

MASTER SPECIFICATION
GigaLAN 10[®] CABLE
4 PAIR #23 AWG UTP CAT 6A NON-PLENUM

Design Number:
LT56560

DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) GigaLAN 10 CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C AND ISO/IEC 11801 ed 2.2 (2011) CLASS EA. THE CABLE EXCEEDS ANSI/TIA-568-C.2 AND ISO/IEC 11801 ed 2.2 (2011) CATEGORY 6A ELECTRICAL CHARACTERISTICS. THIS PATENTED CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A FLEXWEB PLUS(TM) CORE SEPARATOR, WITH A RIPCORD, UNDER A JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL. SEE BELDEN.COM/P FOR ANY/ALL APPLICABLE PATENT DETAILS.

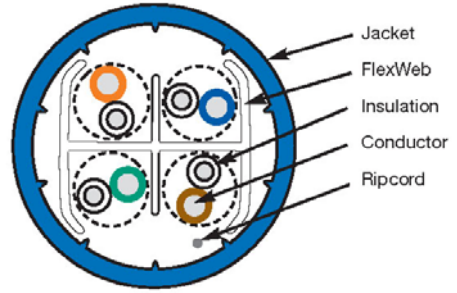
THE CABLE IS RISER (NON-PLENUM) RATED FOR USE AS A VERTICAL RUN IN A SHAFT AND FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING THE UL 1666 RISER CABLE FLAMMABILITY 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 802.3an 10GBASE-T (10 GIGABIT ETHERNET), 1000BASE-T (GIGABIT ETHERNET), 100BASE-T (FAST ETHERNET), AND IEEE 802.3 10BASE-T (ETHERNET), IEEE 802.3af POE, IEEE 802.3at-2009 POE+, ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, 550 MHz BROADBAND VIDEO AND ATM UP TO 4.8 Gbps.

CONSTRUCTION

- PRIMARIES:** COND: 23 AWG (.6 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 WITH A FLEXWEB CORE SEPARATOR
- JACKET:** NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: .309" (7.85 mm)
- LISTINGS:** C(UL)US CMR; (UL) CMR-LP (0.5A) OR CL3R-LP (0.5A)
VERIFIED CAT 6A



(Not to Scale)

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
M58651	LT54116	WHITE
M58650	LT54115	BLUE
M58688	LT54299	PINK
M58652	LT54117	YELLOW
M58653	LT54118	GRAY
M58689	LT54300	GREEN
M58690	LT54301	RED
M58691	LT54302	ORANGE
M58692	LT54303	BLACK
M58693	LT54304	VIOLET

PHYSICAL CHARACTERISTICS

- CABLE WEIGHT w/reel:** 40 lbs/1000ft (60 kg/km)
- BENDING RADIUS:** 1.25" (32 mm) MIN (4 x CABLE OD)
- PULLING TENSION:** 25 lbf (110 N) MAX
- OPERATING TEMP.:** -20°C to +75°C (-4°F to +167°F)
- STORAGE TEMP.:** -20°C to +75°C (-4°F to +167°F)
- *INSTALLATION TEMP.:** +5°C to +50°C (+41°F to +122°F)

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



MOHAWK
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Rev	Description	Date	Init.
K	UPDATE PATENT INFO	10/14/15	JS
L	UPDATE TABLE 3	01/08/16	JS
M	UPDATE FOOTER	02/09/17	JS
N	UPD DESC, APPS, LISTINGS, TEMPS, STDS	08/31/17	JS
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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.

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ELECTRICAL CHARACTERISTICS (REF TABLE 3)
STANDARDS: EXCEEDS ANSI/TIA-568-C.2 CAT 6A,
 ICEA S-116-732-2013 CAT 6A,
 ISO/IEC 11801 ed 2.2 (2011) CLASS EA &
 IEC 61156-5 ed 2.0 HORIZONTAL CABLE

CONDUCTOR DCR: 9.38 Ω/100m (28.6 Ω/Mft) MAX

DCR UNBALANCE: 4% MAX

MUTUAL CAPACITANCE: 46 pF/m NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 33 pF/100m MAX

CHARACTERISTIC IMPEDANCE: 100 Ω ± 7% (10-500 MHz)

