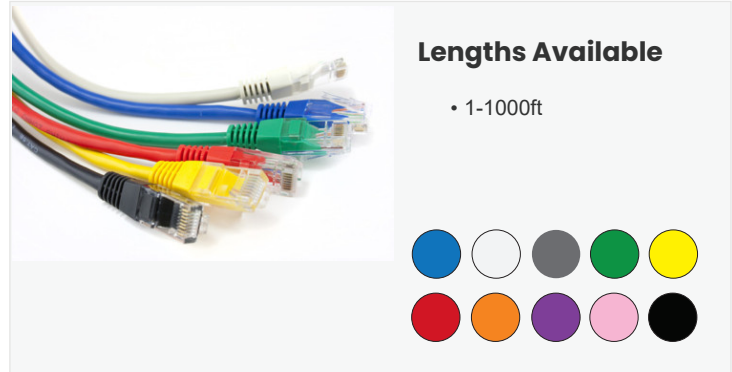


Cat6 Unshielded

26AWG • 4 Twisted Pairs
UTP • 250MHz • Stranded Copper



Key Features

- Bandwidth tested up to 250 MHz
- Suitable for 1 Gigabit and 5 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-D
- RoHS-3 Compliant
- Easily identified color striped pairs
- Supports Power over Ethernet: PoE/PoE+/PoE+ + (IEEE 802.3af/at/bt) 4PPoE up to 90W

Technical Data

Insulation	PE
Average Thickness (mm)	0.21
Min Point Thickness (mm)	0.193
Conductor Insulation Dia. ($\pm 0.02\text{mm}$)	0.96
Twisted Pair Dia. ($\pm 0.02\text{mm}$)	1.92
Ripcord	Nylon
Spline	Present
Polyethylene Tape	Not Present
Shielding	U/UTP

Conductor	Solid Bare Copper
Size	26AWG
Conductor Dia. ($\pm 0.05\text{mm}$)	7/0.16

Color of Pairs

Pair 1	Blue- White/Blue
Pair 2	Orange- White/Orange
Pair 3	Green- White/Green
Pair 4	Brown- White/Brown

Cable Jacket

	PVC
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55
Outer Diameter ($\pm 0.2\text{mm}$)	5.40

Standards Reference

ANSI/TIA
568-2.D

ISO/IEC
11801



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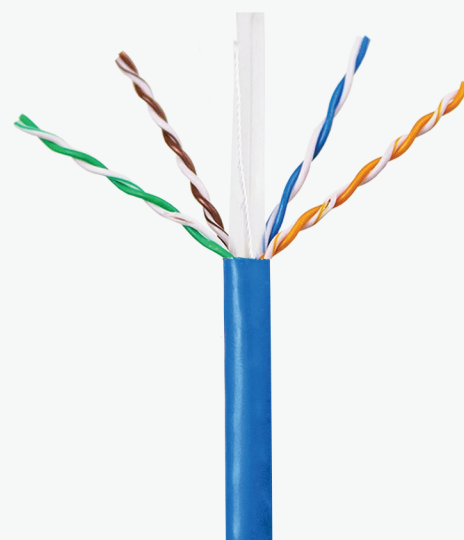
Lengths Available

• 1-1000ft



Electrical Characteristics

PoE Certification	PoE/PoE+/PoE++ 4PPoE
Maximum PoE Wattage	90W
PoE Application Compatibility	802.3af/at/bt Type 4
TIA 568-2.D Cat6 Permanent Link +PoE	CERTIFIED
Maximum Application Speed @ 295ft	5GBASE-T
Nominal Velocity of Propagation (NVP)	68.2
Maximum Operating Voltage	300V
1.0 - 550MHz Impedance (Ω)	100 \pm 15
Maximum Operating Frequency	250MHz
1.0 - 550MHz Delay Skew (ns/100m)	\leq 45
Pair-to-Ground Capacitance Unbalance (pF/km)	\leq 3300
Max. Conductor DC Resistance 20°C (Ω /km)	72.2



