

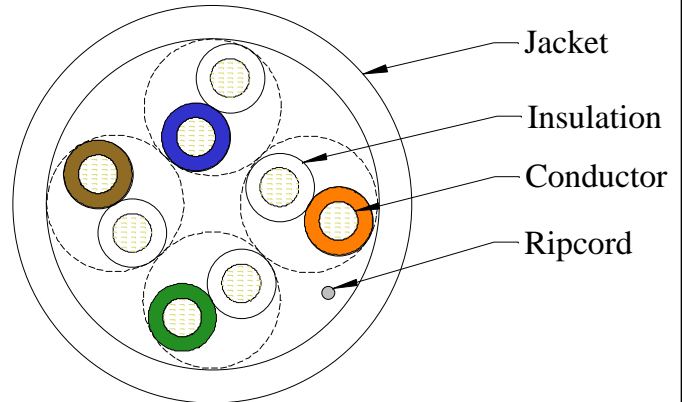
**MASTER SPECIFICATION**  
**MegaLAN® CABLE**  
**4 PAIR #24 AWG UTP CAT 5E NON-PLENUM**

Design Number:  
**LT37935**

**DESCRIPTION**

UNSHIELDED TWISTED PAIR (UTP) MEGALAN CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C. THE CABLE EXCEEDS CATEGORY 5e ELECTRICAL CHARACTERISTICS AND IS TESTED TO 400 MHz. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A RIPCORD, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL OR BOX.

THE CABLE IS RISER (NON-PLENUM) RATED FOR USE AS A VERTICAL RUN IN A SHAFT AND FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS ETL (USA) & cETL (CANADA) LISTED FOR THIS APPLICATION BY PASSING THE UL 1666 RISER CABLE FLAMMABILITY TEST. THE CABLE ALSO PASSES THE CSA FT4 VERTICAL FLAME TEST - CABLES IN CABLE TROUGH FROM CLAUSE 4.11.4 OF CSA C22.2 NO. 0.3.



**SUPPORTED APPLICATIONS**

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps & 1.2 Gbps.

**CONSTRUCTION**

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
 INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**COLOR CODE:** SEE TABLE 1

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**JACKET:** NO LEAD FLAME RETARDANT THERMOPLASTIC  
 JACKET COLOR: SEE TABLE 2  
 NOMINAL OD: .200" (5.08 mm)

**LISTING:** C(UL)US OR C(ETL)US TYPE CMR  
 UL OR ETL VERIFIED CAT 5e

**PHYSICAL CHARACTERISTICS**

**CABLE WEIGHT w/reel:** 20 lbs/1000ft (30 kg/km)

**BENDING RADIUS:** 1" (25.4 mm) MIN (4 x CABLE OD)

**PULLING TENSION:** 25 lbf (110 N) MAX

**OPERATING TEMP.:** -20°C to +60°C (-4°F to +140°F)

**STORAGE TEMP.:** -20°C to +75°C (-4°F to +167°F)

**\*INSTALLATION TEMP.:** 0°C to +60°C (+32°F to +140°F)

**TABLE 1**

PAIR NUMBER	PAIR COLOR CODE	
1	WHITE-BLUE	BLUE
2	WHITE-ORANGE	ORANGE
3	WHITE-GREEN	GREEN
4	WHITE-BROWN	BROWN

**TABLE 2**

MOHAWK PART NUMBER	MOHAWK DESIGN NUMBER	JACKET COLOR
M55989	LT32084	WHITE
M56167	LT33102	BLUE
M56094	LT32716	PINK
M56095	LT32717	YELLOW
M56746	LT37609	GRAY
M56165	LT33100	GREEN
M56670	LT37062	RED
M56954	LT39360	ORANGE
M57129	LT40952	BLACK
M57048	LT40196	VIOLET
M57822	LT45231	DK VIOLET
M58365	LT50845	BROWN
M58748	LT54869	LM. GREEN

\* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.



