

Category 6E UTP GigaLAN[®]

Tested to 750 MHz

GigaLAN is the one of the highest performance unshielded twisted pair (UTP) cables available today. The FlexWeb[®] construction isolates the pairs throughout the length of the cable, while providing an installer-friendly cable.

The unique GigaLAN FlexWeb[®] construction isolates the cable pairs and enhances the pair-to-pair balance for superior crosstalk, LCL and TCL performance. Compact cable design meets the diameter requirements specified in TIA/EIA-568-B, providing flexibility and ease of installation. Electrical performance is ETL verified to TIA/EIA-568-B.2-1 Category 6.

- **Tested to 750 MHz** – with verified stability.
- **25 Year Warranty***
- **34% increase in power due to lower insertion loss characteristics at 100 MHz and greater than 50% at 250 MHz than Category 6.**
- **7 dB Minimum** – Improvement in Near End Crosstalk vs. Category 6 NEXT.
- **33 dB Minimum ACR @ 100 MHz and positive ACR to 460 MHz.**
- **Application** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, IEEE 802.3af Power Over Ethernet for VoIP, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2, 2.4 and 4.8 Gbps.
- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA-568-B.2-1 and ISO/IEC 11801 Category 6 requirements: including NEXT and ELFEXT (Pair-to-Pair and Power Sum), Insertion Loss, Return Loss, and Delay Skew.
- This cable and/or its manufacture are covered by US Patent Nos. 6,596,944, 6,074,503 and 5,424,491.

* Warranty available with MAC and System MATE[®] programs.

Electrical Characteristics

STANDARDS:

EXCEEDS TIA/EIA-568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

CONDUCTOR DCR:

6.6 Ω /100m (20.0 Ω /Mft) MAX

DCR UNBALANCE:

3% MAX

MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

CAPACITANCE UNBALANCE

PAIR/GROUND:
33 pF/100m (100 pF/Mft) MAX

CHARACTERISTIC IMPEDANCE:

100 Ω \pm 7% (10-550 MHz)

INPUT IMPEDANCE:

100 Ω \pm 12% (1-100 MHz)
100 Ω \pm 15% (> 100-350 MHz)
100 Ω \pm 22% (> 350 MHz)

PROPAGATION DELAY:

506 + 36/ \sqrt{f} ns/100m MAX

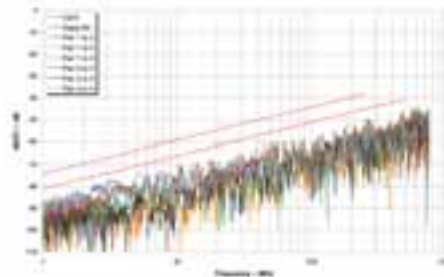
DELTA DELAY (SKEW):

45 ns/100m MAX (10-500 MHz)

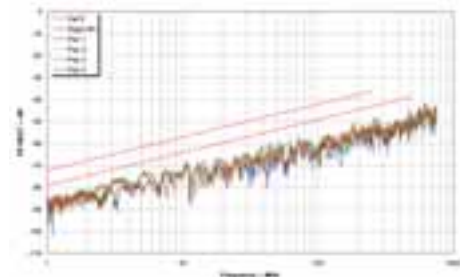
NOMINAL VELOCITY OF PROPAGATION (NVP):

PLENUM 72%
NON-PLENUM 68%

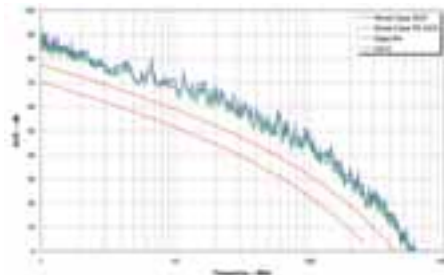
Near End Crosstalk (NEXT)



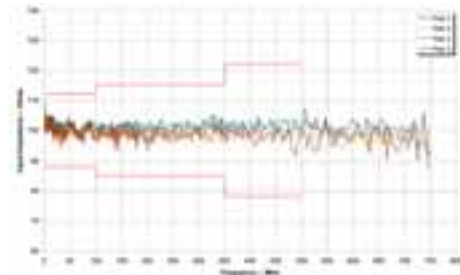
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