Mechanical & Environmental Operating Parameters

Test Object	Jacket	Aging Condition ($^{\circ}$ C x hrs)	100 x 168
Test Material	PVC	After Tensile Strength (Mpa)	\geq 85% of unaged
Before- Tensile Strength (Mpa)	\geq 13.8	Aging Condition - Elongation (%)	\geq 50% of unaged
Aging- Elongation (%)	\geq 100	Cold Bend ($-20 \pm 2^{\circ}$ C x 4hrs)	No Crack
Min. Bend Radius	2.5cm/1.0in	Operating & Storage Temp.	-40° C to 75° C -40° F to 167° F
Max. Installation Tension	110N/25lb-ft	Installation Temp.	-20° C to 75° C -4° F to 167° F

Tested Compatible Accessories

Product

Cat6 Punch Down Keystone Jack Unshielded
Cat6 Toolless Keystone Jack Unshielded
Cat6/6A Pass Through RJ45 Connectors Unshielded
Cat6/6A Standard RJ45 Connectors Unshielded
Large Cut-to-Fit RJ45 Strain Relief Boot 5.5 - 7mm
Cat6A Field Term Plug Unshielded

Part Number

6EPD90CMPT
6ETL90CMPT
MDPTRJ45
LGRJ45
LGCTF
6AFT





Cable ID: 6ECMR MPTL UTP PD KSJ TO PASS-THROUGH RJ45

Test Summary: PASS

Test Limit: TIA Cat 6 MPTL (+PoE)

Main: Versiv

Remote: Versiv

Limits Version: V7.5

S/N: 1917273

S/N: 1924100

Date / Time: 03/03/2020 01:49:57 PM

Software Version: V6.5 Build 5

Software Version: V6.5 Build 5

Operator: DON S

Calibration Date: 11/08/2019

Calibration Date: 11/08/2019

Headroom 7.2 dB (NEXT 3,6-7,8)

Adapter: DSX-8000 (DSX-PLA804)

Adapter: DSX-8000R (DSX-PC6)

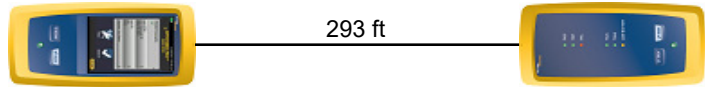
Cable Type: * Cat6 U/UTP* NVP:

S/N: 4523168

S/N: 4716104

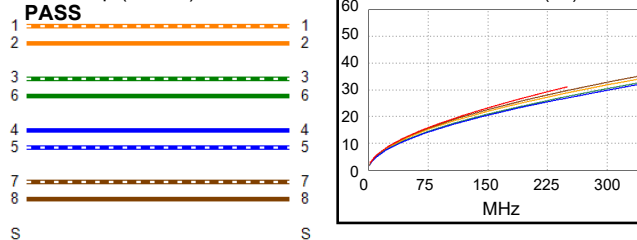
68.2%

Length (ft), Limit 295	[Pair 4,5]	293
Prop. Delay (ns), Limit 498	[Pair 7,8]	461
Delay Skew (ns), Limit 44	[Pair 7,8]	24
Resistance (ohms)	[Pair 7,8]	14.21
Resist. Unbal. (ohms)	[Pair 4,5]	0.036
Resist. P2P Unbal. (ohms)	[Pair 4,5-7,8]	0.144
Insertion Loss Margin (dB)	[Pair 7,8]	1.4
Frequency (MHz)	[Pair 7,8]	250.0
Limit (dB)	[Pair 7,8]	31.1

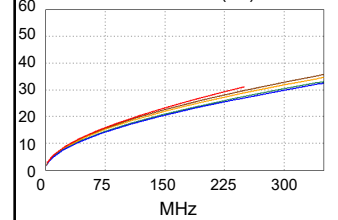


Wire Map (T568B)

