GIGANEED

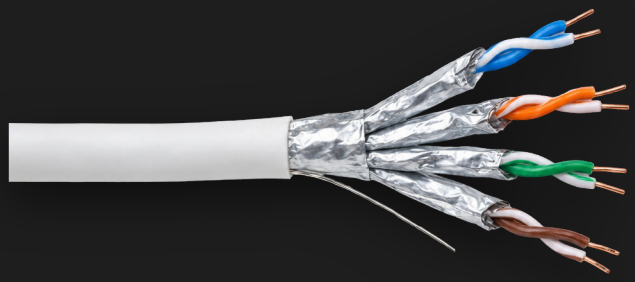
TECHNICAL DATASHEET

CAT 6A F/FTP

Network cable (data / LAN)

CAT 6A F/FTP (4 × 2 × 23 AWG)

CABLE TODAY · WONDERFUL TOMORROW



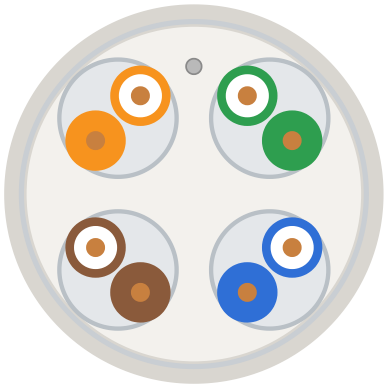
650 MHz | 10 Gbit/s | PoE++ | Double screen | Operating –40/+75 °C | LSZH Cca-s1a,d1,a1

OVERVIEW

The GIGA-C6A-FF-CCA is screened twice: each pair has its own aluminium / polyester foil, and an overall screen with a tinned drain wire surrounds the whole cable. This F/FTP construction limits crosstalk and outside interference for 10 Gbit/s up to 650 MHz, with PoE++ Type 4 power. LSZH jacket rated Euroclass Cca-s1a,d1,a1, operating from −40 °C to +75 °C, 500 m reel.

CONSTRUCTION

Conductor	Solid copper, 23 AWG
Insulation	HDPE
Make-up	4 twisted pairs
Pair screen	Aluminium / polyester
Overall screen	Aluminium / polyester
Drain wire	Tinned copper
Jacket	LSZH
Outer diameter	7.5 ± 0.05 mm
Min. bend radius	29 mm
Reaction to fire (CPR)	Cca-s1a,d1,a1



- LSZH jacket
- Overall screen and drain wire
- Aluminium screen per pair
- 4 copper pairs 23 AWG

MECHANICAL CONDITIONS

Storage	Installation	Operating	Max. pulling force
–20 °C to +60 °C	–20 °C to +60 °C	–40 °C to +75 °C	100 N

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STANDARDS

- ISO/IEC 11801
- ANSI/TIA-568-2.D
- IEC 61156-5
- EN 50288-10-1 · EN 50173
- EN 50575 · EN 50399 · EN 13501-6 (CPR)
- IEEE 802.3 Type 4 (PoE++)

ELECTRICAL PROPERTIES

Conductor resistance (DC)	≤ 93.8 Ω/km at 20 °C
Mutual capacitance	59 nF/km at 1 kHz
Impedance	100 ± 5 Ω at 100 MHz
Velocity of propagation (NVP)	70 %
Propagation delay	≤ 518 ns at 10 MHz
Delay skew	≤ 45 ns/100 m
Coupling attenuation	≥ 55 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	—	74.3	72.3	68.0	65.0	20.0	570.0
4	3.8	65.3	63.3	56.0	53.0	23.0	552.0
8	5.3	60.8	58.8	49.9	46.9	24.5	546.7
10	5.9	59.3	57.3	48.0	45.0	25.0	545.4
16	7.5	56.2	54.2	43.9	40.9	25.0	543.0
20	8.4	54.8	52.8	42.0	39.0	25.0	542.1
25	9.4	53.3	51.3	40.0	37.0	24.3	541.2
31.25	10.5	51.9	49.9	38.1	35.1	23.6	540.4
62.5	15.0	47.4	45.4	32.1	29.1	21.5	538.6
100	19.0	44.3	42.3	28.0	25.0	20.1	537.6
200	27.6	39.8	37.8	22.0	19.0	18.0	536.5
250	31.1	38.3	36.3	20.0	17.0	17.3	536.3
300	34.3	37.1	35.1	18.5	15.5	16.8	536.1
500	45.3	33.8	31.8	14.0	11.0	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)
- PoE++ Type 4 (IEEE 802.3)
- 1000BASE-T (Gigabit Ethernet)
- 10BASE-T, 100BASE-T (IEEE 802.3)
- ATM 155 Mbit/s, 1.2 and 2.4 Gbit/s

PACKAGING

Reference	Packaging	Length	Jacket
GIGA-C6A-FF-CCA	Reel	500 m	LSZH Cca

Specifications may change without notice. Ref. GIGA-C6A-FF-CCA.