INPUT IMPEDANCE: 100 Ω ± 10% (1-100 MHz)
 100 Ω ± 15% (>100-350 MHz)
 100 Ω ± 22% (>350 MHz)

RETURN LOSS (RL): 20 + 7 log₁₀(f) dB MIN (1-10 MHz)
 27 dB MIN (>10-20 MHz)
 27 - 7 log₁₀(f/20) dB MIN (>20 MHz)

PROPAGATION DELAY: 534+36 / √f ns/100m MAX

PROPAGATION DELAY SKEW: 45 ns/100m MAX

INSERTION LOSS: $1.80\sqrt{f} + .010f + .20/\sqrt{f}$ dB/100m MAX

NEAR END CROSSTALK (NEXT): 45.3 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS NEXT): 43.3 - 15 log₁₀(f/100) dB/100m MIN

ATTENUATION TO CROSSTALK RATIO FAR END (ACRF): 30.8 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO FAR END (PS ACRF): 28.8 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM ALIEN NEAR END CROSSTALK (PS ANEXT): 62.5 - 15 log₁₀(f/100) dB/100m MIN
 67 dB MIN

POWER SUM ALIEN ATTENUATION TO CROSSTALK RATIO FAR END (PS AACRF): 38.2 - 20 log₁₀(f/100) dB/100m MIN
 67 dB MIN

NOMINAL VELOCITY OF PROPAGATION (NVP): 68%

NOTE: Attenuation To Crosstalk Ratio Far End (ACRF) was previously referred to as Equal Level Far End Crosstalk (ELFEXT).
 WHERE f = Frequency In MHz from 1 to 500 MHz.

TABLE 3
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)	NEXT (dB/100m)	PS NEXT (dB/100m)	ACRF (dB/100m)	PS ACRF (dB/100m)	RETURN LOSS (dB)	PROP. DELAY (ns/100m)	ALIEN CROSSTALK	
								PS ANEXT (dB/100m)	PS AACRF (dB/100m)
	max	min	min	min	min	min	max	min	min
.772	1.8	77.0	75.0	-	-	-	-	-	-
1.0	2.0	75.3	73.3	70.8	68.8	20.0	570.0	67.0	67.0
4.0	3.7	66.3	64.3	58.8	56.8	24.2	552.0	67.0	66.2
8.0	5.2	61.8	59.8	52.7	50.7	26.3	546.7	67.0	60.1
10.0	5.9	60.3	58.3	50.8	48.8	27.0	545.4	67.0	58.2
16.0	7.4	57.2	55.2	46.7	44.7	27.0	543.0	67.0	54.1
20.0	8.3	55.8	53.8	44.8	42.8	27.0	542.0	67.0	52.2
25.0	9.3	54.3	52.3	42.8	40.8	26.3	541.2	67.0	50.2
31.25	10.4	52.9	50.9	40.9	38.9	25.6	540.4	67.0	48.3
62.5	14.9	48.4	46.4	34.9	32.9	23.5	538.6	65.6	42.3
100.0	19.0	45.3	43.3	30.8	28.8	22.1	537.6	62.5	38.2
155.0	24.0	42.4	40.4	27.0	25.0	20.8	536.9	59.6	34.4
200.0	27.5	40.8	38.8	24.8	22.8	20.0	536.5	58.0	32.2
250.0	31.0	39.3	37.3	22.8	20.8	19.3	536.3	56.5	30.2
300.0	34.2	38.1	36.1	21.3	19.3	18.8	536.1	55.3	28.7
350.0	37.2	37.1	35.1	19.9	17.9	18.3	535.9	54.3	27.3
400.0	40.0	36.3	34.3	18.8	16.8	17.9	535.8	53.5	26.2
500.0	45.3	34.8	32.8	16.8	14.8	17.2	535.6	52.0	24.2
550.0	47.7	34.2	32.2	16.0	14.0	16.9	535.5	51.4	23.4
600.0	50.1	33.6	31.6	15.2	13.2	16.7	535.5	50.8	22.6
650.0	52.4	33.1	31.1	14.5	12.5	16.4	535.4	50.3	21.9
750.0	56.8	32.2	30.2	13.3	11.3	16.0	535.3	49.4	20.7

SWEEP TESTED TO 750 MHz; VALUES ABOVE 500 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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