# Detailed Specifications & Technical Data

**METRIC MEASUREMENT VERSION**

**CAD1100000 Cable Assemblies - CAT6A Performance Modular Cord**

For more Information please call

1-800-Belden1

## General Description:

CAT6A Performance Patch Cord UTP, 4-Pair, 28 AWG Stranded, CMR, T568A/B-T568A/B, (See Product Family List for colors & lengths)

## Usage (Overall)

| | |
|---|---|
| **Suitable Applications:** | TIA Category 6A, ISO Class EA, 10GBASE-T, Support Power over Ethernet (up to 100W), Cisco UPOE (up to 60W) and Power over HDBase-T (up to 100W) |
| **Related Parts:** | 10GX Modular Jacks, 10GX RJ45 Couplers, 10GX Patch Panels |

## Multi Conductor

### Physical Characteristics

#### Conductor

**AWG:**

| # Pairs | AWG | Stranding | Conductor Material |
|---|---|---|---|
| 4 | 28 | Stranded | Tinned Copper |

#### Insulation

**Insulation Material:**

| Insulation Material |
|---|
| High Density Polyethilene |

#### Outer Jacket

**Outer Jacket Material:**

| Outer Jacket Material |
|---|
| PVC - Polyvinyl Chloride |

#### Overall Diameter

| | |
|---|---|
| **Overall Nominal Diameter:** | 4.724 mm |

## Cable Characteristics (Connectivity)

### Outer Jacket

**Outer Jacket Color Code Chart:**

| Color |
|---|
| See Product Family |

## Physical Characteristics (Connectivity)

### Materials

**Materials:**

| Description | Type | Material |
|---|---|---|
| Plug | RJ45 | Polycarbonate - UL94V-0 |
| Boot | | Polycarbonate - UL94V-0 |
| Front Connection | Blades | Phosphor Bronze with 50u inch Gold over Nickel Plating |

### Color

| | |
|---|---|
| **Boot Color:** | Translucent |

### Wiring Scheme

| | |
|---|---|
| **Wiring Scheme:** | T568A/B-T568A/B |

### Packaging

| | |
|---|---|
| **Packaging:** | Individually packaged in a clear plastic bag. |

## Mechanical Characteristics (Connectivity)

| | |
|---|---|
| **Plug / Jack Compatibility:** | RJ45 |

**Termination Interface:**

| Termination | Connection | Durabilities |
|---|---|---|
| RJ45 | Mated Connection | 750 Cycles |

| | |
|---|---|
| **Storage Temperature Range:** | -40°C To +75°C |
| **Installation Temperature Range:** | 0°C To +60°C |
| **Operating Temperature Range:** | -20°C To +75°C |
| **Max. Recommended Pull Tension:** | 50.042 N |
| **Min. Bend Radius (Overall Cable):** | 18.898 mm |

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

| | |
|---|---|
| **UL Rating:** | Riser |
| **Other Standards:** | FCC Part 68, Subpart F, IEC 60603-7 |
| **EU Directive 2002/95/EC (RoHS):** | Yes |
| **EU RoHS Compliance Date (mm/dd/yyyy):** | 01/01/2006 |
| **MII Order #39 (China RoHS):** | EUP 50 |
| **Telecommunications Standards:** | ISO/IEC 11801:2002 Amendment 2, TIA 568.2-D |
| **Safety Listing:** | c(UL)us Listed |
| **Other Specification:** | CEC/C(UL) Voltage Rating: 300 V RMS |