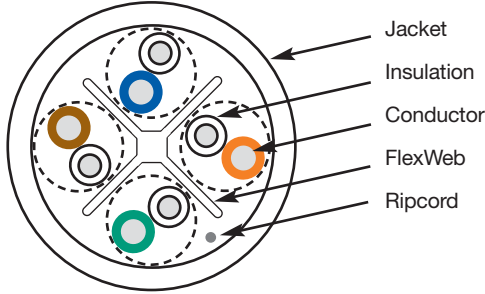
Input Impedance



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-1



Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57418	GREEN	M57421
BLUE	M57419	RED	M57621
PINK	M57867	ORANGE	M57868
YELLOW	M57420	BLACK	M57869
GRAY	M57422	VIOLET	M57870

Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57413	GREEN	M57416
BLUE	M57414	RED	M57620
PINK	M57750	ORANGE	M57861
YELLOW	M57415	BLACK	M57866
GRAY	M57417	VIOLET	M57860

Custom colors available; please consult the factory.

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)	DELAY (ns/100m)
	avg	max	avg	min	min	avg	min	min	min	min	min	max
.772	1.6	1.7	93	83.0	81.3	86	81.0	79.3	-	-	-	-
1.0	1.8	1.9	91	81.3	79.4	84	79.3	77.4	74.8	72.8	20.0	542.0
4.0	3.3	3.5	82	72.3	68.8	75	70.3	66.8	62.8	60.8	24.2	524.0
8.0	4.7	4.9	78	67.8	62.9	71	65.8	60.9	56.7	54.7	26.3	518.7
10.0	5.2	5.5	76	66.3	60.8	69	64.3	58.8	54.8	52.8	27.0	517.4
16.0	6.7	7.0	73	63.2	56.2	66	61.2	54.2	50.7	48.7	27.0	515.0
20.0	7.4	7.8	72	61.8	54.0	65	59.8	52.0	48.8	46.8	27.0	514.0
25.0	8.3	8.7	70	60.3	51.6	63	58.3	49.6	46.8	44.8	26.5	513.2
31.25	9.3	9.8	69	58.9	49.1	62	56.9	47.1	44.9	42.9	25.9	512.4
62.5	13.4	14.1	64	54.4	40.3	57	52.4	38.3	38.9	36.9	24.2	510.6
100.0	17.1	18.0	61	51.3	33.3	54	49.3	31.3	34.8	32.8	23.1	509.6
155.0	21.7	22.8	58	48.4	25.6	51	46.4	23.6	31.0	29.0	22.0	508.9
200.0	24.9	26.2	57	46.8	20.6	50	44.8	18.6	28.8	26.8	21.4	508.5
250.0	28.1	29.6	55	45.3	15.7	48	43.3	13.7	26.8	24.8	20.9	508.3
300.0	31.1	32.7	54	44.1	11.4	47	42.1	9.4	25.3	23.3	20.4	508.1
350.0	33.8	35.6	53	43.1	7.5	46	41.1	5.5	23.9	21.9	20.1	507.9
400.0	36.5	38.4	52	42.3	3.9	45	40.3	1.9	22.8	20.8	19.7	507.8
500.0	41.4	43.6	51	40.8	-	44	38.8	-	20.8	18.8	19.2	507.6
550.0	43.7	46.0	50	40.2	-	43	38.2	-	-	-	19.0	-
600.0	46.0	48.4	50	39.6	-	43	37.6	-	-	-	18.8	-
650.0	48.1	50.6	49	39.1	-	42	37.1	-	-	-	18.6	-
750.0	52.3	55.0	48	38.2	-	41	36.2	-	-	-	18.2	-

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/M' kg/km	Listings
M57418 Non-Plenum	4 PAIR 23 AWG UTP	Thermoplastic	White PVC .247 6.27	34 51	C(ETL)US CMR
M57413 Plenum	4 PAIR 23 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen®* .244 6.20	37 55	C(ETL)US CMP
M58405 Plenum Plus®	4 Pair 23 AWG UTP	FEP	White Smokeguard®† FP Rated for 125° C .220 5.59	36 54	UL CMP Limited Combustible c(UL) CMP

*Plenum rated Thermoplastic. **US Patent No. 5,563,377. †Smokeguard is a registered trademark of AlphaGary. For pair colors see chart A on page 64.

Packaging Options

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	14" Reels	36	42" x 42"
1000 Ft.	Reel in a Box (12 ³ / ₈ "W x 12 ³ / ₈ "D x 12 ⁷ / ₈ "H)	27	42" x 42"



Above part numbers are for reels only. Add "RB" for Reel-in-a-box packaging.

Bulk put-ups available upon request; please consult the factory.

