

# TX6A™ 10Gig UTP Copper Cable with Vari-MaTriX Technology

## specifications

Category 6A/Class E<sub>A</sub> cable shall be constructed of 23 AWG copper conductors with FEP Plenum (CMP) insulation. The copper conductors shall be twisted in pairs and separated by a cross-divider. All four pairs shall be surrounded by a metallic Vari-MaTriX tape cut into segments of varying length and a flame retardant jacket. The Vari-MaTriX tape shall minimize the cable diameter and suppress the effects of alien crosstalk while retaining UTP electromagnetic interference immunity. The innovative cable design shall provide installation flexibility as cables can be routed in tight bundles through pathways and spaces.



## technical information

|                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Category 6A/Class E<sub>A</sub> channel and component performance:</b> | Certified channel performance in a 4-connector configuration up to 100 meters and exceeds the requirements of ANSI/TIA-568-C.2 Category 6A and ISO 11801 Class E <sub>A</sub> standards swept up to 650 MHz for supporting 10GBASE-T transmission over twisted-pair cabling systems as part of the Panduit™ TX6A™ 10Gig UTP Copper Cabling System<br>Certified component performance up to 100 meters and exceeds the ANSI/TIA-568-C.2 Category 6A and IEC 61156-5 Category 6A standards for supporting 10GBASE-T transmission over twisted-pair cabling systems |
| <b>Standards Compliance:</b>                                              | UL Listed CMP-LP (0.7A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Cable diameter:</b>                                                    | Plenum (CMP): 0.250 in. (6.4mm) nominal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Conductors/insulators:</b>                                             | 23 AWG solid copper insulated with FEP (CMP), flame retardant PE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Flame rating:</b>                                                      | Plenum (CMP): NFPA 262                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>PoE compliant:</b>                                                     | Meets IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt for PoE applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Installation tension:</b>                                              | 25 lbf (110 N) maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Temperature rating:</b>                                                | 32°F to 140°F (0°C to 60°C) during installation<br>-4°F to 194°F (-20°C to 90°C) during operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Cable jacket:</b>                                                      | Plenum (CMP): Flame retardant PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Cable weight:</b>                                                      | Plenum (CMP): 31.2 lbs./1000 ft. (14.2kg/305m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Packaging:</b>                                                         | 1000 ft. (305m) on a reel<br>Plenum (CMP): 33.4 lbs./1000 ft. (15.2 kg/305m)<br>Package tested to ISTA procedure 1A                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## key features and benefits

|                                         |                                                                                                                                                                                                     |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vari-MaTriX Technology</b>           |  Best-in-class cable diameter delivers superior PSANEXT and PSAACRF suppression while retaining UTP EMI immunity |
| <b>Interoperable</b>                    | Compatible with components of the TX6A-SD™ 10Gig UTP Copper Cabling System with MaTriX Technology (70 meter solution) for increased design flexibility                                              |
| <b>Superior headroom warranty</b>       | Provides the highest worst-case margins above the industry standard for both electrical and alien crosstalk performance                                                                             |
| <b>Small, round cable design</b>        | Improves fill capacity, cable management, reduces required bend radius and allows efficient use of pathways and spaces                                                                              |
| <b>Extended temperature range</b>       | Allows operation in 90°C (194°F) ambient environment providing error-free performance in high-density cabinets and large cable bundles running PoE+ or PoE++ applications                           |
| <b>Highest density</b>                  | All testing and headroom based on 48-port/1RU panels                                                                                                                                                |
| <b>Descending length cable markings</b> | Easy identification of remaining cable to reduce installation time and cable scrap                                                                                                                  |

## applications

The TX6A™ 10Gig UTP Copper Cable with Vari-MaTriX Technology is a component of the TX6A™ 10Gig Copper Cabling System. Interoperable and backward compatible, this end-to-end system provides design flexibility to protect network investments well into the future.

Key applications include:

- 10GBASE-T Ethernet
- Data center I/O consolidation
- Data center server virtualization
- Consolidation of network interconnects
- Back-bone aggregation
- Parallel processing and high speed computing

