

LP-CE002GRBUS LanPro Reliable® CAT 5e U/UTP Network Cable, CMX-rated gray color jacket with Bimetallic 55% Copper, 45% Aluminum Conductors, 1000 ft Easy-Pull Box.

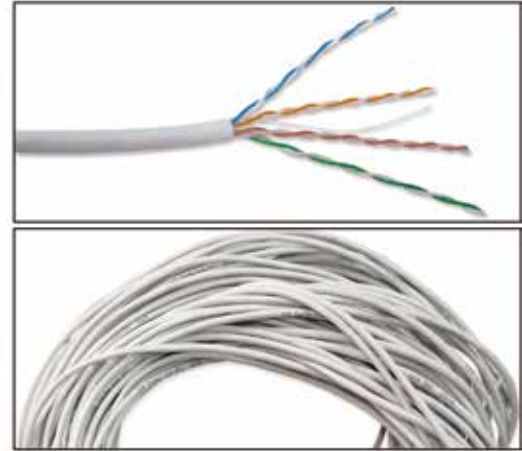
LPCE002GRBUS_SS_ENB01W

Features

- Reliable™ CAT 5e is a robust product.
- Specified and tested to well over 100 MHz.
- Excellent Headroom of 8.2 dB (NEXT 12-45)
- IEEE802.3af and IEEE802.3at PoE compliant for the entire 100m cable run.
- Lower bit error rate increases network efficiency and uptime.
- TIA/EIA 568B CAT 5E.
- Superior performance to traditional designs.
- 568-A and 568-B compatible.
- Exceeds ANSI/TIA-568B, ISO/IEC 11801.
- Unshielded U/UTP.
- Rip Cord included.
- Backward compatible with CAT 5 systems.
- Excellent price/performance ratio.
- Gray color jacket.
- Four (4) 24 AWG Twisted Pairs.
- Flame rating: CMX cover Jacket with a thickness of 0,50mm.
- Packaged in one convenient presentation: 1000 feet (305m) Easy-Pull Box.
- Weight: 10 Kg
- Operating voltage: <48 Vrms.
- RoHS Compliant.

Applications

- For structured UTP cable installations in indoors.
- Enables wiring of all kinds of network equipment based in the CAT 5e standard.
- Power distribution to remote data equipment based in the PoE technology.



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This cable is manufactured with Bimetallic technology, with the purpose of lowering cost without compromising performance and certification for most of the structured cabling applications in the market.

The technology of Bimetallic cables is based in the high frequency skin effect in which most of the current flows near the surface of the conductor and much less in the core. This is why the core is aluminum and the surface is copper.

Excellent handling characteristics for the installer, with a jacket made with CMX rated material, a very tough and abrasion resistant material.

With its AWG 24 wires, it gives excellent characteristics to the user.

A Copper/Aluminum ratio of 55/45, warrants the user excellent characteristics for the Price. The resistivity per meter, and other electric characteristics permit true certification as a CAT 5e UTP cable for 100 m runs.

An uniform structure along the length of the cable, by means of uniform wire twist machining in the fabrication process, reduces cross talk between pairs to values that ensure certification.

We have subjected this cable to open flame and taken a photo of the cable extinguishing features in **Figure 1**.



Figure 1

B Certification



Cable ID: TIA-0001

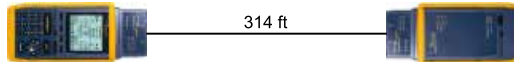
Date / Time: 07/10/2015 05:35:00 PM
 Headroom **8.2 dB (NEXT 12-45)**
 Test Limit: Cat 5e Chan
 Cable Type: Cat 5e UTP

Operator: LanPro America
 Software Version: V06.12
 NVP: 72.0%

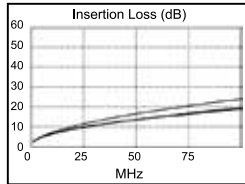
Test Summary: PASS

Model: OMNIScanner2
 Main S/N: 50D04C00038
 Remote S/N: 50E04C00019
 Main Adapter: PM06
 Remote Adapter: PM06

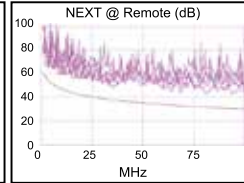
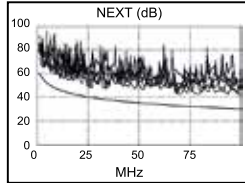
Wire Map	Expected	Actual
PASS	omni.: 12345678	12345678
	rem.: 12345678	12345678



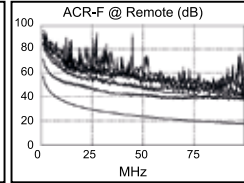
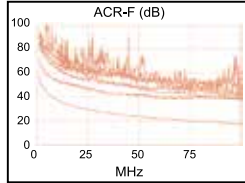
Length (ft), Limit 328	[Pair 36]	314
Prop. Delay (ns), Limit 555	[Pair 78]	452
Delay Skew (ns), Limit 50	[Pair 78]	8
Resistance (ohms)		N/A
Insertion Loss Margin (dB)	[Pair 78]	4.5
Frequency (MHz)	[Pair 78]	99.4
Limit (dB)	[Pair 78]	23.9



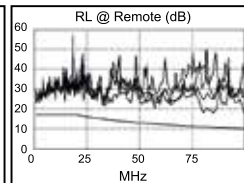
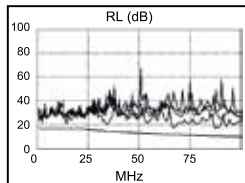
Worst Case Margin	Worst Case Value	
	MAIN	SR
PASS		
Worst Pair	12-45	12-36
NEXT (dB)	8.2	9.8
Freq. (MHz)	25.3	2.8
Limit (dB)	40.3	56.2
Worst Pair	12	45
PS NEXT (dB)	9.5	11.6
Freq. (MHz)	25.3	35.4
Limit (dB)	37.3	34.8