### Suitability

| | |
|---|---|
| **Suitability - Indoor:** | Yes |

## Transmission Characteristics (Connectivity)

**Performance Table 1:**

| Frequency (MHz) | Max. Insertion Loss TIA* (dB) | Max. Insertion Loss Belden (dB) | Min. PSNEXT TIA* (dB) | Min PSNEXT Belden (dB) | Min. PSACRF TIA* (dB) | Min. PSACRF Belden (dB) |
|---|---|---|---|---|---|---|
| 1.000 | 2.500 | 4.000 | 72.300 | 72.300 | 64.800 | 64.800 |
| 4.000 | 4.600 | 7.200 | 63.300 | 63.300 | 52.800 | 52.800 |
| 8.000 | 6.400 | 10.100 | 58.800 | 58.800 | 46.700 | 46.700 |
| 10.000 | 7.100 | 11.300 | 57.300 | 57.300 | 44.800 | 44.800 |
| 16.000 | 9.000 | 14.200 | 54.200 | 54.200 | 40.700 | 40.700 |
| 20.000 | 10.100 | 15.900 | 52.800 | 52.800 | 38.800 | 38.800 |
| 25.000 | 11.300 | 17.800 | 51.300 | 51.300 | 36.800 | 36.800 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31.250 | 12.600 | 20.000 | 49.900 | 49.900 | 34.900 | 34.900 |
| 62.500 | 18.000 | 28.500 | 45.400 | 45.400 | 28.900 | 28.900 |
| 100.000 | 22.900 | 36.400 | 42.300 | 42.300 | 24.800 | 24.800 |
| 200.000 | 33.100 | 52.400 | 37.800 | 37.800 | 18.800 | 18.800 |
| 250.000 | 37.300 | 59.000 | 36.300 | 36.300 | 16.800 | 16.800 |
| 300.000 | 41.200 | 65.100 | 35.100 | 35.100 | 15.300 | 15.300 |
| 400.000 | 48.100 | 76.100 | 33.300 | 33.300 | 12.800 | 12.800 |
| 500.000 | 54.400 | 86.000 | 31.800 | 31.800 | 10.800 | 10.800 |

**Performance Table - Footnote:** 100 Meter Cable Specifications - * TIA/EIA-568.2-D Category 6A Standard

**Performance Table 2:**

| Frequency (MHz) | Min. Return Loss TIA* (dB) | Min. Return Loss Belden (dB) | Min. PSANEXT TIA* (dB) | Min. PSANEXT Belden (dB) | Min. PSAACR-F TIA* (dB) | Min. PSAACR-F Belden (dB) | Min. Balanced TCL TIA* (dB) | Min. Balanced TCL Belden (dB) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | 20.000 | 20.000 | 67.000 | 67.000 | 67.000 | 67.000 | 40.000 | 40.000 |
| 4.000 | 23.000 | 23.000 | 67.000 | 67.000 | 66.200 | 66.200 | 40.000 | 40.000 |
| 8.000 | 24.500 | 24.500 | 67.000 | 67.000 | 60.100 | 60.100 | 40.000 | 40.000 |
| 10.000 | 25.000 | 25.000 | 67.000 | 67.000 | 58.200 | 58.200 | 40.000 | 40.000 |
| 16.000 | 25.000 | 25.000 | 67.000 | 67.000 | 54.100 | 54.100 | 38.000 | 38.000 |
| 20.000 | 25.000 | 25.000 | 67.000 | 67.000 | 52.200 | 52.200 | 37.000 | 37.000 |
| 25.000 | 24.200 | 24.200 | 67.000 | 67.000 | 50.200 | 50.200 | 36.000 | 36.000 |
| 31.250 | 23.300 | 23.300 | 67.000 | 67.000 | 48.300 | 48.300 | 35.100 | 35.100 |
| 62.500 | 20.700 | 20.700 | 65.600 | 65.600 | 42.300 | 42.300 | 32.000 | 32.000 |
| 100.000 | 19.000 | 19.000 | 62.500 | 62.500 | 38.200 | 38.200 | 30.000 | 30.000 |
| 200.000 | 16.400 | 16.400 | 58.000 | 58.000 | 32.200 | 32.200 | 27.000 | 27.000 |
| 250.000 | 15.600 | 15.600 | 56.500 | 56.500 | 30.200 | 30.200 | 26.000 | 26.000 |
| 300.000 | 14.900 | 14.900 | 55.300 | 55.300 | 28.700 | 28.700 | 25.200 | 25.200 |
| 400.000 | 13.800 | 13.800 | 53.500 | 53.500 | 26.200 | 26.200 | 24.000 | 24.000 |
| 500.000 | 13.000 | 13.000 | 52.000 | 52.000 | 24.200 | 24.200 | 23.000 | 23.000 |

