

# TX6A™ 10Gig UTP Copper Cable: Vari-MaTriX High Density (HD)

## 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. 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 small cable diameter shall maximize cable density such that existing pathways can be utilized when upgrading from Category 6 cabling.



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

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

**Plenum (CMP):** PUP6AHD04\*-G

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

## 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-568.2-D 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™ 10 Gig UTP Copper Cabling System Certified component performance up to 100 meters and exceeds the ANSI/TIA-568.2-D 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): 0.230 in. (5.8mm) nominal
<b>Conductors/insulators:</b>	23 AWG solid copper insulated with FEP (CMP)
<b>Flame rating:</b>	Plenum (CMP): NFPA 262
<b>PoE/PoH compliant:</b>	Meets IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt for PoE applications UL PoH certified per UL4299
<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 -4°F to 221°F (-20°C to 105°C) during operation
<b>Cable jacket:</b>	Plenum (CMP): Flame retardant PVC
<b>Cable weight:</b>	30.0 lbs./1000 ft. (13.6 kg/305m)
<b>Packaging:</b>	1000 ft. (305m) on a reel 34.0 lbs./1000 ft. (15.4 kg/305m) Package tested to ISTA procedure 1A

## key features and benefits

<b>Vari-MaTriX HD Technology</b> 	Best-in-class cable diameter delivers superior PSANEXT and PSAACRF suppression while retaining UTP EMI immunity
<b>Superior headroom warranty</b>	Provides the highest worst-case margins above the industry standard for both electrical and alien crosstalk performance
<b>High density 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 105°C (221°F) ambient environment providing error-free performance in high-density cabinets and large cable bundles running PoE+ or PoE++ applications
<b>Highest port 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™ 10 Gig UTP Copper Cable with Vari-MaTriX HD Technology is a component of the TX6A™ 10 Gig 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:

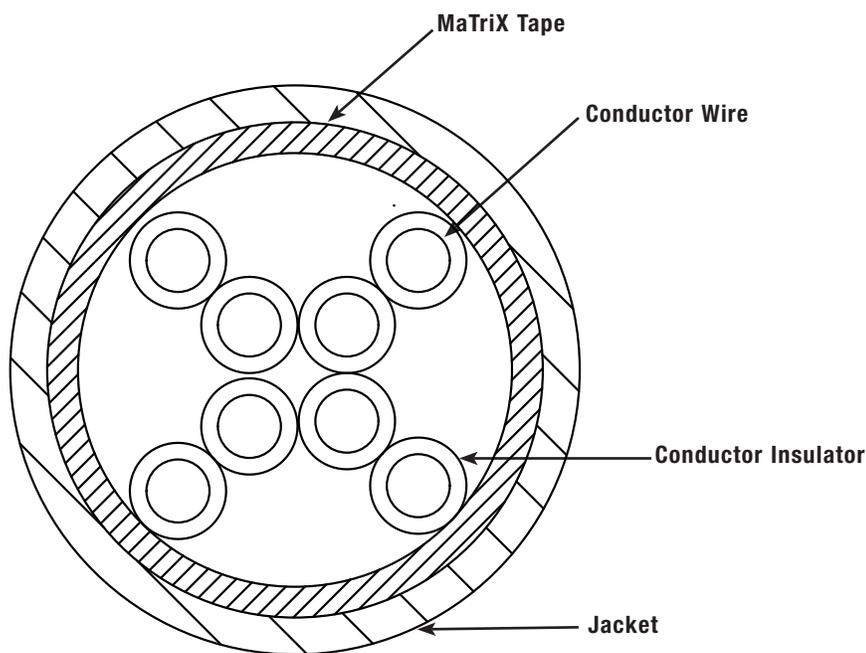
- 10GBASE-T Ethernet
- Data center I/O consolidation
- Data center server virtualization
- Consolidation of network interconnects
- Back-bone aggregation
- Parallel processing and high speed computing

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## 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)	Plenum (CMP): 70%
Operating Voltage, Maximum	80V

## cable construction



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