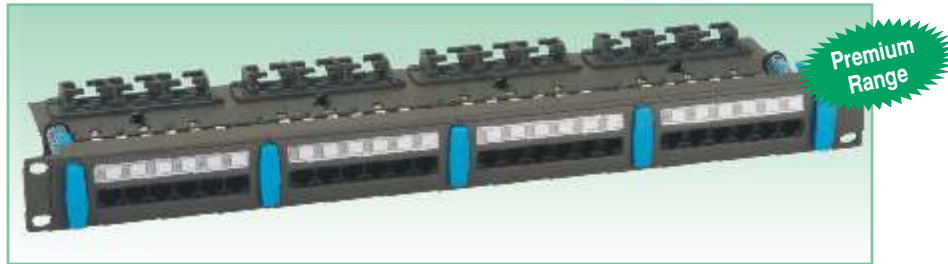
Typical Return Loss



### Ordering Information

P/N	Description	Size	Wiring	T568
DCEPP24UKR1U	Patch panel Cat5e+ UTP Modular 24 port fully loaded.	19" 1 U	EIA/ TIA 568 B	
DCEPP6UKRMO	6 Port Cat5e+, Module, UTP			
DCEPP6UKRBLK	6 Port Cat5e+, Blank Module,			

## Category 5e+ Smart-Series Patch Panels



### Description

Introducing the Smart Series range of Patch Panels for termination of horizontal and backbone cabling. The design boasts of excellent cable management coupled with a robust construction delivering value for money to the customers.

### Applications

- Ethernet 10 Base T
- Gigabit Ethernet 1000 Base T
- ATM
- CDDI
- ISDN
- Fast Ethernet 100 Base TX
- 10 Gigabit 10G BASE T
- 4/16 MB Token Ring
- TP PMD
- ADSL

### Benefits and Features

- ✓ Springed front-end cable management to manage the looks, performance and aesthetics of cords in the telecom rack
- ✓ Clear Information Windows for Port Identification
- ✓ Rear Cable Guide to provide strain relief and locking to the horizontal or backbone cables.
- ✓ A new improved "rear slant" panel design to avoid kinks caused while installing and crimping cables.
- ✓ Cable clips made from Fire Retardant ABS Plastic conforming to UL94V-0
- ✓ All components are UL listed.

### Physical and Mechanical Properties

Robust mild steel chassis 19" * 5.7" rack mount frame 1U, Fully powder coated	
8-pin polarized connectors	
Direct punching of cables	
Phosphor Bronze spring contact	
Unshielded RJ-45 (6-port jacks module)	
Spring contact:	Phosphor bronze 50µ" gold over 100µ" nickel plating
Current Rating:	1.5A (max)
Insulation Resistance:	500M Ω (min)
Contact Resistance:	15m Ω (max)
Plug Insertion:	750 cycles (min)
Meets and exceeds EIA/TIA568-B.2	

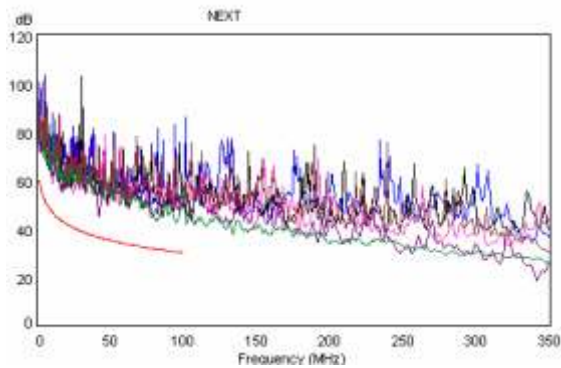
## Category 5e+ Smart-Series Patch Panels

