

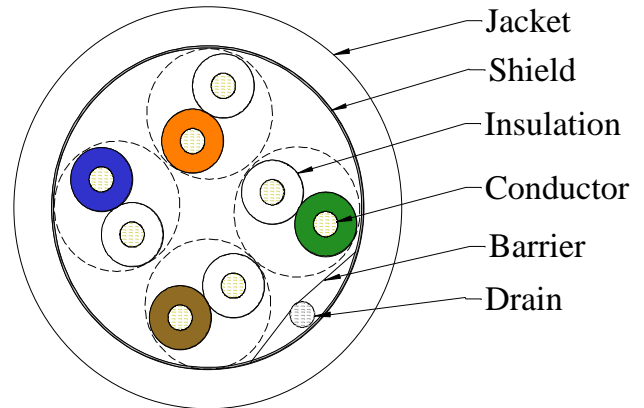
MASTER SPECIFICATION
MegaLAN® F/UTP CABLE
4 PAIR #24 AWG CAT 5E NON-PLENUM

Design Number:
LT42471

DESCRIPTION

SCREENED TWISTED PAIR (F/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 AN OVERALL FOIL SHIELD AND DRAIN, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0.

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 UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING 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

PAIR ASSEMBLY: 2 PRIMARIES TWISTED IN VARIED LAYS

CABLE ASSEMBLY: 4 PAIRS CABLED TOGETHER

COLOR CODE: SEE TABLE 1

BARRIER: OVERALL POLYESTER TAPE, 25% OVERLAP

DRAIN: #24 AWG SOLID TINNED COPPER

SCREEN (SHIELD): OVERALL ALUMINUM/POLYESTER TAPE, ALUM SIDE FACING IN, 25% OVERLAP, 100% COVERAGE

JACKET: NO LEAD FLAME RETARDANT THERMOPLASTIC
 NOMINAL OD: .260" (6.60 mm)

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

PHYSICAL CHARACTERISTICS

CABLE WEIGHT w/reel: 32 lbs/1000ft (48 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
M55987	LT32082	WHITE
M57370	LT42486	BLUE
M57371	LT42487	PINK
M57372	LT42488	YELLOW
M57373	LT42489	GRAY
M57374	LT42490	GREEN
M57375	LT42491	RED
M57376	LT42492	ORANGE
M57377	LT42493	BLACK
M57378	LT42494	VIOLET

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



MOHAWK
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Rev	Description	Date	Init.
S	UPDATE ELECTRICALS	03/16/10	JS
T	UPD HDR/FTR, DESC, STDS, ELECS; ADD SWEEP	05/16/14	JS
U	UPDATE DIAMETER & TABLE 3	01/28/16	JS
V	UPDATE FOOTER	02/20/17	JS
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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS:	EXCEEDS ANSI/TIA-568-C.2 CAT 5e & ISO/IEC 11801:2002 CAT 5 HORIZONTAL CABLE	INSERTION LOSS:	$1.967\sqrt{f} + .023f + \frac{.050}{\sqrt{f}}$ dB/100m MAX
CONDUCTOR DCR:	8.9 Ω /100m (27.1 Ω /Mft) MAX	NEAR END CROSSTALK (NEXT):	40.3 - 15 log ₁₀ (f/100) dB/100m MIN
DCR UNBALANCE:	3% MAX	POWER SUM NEAR END CROSSTALK (PS-NEXT):	38.3 - 15 log ₁₀ (f/100) dB/100m MIN
MUTUAL CAPACITANCE:	46 pF/m NOM	EQUAL LEVEL FAR END CROSSTALK (ELFEXT):	27.8 - 20 log ₁₀ (f/100) dB/100m MIN
CAPACITANCE UNBALANCE PAIR/GROUND:	66 pF/100m MAX	POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):	24.8 - 20 log ₁₀ (f/100) dB/100m MIN
CHARACTERISTIC IMPEDANCE:	100 Ω \pm 15% (1-400 MHz)	PROPAGATION DELAY:	534 + 36/ \sqrt{f} ns/100m MAX
INPUT IMPEDANCE:	100 Ω \pm 15% (1-100 MHz) 100 Ω \pm 22% (>100-200 MHz)	DELTA DELAY (SKEW):	30 ns/100m MAX
RETURN LOSS (RL):	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)	NOMINAL VELOCITY OF PROPAGATION (NVP):	68%

WHERE f = FREQUENCY IN MHz from .772 to 250 MHz.

TABLE 3

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	82	72.0	70.2	75	70.0	68.2	-	-	-
1.0	1.8	2.0	80	70.3	68.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.8	4.1	70	61.3	57.2	63	59.3	55.2	55.8	52.8	23.0
8.0	5.4	5.8	66	56.8	51.0	59	54.8	49.0	49.7	46.7	24.5
10.0	6.0	6.5	64	55.3	48.8	58	53.3	46.8	47.8	44.8	25.0
16.0	7.6	8.2	62	52.2	44.0	56	50.2	42.0	43.7	40.7	25.0
20.0	8.6	9.3	60	50.8	41.5	54	48.8	39.5	41.8	38.8	25.0
25.0	9.7	10.4	59	49.3	38.9	52	47.3	36.9	39.8	36.8	24.3
31.25	10.9	11.7	58	47.9	36.2	51	45.9	34.2	37.9	34.9	23.6
62.5	15.8	17.0	54	43.4	26.4	47	41.4	24.4	31.9	28.9	21.5
100.0	20.5	22.0	50	40.3	18.3	43	38.3	16.3	27.8	24.8	20.1
155.0	26.2	28.1	48	37.4	9.4	41	35.4	7.4	24.0	21.0	18.8
200.0	30.2	32.4	46	35.8	3.4	40	33.8	1.4	21.8	18.8	18.0
250.0	34.8	36.9	45	34.3	-	38	32.3	-	19.8	16.8	17.3
300.0	38.5	41.0	44	33.1	-	37	31.1	-	18.3	15.3	16.8
350.0	42.0	44.9	43	32.1	-	36	30.1	-	16.9	13.9	16.3
400.0	45.2	48.5	42	31.3	-	35	29.3	-	15.8	12.8	15.9

SWEEP TESTED TO 400 MHz; VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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Mohawk reserves the right to change any specification in the interest of product enhancement.
This cable complies with the EU-RoHS directive 2002/95/EC (restrictions on hazardous substances) regulations.