Worst Case Margin	Worst Case Value	
	MAIN	SR
PASS		
Worst Pair	12-36	36-12
ACR-F (dB)	14.3	14.2
Freq. (MHz)	1.0	1.0
Limit (dB)	57.7	57.7
Worst Pair	36	12
PS ACR-F (dB)	16.8	16.9
Freq. (MHz)	1.0	1.0
Limit (dB)	54.8	54.8



Worst Case Margin	Worst Case Value	
	MAIN	SR
PASS		
Worst Pair	78	12
RL (dB)	4.2	6.4
Freq. (MHz)	14.7	2.5
Limit (dB)	17.0	17.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T ATM-25 ATM-51
 ATM-155 100V-G-AnyLan TR-4
 TR-16 Active TR-16 Passive

LinkWare™ PC Version 9.3

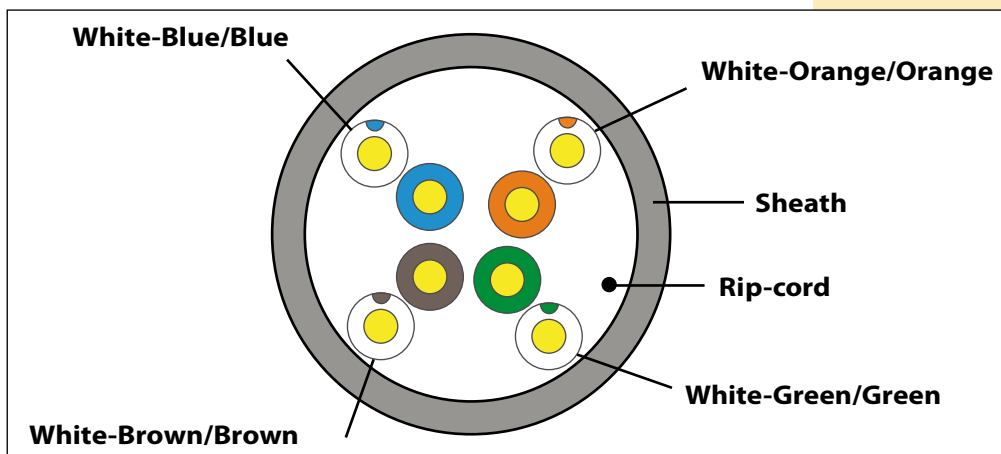
Project: Cat5e UTP BM2

bm2 certification.flw



Figure 2

C Cable Structure



D Technical Specifications

Standards	ISO/IEC11801, TIA/EIA 568B			
1.-Conductor	Material	55% Copper 45% Aluminum		
	AWG #	24		
	Nominal Diameter (mm)	0.5	Positive tolerance	+0.005
			Negative tolerance	-0.005
2.-Isolation layer	Material	HDPE (High Density Polyethylene)		
	Diameter (mm)	0.90±0.02		
	Elongation	Min. 300%		
	Color	A-Blue, White-Blue	B-Orange, White-Orange	
		C-Green, White-Green	D-Brown, White-Brown	
3.-Rip Cord	Yes			
4.-Shielding	U/UTP (Unshielded)			
5.-Jacket	Thickness	0.55±0.05 mm		
	External Diameter, (O.D.)	5.0±0.3 mm		
	Surface finish	Clean, Frap. Satiation		
	Material	CMX, RoHS		
	Color	Gray		
6.-Markings	Type height	3.0±0.3 mm		
	Color	Black		
7.-Packaging	Easy-Pull Box			
	Product length	305 ± 1.5 m		
	Carton Dimensions	35cmx35cmx20cm		
8.-Electrical properties @ 20°C	Isolation resistance @500 V	Min 5000 MOhm/Km		
	Zo (1.0 – 100.0 MHz)	100 ±15 Ohm		
	Propagation Velocity (% C)	68%		
	Delay Skew	≤45(ns/100m)		
	Maximum DC Resistance @ (20 °C)	13 Ohm/100 m		
	Delay [ns/100m] @100 MHz	570 ns		
	% Resistance unbalance between conductors(Max)	2.5 %		
	Maximum Operating RMS AC Voltage	±48		
	Peak Operating Voltage (DC)	±68		
	(DC) Test Voltage (1minute)	1.0 KV/ 1 minute		

E Certification Characteristics

Frequency (MHz)	RL (dB)	Phase ≥ Delay ns	ATT ≤ (dB/100m)	NEXT ≥(dB/100m)	PSNEXT ≥ (dB/100m)	ACR-F ≥ (dB/100m)	PS ACR-F≥ (dB/100m)
1	23.0	570.00	1.8	74.4	73.2	67.8	66.8
4	27.2	552.00	4.3	64.4	62.1	57.9	56.8
8	26.2	546.73	6.2	67.6	65.6	51.4	49.9
10	27.0	545.73	6.8	61.3	59.4	47.6	46.1
16	25.9	545.38	8.5	55.9	54.7	46.0	44.8
20	24.5	542.05	9.4	55.8	54.7	43.7	42.3
25	24.8	541.20	10.4	55.5	51.5	42.4	38.7
31.25	19.1	540.44	11.5	53.8	50.1	41.2	38.3
62.5	26.8	538.55	16.1	47.4	45.0	31.5	28.8
100	19.3	537.60	20.9	47.3	45.2	28.3	26.9

F How to order

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