



State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

## Request for Quotation

RFQ NUMBER

CABLE 13

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

FRANK WHITTAKER  
304-558-2316

\*709002526 314-573-5174  
GRAYBAR ELECTRIC COMPANY INC  
1010 YOUNG ST

CHARLESTON WV 25301

ALL STATE AGENCIES  
AND POLITICAL SUBDIVISIONS  
VARIOUS LOCALES AS INDICATED  
BY ORDER

| DATE PRINTED  | TERMS OF SALE | SHIP VIA                 | F.O.B.   | FREIGHT TERMS                     |            |        |
|---|---------------|--------------------------|----------|-----------------------------------|------------|--------|
| 04/11/2012  |               |                          |          |                                   |            |        |
| BID OPENING DATE: 05/10/2012  |               | BID OPENING TIME 01:30PM |          |                                   |            |        |
| LINE  | QUANTITY      | UOP                      | CAT. NO. | ITEM NUMBER                       | UNIT PRICE | AMOUNT |
| 0001  | 1             | LS                       |          | 285-10                            |            |        |
| COMPUTER DATA CABLE (COPPER/FIBER) & FITTINGS   |               |                          |          |                                   |            |        |
| REQUEST FOR QUOTATION (RFQ)   |               |                          |          |                                   |            |        |
| BLANKET OPEN END STATEWIDE CONTRACT   |               |                          |          |                                   |            |        |
| THE WEST VIRGINIA STATE PURCHASING DIVISION IS SOLICITING BIDS TO ESTABLISH A BLANKET OPEN END STATEWIDE CONTRACT FOR COMPUTERS DATA CABLE (COPPER/FIBER) AND FITTINGS FOR ALL WEST VIRGINIA STATE AGENCIES AND PARTICIPATING POLITICAL SUBDIVISIONS. |               |                          |          |                                   |            |        |
| TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO FRANK WHITTAKER IN THE WEST VIRGINIA STATE PURCHASING DIVISION VIA FAX AT 304-558 4115 OR VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV.                                     |               |                          |          |                                   |            |        |
| DEADLINE FOR ALL TECHNICAL QUESTIONS IS APRIL 26, 2012 AT THE CLOSE OF BUSINESS.  |               |                          |          |                                   |            |        |
| ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL WRITTEN ADDENDUM TO BE ISSUED AFTER THE DEADLINE HAS LAPSED.  |               |                          |          |                                   |            |        |
| VERBAL COMMUNICATION: ANY VERBAL COMMUNICATION BETWEEN THE VENDOR AND ANY STATE PERSONNEL IS NOT BINDING, ONLY INFORMATION ISSUED IN WRITING AND ADDED TO THE RFQ SPECIFICATIONS BY A FORMAL WRITTEN ADDENDUM IS BINDING.                             |               |                          |          |                                   |            |        |
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS   |               |                          |          |                                   |            |        |
| SIGNATURE <i>Kevin Hays</i>   |               | TELEPHONE 304-344-1371   |          | DATE 5-10-12                      |            |        |
| TITLE <i>Sales Rep</i>  |               | FEIN 130794380001        |          | ADDRESS CHANGES TO BE NOTED ABOVE |            |        |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

RECEIVED  
2012 MAY 10 PM 12:26  
WV PURCHASING  
DIVISION

## GENERAL TERMS & CONDITIONS

### REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
  2. The State may accept or reject in part, or in whole, any bid.
  3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
  4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
  5. Payment may only be made after the delivery and acceptance of goods or services.
  6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
  7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
  8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
  9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
  10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
  11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
  12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
  13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at [www.state.wv.us/admin/purchase/vrc/hipaa.html](http://www.state.wv.us/admin/purchase/vrc/hipaa.html) and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
  14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
  15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
  16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.
- I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

### INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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| DATE PRINTED   | TERMS OF SALE | SHIP VIA                      | F.O.B.   | FREIGHT TERMS                     |            |        |
|--|---------------|-------------------------------|----------|-----------------------------------|------------|--------|
| 04/11/2012   |               |                               |          |                                   |            |        |
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| <p>NO CONTACT BETWEEN THE VENDOR AND ANY AGENCY PERSONNEL IS PERMITTED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE STATE BUYER. VIOLATION MAY RESULT IN THE REJECTION OF THE BID. THE STATE BUYER NAMED ABOVE IS THE SOLE CONTACT FOR ANY AND ALL INQUIRIES AFTER THIS RFQ HAS BEEN RELEASED.</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.: <i>CABLE 13</i> .....</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1 .....</p> <p>NO. 2 .....</p> <p>NO. 3 .....</p> <p>NO. 4 .....</p> <p>NO. 5 .....</p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES</p> |               |                               |          |                                   |            |        |
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS  |               |                               |          |                                   |            |        |
| SIGNATURE <i>Kevin Hays</i>  |               | TELEPHONE <i>304-344-2371</i> |          | DATE <i>5-10-12</i>               |            |        |
| TITLE <i>Sales Rep</i>   |               | FEIN <i>138794380001</i>      |          | ADDRESS CHANGES TO BE NOTED ABOVE |            |        |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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BID OPENING DATE:

05/10/2012

BID OPENING TIME

01:30PM

| LINE   | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|----------|-------------|------------|--------|
| AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.   |          |     |          |             |            |        |
| .....<br>SIGNATURE   |          |     |          |             |            |        |
| .....<br>COMPANY   |          |     |          |             |            |        |
| .....<br>DATE  |          |     |          |             |            |        |
| NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.  |          |     |          |             |            |        |
| REV. 09/21/2009  |          |     |          |             |            |        |
| EXHIBIT 3  |          |     |          |             |            |        |
| LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AWARD AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE. |          |     |          |             |            |        |
| UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.   |          |     |          |             |            |        |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

|           |              |                                   |
|-----------|--------------|-----------------------------------|
| SIGNATURE | TELEPHONE    | DATE                              |
| .....     | 304-344-2371 | 5/10/12                           |
| TITLE     | FEIN         | ADDRESS CHANGES TO BE NOTED ABOVE |
| SPRGS REP | 130774380001 |                                   |

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| LINE   | QUANTITY      | UOP                      | CAT. NO.               | ITEM NUMBER                       | UNIT PRICE   | AMOUNT |
| <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SEE SECTION 4.0 OF THE ATTACHED SPECIFICATIONS.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE</p> |               |                          |                        |                                   |              |        |
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS  |               |                          |                        |                                   |              |        |
| SIGNATURE <i>Kenn J. [Signature]</i>   |               |                          | TELEPHONE 304-344-2311 |                                   | DATE 5/10/12 |        |
| TITLE <i>Sales Rep</i>   |               | FEIN 130794380001        |                        | ADDRESS CHANGES TO BE NOTED ABOVE |              |        |

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| <p>CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 05/26/2009</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION<br/>PURCHASING DIVISION<br/>BUILDING 15<br/>2019 WASHINGTON STREET, EAST<br/>CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> |               |                          |                        |               |                                   |        |
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS  |               |                          |                        |               |                                   |        |
| SIGNATURE <i>Lamin Hys</i>   |               |                          | TELEPHONE 304-344-2311 |               | DATE 5-10-12                      |        |
| TITLE SALES REP  |               |                          | FEIN 138794380881      |               | ADDRESS CHANGES TO BE NOTED ABOVE |        |

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| SEALED BID   |               |                          |          |                                   |            |              |
| BUYER:   |               | FRANK WHITTAKER-FILE 44  |          |                                   |            |              |
| RFQ. NO.:  |               | CABLE13                  |          |                                   |            |              |
| BID OPENING DATE:  |               | 05/10/2012               |          |                                   |            |              |
| BID OPENING TIME:  |               | 1:30 PM                  |          |                                   |            |              |
| PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:<br>----- 304-344-0324 ----- |               |                          |          |                                   |            |              |
| CONTACT PERSON (PLEASE PRINT CLEARLY):<br>----- KEVIN HYPES -----  |               |                          |          |                                   |            |              |
| ***** THIS IS THE END OF RFQ CABLE13 ***** TOTAL:  |               |                          |          |                                   |            | \$946,402.30 |
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS  |               |                          |          |                                   |            |              |
| SIGNATURE <i>Kevin Hypes</i>   |               | TELEPHONE 304-344-2371   |          | DATE 5/10/12                      |            |              |
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**REQUEST FOR QUOTATION: CABLE13  
STATEWIDE CONTRACT  
COMPUTER DATA CABLE (COPPER/FIBER) & FITTINGS**

