

# **SPECIFICATION FOR APPROVAL**

DOCUMENT : C6ABC50-BL-1000

STYLE : 75°C 300V  
COMMUNICATION CABLE

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DESCRIPTION: GigaTrue Category 6A Bulk  
Cable Riser, Blue - 650 MHz

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RECOGNIZED: UL 、 ETL

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**BLACK BOX NETWORK SERVICES**

Release Date : Aug./06/2013

EDITION : 1.2

# BLACK BOX NETWORK SERVICES

## SPECIFICATION

STYLE	75°C 300V COMMUNICATION CABLE	DOCUMENT NO : C6ABC50-BL-1000
SIZE	UTP 23AWG×4P	ESTABLISHED DATE : Jan./09/2012
STANDARD : 10GS LAN SUPPORTS IEEE 802.3an 10G BASE-T STANDARD, AND TIA-568-C.2 ,UL444 & 1666		
APPLICATION : ULTRA HIGH PERFORMANCE LAN CABLE ARE SUITABLE FOR PERFECT AUDIO DATA AND VIDEO OF TRANSFER FOR HORIZONTAL NETWORK		
CONSTRUCTION :		
CONDUCTOR	SIZE	23AWG
	CONSTRUCTION	SOLID BARE COPPER
INSULATION	AVG. THICK.	0.235 mm 0.00925 inch
	MIN. THICK.	0.225 mm 0.00885 inch
	DIAMETER	1.08 ± 0.02 mm 0.04251±0.00078 inch
	MATERIAL	HDPE
	COLOR CODES	1.BLUE × WHITE 2.ORANGE × WHITE 3.GREEN × WHITE 4.BROWN × WHITE
SHIELDED	PAIR STRANDED	2 CORES STRANDED
	FILLER(SLOT)	FRPE ISOLATOR SEPARATOR
	ASSEMBLY STRANDED	4 PAIR STRANDED
JACKETED	CONVEX THICK.	1.20 mm 0.04724 inch
	CONCAVE THICK.	0.60 mm 0.02362 inch
	DIAMETER	8.5 ± 0.2 mm 0.33464±0.00787 inch
	MATERIAL	FR PVC
	COLOR	Blue
	RIP CORD	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PACKAGING	Reel or Spool	Spool

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ELECTRICAL & PHYSICAL PROPERTIES :			
ITEM		23AWG × 4P	
RATING TEMP VOLTAGE		75°C 300V	
CONDUCTOR RESISTANCE		9.38 OHM/100m/20°C MAX.	
MUTUAL CAPACITANCE		56 pF/M MAX.	
DIELECTRIC STRENGTH		AC 1.5 KV/2 SEC.	
SPARK TEST		2.5 KV	
INSULATION	UNAGED	TENSILE STRENGTH	2400 PSI MIN. (1.69 Kg/m m <sup>2</sup> )
		ELONGATION	300% MIN.
	AGED	TENSILE STRENGTH	UNAGED MIN. 75%(100°C×48HRS)
		ELONGATION	UNAGED MIN. 75%(100°C×48HRS)
JACKETED	UNAGED	TENSILE STRENGTH	2000 PSI MIN.(1.41 Kg/m m <sup>2</sup> )
		ELONGATION	100% MIN.
	AGED	TENSILE STRENGTH	UNAGED MIN. 85%(100°C×240HRS)
		ELONGATION	UNAGED MIN. 50%(100°C×240HRS)
INSULATION SHRINKBACK		150m/m, 121°C ±1°C×1HR ≤9.5m/m	
COLD BEND TEST		-20°C×4HRS NO CRACK	
FLAME RETARDANT TEST		CMR	
AC LEAKAGE CURRENT THROUGH OVERALL JACKET		AC 1500V ≤ 10 mA	
DC RESISTANCE UNBALANCE		4% MAX.	
PAIR-TO-GROUND CAPACITANCE UNBALANCE		330 pF/100m MAX.	
PROPAGATION DELAY		650 MHz 535.4nS/100m MAX.	
DELAY SKEW		1 ~ 650 MHz 45nS/100m MAX.	
MARKING :			
BLACK BOX CORPORATION GUARANTEED FOR LIFE (724)746-5500 --- GIGATRUE CATEGORY 6A TESTED TO 650MHZ --- E196163-P C(UL)US CMR 75°C 4PR 23AWG ETL VERIFIED ANSI/TIA-568-C.2 CAT 6A MM-YY XXXXFT			

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### Electrical performance

ITEM(dB) Frequency (MHz)	IL MAX. (dB/100m)	RL. MIN. (dB/100m)	NEXT MIN. (dB/100m)	PS. NEXT MIN. (dB/100m)	ACRF MIN. (dB/100m)	PS ACRF MIN. (dB)/100m)	PROP. DELAY MAX. (dB/100m)	PS ANEXT MIN. (dB/100m)	PS AACRF MIN. (dB/100m)
1	2.08	20.00	74.30	72.30	67.80	64.80	570.00	67.00	67.00
4	3.80	23.01	65.27	63.27	55.76	52.76	552.00	67.00	66.16
8	5.31	24.52	60.75	58.75	49.74	46.74	546.73	67.00	60.14
10	5.93	25.00	59.30	57.30	47.80	44.80	545.38	67.00	58.20
16	7.49	25.00	56.24	54.24	43.72	40.72	543.00	67.00	54.12
20	8.38	25.00	54.78	52.78	41.78	38.78	542.05	67.00	52.18
25	9.38	24.32	53.33	51.33	39.84	36.84	541.20	67.00	50.24
31.25	10.50	23.64	51.88	49.88	37.90	34.90	540.44	67.00	48.30
62.5	14.99	21.54	47.36	45.36	31.88	28.88	538.55	65.56	42.28
100	19.14	20.11	44.30	42.30	27.80	24.80	537.60	62.50	38.20
155	23.68	18.87	41.66	39.66	24.28	21.28	536.94	59.86	34.68
200	27.58	18.00	39.78	37.78	21.78	18.78	536.55	57.98	32.18
250	31.07	17.32	38.33	36.33	19.84	16.84	536.28	56.53	30.24
300	34.27	16.77	37.14	35.14	18.26	15.26	536.08	55.34	28.66
350	37.25	16.30	36.14	34.14	16.92	13.92	535.92	54.34	27.32
400	40.05	15.89	35.27	33.27	15.76	12.76	535.80	53.47	26.16
500	42.71	15.53	34.50	32.50	14.74	11.74	535.70	52.70	25.14
550	45.26	15.21	33.82	31.82	13.82	10.82	535.61	52.02	24.22
600	47.70	14.92	33.19	31.19	12.99	9.99	535.54	51.39	23.39
650	50.05	14.66	32.63	30.63	12.24	9.24	535.47	50.83	22.64

Values above 500 MHz are for Engineering Information Only