**MOHAWK**  
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Rev	Description	Date	Init.
AY	UPDATE DIAMETER & ELECTRICALS; ADD SWEEP	01/06/14	JS
AZ	UPDATE CAP UNBALANCE, ACR, PS-ACR	03/25/14	JS
BA	UPDATE ELECTRICALS	12/10/15	JS
BB	UPDATE WEIGHT & FOOTER	01/26/17	JS
Date: 04/17/96		Page 1 of 2	
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**ELECTRICAL CHARACTERISTICS** (REF TABLE 3)

<b>STANDARDS:</b>	EXCEEDS ANSI/TIA-568-C.2 CAT 5e AND ISO/IEC 11801:2002 CAT 5 HORIZONTAL CABLE	<b>INSERTION LOSS:</b>	$1.967\sqrt{f} + .023f + \frac{.050}{\sqrt{f}}$ dB/100m MAX
<b>CONDUCTOR DCR:</b>	9.38 $\Omega$ /100m (28.6 $\Omega$ /Mft) MAX	<b>NEAR END CROSSTALK (NEXT):</b>	40.3 - 15 $\log_{10}(f/100)$ dB/100m MIN
<b>DCR UNBALANCE:</b>	5% MAX	<b>POWER SUM NEAR END CROSSTALK (PS-NEXT):</b>	38.3 - 15 $\log_{10}(f/100)$ dB/100m MIN
<b>MUTUAL CAPACITANCE:</b>	46 pF/m NOM	<b>EQUAL LEVEL FAR END CROSSTALK (ELFEXT):</b>	27.8 - 20 $\log_{10}(f/100)$ dB/100m MIN
<b>CAPACITANCE UNBALANCE PAIR/GROUND:</b>	160 pF/100m MAX	<b>POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):</b>	24.8 - 20 $\log_{10}(f/100)$ dB/100m MIN
<b>CHARACTERISTIC IMPEDANCE:</b>	100 $\Omega \pm 15\%$ (1-200 MHz)	<b>PROPAGATION DELAY:</b>	534 + 36/ $\sqrt{f}$ ns/100m MAX
<b>INPUT IMPEDANCE:</b>	100 $\Omega \pm 15\%$ (1-100 MHz) 100 $\Omega \pm 22\%$ (>100-200 MHz)	<b>DELTA DELAY (SKEW):</b>	45 ns/100m MAX
<b>RETURN LOSS (RL):</b>	20 + 5 $\log_{10}(f)$ dB MIN (1-10 MHz) 25 dB MIN (>10-20 MHz) 25 - 7 $\log_{10}(f/20)$ dB MIN (>20 MHz)	<b>NOMINAL VELOCITY OF PROPAGATION (NVP):</b>	68%

WHERE  $f$  = FREQUENCY IN MHz from .772 to 200 MHz, except for ELFEXT and PS-ELFEXT from 1 to 200 MHz.

**TABLE 3**

**REFERENCE ELECTRICAL CHARACTERISTICS**

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	(dB/100m)	(dB/mft)	(dB/mft)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB)
.772	1.6	1.8	5.5	82	72.0	70.2	75	70.0	68.2	-	-	-
1.0	1.8	2.0	6.3	80	70.3	68.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.8	4.1	13	70	61.3	57.2	63	59.3	55.2	55.8	52.8	23.0
8.0	5.4	5.8	18	66	56.8	51.0	59	54.8	49.0	49.7	46.7	24.5
10.0	6.0	6.5	20	64	55.3	48.8	58	53.3	46.8	47.8	44.8	25.0
16.0	7.6	8.2	25	62	52.2	44.0	56	50.2	42.0	43.7	40.7	25.0
20.0	8.6	9.3	28	60	50.8	41.5	54	48.8	39.5	41.8	38.8	25.0
25.0	9.7	10.4	32	59	49.3	38.9	52	47.3	36.9	39.8	36.8	24.3
31.25	10.9	11.7	36	58	47.9	36.2	51	45.9	34.2	37.9	34.9	23.6
62.5	15.8	17.0	52	54	43.4	26.4	47	41.4	24.4	31.9	28.9	21.5
100.0	20.5	22.0	67	50	40.3	18.3	43	38.3	16.3	27.8	24.8	20.1
155.0	26.2	28.1	86	48	37.4	9.4	41	35.4	7.4	24.0	21.0	18.8
200.0	30.2	32.4	99	46	35.8	3.4	40	33.8	1.4	21.8	18.8	18.0
250.0	34.8	36.9	112	45	34.3	0.9	38	32.3	-	19.8	16.8	17.3
300.0	38.5	41.0	125	44	33.1	-	37	31.1	-	18.3	15.3	16.8
350.0	42.0	44.9	137	43	32.1	-	36	30.1	-	16.9	13.9	16.3
400.0	45.2	48.5	145	42	31.3	-	35	29.3	-	-	-	15.9

SWEEP TESTED TO 400 MHz; VALUES ABOVE 200 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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