

**DESCRIPTION**

Bellcom Category 6 indoor UTP cable is designed for structured cabling and horizontal network installations requiring reliable Cat6 performance. The cable uses 23AWG bare copper conductors, HDPE insulation, and a flame-retardant PVC jacket for indoor data, voice, and video applications.

**KEY FEATURES**

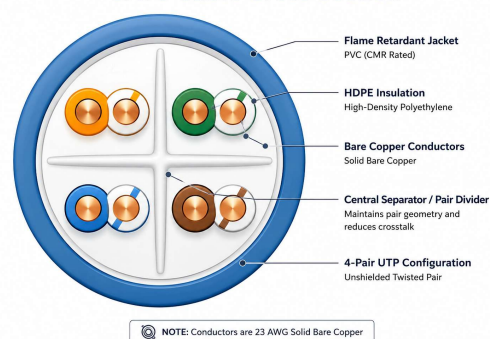
- Category 6 UTP cable for high-speed data networking
- 4-pair construction with 23AWG bare copper conductors
- HDPE insulation with flame-retardant PVC outer jacket
- Nominal outer diameter: 6.2 mm
- Supports applications including Gigabit Ethernet, Fast Ethernet, Voice, T1, ISDN, ATM, and broadband video
- Designed to meet Cat6 requirements under ANSI/TIA, ISO/IEC, and CENELEC standards
- RoHS compliant and UL Listed

**APPLICATIONS**

- 1000BASE-TX Gigabit Ethernet
- 10BASE-T / 100BASE-TX Fast Ethernet (IEEE 802.3)
- 100 VG-AnyLAN (IEEE 802.12), 155/622 Mbps ATM
- 550 MHz Broadband Video
- Voice, T1, ISDN

**PRODUCT SUMMARY**

| Property       | Specification       |
|----------------|---------------------|
| Product Type   | Indoor UTP Cable    |
| Category       | Category 6          |
| Construction   | 23AWG x 4P          |
| Conductor      | Bare Copper         |
| Insulation     | HDPE                |
| Jacket         | Flame Retardant PVC |
| Outer Diameter | Nominal 6.2 mm      |
| SKU            | BC6-UTP-B/W/G       |

**CAT6 Cable Cross Section****CONSTRUCTION & CHARACTERISTICS**

| Component    | Property                   | Specification                                                              |
|--------------|----------------------------|----------------------------------------------------------------------------|
| Conductor    | Material / Size            | Bare Copper / 23AWG                                                        |
| Insulation   | Material                   | HDPE                                                                       |
| Insulation   | Thickness                  | Nominal: 0.22 mm                                                           |
| Insulation   | Diameter                   | Nominal: 1.00 mm                                                           |
| Insulation   | Colors                     | Blue/White-Blue; Orange/White-Orange; Green/White-Green; Brown/White-Brown |
| Insulation   | Unaged Elongation          | Min. 300%                                                                  |
| Insulation   | Unaged Tensile Strength    | Min. 1.683 Kg/mm <sup>2</sup>                                              |
| Jacket       | Material                   | Flame Retardant PVC                                                        |
| Jacket       | Thickness                  | Nominal: 0.56 mm                                                           |
| Jacket       | Diameter                   | Nominal: 6.2 mm                                                            |
| Jacket       | Color                      | Assorted upon request                                                      |
| Jacket       | Unaged Elongation          | Min. 100%                                                                  |
| Jacket       | Unaged Tensile Strength    | Min. 1.407 Kg/mm <sup>2</sup>                                              |
| Jacket Aging | Condition                  | 100°C for 168 hours                                                        |
| Jacket Aging | Elongation Retention       | Min. 50%                                                                   |
| Jacket Aging | Tensile Strength Retention | Min. 75%                                                                   |

**PAIR CONFIGURATION**

| Pair   | Color Combination     |
|--------|-----------------------|
| Pair 1 | Blue / White-Blue     |
| Pair 2 | Orange / White-Orange |
| Pair 3 | Green / White-Green   |
| Pair 4 | Brown / White-Brown   |

UTP 4-pair construction with HDPE insulated conductors and a flame-retardant PVC jacket. The color configuration shown is used for pair identification during termination and structured cabling installation.

## ELECTRICAL PERFORMANCE

| Property                          | Specification            |
|-----------------------------------|--------------------------|
| Dielectric Strength of Insulation | 2500 V dc / 2 seconds    |
| Insulation Resistance Test        | Min. 5000 MΩ·Km          |
| Conductor Resistance              | Max. 9.38 Ω/100m at 20°C |
| Resistance Unbalance              | Max. 2%                  |
| Capacitance Unbalance             | Max. 160 pF/100m         |
| Mutual Capacitance                | Max. 5600 pF/100m        |
| Impedance at 772 kHz              | 125Ω ± 20%               |
| Impedance at 1-250 MHz            | 100Ω ± 15%               |

## ATTENUATION & NEAR END CROSS TALK

| Frequency | Max. Attenuation | NEXT          | PSNEXT        |
|-----------|------------------|---------------|---------------|
| 1 MHz     | 2.0* dB/100m     | 74.3* dB Min. | 72.3* dB Min. |
| 4 MHz     | 3.8* dB/100m     | 65.3* dB Min. | 63.3* dB Min. |
| 10 MHz    | 6.0* dB/100m     | 59.3* dB Min. | 57.3* dB Min. |
| 16 MHz    | 7.6* dB/100m     | 56.2* dB Min. | 54.2* dB Min. |
| 20 MHz    | 8.5* dB/100m     | 54.8* dB Min. | 52.8* dB Min. |
| 31.25 MHz | 10.7* dB/100m    | 51.9* dB Min. | 49.9* dB Min. |
| 62.5 MHz  | 15.4* dB/100m    | 47.4* dB Min. | 45.4* dB Min. |
| 100 MHz   | 19.8* dB/100m    | 44.3* dB Min. | 42.3* dB Min. |
| 150 MHz   | 24.9* dB/100m    | 41.4* dB Min. | 39.4* dB Min. |
| 200 MHz   | 29.0* dB/100m    | 39.8* dB Min. | 37.8* dB Min. |
| 250 MHz   | 32.8* dB/100m    | 38.3* dB Min. | 36.3* dB Min. |

Asterisked (\*) values are for information only. Minimum NEXT coupling loss for any pair combination at room temperature is to be greater than:  $NEXT(f \text{ MHz}) \geq NEXT(0.772) - 15 \log_{10}(f \text{ MHz}/0.772)$  dB.

## STANDARDS & APPROVALS

- ANSI/TIA-568-C.2 Cat.6
- ISO/IEC 11801 2nd Edition Class E
- CENELEC EN 50173-1; CENELEC EN 50288-6-1
- IEC 61156-5 for horizontal cable
- Flame retardancy verified according to IEC 60332-1-2
- RoHS compliance implemented for EU Directive 2002/95/EC
- UL Listed

## ORDERING INFORMATION

| SKU           | Product Description                    |
|---------------|----------------------------------------|
| BC6-UTP-B/W/G | CAT6 Indoor UTP Cable, 23AWG x 4P, PVC |

Color and packaging options should be confirmed at time of order.