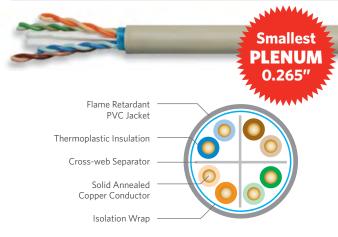
## **10G**ain<sup>®</sup> **XP** Category 6A

CMR-LP/CMP-LP



# CHDBI

| SPECIFICATIONS                   |  |  |  |  |  |
|----------------------------------|--|--|--|--|--|
| Pair Count                       | 4  |  |  |  |  |
| Conductor                        | Solid annealed copper  |  |  |  |  |
| AWG (mm)                         | 23 (0.57)  |  |  |  |  |
| Insulation                       | CMR: Thermoplastic<br>CMP: FEP   |  |  |  |  |
| Insulation Colors                | Pair 1: ColorTip Light Blue, Blue<br>Pair 2: ColorTip Light Orange, Orange<br>Pair 3: ColorTip Light Green, Green<br>Pair 4: ColorTip Light Brown, Brown |  |  |  |  |
| Separator                        | Cross-web  |  |  |  |  |
| Isolation Wrap                   | Proprietary construction   |  |  |  |  |
| Jacket                           | CMR: Flame retardant (FR) PVC<br>CMP: FR, low smoke PVC  |  |  |  |  |
| Characteristic Impedance<br>Ohms | 100 ± 15   |  |  |  |  |
| Velocity of Propagation<br>%     | CMR: 66<br>CMP: 71   |  |  |  |  |
| Performance Compliance           | UL 444<br>CSA C22.2 No. 214-08<br>UL 1666<br>NFPA 262<br>ANSI/TIA-568-C.2<br>Article 800, NEC (NFPA 70)<br>HDBaseT Class A and B                         |  |  |  |  |
| NRTL Programs                    | UL Verified CAT 6A<br>UL listed CMR-LP (0.5)<br>c(UL) listed CMR<br>UL Listed CMP-LP (0.6)<br>c(UL) Listed CMP<br>HDBaseT Certified                      |  |  |  |  |
| Sustainability                   | UL Certified EPD<br>HPD<br>Multi-Attribute Certification<br>USGBC® Member<br>RoHS-compliant/RoHS 2-compliant<br>REACH-compliant                          |  |  |  |  |

## PRODUCT DESCRIPTION

# **FIRST MANUFACTURER IN THE INDUSTRY**

10Gain® XP is the first Category 6A cable without a continuous shield to offer 7 dB margin over Alien Crosstalk (AXT) performance requirements in ANSI/TIA-568-C.2. Its uniquely designed Isolation Wrap contains discontinuous sections of metallized material, held in place by a polymeric layer. 10Gain XP has a nominal 0.265 (CMP) or 0.275" (CMR) diameter that allows for higher cable density than other CAT 6A cable products. 10Gain XP is ideal for PoE applications requiring higher levels of current and simultaneously up to 10 Gigabit Ethernet. 10Gain XP is certified for HD A/V applications using HDBaseT Class A and B protocol.

## APPLICATIONS

- 10BASE-T through 10GBASE-T Ethernet
- Power over Ethernet (PoE & PoE+) IEEE 802.3at and 3af Type 1 and 2
- 4PPoE+ IEEE 802.3bt Type 3 and 4 draft D1.2
- ATM and token ring
- Backward compatible to legacy protocols and applications
- HDBaseT Class A and B

|                          | FEATURES   | BENEFITS  |
|--------------------------|--|---|
|                          | UL Certified Environmental<br>Product Declaration (EPD)  | <ul> <li>Contributes toward 1 LEED<br/>credit under the Material and<br/>Resources credit (MRc)</li> </ul>                        |
| e, Blue<br>ange, Orange  | <ul> <li>Health Product Declaration<sup>™</sup><br/>(HPD<sup>™</sup>)</li> </ul>                               | <ul> <li>Contributes toward 1 LEED<br/>credit under the MRc</li> </ul>  |
| een, Green<br>own, Brown | <ul> <li>Multi-Attribute Certification<br/>by GreenCircle Certified, LLC</li> </ul>                            | <ul> <li>Offers an overview of the<br/>sustainability of a product, its<br/>packaging and manufacturing</li> </ul>                |
| R) PVC                   | Non-conductive Isolation Wrap  | • 7 dB AXT performance without grounding or bonding   |
| -                        | Tested to 650 MHz  | <ul> <li>Assures ample<br/>bandwidth headroom</li> </ul>  |
|                          | Nominal 0.265 (CMP)<br>or 0.275 (CMR) inch diameter  | <ul> <li>Higher cable density, smaller<br/>bend radius and lowers<br/>installation costs</li> </ul>                               |
|                          | <ul> <li>CableID<sup>®</sup> alpha numeric code<br/>printed every 2 feet</li> </ul>                            | <ul> <li>Easily identifies both ends of a<br/>cable run without the need to<br/>separately label or tone<br/>the cable</li> </ul> |
| 70)                      | <ul> <li>ColorTip<sup>®</sup> circuit<br/>identification system</li> </ul>                                     | Easily identify conductor mates     even in low-light environments  |
|                          | <ul> <li>Tested up to 100 W in most<br/>severe temperature conditions<br/>in a bundle of 100 cables</li> </ul> | • Offers 82% power efficiency<br>and lowest temperature increase<br>inside a bundle   |
|                          | HDBaseT Class A and B certified  | <ul> <li>Ideal for any A/V application up<br/>to 100m channel</li> </ul>  |
| tion                     | UL LP listed   | <ul> <li>Third-party assurance of<br/>product safety in high-heat and<br/>high-power applications</li> </ul>                      |
| 2-compliant              | <ul> <li>Temperature cable rating: 75°C<br/>for CMR and 90°C for CMP</li> </ul>                                | • Temperature rating of the<br>insulation AND of the jacket   |

