



**Part Number: 10GX12**

**CAT6A 10GX, 4pr, UTP, PVC Jkt, CMR**

## Product Description

CAT6A (625MHz), 4-Pair, U/UTP-unshielded, Riser-CMR 90C OR CMR-LP (0.5A) OR CL3R-LP (0.5A), Premise Horizontal cable, 23 AWG solid bare copper conductors, polyolefin insulation, patented Double-H spline, ripcord, PVC jacket

## Technical Specifications

### Product Overview

|                        |  |
|------------------------|--|
| Environmental Space:   | Riser  |
| Suitable Applications: | Premise Horizontal Cable, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, PoE |

### Physical Characteristics (Overall)

#### Conductor

| AWG | Stranding | Material         | No. of Pairs |
|-----|-----------|------------------|--------------|
| 23  | Solid     | BC - Bare Copper | 4            |

|                        |        |
|------------------------|--------|
| Conductor Count:       | 8      |
| Total Number of Pairs: | 4      |
| Conductor Size:        | 23 AWG |

#### Insulation

| Material        |
|-----------------|
| PO - Polyolefin |

#### Color Chart

| Number | Color          |
|--------|----------------|
| 1      | White & Blue   |
| 2      | White & Orange |
| 3      | White & Green  |
| 4      | White & Brown  |

#### Outer Jacket Material

| Material                 | Nominal Diameter | Ripcord | Separator Material                      |
|--------------------------|------------------|---------|---|
| PVC - Polyvinyl Chloride | 0.295 in         | Yes     | Patented RoundFlex - Double H Cross-Web |

### Electrical Characteristics

#### Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalance | Max DCR Unbalanced Between Pairs [%] |
|--------------------|--------------------|--------------------------------------|
| 7.4 Ohm/100m       | 3 %                | 5 %                                  |

#### Capacitance

| Max. Capacitance Unbalance | Nom.Mutual Capacitance |
|----------------------------|------------------------|
| 50 pF/100m                 | 17 pF/ft               |

|            |                    |
|------------|--------------------|
| Shielding: | U/UTP - Unshielded |
|------------|--------------------|

#### Delay

| Max. Delay              | Max. Delay Description | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] | Typical Delay Skew |
|-------------------------|------------------------|-----------------|--|--------------------|
| @ 100 MHz 537.6 ns/100m | 537 @ 100MHz           | 45 ns/100m      | 64 %                                     | 35 ns/100m         |

## High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. PSNEXT [dB] | Min. PSACR [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance | Min. PSANEXT | Min. PSAACRF | Min. TCL [dB] | Min. ELTCL [dB] |
|-----------------|-----------------------------------|------------------|-----------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|--------------|--------------|---------------|-----------------|
| 1 MHz           | 2.1 dB/100m                       | 73.3 dB          | 71.2 dB         | 68.8 dB                     | 20.0 dB                    | 100 ± 15 Ohm                         | 100 ± 15 Ohm               | 67.0 dB      | 67.0 dB      | 40.0 dB       | 35.0 dB         |
| 4 MHz           | 3.8 dB/100m                       | 64.3 dB          | 60.5 dB         | 56.8 dB                     | 23.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 67.0 dB      | 40.0 dB       | 23.0 dB         |
| 8 MHz           | 5.3 dB/100m                       | 59.8 dB          | 54.4 dB         | 50.7 dB                     | 24.5 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 61.1 dB      | 40.0 dB       | 16.9 dB         |
| 10 MHz          | 5.9 dB/100m                       | 58.3 dB          | 52.4 dB         | 48.8 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 59.2 dB      | 40.0 dB       | 15.0 dB         |
| 16 MHz          | 7.5 dB/100m                       | 55.2 dB          | 47.8 dB         | 44.7 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 55.1 dB      | 40.0 dB       | 10.9 dB         |
| 20 MHz          | 8.4 dB/100m                       | 53.8 dB          | 45.4 dB         | 42.8 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 53.2 dB      | 38.0 dB       | 9.0 dB          |
| 25 MHz          | 9.4 dB/100m                       | 52.3 dB          | 43.0 dB         | 40.8 dB                     | 24.3 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 51.2 dB      | 36.0 dB       | 7.0 dB          |
| 31.25 MHz       | 10.5 dB/100m                      | 50.9 dB          | 40.4 dB         | 38.9 dB                     | 23.6 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 49.3 dB      | 35.1 dB       |                 |
| 62.5 MHz        | 15.0 dB/100m                      | 46.4 dB          | 31.4 dB         | 32.9 dB                     | 21.5 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 66.6 dB      | 43.3 dB      | 32.0 dB       |                 |
| 100 MHz         | 19.1 dB/100m                      | 43.3 dB          | 24.2 dB         | 28.8 dB                     | 20.1 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 63.5 dB      | 39.2 dB      | 30.0 dB       |                 |
| 200 MHz         | 27.6 dB/100m                      | 38.8 dB          | 11.2 dB         | 22.8 dB                     | 18.0 dB                    | 100 ± 22 Ohm                         | 100 ± 10 Ohm               | 59.0 dB      | 33.2 dB      | 27.0 dB       |                 |
| 250 MHz         | 31.1 dB/100m                      | 37.3 dB          | 6.3 dB          | 20.8 dB                     | 17.3 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 57.5 dB      | 31.2 dB      | 26.0 dB       |                 |
| 300 MHz         | 34.3 dB/100m                      | 36.1 dB          | 1.9 dB          | 19.3 dB                     | 16.8 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 56.3 dB      | 29.7 dB      | 25.2 dB       |                 |
| 350 MHz         | 37.2 dB/100m                      | 35.1 dB          |                 | 17.9 dB                     | 16.3 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 55.3 dB      | 28.3 dB      | 24.6 dB       |                 |
| 400 MHz         | 40.1 dB/100m                      | 34.3 dB          |                 | 16.8 dB                     | 15.9 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 54.5 dB      | 27.2 dB      | 24.0 dB       |                 |
| 450 MHz         | 42.7 dB/100m                      | 33.5 dB          |                 | 15.7 dB                     | 15.5 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 53.7 dB      | 26.1 dB      | 23.5 dB       |                 |
| 500 MHz         | 45.3 dB/100m                      | 32.8 dB          |                 | 14.8 dB                     | 15.2 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 53.0 dB      | 25.2 dB      | 23.0 dB       |                 |
| 550 MHz         | 47.7 dB/100m                      | 32.2 dB          |                 | 14.0 dB                     | 14.9 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 52.4 dB      | 24.4 dB      |               |                 |
| 600 MHz         | 50.1 dB/100m                      | 31.6 dB          |                 | 13.2 dB                     | 14.7 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 51.8 dB      | 23.6 dB      |               |                 |
| 625 MHz         | 51.2 dB/100m                      | 31.4 dB          |                 | 12.9 dB                     | 14.5 dB                    | 100 ± 32 Ohm                         | 100 ± 10 Ohm               | 51.6 dB      | 23.3 dB      |               |                 |
| 750 MHz         | 56.7 dB/100m                      | 30.2 dB          |                 | 11.3 dB                     | 14.0 dB                    |                                      |                            | 50.4 dB      | 21.7 dB      |               |                 |
| 860 MHz         | 61.2 dB/100m                      | 29.3 dB          |                 | 10.1 dB                     | 13.6 dB                    |                                      |                            | 49.5 dB      | 20.5 dB      |               |                 |