The Acquisition and Contract Administration Section of the Purchasing Division, hereinafter referred to as "State", is soliciting bids for the Office of Technology, hereinafter referred to as "WVOT", to establish a statewide contract to provide computer data cable (copper/fiber) and fittings for all West Virginia State agencies and participating political subdivisions.

**1.0 PURPOSE**

The purpose of this RFQ is to request bids from responsible vendors with the intent to award a statewide contract to provide computer data cable, (copper/fiber) and fittings to state agencies. This contract will include category 5E and category 6 plenum & non plenum cable, patch panels, modular connectors, single-mode & multi-mode fiber, and accessories.

Our primary goal is to leverage the State of West Virginia's buying power to ultimately reduce our overall costs, while meeting our requirements and maintaining an acceptable level of quality.

**2.0 DEFINITIONS**

The below terms shall be herein defined as:

- A. "Vendor": the successful bidder(s)
- B. "Manufacturer": the company who produces the equipment.
- C. "Contract": the binding agreement that is entered into between the State of West Virginia and the Vendor to provide the services as herein specified.
- D. Mandatory Requirements: The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the State. Failure on the part of the Vendor to meet any of the mandatory specifications shall result in the disqualification of the bid.



### 3.0 MATERIAL SPECIFICATIONS

#### 3.1 Category 5e Plenum & Non-plenum Cable

##### REFERS TO ITEMS 45 & 46 ON PRICING SHEETS

##### **Minimum specifications:**

UNSHIELDED TWISTED PAIR CABLE TESTED TO 200 mhz AND ETL VERIFIED TO CATEGORY 5e. CAT.5e CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A RIPCORD UNDER AN OVERALL JACKET THROUGHOUT THE LENGTH OF THE CABLE. CAT.5e CABLE **MUST** BE PACKAGED DIRECTLY IN AN EASY PULL BOX AND DISPENSE IN A TANGLE-FREE PAYOUT (AS IF ON A REEL) IN 1,000 FT LENGTHS PER BOX. CABLE **MUST** CONTAIN PRINTED DESCENDING FOOTAGE MARKERS FROM 1,000 TO 0 IN EACH 1,000 FT. BOX. OUTER JACKET OF CAT.5e CABLE **MUST** BE AVAILABLE IN SELECTION OF 10 COLORS WHICH INCLUDE WHITE, BLUE, PINK, YELLOW, GRAY, GREEN, RED, ORANGE, BLACK, & VIOLET. CAT.5e NON-PLENUM CABLE **MUST** HAVE "CMR" PRINTED ON CABLE, INDICATING IT IS RISER NON-PLENUM CABLE. CAT.5e PLENUM CABLE **MUST** HAVE "CMP" PRINTED ON CABLE, INDICATING IT IS PLENUM CABLE. CAT.5e PLENUM CABLE **MUST** USE DUAL INSULATION - CONSIDERED FEP ON ALL 4 PAIRS AND INSULATION IS A DUAL LAYER OF FRPE AND FEP.

**All plenum cable must be 4X4 plenum construction.**

- **14 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps.
- **4 dB Minimum** – Improvement in Near End Crosstalk vs. TIA/EIA-568-B Category 5.
- **ETL Verified to Category 5e.**
- **.45 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- **Engineered for Future Applications** – Tested for all parameters specified...for 4 pair UTP in TIA/EIA-568-B.2, including PS-NEXT, Return Loss, ELFEXT and PS-ELFEXT.

