

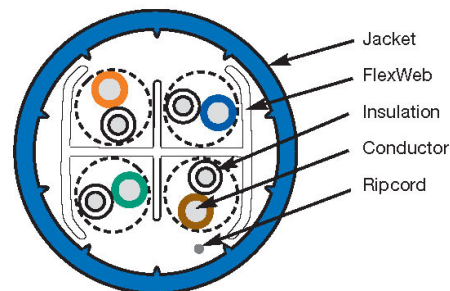
MASTER SPECIFICATION
GigaLAN 10[®] CABLE
4 PAIR #23 AWG UTP CATEGORY 6A PLENUM

Design Number:
HT55984

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 PLENUM RATED FOR USE IN AIR HANDLING DUCTS AND SPACES IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING NFPA 262 (FT6 OR PREVIOUSLY UL 910 STEINER TUNNEL) TEST.



(Not to Scale)

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. IEEE 802.3bt Type 1, Type 2, Type 3, Type 4.

CONSTRUCTION

PRIMARIES: COND: 23 AWG (.6 mm) SOLID BARE COPPER
INSULATION: FEP ON ALL 4 PAIRS

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 PLENUM RATED THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: .309" (7.85 mm)

LISTINGS: C(UL)US CMP, (UL) CMP-LP (0.6 A) OR CL3P-LP (0.6A)
VERIFIED CAT 6A

TABLE 1

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

TABLE 2

MOHAWK PART NUMBER	MOHAWK DESIGN NUMBER	JACKET COLOR
M58647	HT53931	WHITE
M58646	HT53930	BLUE
M58682	HT54293	PINK
M58648	HT53932	YELLOW
M58649	HT54113	GRAY
M58683	HT54294	GREEN
M58684	HT54295	RED
M58685	HT54296	ORANGE
M58686	HT54297	BLACK
M58687	HT54298	VIOLET

PHYSICAL CHARACTERISTICS

CABLE WEIGHT w/reel: 47 lbs/1000ft (70 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. DO NOT INSTALL BELOW +5°C (+41°F).



MOHAWK
Cabling Excellence for Open Architecture

(978) 537-9961 Fax: (978) 537-4358
(800) 422-9961 www.mohawk-cable.com

This document is the property of Mohawk. The information contained herein is considered proprietary and not to be reproduced by any means without written consent of Mohawk.

Rev	Description	Date	Init.
N	UPDATE LISTINGS	08/29/16	JS
O	UPDATE FOOTER	02/08/17	JS
P	UPD DESC, APPS, LISTINGS, TEMPS, STDS	08/21/17	JS
Q	UPD ADD 802.3BT TYPES 1-4	10/16/19	CC
Date: 07/30/07		Page 1 of 2	
Orig:		Review:	
		Design Number: HT55984	

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.

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

Design Number:
HT55984

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 $\Omega \pm 7\%$ (10-500 MHz)

INPUT IMPEDANCE: 100 $\Omega \pm 10\%$ (1-100 MHz)
 100 $\Omega \pm 15\%$ (>100-350 MHz)
 100 $\Omega \pm 22\%$ (>350 MHz)

RETURN LOSS (RL): 20 + 7 $\log_{10}(f)$ dB MIN (1-10 MHz)
 27 dB MIN (>10-20 MHz)
 27 - 7 $\log_{10}(f/20)$ dB MIN (>20 MHz)

PROPAGATION DELAY: 534+36 / $\sqrt{f}$ 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 $\log_{10}(f/100)$ dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS NEXT): 43.3 - 15 $\log_{10}(f/100)$ dB/100m MIN

ATTENUATION TO CROSSTALK RATIO FAR END (ACRF): 30.8 - 20 $\log_{10}(f/100)$ dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO FAR END (PS ACRF): 28.8 - 20 $\log_{10}(f/100)$ dB/100m MIN

POWER SUM ALIEN NEAR END CROSSTALK (PS ANEXT): 62.5 - 15 $\log_{10}(f/100)$ dB/100m MIN
 67 dB MIN

POWER SUM ALIEN ATTENUATION TO CROSSTALK RATIO FAR END (PS AACRF): 38.2 - 20 $\log_{10}(f/100)$ dB/100m MIN
 67 dB MIN

NOMINAL VELOCITY OF PROPAGATION (NVP): 72%

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.



MOHAWK
 Cabling Excellence for Open Architecture

(978) 537-9961 Fax: (978) 537-4358
 (800) 422-9961 www.mohawk-cable.com

This document is the property of Mohawk. The information contained herein is considered proprietary and not to be reproduced by any means without written consent of Mohawk.

Rev	Description	Date	Init.
N	UPDATE LISTINGS	08/29/16	JS
O	UPDATE FOOTER	02/08/17	JS
P	UPD DESC, APPS, LISTINGS, TEMPS, STDS	08/21/17	JS
Q	UPD ADD 802.3BT TYPES 1-4	10/16/19	CC
Date: 07/30/07		Page 2 of 2	
Orig:		Review:	
			Design Number: HT55984