PASS

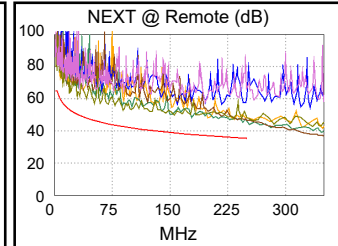
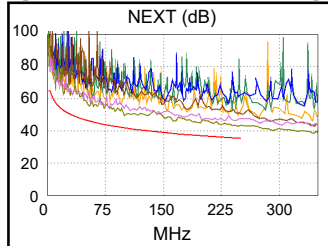


Insertion Loss (dB)

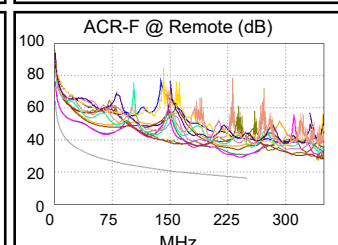
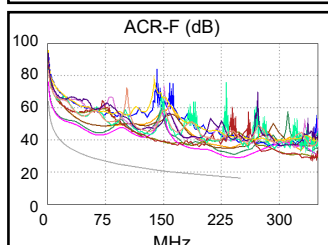


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	1,2-4,5	3,6-7,8	1,2-4,5
NEXT (dB)	7.2	10.0	7.3	10.0
Freq. (MHz)	224.5	244.5	246.0	244.5
Limit (dB)	36.1	35.5	35.5	35.5

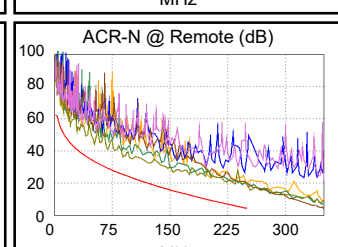
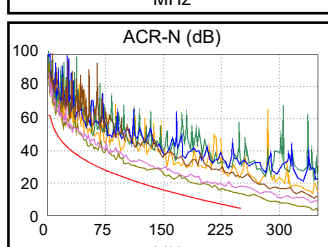


Worst Pair	7,8	3,6	7,8	3,6
PS NEXT (dB)	8.3	9.7	8.6	9.9
Freq. (MHz)	221.5	234.0	246.5	250.0
Limit (dB)	33.6	33.2	32.8	32.7



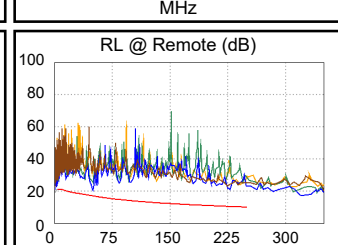
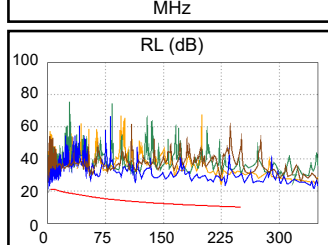
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-1,2	1,2-4,5	4,5-1,2	4,5-1,2
ACR-F (dB)	11.6	11.8	12.5	12.7
Freq. (MHz)	4.4	4.4	246.5	242.0
Limit (dB)	51.4	51.4	16.4	16.5

Worst Pair	1,2	4,5	1,2	1,2
PS ACR-F (dB)	14.1	14.0	14.5	14.4
Freq. (MHz)	3.0	3.9	246.5	241.5
Limit (dB)	51.6	49.4	13.4	13.5



N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
ACR-N (dB)	8.0	10.5	8.7	13.6
Freq. (MHz)	100.0	89.3	246.0	243.5
Limit (dB)	23.3	25.2	4.6	4.9

Worst Pair	7,8	7,8	7,8	3,6
PS ACR-N (dB)	9.2	12.3	9.9	13.5
Freq. (MHz)	99.8	10.5	246.5	250.0
Limit (dB)	20.8	49.5	2.0	1.6



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	6.5	3.5	13.5	3.5
Freq. (MHz)	3.9	50.0	230.5	50.0
Limit (dB)	21.0	17.0	10.4	17.0

Compliant Network Standards:

10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
ATM-25	ATM-51	ATM-155
100VG-AnyLan	TR-4	TR-16 Active
TR-16 Passive		