#### 3.2 Category 5e Modular Connectors

##### REFERS TO ITEM 47 ON PRICING SHEETS

Modular connector for Category 5e UTP structured cabling systems and uses include high megabit applications such as Gigabit Ethernet and 622 Mbps ATM. The Category 5e modular connector shall meet or exceed individual snap-in style, and provide compliance with TIA/EIA-568-B specifications. The connectors shall also be in compliance with all National Electrical Codes; compliant with FCC Part 68; UL listed; and independently UL Certified. In addition to Category 5e compliance, the connector shall have the ability to support high megabit and shared-sheath applications. All plastics used in construction of the connector bodies shall be fire-retardant with a UL

flammability rating of 94V-0. Termination of all connectors shall be 110-type IDC with solder-plated phosphor bronze contacts. The connector shall provide a ledge directly adjacent to the 110 style termination against which the wires can be directly terminated and cut in one action by the installer. Connector wiring label shall provide installation color codes for T568B wiring schemes. The modular hardware shall fit all other installed telecommunications wall plates, outlets and field configurable patch panels and patch blocks. A selection of 13 colors **must** be available for the Cat.5e connector, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.

### STANDARDS COMPLIANCE

Category 5e connector **must** meet all applicable standards: UL Listed; complies with all TIA/EIA-568-B requirements; and meets FCC Part 68.

### FEATURES

- **Must** be available in 13 different colors including ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond, and brown.
- Individual port configurability allows specification flexibility.
- Robust one-piece lead-frame design.
- Narrow connector allows high port density in a small area.
- Performance supports high megabit and shared-sheath applications.

### PHYSICAL SPECIFICATIONS

Dimensions: .89"H x .635"W x 1.178"D

Materials: Connector body is high-impact, fire-retardant plastic rated UL 94V-0. Spring wire contacts are high-quality phosphor bronze, plated with 50 micro-inches of gold over 100 micro inches of nickel for lowest contact resistance, maximum life. Connector 110-style IDC contacts are solder-plated phosphor bronze.

Colors: selection of 13 colors **must** be made available, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond, and brown.

### DESIGN SPECIFICATIONS

- For use in any Category 5e housing to support Category 5e UTP connectivity in surface mount, flush mount, or modular furniture outlets and field configurable patch panels and patch blocks.
- Can be used in conjunction with other snap-in modules for voice/data and video applications over UTP, coax and fiber.
- A selection of 13 colors **must** be available for the connector, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.

### INSTALLATION NOTES

- **Must** be designed for cable termination with a 110 punch down tool.
- Detailed installation instructions **must** be included in the standard pack.
- IDCs **must** be arranged to minimize untwisting.

### 3.3 Category 5E Plenum & Non-plenum Cable

#### REFERS TO ITEMS 48 & 49 ON PRICING SHEETS

##### **Minimum specifications:**

UNSHIELDED TWISTED PAIR CABLE TESTED TO 400 MHz AND ETL VERIFIED TO CATEGORY 5E. CATEGORY 5E CABLE EXCEEDS TIA/EIA 568-B.2 CAT.5e & ISO/IEC 11801 CAT.5E. HORIZONTAL CABLE SPECS. THIS CAT.5E CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A RIPCORD UNDER AN OVERALL JACKET THROUGHOUT THE LENGTH OF THE CABLE. CAT.5E CABLE **MUST** BE PACKAGED DIRECTLY IN AN EASY PULL BOX AND DISPENSE IN A TANGLE-FREE PAYOUT (AS IF ON A REEL) IN 1,000 FT. LENGTHS PER BOX. CABLE **MUST** CONTAIN PRINTED DESCENDING FOOTAGE MARKERS FROM 1,000 TO 0 IN EACH 1,000 FT. BOX. OUTER JACKET OF CAT.5E CABLE **MUST** BE AVAILABLE IN SELECTION OF 10 COLORS WHICH INCLUDE WHITE, BLUE, PINK, YELLOW, GRAY, GREEN, RED, ORANGE, BLACK, & VIOLET. CAT.5E NON-PLENUM CABLE **MUST** HAVE "CMR" PRINTED ON CABLE, INDICATING IT IS RISER NON-PLENUM CABLE. CAT.5E PLENUM CABLE **MUST** HAVE "CMP" PRINTED ON CABLE, INDICATING IT IS PLENUM CABLE. CAT.5E PLENUM CABLE **MUST** USE DUAL INSULATION - CONSIDERED FEP ON ALL 4 PAIRS AND INSULATION IS A DUAL LAYER OF FRPE AND FEP.

