Utility Grade UTG20 Copper Cable with Vari-MaTriX HD Technology

Specifications
Utility Grade UTG20 cable shall be constructed of 23 AWG copper conductors with FEP Plenum (CMP) insulation. The cable shall be UL verified to the Bear Attack (BERetAC) Test Method™. 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 innovative cable design shall maximize density and provide installation flexibility as cables can be routed in tight bundles through pathways and spaces.

Technical Information
Category 6A/Class EA channel and component performance:
- 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 EA 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

Conductors/insulators: 23 AWG solid copper insulated with FEP (CMP)
Standards compliance: UL Verified - Bear Attack (BERetAC) Test Method™
Flame rating: Plenum (CMP): NFPA 262

PoE Performance:
- 150m or more up to 100 W (CMP-LP - 0.7A)
- Meets IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt for PoE applications
- UL PoH certified per UL4299

Temperature rating:
- 32°F to 140°F (0°C to 60°C) during installation
- -4°F to 221°F (-20°C to 105°C) during operation

Cable jacket: Plenum (CMP): Flame-retardant PVC
Cable diameter: Plenum (CMP): 0.230 in. (5.8mm) nominal
Cable weight: 30.0 lbs./1000 ft. (13.6 kg/305m)
Packaging: 1000 ft. (305m) on a reel

Key Features and Benefits
Vari-MaTriX HD Technology
- Best-in-class cable diameter delivers superior PSANEXT and PSAACRF suppression while retaining UTP EMI immunity

Extended Transmission Distances
- Supports low bit rate devices like OT and physical security applications at up to 150m, while also supporting increased distances for high bit rate IP-based applications.

Higher Bandwidth Capabilities
- Maximum bandwidth of 650 MHz provides more headroom margin for connectivity performance and consistency with data transmission speeds up to 10 Gb/s at 100m

Extended AV Distances
- Provides design flexibility for high definition 4K video surveillance, HDBaseT and Gb/s SDVoE applications

Increased PoE Application Distance
- Minimizes degradation of insertion loss and maintains performance at longer distances with edge devices while still meeting code compliance

Ease of Installation
- Flex Force Level 2 parameters simplifies installation readiness and highlights the ease of handling for pulling, installing, and terminating

Applications
The Utility Grade UTG20 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
- Wi-Fi
- Smart building
- Power over Ethernet (PoE)
- High definition audio/visual
- 5G DAS

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**Utility Grade UTG20 Copper Cable with Vari-MaTriX HD Technology**

### Additional Specifications

<table>
<thead>
<tr>
<th>Mechanical Test</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Ultimate Breaking Strength</td>
<td>&gt; 90 lbf (400 N)</td>
</tr>
<tr>
<td>Minimum Bend Radius</td>
<td>4 × cable diameter</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical Test</th>
<th></th>
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<tbody>
<tr>
<td>Nominal Velocity of Propagation (NVP) Plenum (CMP): 70%</td>
<td></td>
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<tr>
<td>Operating Voltage, Maximum</td>
<td>80 V</td>
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<table>
<thead>
<tr>
<th>UL® Verified UTG Attributes (BERetAC Method)</th>
<th></th>
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<tbody>
<tr>
<td>Maximum horizontal distance at 10 Mb/s</td>
<td>185m (606 ft.)</td>
</tr>
<tr>
<td>Maximum horizontal distance at 100 Mb/s</td>
<td>150m (492 ft.)</td>
</tr>
<tr>
<td>Maximum horizontal distance at 1 Gb/s</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Maximum horizontal distance at 10 Gb/s</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Maximum HDBaseT and Gb/s SDVoE distance</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Video Surveillance (1080p HD and 4K UHD)</td>
<td>150-185m (492-606 ft.)</td>
</tr>
<tr>
<td>Maximum PoE distance - Type 1 (15.4 W)</td>
<td>185m (606 ft.)</td>
</tr>
<tr>
<td>Maximum PoE distance - Type 2 (30 W)</td>
<td>150m (492 ft.)</td>
</tr>
<tr>
<td>Maximum PoE distance - Type 3 (60 W)</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Maximum PoE distance - Type 4 (100 W)</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Maximum bundle size with PoE (Type 4 - 0.5A) @ 45°C</td>
<td>90 cables</td>
</tr>
<tr>
<td>Flex Force Level</td>
<td>2</td>
</tr>
</tbody>
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### Cable Construction

- MaTriX Tape
- Conductor Wire
- Conductor Insulator
- Jacket

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