Performance Characteristics TIA/EIA-568-B2												
FREQUENCY (MHz)	INSERTION LOSS (Attenuation) dB/100m		NEXT (db)		PSNEXT (db)		ELFEXT (db)		PSELFEXT (db)		RETURN LOSS (db)	
	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link
0.72	1.8	1.3	67.0	80.2	64.0	77.20		86.6		70.0	17.0	21.8
1.00	2.3	2.0	62.8	74.2	59.8	72.20	56.8	77.3	53.8	69.5	17.0	22.7
4.00	4.4	4.0	53.6	73.0	50.6	63.00	45.4	65.0	42.4	57.3	17.0	29.8
8.00	6.3	5.8	48.6	70.7	45.6	59.20	39.3	58.7	36.3	50.9	17.0	32.0
10.00	7.1	6.5	47.0	67.3	44.0	56.80	37.4	49.6	34.4	49.0	17.0	34.6
16.00	9.1	8.2	43.6	63.0	40.6	54.00	33.3	45.5	30.3	44.9	17.0	31.3
20.00	10.2	9.2	42.0	58.2	39.0	51.30	31.4	43.6	28.4	42.9	17.0	29.4
25.00	11.4	10.4	40.3	52.0	37.3	49.40	29.4	41.9	26.4	40.9	16.0	23.7
31.25	12.9	11.6	38.7	48.0	35.7	46.60	27.5	46.0	24.5	39.1	15.1	24.8
62.50	18.6	16.7	33.6	42.9	30.6	40.80	21.5	41.8	18.5	33.9	12.1	19.0
100.00	24.0	21.4	30.1	40.2	27.1	36.90	17.4	39.4	14.4	31.2	10.0	18.4
200.00	**	31.1	**	35.0	**	31.90	**	30.8	**	24.0	**	15.3

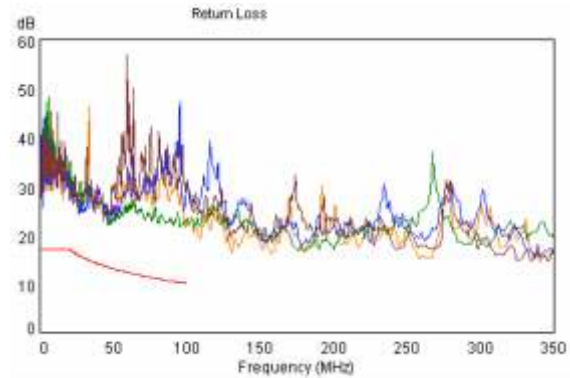
\*\* Extrapolated Values

Propagation Delay	2.5 nS max @ 1-100 MHz
Propagation Delay Skew	1.25 nS max @ 1-100 MHz
Current rating	1.5 A max.
Contact resistance	20 mΩ (max) (per contact)
Input/Output resistance	200 mΩ (max)
Input/Output resistance Unbalance	50 mΩ (max)
Voltage rating	72 Vdc max.
Dielectric strength	1000 V rms for 1 minute
Insulation Resistance	500 mΩ (min) @ 500 Vdc
DC Resistance	0.1 mΩ (max) @ 20°C
TCL	28-20·Log(f/100) dB min @ 1-100 MHz
Transfer Impedance	N/A

Typical NEXT Loss



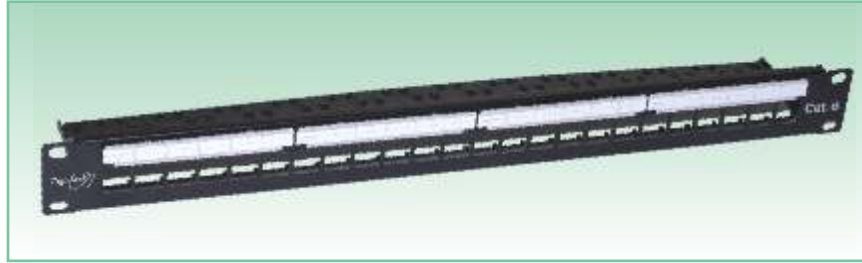
Typical Return Loss



### Ordering Information

P/N	Description
DCEPP24USKR1U	Patch panel Cat 5e+, Unshielded Smart Modular, 1U-24 port