**All plenum cable must be 4X4 plenum construction.**

- **20 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps and 1.2 Gbps.
- **5 dB Minimum** – Improvement in Near End Crosstalk vs. standard Category 5e NEXT.
- **Meets Return Loss** – Category 5e Standard.
- **.25 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B Category 5e requirements: Near End Crosstalk, Characteristic Impedance, Insertion Loss, and Delay Skew. Also exceeds TIA/EIA-568-B.2 Category 5e requirements: Power Sum NEXT, and Far End Crosstalk – ELFEXT and PS-ELFEXT.

**STANDARDS:** EXCEEDS TIA/EIA-568-B.2 CAT 5e & ISO/IEC 11801:2002 CAT 5e HORIZONTAL CABLE

**CONDUCTOR DCR:** 8.9ohms/100m (27.1  $\Omega$ /Mft) MAX

**DCR UNBALANCE:** 3% MAX

**MUTUAL CAPACITANCE:** 46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 66 pF/100m (200 pF/Mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100ohms 15% (1-400 MHz)

**INPUT IMPEDANCE:** 100 ohms 15% (1-100 MHz); 100 ohms 22% (>100-200 MHz)

**PROPAGATION DELAY:** 506 + 36/ $\sqrt{f}$  ns/100m MAX

**DELTA DELAY (SKEW):** 25 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** PLENUM 72%; NON-PLENUM 68%

### 3.4 Category 5E Modular Connectors

#### REFERS TO ITEM 50 ON PRICING SHEETS

The Category 5E connector shall meet or exceed the requirements for Category 5e described in TIA/EIA-568-B as well as the Class E requirements described in ISO/IEC 11801. The modular connector shall be individual snap-in style. The connector **must** include unique pair separation towers allowing for quicker and easier terminations. The connector shall be 180° configuration such that the punch field is in the back, allowing for rear termination.

Rear termination field shall include pointed pair separation towers to promote easier installation. All plastics used in construction of the connector bodies **must** be fire retardant with a UL flammability rating of 94V-0. Termination of all connectors shall be 110-type insulation displacement connectors (IDC). The connector shall provide a cutting ledge directly adjacent to the 110-style IDC's against which the wires can be directly terminated and cut in one action.

Connector wiring shall be universal and wiring label shall provide installation color codes for T568B wiring schemes. A selection of 13 colors **must** be available for the Cat.5E connector, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.

#### **STANDARDS COMPLIANCE**

The Category 5E modular connector **must** meet or exceed the Category 5E requirements for channel/component level performance per TIA/EIA-568-B and ISO/IEC 11801. Components certified per cULus and ACA requirements.

#### **PHYSICAL SPECIFICATIONS**

Dimensions: .885"H x .635"W x 1.211"D

Materials: Connector body is high-impact, fire-retardant plastic rated UL 94V-0. Spring wire contacts are high quality copper-based alloy, plated with 50 micro-inches of gold over 100 micro-inches of nickel for lowest electrical contact resistance and maximum life. Connector **must** include selection of 13 colors, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond, and brown.

#### **FEATURES**

- Universal T568B wiring labels for 110-style IDC terminations.
- **Must** be available in 13 different TIA/EIA 606-A compatible colors.
- 180° configuration allowing for rear termination.
- Unique pair separation towers designed to minimize untwisting and to speed installation.

#### **DESIGN SPECIFICATIONS**

- For use in any Category 5e housing to support Category 5E UTP connectivity in surface mount, flush mount, or modular furniture outlets and field configurable patch panels.
- Can be used in conjunction with other snap-in modules for voice/data and video applications over UTP, coax and fiber.



