GIGANEED

TECHNICAL DATASHEET

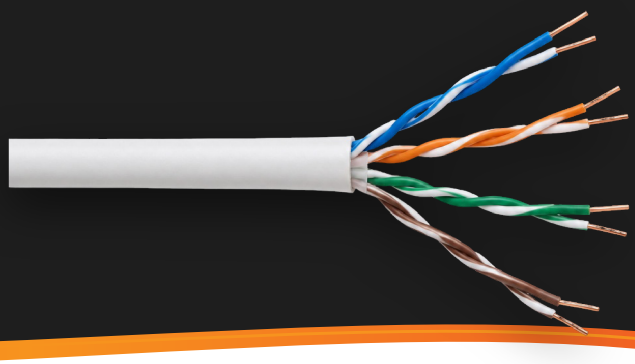
CAT 6A

U/UTP

Network cable (data / LAN)

CAT 6A U/UTP (4 × 2 × 23 AWG)

CABLE TODAY · WONDERFUL TOMORROW



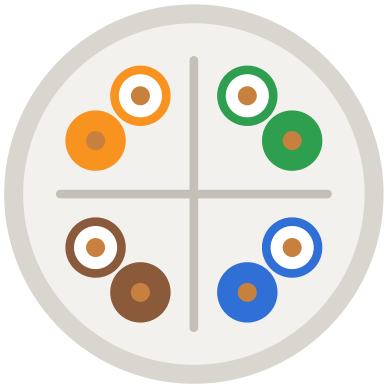
500 MHz | 10 Gbit/s | 4P × 23 AWG | Cross separator | Unshielded | LSZH Dca-s2,d2,a1

OVERVIEW

The GIGA-C6A-U-DCA is the entry point to 10 Gbit/s in the GigaNeed Cat 6A range without a shielded cable: four solid copper 23 AWG pairs, a cross separator and an FR-LSZH jacket rated Euroclass Dca-s2,d2,a1, the usual class for office buildings. It is specified up to 500 MHz with a 7.1 mm diameter. 500 m reel.

CONSTRUCTION

Conductor	Solid copper, 23 AWG
Insulation	HDPE
Make-up	4 twisted pairs, cross separator
Screen	None (U/UTP)
Jacket	FR-LSZH (RoHS compliant)
Outer diameter	7.1 ± 0.4 mm
Weight	≈ 59.7 kg/km
Min. bend radius	34 mm
Reaction to fire (CPR)	Dca-s2,d2,a1 (EN 13501-6)



- FR-LSZH jacket
- Cross separator
- 4 copper pairs 23 AWG

MECHANICAL CONDITIONS

Storage	Operating	Installation	Max. pulling force
–20 °C to +70 °C	–20 °C to +70 °C	–5 °C to +50 °C	80 N

GIGANEED

CAT 6A U/UTP (4 x 2 x 23 AWG)

STANDARDS

- ISO/IEC 11801
- ANSI/TIA-568-2.D
- IEC 61156-5
- EN 50288-3-1 · EN 50173
- EN 50575 · EN 50399 · EN 13501-6 (CPR)

ELECTRICAL PROPERTIES

Conductor resistance (DC)	≤ 93.8 Ω/km at 20 °C
Mutual capacitance	56 nF/km at 1 kHz
Impedance	100 ± 5 Ω at 100 MHz
Velocity of propagation (NVP)	65 %
Propagation delay	≤ 518 ns at 10 MHz
Delay skew	≤ 40 ns/100 m
Coupling attenuation	≥ 40 dB (30–100 MHz)

FREQUENCY PERFORMANCE

Frequency	Attenuation	NEXT	PS-NEXT	ACR-F	PS ACR-F	RL	Delay
(MHz)	dB/100 m · max	dB · min	dB · min	dB/100 m · min	dB/100 m · min	dB · min	ns/100 m · max
1	2.1	74.3	72.3	67.8	64.8	20.0	570.0
4.0	3.8	65.3	63.3	55.8	52.8	23.0	552.0
8.0	5.3	60.8	58.8	49.7	46.7	24.5	546.7
10.0	5.9	59.3	57.3	47.8	44.8	25.0	545.4
16.0	7.5	56.2	54.2	43.7	40.7	25.0	543.0
20.0	8.4	54.8	52.8	41.8	38.8	25.0	542.1
25.0	9.4	53.3	51.3	39.8	36.8	24.3	541.2
31.25	10.5	51.9	49.9	37.9	34.9	23.6	540.4
62.5	15.0	47.4	45.4	31.9	28.9	21.5	538.6
100	19.1	44.3	42.3	27.8	24.8	20.1	537.6
200	27.6	39.8	37.8	21.8	18.8	18.0	536.5
250	31.1	38.3	36.3	19.8	16.8	17.3	536.3
300	34.3	37.1	35.1	18.3	15.3	16.8	536.1
500	45.3	33.8	31.8	13.8	10.8	15.2	535.6

T568B COLOUR CODE

Pair 2	1	White-orange	2	Orange
Pair 3	3	White-green	6	Green
Pair 1	5	White-blue	4	Blue
Pair 4	7	White-brown	8	Brown

In T568A the orange and green pairs are swapped.

APPLICATIONS

- 10GBASE-T (10 Gbit/s)
- 1000BASE-T (Gigabit Ethernet)
- 10BASE-T, 100BASE-T (IEEE 802.3)
- ATM 155 Mbit/s, 1.2 and 2.4 Gbit/s
- Token Ring 4/16 Mbit/s

PACKAGING

Reference	Packaging	Length	Cable weight (approx.)
GIGA-C6A-U-DCA	Reel	500 m	29.9 kg

Specifications may change without notice. Ref. GIGA-C6A-U-DCA.