### TX6A™ 10Gig UTP Copper Cabling System with Vari-MaTriX Technology

### TX6A™ 10Gig UTP Copper Cable with Vari-MaTriX Technology

**Plenum:** PUP6AV04\*-G

### Mini-Com® TX6A™ 10Gig UTP Jack Module

**Jack module:** CJ6X88TG\*\*

**Shuttered jack module:** CJH6X88TG\*\*

### TX6A™ 10Gig UTP Patch Cords with MaTriX Technology

**Foot lengths:** UTP6A^

**Meter lengths:** UTP6A^^M

### Mini-Com® Angled Modular Patch Panels

**24-port, 1 RU:** CPPA24FMWBLY

**48-port, 2 RU:** CPPA48FMWBLY

**72-port, 2 RU:** CPPLA72WBLY

### Mini-Com® Flat Modular Patch Panels

**24-port, 1 RU:** CPP24FMWBLY

**48-port, 1 RU:** CPP48HDWBLY

**48-port, 2 RU:** CPP48FMWBLY

**72-port, 2 RU:** CPP72FMWBLY

For additional modular patch panels reference [www.panduit.com](http://www.panduit.com)

### Cable Prep Tools

**Wire snipping tool:** CWST

**Wire stripping tool:** CCAST

**Cable bundle organizing tool:** CBOT24K

\*To designate color, add suffix BU (Blue), WH (White), IG (International Gray), or YL (Yellow). For additional cable colors, contact customer service.

\*\*To designate color, add suffix IW (Off White), EI (Electric Ivory), IG (International Gray), WH (White), AW (Arctic White), BL (Black), OR (Orange), RD (Red), BU (Blue), GR (Green), YL (Yellow), or VL (Violet) to end of the part number.

^Add length, then color to end of part number: 1M to 10M (one meter increments), 1.5M, 2.5M, 15M, and 20M.

3 to 20 feet (one foot increments), 25, 30, 35, and 40 feet.

Color is off white unless color code is added to end: BL (Black), BU (Blue), RD (Red), YL (Yellow), GR (Green), OR (Orange), VL (Violet)  
Example: Blue, 5-meter patch cord is UTP6A5MBU

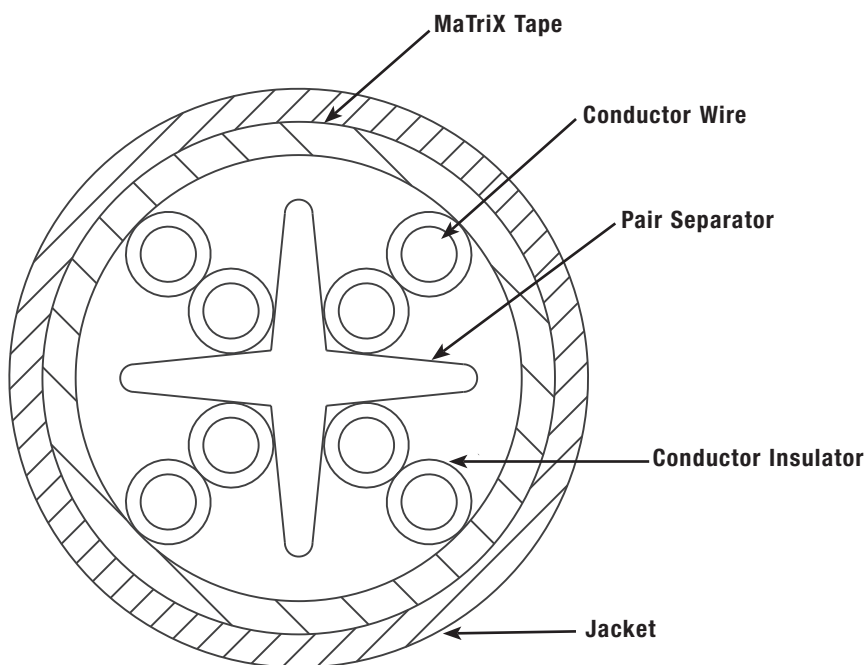
Contact Customer Service for keyed connectivity bulk packaged jack modules, and patch cords.

# TX6A™ 10Gig UTP Copper Cable with Vari-MaTriX Technology

## additional specifications

| Mechanical Test                       |                                     |
|---------------------------------------|-------------------------------------|
| Ultimate Breaking Strength            | > 90 lbf (400 N)                    |
| Minimum Bend Radius                   | 4 x cable diameter                  |
| Electrical Test                       |                                     |
| DC Resistance                         | <9.38 Ohm per 328 ft. (100m)        |
| DC Resistance Unbalance               | <5%                                 |
| Mutual Capacitance                    | <5.6 nF per 328 ft. (100m) at 1 kHz |
| Capacitance Unbalance                 | <330 pF per 328 ft. (100m) at 1 kHz |
| Characteristic Impedance              | 100 Ohm +/-15% up to 100 MHz        |
| Nominal Velocity of Propagation (NVP) | Panduit 67%                         |
| Operating Voltage, Maximum            | 80V                                 |

## cable construction



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