- Connector **must** be available in 13 colors, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.

#### INSTALLATION NOTES

- **Must** be designed for cable termination with a 110 punch down tool.
- Detailed installation instructions **must** be included in the standard pack.
- IDCs **must** be arranged to minimize untwisting.

### 3.5

#### Category 5E Patch Panels

#### REFERS TO ITEMS 72, 73, 74 & 75 ON PRICING SHEETS

The Category 5E patch panel shall meet or exceed the requirements for Category 5e described in TIA/EIA-568-B as well as the Class E requirements described in ISO/IEC 11801-B. The panels shall feature T568B wiring configurations, white IDC 110-punchdown modules, mounting standoffs for cable management bars, color-coded front window labeling, and a termination standoff for patch panel earthing/grounding. The panels shall have universal T568B wiring card for terminations. The panels shall be made of 16 gauge steel, and shall have a black painted finish with white silk-screening. The plastic elements shall be fire-retardant with a UL flammability rating of 94V-0. The panel shall be offered in 12-, 24-, 48-port configurations as well as 12-port configuration for wall mount applications. The patch panel shall be configured with six port modules. The 110 termination on the rear of the panel **must** follow normal installation color sequence (blue, orange, green, brown) from left to right; and **must** be designed for use in high megabit applications such as Gigabit Ethernet.

#### APPLICATION

Category 5e patch panels **must** be designed for use on 19" standard racks and cabinets and **must** allow for standard 110 terminations on the rear of the panel and **must** follow the normal installation color sequence (blue, orange, green, brown) from left to right; and **must** be designed for use in high megabit applications such as Gigabit Ethernet.

#### FEATURES

- Universal T568B wiring cards for 110 style IDC terminations.
- Color-coded front labeling for easy port identification
- Centralized labeling available on 48 port panel.
- Grounding standoff for optional earthing/grounding.

#### STANDARDS COMPLIANCE

Meets all applicable standards: UL Listed; meets or exceeds all TIA/EIA-568-B for Category 5e requirements; and meets FCC Part 68.

#### PHYSICAL SPECIFICATIONS

Dimensions: 12-, 24-Port - 1.75"H x 19"W x 1.31"D; 48 Port - 3.5"H x 19"W x 1.31"D  
12-port Patch Block - 10.0"H x 2.3"W x 1.474"D; Capacity: 12-, 24-, 48-port and 12-Port Patch Block; Materials: 16 gauge steel, painted black, PCB and plastic components are rated UL 94V-0

**DESIGN SPECIFICATIONS**

- Color-coded front window labeling for easy port identification.
- Centralized labeling (available on 48-port), promotes greater visibility of labels when patch cords are routed into horizontal cable management above and below the patch panel.
- Mounts on 19" standard equipment racks.
- Panel offered in 12-, 24-, 48-port configurations and a 12-Port Patch Block for wall-mount applications.
- Connector modules are grouped in sets of six.

