

Technical Specifications

Product Line: LLINX-HD

Description

4 pair 24 AWG solid, twisted, and dual shielded cable NEC type CMR and CEC type CMR FT4. Factory verified to ANSI/TIA-568C Category 5e performance. Product manufactured compliant to the requirements of UL444 for installations and applications in accordance with NEC articles 725 and 800.

Conductor

24 AWG
Solid annealed bare copper conductors
Diameter: 0.0201" | 0.51mm

Electrical

DC resistance: $\leq 28.6 \Omega / 1000'$ | $93.8 \Omega/\text{KM}$
DCR Unbalance: $\leq 5.0\%$
Capacitance: 17.0 pF/FT | 56.0 pF/M
Pair to ground capacitance Unbalance: $\leq 330 \text{ pF}/100\text{M}$
Impedance: $100 \pm 15 \Omega$
Propagation Delay (Skew): 45ns/100m MAX
Velocity of Propagation: 68%
Voltage rating: 300V
Maximum current: 1.4A@25°C

Insulation

High density polyethylene
Wall thickness: 0.009" | 0.23mm
Diameter: 0.038" | 0.97mm

Regulatory

ANSI/TIA-568C Category 5e
NEC: CMR 75°C
CEC: CMG FT4 60°C
EU RoHS 2002/95/EC Compliant

Color Code

Pair 1: Orange, White/orange stripe
Pair 2: Blue, White/blue stripe
Pair 3: Green, White/green stripe
Pair 4: Brown, White/brown stripe

Packages

Reel: 1000' | 305M
Weight: 34 Lbs/1000' | 50 Kg/KM

Assembly

Pairs twisted in varying lay lengths with co-extruded like striped conductor
4 twisted pairs cabled on a common axis

Installation

Pull Tension: 34 Lbs | 152 N
Bend radius: 2.44" | 62mm unloaded
Bend radius: 4.88" | 124mm loaded

Construct

100% Polyester tape binder
Ripcord under jacket

Applications

LibertyLinx® universal system control cable
SF/UTP Category 5E cable specific to HDBaseT requirements
General purpose HDBaseT signal infrastructure
General purpose control and communication cable

Shield

100% aluminum/polyester shield with foil out
40% 16x4/38 AWG tinned copper braid shield
26 AWG solid tinned copper drain

Performance

LAN: 300 feet
HDBaseT: 328 feet per standard

Jacket

Polyvinyl chloride
Colors: Blue
Wall thickness: 0.023" | 0.58mm
Diameter: 0.244" | 6.20mm

Final Outside Diameter (inches)

0.244

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Specification Revision Date:

September 2, 2013

Category 5e Performance Chart

FREQ (MHz)	Insertion Loss (dB/100m)		NEXT (dB)		PSNEXT (dB)		ACR (dB/100m)		PSACR (dB/100m)		ELFEXT (dB/100m)		PSELFEXT (dB/100m)		RL (dB)	
	568 Max	Typical	568 Min	Typical	568 Min	Typical	568 Min	Typical	568 Min	Typical	568 Min	Typical	568 Min	Typical	568 Min	Typical
1.0	2.0	1.9	65.3	94.4	62.3	86.9	63.3	92.6	60.3	85.0	63.8	98.7	60.8	91.5	20.0	26.4
4.0	4.1	3.7	56.3	78.7	53.3	71.5	52.2	75.0	49.2	67.8	51.8	89.4	48.8	80.9	23.0	31.5
8.0	5.8	5.2	51.8	75.2	48.8	68.5	46.0	69.9	43.0	63.2	45.7	82.1	42.7	74.4	24.5	34.7
10.0	6.5	5.9	50.3	73.9	47.3	66.9	43.8	68.0	40.8	61.1	43.8	82.0	40.8	73.4	25.0	39.3
16.0	8.3	7.5	47.2	68.8	44.2	60.5	39.0	61.4	36.0	53.0	39.7	76.0	36.7	68.6	25.0	40.0
20.0	9.3	8.4	45.8	69.2	42.8	62.6	36.5	60.9	33.5	54.2	37.8	78.5	34.8	66.8	25.0	39.7
25.0	10.4	9.4	44.3	66.8	41.3	59.8	33.9	57.4	30.9	50.4	35.8	72.6	32.8	64.0	24.3	39.3
31.25	11.7	10.5	42.9	64.5	39.9	58.7	31.2	54.0	28.2	48.2	33.9	69.7	30.9	62.6	23.6	43.1
62.5	17.0	14.9	38.4	65.4	35.4	59.7	21.4	50.5	18.4	44.7	27.9	62.3	24.9	54.0	21.5	44.3
100.0	22.0	19.0	35.3	57.8	32.3	52.4	13.3	38.8	10.3	33.5	23.8	56.3	20.8	48.0	20.1	36.2
155.0		23.7		59.5		50.9		35.8		27.2		54.7		45.7		40.7
200.0		27.1		57.1		51.4		30.1		24.3		49.2		42.0		38.2
250.0		30.4		51.4		45.5		21.0		15.1		46.8		40.7		40.0
300.0		33.3		50.0		41.4		16.7		8.1		46.3		39.5		32.2
350.0		36.2		50.1		43.6		13.9		7.4		43.9		35.5		29.7