insulation AND of the jacket provide improved cable lifespan despite high-heat and high-power applications

### PART NUMBERS AND PHYSICAL CHARACTERISTICS Nominal Diameter Approx. Weight Listing Part Number<sup>1</sup> Package Packages per Pallet in (mm) lbs/kft (kg/km) CMR 0.275 (6.99) 29 (43) 1,000' BrakeBox® 6H-246-xA 12 CMR 6H-272-xA 0.275 (6.99) 29 (43) 1,000' Plywood reel 12 CMP 6H-246-xB 0.265 (6.73) 35 (52) 1,000' BrakeBox® 12 CMP 6H-272-xB 0.265 (6.73) 35 (52) 1,000' Plywood reel 12

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| 1Declar "              |  |          | C                        | White = 4  | C                       | Yellow = 6 | Dunala - 7                 | D- J - 0 | 0                         | Dia ali — D |
|------------------------|--|----------|--------------------------|------------|-------------------------|------------|----------------------------|----------|---------------------------|-------------|
| <sup>1</sup> Replace " | x with:                                      | Blue = 2 | Gray = 3                 | vvnite – 4 | Green = 5               | reliow – 6 | Purple = 7                 | Red = 9  | Orange = D                | Black = E   |
| LECTRICAL              | SPECIFICATION                                | IS       |                          |            |                         |            |                            |          |                           |             |
| Frequency              | Insertion Loss @ 20°C<br>Maximum<br>dB/100 m |          | NEXT Minimum<br>dB/100 m |            | ACR Minimum<br>dB/100 m |            | PSNEXT Minimum<br>dB/100 m |          | PSACR Minimum<br>dB/100 m |             |
| MHz                    | Guaranteed                                   | Typical  | Guaranteed               | Typical    | Guaranteed              | Typical    | Guaranteed                 | Typical  | Guaranteed                | Typical     |
| 1                      | 2.1  | 2.0      | 74.3                     | 78.3       | 72.2                    | 77.3       | 72.3                       | 77.3     | 70.2                      | 76.3        |
| 4                      | 3.8  | 3.7      | 65.3                     | 69.3       | 61.5                    | 66.6       | 63.3                       | 68.3     | 59.5                      | 65.6        |
| 8                      | 5.3  | 5.1      | 60.8                     | 64.8       | 55.4                    | 60.6       | 58.8                       | 63.8     | 53.4                      | 59.6        |
| 10                     | 5.9  | 5.7      | 59.3                     | 63.3       | 53.4                    | 58.6       | 57.3                       | 62.3     | 51.4                      | 57.6        |
| 16                     | 7.5  | 7.3      | 56.2                     | 60.2       | 48.8                    | 54.0       | 54.2                       | 59.2     | 46.8                      | 53.0        |
| 20                     | 8.4  | 8.1      | 54.8                     | 58.8       | 46.4                    | 51.7       | 52.8                       | 57.8     | 44.4                      | 51.2        |
| 25                     | 9.4  | 9.1      | 53.3                     | 57.3       | 44.0                    | 49.7       | 51.3                       | 56.3     | 42.0                      | 49.0        |
| 31.25                  | 10.5   | 10.2     | 51.9                     | 55.9       | 41.4                    | 47.2       | 49.9                       | 54.9     | 39.4                      | 46.7        |
| 62.5                   | 15.0   | 14.4     | 47.4                     | 51.4       | 32.4                    | 39.0       | 45.4                       | 50.4     | 30.4                      | 38.4        |
| 100                    | 19.1   | 18.4     | 44.3                     | 48.3       | 25.2                    | 32.4       | 42.3                       | 47.3     | 23.2                      | 31.7        |
| 200                    | 27.6   | 26.5     | 39.8                     | 43.8       | 12.2                    | 20.1       | 37.8                       | 42.8     | 10.2                      | 19.5        |
| 250                    | 31.1   | 29.8     | 38.3                     | 42.3       | 7.3                     | 15.5       | 36.3                       | 41.3     | 5.3                       | 15.1        |
| 300                    | 34.3   | 32.9     | 37.1                     | 41.1       | 2.9                     | 11.4       | 35.1                       | 40.1     | 0.9                       | 10.8        |
| 400                    | 40.1   | 38.3     | 35.3                     | 39.3       |                         | 4.6        | 33.3                       | 38.3     |                           | 3.6         |
| 500                    | 45.3   | 43.0     | 33.8                     | 37.8       |                         |            | 31.8                       | 36.8     |                           |             |
| 600                    |  | 47.5     |                          | 36.4       |                         |            |                            | 35.6     |                           |             |
| 650                    |  | 49.7     |                          | 35.9       |                         |            |                            | 35.1     |                           |             |
| 700                    |  | 51.4     |                          | 35.5       |                         |            |                            | 34.6     |                           |             |
| 750                    |  | 53.3     |                          | 35.1       |                         |            |                            | 34.2     |                           |             |

