

# Cat6 Direct Burial Shielded

23AWG • 4 Twisted Pairs • CMX  
F/UTP • 550MHz • Solid Copper

## Lengths Available

- 500ft
- 1000ft

## Jacket Colors



## Key Features

- Bandwidth tested up to 550 MHz
- Suitable for 1 Gigabit and 5 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-D
- CMX jacket can withstand sunlight, dirt, snow, and moisture
- Supports Power over Ethernet: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) 4PPoE up to 100W
- cETLus Certified, RoHS-3 Compliant

## Technical Data

Insulation	PE
Average Thickness (mm)	0.275
Min Point Thickness (mm)	0.253
<b>Conductor Insulation Dia. (±0.02mm)</b>	<b>1.12</b>
Twisted Pair Dia. (±0.02mm)	2.24
Ripcord	Nylon
Spline	PE
Polyethylene Tape	Present
Shielding	F/UTP
Drain Wire- Solid Tinned Copper (mm)	0.40
Water Resistance	Jacket & Dry Tape

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. (±0.05mm)	0.57

### Standards Reference

UL-444 /  
cETLus

ANSI/TIA  
568-2.D

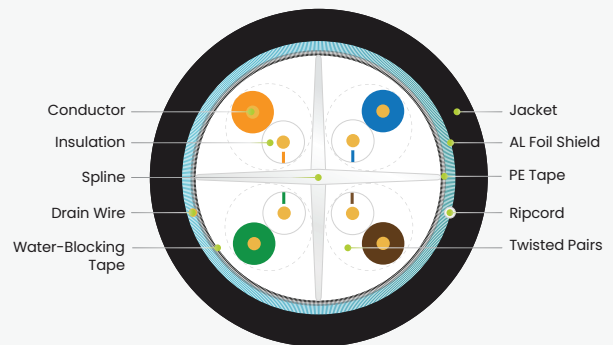
ISO/IEC  
11801

### 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

Cable Jacket	LLDPE
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55
<b>Outer Diameter (±0.2mm)</b>	<b>7.80</b>



## Print Legend

CAT6 CMX F/UTP DIRECT BURIAL UV 75°C 4PR 23AWG

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## Electrical Characteristics

PoE Certification	PoE/PoE+/PoE++ 4PPoE
Maximum PoE Wattage	100W
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)	66.8
Maximum Operating Voltage	300V
1.0 - 550MHz Impedance ( $\Omega$ )	100 $\pm$ 15
Maximum Operating Frequency	550MHz
1.0 - 550MHz Delay Skew (ns/100m)	$\leq$ 45
Pair-to-Ground Capacitance Unbalance (pF/km)	$\leq$ 3300
Max. Conductor DC Resistance 20°C ( $\Omega$ /km)	68



## Mechanical & Environmental Operating Parameters

Test Object	Jacket	Aging Condition ( $^{\circ}\text{C} \times \text{hrs}$ )	100 x 168
Test Material	LLDPE	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 ( $-20 \pm 2^{\circ}\text{C} \times 4\text{hrs}$ )	No Crack
Min. Bend Radius	5.5cm/2.25in	Operating & Storage Temp.	$-40^{\circ}\text{C}$ to $75^{\circ}\text{C}$   $-40^{\circ}\text{F}$ to $167^{\circ}\text{F}$
Max. Installation Tension	110N/25lb-ft	Installation Temp.	$-20^{\circ}\text{C}$ to $75^{\circ}\text{C}$   $-4^{\circ}\text{F}$ to $167^{\circ}\text{F}$

## Tested Compatible Accessories

### Product

### Part Number

Cat6 Toolless Keystone Jack   Shielded	6ESTL90CMPT
Cat6/6A Pass Through RJ45 Connectors   Shielded	LGEGPTRJ45
Cat6A Field Term Plug   Shielded	6ASFT
Conductive Copper Fabric Strips	CUstrips_100pc
Large Slip-On RJ45 Strain Relief Boot   8.00mm	LGSLIP



**Cable ID: 6ESCMX STP JACK > STP RJ45 JACKET DATE 01/22**

Test Limit: TIA Cat 6 MPTL (+PoE)

Limits Version: V7.6

Date / Time: 02/14/2022 11:15:40 AM

Operator: DON S

Headroom 4.8 dB (NEXT 4,5-7,8)

Cable Type: Cat 6 F/UTP

NVP: 66.8%

Main: Versiv

S/N: 1924100

Software Version: V6.7 Build 1

Calibration Date: 11/14/2020

Adapter: DSX-8000 (DSX-PLA804)

S/N: 4523169

**Test Summary: PASS**

Remote: Versiv

S/N: 1917273

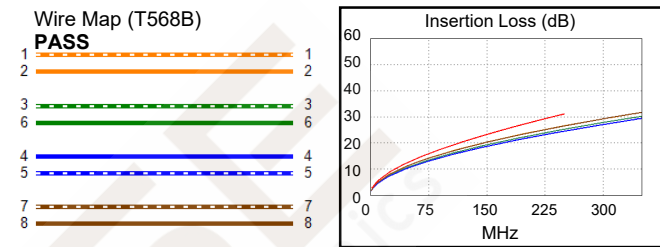
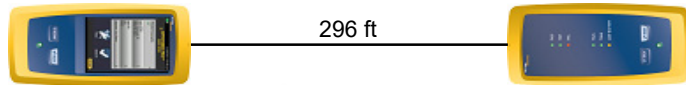
Software Version: V6.7 Build 1