## Category 5e+ Unshielded Keystone Patch Panels



### Description

This rack mount type unshielded keystone patch panel comes with a design, which has redefined engineering elegance. It is a three piece structure that includes the front panel, the metal case and the cable management plate. The cable management plate comes with pre-fitted B-Clip that helps in routing cables and provides a perfect strain relief. The front plate has icon holders which help identify the media used such as computer, telephone, etc. The high performance, high-density keystone connectors meet and exceed EIA/TIA568 B.2 Category 5e specifications. They are snap fit -able on the metal case and can be easily removed whenever required.

### Applications

- Ethernet 10 Base T
- 10 Gigabit 10GBASE T
- CDDI
- ADSL
- Fast Ethernet 100 Base TX
- ATM
- TP/PMD
- Gigabit Ethernet 1000 Base T
- 4/16 MB Token Ring
- ISDN

### Benefits and Features

- ✓ Elegant cable Manager with built-in connector case, highly compact and light weight in design, equipped for maximum port connections.
- ✓ The Keystone jacks are designed to snap easily in and out of the unloaded Patch Panel.
- ✓ The horizontal cable (solid wire) is individually terminated by IDC (Insulation Displacement Connectors) using a punch down tool.
- ✓ The front of the jack (RJ-45) is connected to the equipment by patch cord (stranded wire).
- ✓ The Keystone jacks come with T568A or T568B wiring and fully comply with ANSI/ TIA/ EIA 568 B.2.
- ✓ Specifications for insertion loss (Attenuation), near-end cross talk (NEXT) LOSS, return loss and Far-end cross talk (FEXT) loss for data transmission of any pair combination with frequencies upto 200 MHz.

### Physical and Mechanical Properties

Mild steel 1.6mm thick	
482 x 44.5mm	
Provision for 24 cut outs	
Mild steel 1.6mm thick	
442.6 x 44.5mm	
Provision for 1 to 24 high density keystone jacks	
Contact Wiring:	Phosphor bronze 50µ" gold over 100µ" nickel plating
Housing:	High impact flame retardant plastic, UL9V-0 rated.
IDC:	Accept 23-26 AWG solid wire.
Jack mating life:	750 cycle.
Jack contact force:	100 grams minimum.
Jack pull force:	20 lbs (89)N.
Retention force:	13 kgs minimum.
Current Rating:	1.5A
Contact Resistance:	20 mΩ (max)
DC Resistance:	0.1 Ω (max)
Insulation Resistance:	500 mΩ (min)
Data Transmission Rates:	upto 10G

### Performance Characteristics TIA/EIA-568-B2

FREQUENCY (MHz)	INSERTION LOSS (Attenuation) dB/100m		NEXT (db)		PSNEXT (db)		ELFEXT (db)		PSELFEXT (db)		RETURN LOSS (db)	
	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link
0.72	1.8	1.3	67.0	80.2	64.0	77.20		86.6		70.0	17.0	21.8
1.00	2.3	2.0	62.8	74.2	59.8	72.20	56.8	77.3	53.8	69.5	17.0	22.7
4.00	4.4	4.0	53.6	73.0	50.6	63.00	45.4	65.0	42.4	57.3	17.0	29.8
8.00	6.3	5.8	48.6	70.7	45.6	59.20	39.3	58.7	36.3	50.9	17.0	32.0
10.00	7.1	6.5	47.0	67.3	44.0	56.80	37.4	49.6	34.4	49.0	17.0	34.6
16.00	9.1	8.2	43.6	63.0	40.6	54.00	33.3	45.5	30.3	44.9	17.0	31.3
20.00	10.2	9.2	42.0	58.2	39.0	51.30	31.4	43.6	28.4	42.9	17.0	29.4
25.00	11.4	10.4	40.3	52.0	37.3	49.40	29.4	41.9	26.4	40.9	16.0	23.7

