D-CONNECT
DATA CONNECT

TNS TECHNOLOGIES
TELECOM • NETWORKING • STRUCTURED CABLING

CAT6 UTP PATCH CORD

STRUCTURE DIAGRAM

DESCRIPTIONS

D-CONNECT Patch Cords shall meet or exceeds all requirements for CAT6 standard. Compatible with CAT6 keystone jacks and CAT6 patch panel, guarantees 250MHZ broadband transmission. D-CONNECT UTP Patch Cable is a 100 ohm cable, with a PVC or LSZH jacket and four twisted pairs for indoor installations. Patch cord plug shall be clear and contacts shall have industry-standard, ANSI/TIA-1096-A compliant 50 micro inches of gold plating.

FEATURES

- Patch Cords are used in the work area and cross-connect generic cabling applications
- 24 AWG stranded conductor with a length of eight-wire flexible patch cable, terminated with snagless high quality, two eight-position RJ-45 plugs at each end
- Patch cords feature molded RJ-45 connectors for enhanced life and reliability
- Extra-long slimline flexible strain relief boot to maintain the bend radius
- Conforms to the ANSI/TIA/EIA-568-C.2, ISO/IEC 2nd edition 11801 Class E and CENELEC EN 50173 for Category 6/Class E
- Excellent attenuation and crosstalk continuity
- Maximum RL performance under all patching conditions
- Ultra slim design for high density environments
- T568B wiring to function in either T568A or T568B applications
- Latch protection in order to eliminate digging in high density patch cord installations
- 100% factory transmission tested to 250MHz, Superior ruggedness and durability
- Plugs with 50 micron gold plating contacts
- All patch cords are backwards compatible and Interoperable with earlier ANSI/TIA category ratings
- Horizontal Distribution & Backbone Cabling
- Available in different colors

CAT6 UTP PATCH CORD

FEATURES

- Available in a variety of the length
- The snagless plug design makes the patch cords an excellent choice in environments where moves, adds, and changes are frequent

STANDARDS REFERENCE

- All Proposed Category 6 Requirements as Per ANSI/TIA/, ISO/IEC, and CENELEC EN Standards:
- ANSI/TIA/EIA 568-C.2 CAT6
- ISO/IEC 2nd Edition 11801 Class E
- EN 50173-1:2011
- ANSI/TIA-1096-A (formerly FCC Part 68)
- UL 94-V2Compliant
- IEC 61156-6 for patch cable
- IEC60332-1, IEC61034-2, IEC60754-1&-2 and IEC 60603-7 (603-7) Compliant
- Flame Retardant verified according to IEC 60332-1-2
- PoE standards: IEEE 802.3af, 802.3at, 802.3bt, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts
- RoHS Compliant

APPLICATION

- 10GBASE-T ETHERNET (IEEE P802.3an) Proposed100 Mbps TP-PMD
- 1000BASE-TX Fast Ethernet1000BASE-T Gigabit Ethernet
- 100BASE-TX Fast Ethernet.10BASE-T Ethernet.
- 155/622 Mbps ATM4/16 Mbps Token Ring
- 100VG-AnyLAN1.2Gb/s ATM