| Frequency<br>MHz | Return Loss Minimum<br>dB/100 m |         | ACRF Minimum<br>dB/100 m |         | PSACRF Minimum<br>dB/100 m |         | PSANEXT Minimum<br>dB/100 m |         | PSAACRF Minimum<br>dB/100 m |         |
|------------------|---------------------------------|---------|--------------------------|---------|----------------------------|---------|-----------------------------|---------|-----------------------------|---------|
|                  | Guaranteed                      | Typical | Guaranteed               | Typical | Guaranteed                 | Typical | Guaranteed                  | Typical | Guaranteed                  | Typical |
| 1                | 20.0                            | 22.0    | 67.8                     | 73.8    | 64.8                       | 70.8    | 74.0                        | 96.5    | 74.0                        | 80.0    |
| 4                | 23.0                            | 25.0    | 55.8                     | 61.8    | 52.8                       | 58.8    | 74.0                        | 87.5    | 73.2                        | 79.2    |
| 8                | 24.5                            | 26.5    | 49.7                     | 55.7    | 46.7                       | 52.7    | 74.0                        | 83.0    | 67.1                        | 73.1    |
| 10               | 25.0                            | 27.0    | 47.8                     | 53.8    | 44.8                       | 50.8    | 74.0                        | 81.5    | 65.2                        | 71.2    |
| 16               | 25.0                            | 27.0    | 43.7                     | 49.7    | 40.7                       | 46.7    | 74.0                        | 80.0    | 61.1                        | 67.1    |
| 20               | 25.0                            | 27.0    | 41.8                     | 47.8    | 38.8                       | 44.8    | 74.0                        | 80.0    | 59.2                        | 65.2    |
| 25               | 24.3                            | 26.3    | 39.8                     | 45.8    | 36.8                       | 42.8    | 74.0                        | 80.0    | 57.2                        | 63.2    |
| 31.25            | 23.6                            | 25.6    | 37.9                     | 43.9    | 34.9                       | 40.9    | 74.0                        | 80.0    | 55.3                        | 61.3    |
| 62.5             | 21.5                            | 23.5    | 31.9                     | 37.9    | 28.9                       | 34.9    | 72.6                        | 78.6    | 49.3                        | 55.3    |
| 100              | 20.1                            | 22.1    | 27.8                     | 33.8    | 24.8                       | 30.8    | 69.5                        | 75.5    | 45.2                        | 51.2    |
| 200              | 18.0                            | 20.0    | 21.8                     | 27.8    | 18.8                       | 24.8    | 65.0                        | 71.0    | 39.2                        | 45.2    |
| 250              | 17.3                            | 19.3    | 19.8                     | 25.8    | 16.8                       | 22.8    | 63.5                        | 69.5    | 37.2                        | 43.2    |
| 300              | 16.8                            | 18.8    | 18.3                     | 24.3    | 15.3                       | 21.3    | 62.3                        | 68.3    | 35.7                        | 41.7    |
| 400              | 15.9                            | 17.9    | 15.8                     | 21.8    | 12.8                       | 18.8    | 60.5                        | 66.5    | 34.2                        | 39.2    |
| 500              | 15.2                            | 17.2    | 13.8                     | 19.8    | 10.8                       | 16.8    | 59.0                        | 65.0    | 31.2                        | 37.2    |
| 600              |                                 | 16.7    |                          | 18.2    |                            | 15.2    |                             | 63.8    |                             | 35.6    |
| 650              |                                 | 16.4    |                          | 17.5    |                            | 14.5    |                             | 63.3    |                             | 34.9    |
| 700              |                                 | 16.2    |                          | 16.9    |                            | 13.9    |                             |         |                             |         |
| 750              |                                 | 16.0    |                          | 16.3    |                            | 13.3    |                             |         |                             |         |



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