### 3.6 Category 6 Plenum & Non-plenum Cable

#### REFERS TO ITEMS 81 & 82 ON PRICING SHEETS

**DESCRIPTION & MINIMUM SPECIFICATIONS:**

ENHANCED UNSHIELDED TWISTED PAIR (UTP) CAT.6 CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER TIA/EIA 568-B AND ISO/IEC 11801 CLASS E. TESTED TO 650 MHz AND ETL VERIFIED TO TIA/EIA-568-B.2-1 CAT.6. THE CABLE EXCEEDS TIA/EIA 568-B.2-1 AND ISO/IEC 11801 CATEGORY 6 ELECTRICAL CHARACTERISTICS. THE CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A CORE SEPARATOR (SPINAL SPACER) AND A RIPCORDER UNDER AN OVERALL JACKET THROUGHOUT THE LENGTH OF THE CABLE. OUTER JACKET OF CAT.6 CABLE **MUST** BE AVAILABLE IN SELECTION OF 10 COLORS WHICH INCLUDE WHITE, BLUE, PINK, YELLOW, GRAY, GREEN, RED, ORANGE, BLACK, & VIOLET. CAT.6 CABLE **MUST** BE PACKAGED DIRECTLY IN AN EASY PULL BOX AND DISPENSE IN A TANGLE-FREE PAYOUT (AS IF ON A REEL) IN 1,000 FT. LENGTHS PER BOX. CABLE **MUST** CONTAIN PRINTED DESCENDING FOOTAGE MARKERS FROM 1,000 TO 0 IN EACH 1,000 FT. BOX. CAT.6 NON-PLENUM CABLE **MUST** HAVE "CMR" PRINTED ON CABLE, INDICATING IT IS RISER NON-PLENUM CABLE. CAT.6 PLENUM CABLE **MUST** HAVE "CMP" PRINTED ON CABLE, INDICATING IT IS PLENUM CABLE. CAT.6 PLENUM CABLE **MUST** USE DUAL INSULATION - CONSIDERED FEP ON ALL 4 PAIRS AND INSULATION IS A DUAL LAYER OF FRPE AND FEP.

All plenum cable must be 4X4 plenum construction.

**SUPPORTED APPLICATIONS**

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), IEEE 802.3af POWER OVER ETHERNET FOR VoIP, ANSI X3.263 FDDI TP- PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps, AND 1.2 & 2.4 Gbps.

**INDUSTRY APPROVALS**

**STANDARDS:** EXCEEDS TIA/EIA 568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

**LISTINGS:** PL: UL/cUL TYPE CMP NP: UL/cUL TYPE CMR

**PERFORMANCE:** ETL VERIFIED TO TIA/EIA 568-B.2-1 CAT 6

**CONSTRUCTION**

**PRIMARIES:** CONDUCTOR: 23 AWG (.6 mm) SOLID BARE COPPER  
**PL:** DUAL INSULATION, FEP ON ALL 4 PAIRS; **NP:** THERMOPLASTIC POLYOLEFIN  
**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS  
**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER WITH A FLEXWEB CORE  
 SEPARATOR

**JACKET:** PL: NO LEAD PLENUM RATED THERMOPLASTIC  
 NP: NO LEAD FLAME RETARDANT THERMOPLASTIC  
**NOMINAL CABLE OD:** PL: .228" (5.79 mm); NP: .225" (5.7 mm)

**PHYSICAL CHARACTERISTICS**

**CABLE WEIGHT:** PL: 33 lbs/1000ft (49 kg/km) NP: 30 lbs/1000ft (45 kg/km)  
**BENDING RADIUS:** PL: 1" (25 mm) MIN (4 x CABLE OD)  
**PULLING TENSION:** 25 lbf (110 N) MAX  
**OPERATING TEMP.:** -20°C to +60°C (-4°F to +140°F)  
**STORAGE TEMP.:** -20°C to +75°C (-4°F to +167°F)  
**INSTALLATION :** 0°C to +60°C (+32°F to +140°F)

**ELECTRICAL CHARACTERISTICS**

**STANDARDS:**

EXCEEDS TIA/EIA-568-B.2-1 CAT 6, ISO/IEC 11801:2002 CAT 6 & IEC 61156-5 CAT 6  
 HORIZONTAL CABLE

**CONDUCTOR DCR:** 7.8ohms/100m (23.8ohms/Mft) MAX

**DCR UNBALANCE:** 3% MAX

**MUTUAL CAPACITANCE:** 46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/ GROUND:** 66 pF/100m (200 pF/Mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 ± 15% (1-350 MHz)

**INPUT IMPEDANCE:** 100 ohms ± 15% (1-100 MHz)

100 ohms ± 18% (>100-200 MHz)

100 ohms ± 22% (>200-350 MHz)

**RETURN LOSS (RL):** 20 + 7 log<sub>10</sub> (f) dB MIN (1-10 MHz)

27 dB MIN (>10-20 MHz)

27 - 5.58 log<sub>10</sub> (f/20) dB MIN (>20 MHz)