PLUG SPECIFICATIONS

CONSTRUCTION

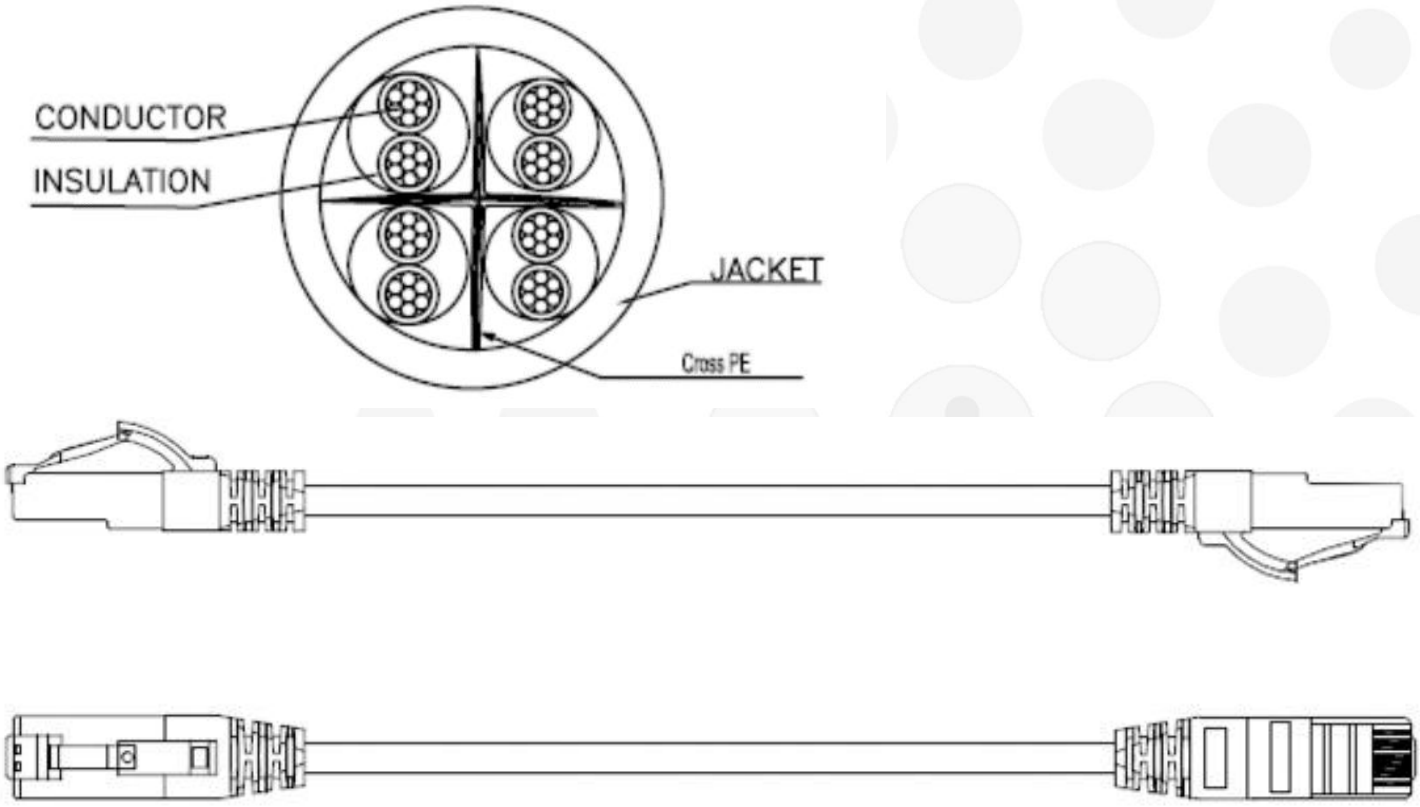
- Plug Housing PC Resin UL 94-V2
- Contacts High grade copper alloy
- Plating 50 micro inch (1.27 micrometer) gold

ELECTRICAL

- Current/Voltage Rating 1.5 Amps, 30 VAC / 56 VDC
- Dielectric Withstanding 1000 volts RMS, 1 min. (60Hz)
- Insulation Resistance 500 Mega ohms

CAT6 UTP PATCH CORD

TECHNICAL DRAWING



CONSTRUCTION

Conductor	Material / Size	Bare Copper / 24AWG
	Construction	7/0.19± 0.01mm
Insulation	Material	Solid PE
	Thickness	Nominal: 0.2±0.02 mm
	Diameter	Nominal: 0.8 ± 0.03 mm
	Colors	Blue/White-Blue Orange/White-Orange
		Green/White-Green Brown/White-Brown
	Elongation	Min. 400%
	Tensile Strength	Min. 1.6Kgf/mm²
	Pair Construction	Four pairs cabled together, over a precision cross-shaped pair organizer
Cross Member	Material	PE 4.0*0.5MM
Ripcord	Material	1670D or as per requirement
Sheath	Material	PVC/LSZH
	Thickness	Nominal: 0.5 mm+-0.05mm
	Diameter	6.0±0.3 mm
	Tensile Strength	Min. 0.917Kgf/mm²