Calibration Date: 11/14/2020

Adapter: DSX-8000R (DSX-PC6)

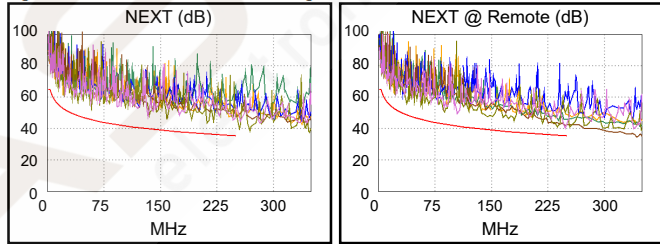
S/N: 4716104

Length (ft), Limit 295	[Pair 4,5]	296
Prop. Delay (ns), Limit 498	[Pair 1,2]	485
Delay Skew (ns), Limit 44	[Pair 1,2]	34
Resistance (ohms), Limit 21.00	[Pair 1,2]	13.49
Resist. Unbal. (ohms)	[Pair 4,5]	0.079
Resist. P2P Unbal. (ohms)	[Pair 1,2-4,5]	0.193
Insertion Loss Margin (dB)	[Pair 1,2]	4.6
Frequency (MHz)	[Pair 1,2]	250.0
Limit (dB)	[Pair 1,2]	31.1

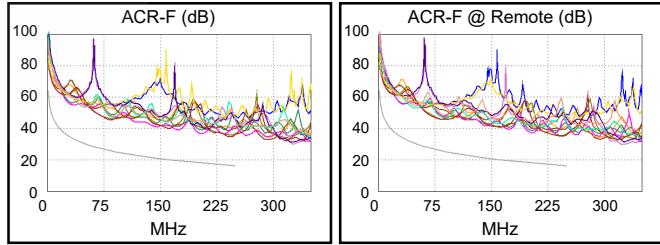


Worst Case Margin Worst Case Value

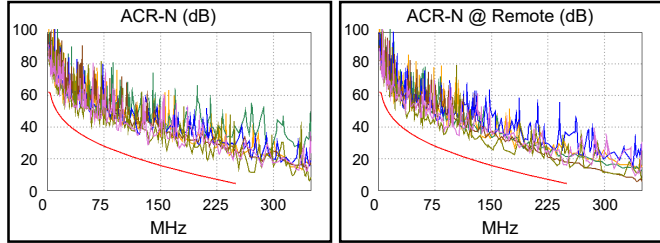
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	4,5-7,8	3,6-7,8	4,5-7,8
<b>NEXT (dB)</b>	6.9	4.8	6.9	4.8
Freq. (MHz)	212.5	248.0	212.5	248.0
Limit (dB)	36.5	35.4	36.5	35.4
Worst Pair	3,6	4,5	7,8	4,5
<b>PS NEXT (dB)</b>	8.8	4.6	9.8	4.6
Freq. (MHz)	212.5	248.0	246.5	248.0
Limit (dB)	33.9	32.8	32.8	32.8



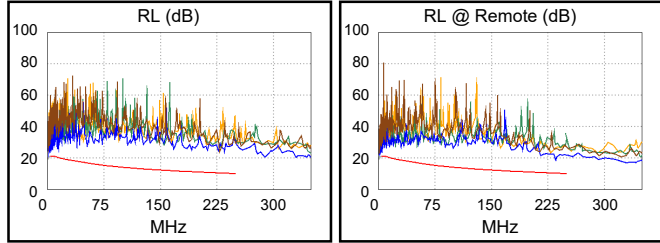
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	4,5-3,6	4,5-3,6	4,5-3,6
<b>ACR-F (dB)</b>	18.2	18.7	18.3	18.7
Freq. (MHz)	241.5	245.0	245.0	245.0
Limit (dB)	16.5	16.4	16.4	16.4
Worst Pair	1,2	1,2	3,6	3,6
<b>PS ACR-F (dB)</b>	19.6	19.8	20.2	20.2
Freq. (MHz)	1.4	1.1	245.0	242.0
Limit (dB)	58.4	60.2	13.4	13.5



N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	4,5-7,8	4,5-7,8
<b>ACR-N (dB)</b>	9.4	7.8	14.2	9.4
Freq. (MHz)	58.5	37.3	247.0	248.0
Limit (dB)	31.7	37.8	4.5	4.4
Worst Pair	7,8	7,8	7,8	4,5
<b>PS ACR-N (dB)</b>	10.9	9.7	14.3	11.2
Freq. (MHz)	58.3	87.3	246.5	248.0
Limit (dB)	29.3	23.0	2.0	1.8



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	7,8	4,5
<b>RL (dB)</b>	6.1	5.5	12.9	8.3
Freq. (MHz)	4.9	4.8	229.0	235.5
Limit (dB)	21.0	21.0	10.4	10.3



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		