**Dielectric Strength:** 1,000 V RMS @ 60 Hz for 1 minute

**Current Rating:** 1.500 A

**Insulation Resistance:** 500 M-Ohm Minimum

**Max. Contact Resistance:** 20 m-Ohm

## Electrical Characteristics (Overall)

## Labeling

**Labeling:** Labeling: Belden Part Number and Cord Length.

## Notes (Overall)

**Notes:**

- CAD1100000 is subdivided as following CA-D1-1-00-000
  CA stands for performance, D1 stands for cable type, 1 stands for termination type, 00 stands for color, 000 stands for length Use last 3 digits of the code to specify length in feet - 001-015 ft in increments of 1 ft than 20 ft or 25 ft.
- 28 AWG stranded conductors are not TIA-568 compliant. However, using maximum 6.3 meters of cordage connected to a 90 meters permanent link will meet all TIA channel requirements.

**Notes (Cont'd.):**

- Cable Weight: 0.0152 lbs/ft.
- Cable with Polyester Aluminum Floating Screen
- www.belden.com/p

### Product Family

**Product List:**

| Length | Black | Red | Orange | Yellow | Green | Blue | Gray | White |
|---|---|---|---|---|---|---|---|---|
| 2 ft. (0.6 m) | CAD1100002 | CAD1102002 | CAD1103002 | CAD1104002 | CAD1105002 | CAD1106002 | CAD1108002 | CAD1109002 |
| 3 ft. (0.9 m) | CAD1100003 | CAD1102003 | CAD1103003 | CAD1104003 | CAD1105003 | CAD1106003 | CAD1108003 | CAD1109003 |
| 4 ft. (1.2 m) | CAD1100004 | CAD1102004 | CAD1103004 | CAD1104004 | CAD1105004 | CAD1106004 | CAD1108004 | CAD1109004 |
| 5 ft. (1.5 m) | CAD1100005 | CAD1102005 | CAD1103005 | CAD1104005 | CAD1105005 | CAD1106005 | CAD1108005 | CAD1109005 |
| 6 ft. (1.8 m) | CAD1100006 | CAD1102006 | CAD1103006 | CAD1104006 | CAD1105006 | CAD1106006 | CAD1108006 | CAD1109006 |
| 7 ft. (2.1 m) | CAD1100007 | CAD1102007 | CAD1103007 | CAD1104007 | CAD1105007 | CAD1106007 | CAD1108007 | CAD1109007 |
| 8 ft. (2.4 m) | CAD1100008 | CAD1102008 | CAD1103008 | CAD1104008 | CAD1105008 | CAD1106008 | CAD1108008 | CAD1109008 |
| 9 ft. (2.7 m) | CAD1100009 | CAD1102009 | CAD1103009 | CAD1104009 | CAD1105009 | CAD1106009 | CAD1108009 | CAD1109009 |

## CAD1100000 Cable Assemblies - CAT6A Performance Modular Cord

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 ft. (3.0 m) | CAD1100010 | CAD1102010 | CAD1103010 | CAD1104010 | CAD1105010 | CAD1106010 | CAD1108010 | CAD1109010 |
| 12 ft. (3.6 m) | CAD1100012 | CAD1102012 | CAD1103012 | CAD1104012 | CAD1105012 | CAD1106012 | CAD1108012 | CAD1109012 |
| 15 ft. (4.6 m) | CAD1100015 | CAD1102015 | CAD1103015 | CAD1104015 | CAD1105015 | CAD1106015 | CAD1108015 | CAD1109015 |
| 25 ft. (7.6 m) | CAD1100025 | CAD1102025 | CAD1103025 | CAD1104025 | CAD1105025 | CAD1106025 | CAD1108025 | CAD1109025 |

## Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---|---|---|---|---|---|

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