CAT6 UTP PATCH CORD

ELECTRICAL PERFORMANCE

Dielectric Strength of Insulation	1500 V dc / 2 seconds
DC Resistance	Max. 96 Ohm/km max. at 20°C
Insulation Resistance Test	Min. 5000MΩ.Km
Conductor Resistance	Max.14.5Ω/100m at 20°C
Resistance Unbalance	Max. 2%
Capacitance Unbalance	Max. 330 pF/100m
Mutual Capacitance	Max. 5600 pF/100m
Maximum operating voltage	300V
Impedance	100±15 Ohm at 1 to 100 MHz 100±(15 + 0.05(f-100)) W at f=100 to 250 MHz
Velocity of Propagation	69% nominal
Propagation Delay	5.7 ns/m max @ 1 MHz 5.4 ns/m max @ 10 MHz 5.3 ns/m max @ 100 MHz
Propagation Delay Skew	45 ns/100 m max @ 1-250 MHz

Transmission Frequency (MH_z)	1	4	10	16	20	31.25	62.5	100	200	250
NEXTA dB/100m	74.3	65.3	59.3	56.2	54.8	51.9	47.4	44.3	39.8	38.3
Characteristic Impedance	100+/- 15								+/- 22	
Attenuation dB/100m	3.1	5.8	9.0	11.4	12.8	16.1	23.3	29.9	43.8	49.7
Return Loss dB/100m	20.0	23.0	25.0	25.0	25.0	23.3	20.7	19.0	16.4	15.6
PSNEXTA dB/100m	72.3	63.3	57.3	54.2	52.8	49.9	45.4	42.3	37.8	36.3
PSACRF dB/100m	64.8	52.8	44.8	40.7	38.8	34.9	28.9	24.8	18.8	16.8
Delay ns/100m	570	552	545	543	542	540	539	538	537	536
Skew ns/100m	45									
NVP	69%									

MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

Maximum Pulling Force	80N	Operating Temperature	-20Deg ~ +75Deg
Minimum Bending Radius	8* O.D.	Installation Temperature	+0Deg ~ +50 Deg
Nominal Weight	38 KGS/KM		
LSZH Requirement	ROHS,IEC60332-1, IEC61034-2, IEC60754-1&-2		
PVC Requirement	ROHS,IEC60332-1,		
Plug/Jack Compatibility	RJ45		
Insertion Life	750 Mating Cycles minimum		
Humidity	10% ~ 90% RH		

CAT6 UTP PATCH CORD

ORDERING INFORMATION

DCPC-6-U-(XX)-28811(XXX)-(YY)

Jacket

PVC-PV
LSZH-LS

Length

0.3m – 003
0.5m – 005
1.0m – 010
1.5m – 015
2.0m – 020
3.0m – 030
5.0m – 050
6.0m – 060
7.0m – 070
8.0m – 080
10.0m – 100
12.0m – 120
15.0m – 150
18.0m – 180
20.0m – 200
24.0m – 240
30.0m – 300

Color

White - 01
Black - 02
Red - 03
Orange - 04
Yellow - 05
Green - 06
Blue - 07
Purple - 08
Gray - 11

REMARK:

For example CAT6 UTP Patch Cord, PVC, 1 Meter, Blue: DCPC-6-U-PV-28811010-07

2 Meter, Blue: DCPC-6-U-PV-28811020-07

10 Meter Blue: DCPC-6-U-PV-28811100-07

Note: Any other combination patch cords are available as per request.

The **D-CONNECT** System Warranty provides a 25-year product and applications assurance of compliance with the industry performance standard appropriate to the class of cabling installed. The warranty may be applied for by an accredited **D-CONNECT** Partner who has designed, supplied and installed the said system.