## Voltage

|                          |
|--------------------------|
| <b>UL Voltage Rating</b> |
| 300V RMS                 |

## Temperature Range

|                          |                |
|--------------------------|----------------|
| Installation Temp Range: | +5°C To +50°C  |
| UL Temp Rating:          | 90°C           |
| Storage Temp Range:      | -20°C To +75°C |
| Operating Temp Range:    | -20°C To +75°C |

## Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 36 lbs/1000ft |
| Max Recommended Pulling Tension: | 25 lbs        |
| Min Bend Radius/Minor Axis:      | 1.25 in       |
| Min Bend Radius/Installation:    | 3.0 in        |

## Standards

|                               |   |
|-------------------------------|---|
| NEC Articles:                 | 800   |
| NEC/(UL) Specification:       | CMR   |
| CEC/C(UL) Specification:      | CMR   |
| ISO/IEC Compliance:           | 11801 ed 2.2 (2011) Class EA                            |
| CPR Euroclass:                | Eca   |
| Data Category:                | Category 6A   |
| ANSI Compliance:              | S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A |
| Telecommunications Standards: | ANSI/TIA-568-C.2 Category 6A                            |
| IEEE Specification:           | POE per 802.3af & POE+ per 802.3at-2009                 |
| Other Specification:          | Verified Channel/Category 6A                            |
| Other Standards:              | C(UL)US CMR 90C OR (UL) CMR-LP (0.5A) OR CL3R-LP (0.5A) |

## Applicable Environmental and Other Programs

|                                 |     |
|---------------------------------|-----|
| EU Directive 2000/53/EC (ELV):  | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU Directive 2002/96/EC (WEEE): | Yes |

|  |            |
|--|------------|
| EU Directive 2003/11/EC (BFR):         | Yes        |
| EU Directive 2003/96/EC (BFR):         | Yes        |
| EU Directive 2011/65/EU (ROHS II):     | Yes        |
| EU Directive 2012/19/EU (WEEE):        | Yes        |
| EU Directive 2015/863/EU:              | Yes        |
| EU Directive Compliance:               | Yes        |
| EU CE Mark:                            | Yes        |
| EU REACH SVHC Compliance (yyyy-mm-dd): | 2017-07-10 |
| EU RoHS Compliance Date (yyyy-mm-dd):  | 2004-01-01 |
| CA Prop 65 (CJ for Wire & Cable):      | Yes        |
| MII Order #39 (China RoHS):            | Yes        |

## Suitability

|                                    |     |
|------------------------------------|-----|
| Suitability - Aerial:              | No  |
| Suitability - Burial:              | No  |
| Suitability - Hazardous Locations: | No  |
| Suitability - Indoor:              | Yes |
| Suitability - Non-Halogenated:     | No  |
| Suitability - Oil Resistance:      | No  |
| Suitability - Outdoor:             | No  |
| Suitability - Sunlight Resistance: | No  |

## Flammability, LSOH, Toxicity Testing

|                     |               |
|---------------------|---------------|
| C(UL) Flammability: | FT4           |
| UL Flammability:    | UL 1666 Riser |
| UL Voltage Rating:  | 300 V RMS     |

## Plenum/Non-Plenum

|                |        |
|----------------|--------|
| Plenum (Y/N):  | No     |
| Plenum Number: | 10GX13 |

## Part Number

### Variants

| Item #         | Color  |
|----------------|--------|
| 10GX12 0101000 | BLACK  |
| 10GX12 0101500 | BLACK  |
| 10GX12 0061000 | BLUE   |
| 10GX12 0062500 | BLUE   |
| 10GX12 0081000 | GRAY   |
| 10GX12 0051000 | GREEN  |
| 10GX12 0031000 | ORANGE |
| 10GX12 0071000 | PURPLE |
| 10GX12 0021000 | RED    |
| 10GX12 0091000 | WHITE  |
| 10GX12 0091500 | WHITE  |
| 10GX12 0041000 | YELLOW |
| 10GX12 0041500 | YELLOW |

Patent: <http://www.belden.com/p>

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