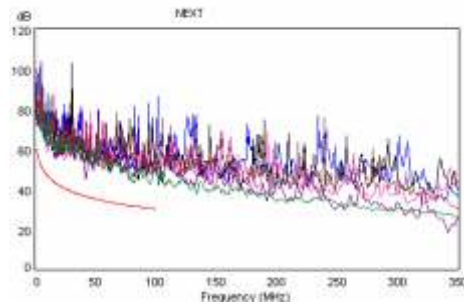
## Category 5e+ Unshielded Keystone Patch Panels

Performance Characteristics TIA/EIA-568-B2												
FREQUENCY (MHz)	INSERTION LOSS (Attenuation) dB/100m		NEXT (db)		PSNEXT (db)		ELFEXT (db)		PSELFEXT (db)		RETURN LOSS (db)	
	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link	Standard	Digi-Link
31.25	12.9	11.6	38.7	48.0	35.7	46.60	27.5	46.0	24.5	39.1	15.1	24.8
62.50	18.6	16.7	33.6	42.9	30.6	40.80	21.5	41.8	18.5	33.9	12.1	19.0
100.00	24.0	21.4	30.1	40.2	27.1	36.90	17.4	39.4	14.4	31.2	10.0	18.4
200.00	**	31.1	**	35.0	**	31.90	**	30.8	**	24.0	**	15.3

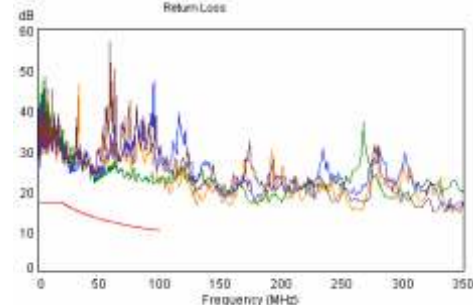
\*\* Extrapolated Values

Propagation Delay	2.5 nS max @ 1-100 MHz
Propagation Delay Skew	1.25 nS max @ 1-100 MHz
Current rating	1.5 A max.
Contact resistance	20 mΩ maximum
Input/Output resistance	200 mΩ maximum
Input/Output resistance Unbalance	50 mΩ maximum
Voltage rating	72 Vdc max.
Dielectric strength	1000 V rms for 1 minute
Insulation Resistance	500 mΩ min @ 500 Vdc
DC Resistance	0.1 Ω max @ 20°C
TCL	28-20·Log(f/100) dB min @ 1-100 MHz
Transfer Impedance	N/A

Typical NEXT Loss



Typical Return Loss



### Ordering Information

P/N	Description	Colour	
DCEKYSTU-WT	Cat5e+ Unshielded Keystone jacks	White	
DCEKYSTU-BL	Cat5e+ Unshielded Keystone jacks	Blue	
DCEKYSTU-RD	Cat5e+ Unshielded Keystone jacks	Red	
DCEKYSTU-GN	Cat5e+ Unshielded Keystone jacks	Green	
DCEKYSTU-YL	Cat5e+ Unshielded Keystone jacks	Yellow	
DCEKYSTU-BK	Cat5e+ Unshielded Keystone jacks	Black	

### Ordering Information

P/N	Description	No of Ports	Size	Wiring
DCEPP24UKY1U	Patch Panel Cat5e+ unshielded keystone type- Loaded	24	1U	EIA/TIA 568 A/B
DCEPPXXUKY1U	Patch Panel Cat5e+ unshielded keystone type- Unloaded	24	1U	EIA/TIA 568 A/B
DCEPPXXUKY2U	Patch Panel Cat5e+ unshielded keystone type- Unloaded	48	2U	EIA/TIA 568 A/B

### Ordering Information

P/N	Description	Colour	
DCXKYSTU-WT	Blank Fillers for unloaded patch panel	White	
DCXKYSTU-GY	Blank Fillers for unloaded patch panel	Grey	