**INSERTION LOSS ( ATTENUATION):**  $1.795 \sqrt{f} + .017 f + \frac{.20}{\sqrt{f}}$  dB/100m MAX

**NEAR END CROSSTALK (NEXT):** 48.3 - 15 log<sub>10</sub> (f/100) dB/100m MIN

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 46.3 - 15 log<sub>10</sub> (f/100) dB/100m  
 MIN

**EQUAL LEVEL FAR END CROSSTALK (ELFEXT):** 30 - 20 log<sub>10</sub> (f/100) dB/100m  
 MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 28 - 20 log<sub>10</sub> (f/100) dB/100m MIN

**PROPAGATION DELAY:** 534 + 36 / √f ns/100m MAX

**DELTA DELAY (SKEW):** 25 ns/100m MAXIMUM SKEW – tightly controlled  
 propagation delay.

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 72% PLENUM  
 68% NON-PLENUM

WHERE f = FREQUENCY IN MHz from .772 to 350 MHz, except for ELFEXT and PS-  
 ELFEXT from 1 to 350 MHz.

### 3.7 Category 6 Modular Connectors

#### REFERS TO ITEM 83 ON PRICING SHEETS

The Category 6 modular connector shall meet or exceed the requirements for channel and component-level performance described in TIA/EIA-568-B.2-1 Category 6 standards. The modular connector shall be individual snap-in style. The connectors shall also be in compliance with all National Electrical Codes; compliant with FCC Part 68; UL listed; and independently verified. In addition to Category 6 compliance, the connector shall have the ability to support high megabit and shared-sheath applications. All plastics used in construction of the connector bodies **must** be fire-retardant with a UL flammability rating of 94V-0. The Category 6 connector includes unique pair separation towers allowing for quicker and easier terminations. The connector is configured in a 180° configuration such that the punch field is in the back, allowing for rear termination. Termination of all connectors shall be 110-type insulation displacement connectors (IDC). The connector shall provide a ledge directly adjacent to the 110-style termination against which the wires can be directly terminated and cut in one action by the installation craftsman. Connector wiring is universal and will accommodate installation color codes for T568B wiring schemes. The termination field shall be in the rear for easy access. The modular connector shall fit all other installed telecommunications wall plates, outlets and field-configurable patch panels and patch blocks. A selection of 13 colors **must** be available for the Cat.6 connector, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.

#### **STANDARDS COMPLIANCE**

Category 6 modular connectors **must** meet or exceed the requirements for channel and component-level performance for TIA/EIA Category 6, cULus Listed, NOM and ACA.

#### **PHYSICAL SPECIFICATIONS**

Dimensions: .901"H x .575"W x 1.246"D

Materials: Connector body is high-impact, fire-retardant plastic rated UL 94V-0. Spring wire contacts are high quality copper-based alloy, plated with 50 micro-inches of gold over 100 micro inches of nickel for lowest contact resistance, maximum life. **Must** include full selection of TIA/EIA-606 compatible colors, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond, and brown.

#### **DESIGN SPECIFICATIONS**

- For use in any Category 6 housing to support Category 6 UTP connectivity in surface mount, flush mount, or modular furniture outlets and field configurable patch panels.
- Can be used in conjunction with other snap-in modules for voice/data and video applications over UTP, coax and fiber.
- Connector **must** be available in 13 colors, which include ivory, white, grey, black, orange, blue, bright red, dark red, yellow, green, purple, almond & brown in order to identify ports for different applications.



### INSTALLATION NOTES

- **Must** be designed for cable termination with a 110 punch down tool.
- Detailed installation instructions **must** be included in the standard pack.
- IDCs **must** be arranged to minimize untwisting.

### 3.8 Category 6 Patch Panels

#### REFERS TO ITEMS 101, 102, 103, & 104 ON PRICING SHEETS

The Category 6 patch panel shall meet or exceed the requirements for Category 6 described in TIA/EIA-568-B.2-1 as well as the Class E requirements described in ISO/IEC 11801-B. The panels shall feature T568B wiring configurations, white IDC 110-punchdown modules, mounting standoffs for cable management bars, color-coded front window labeling, and a termination standoff for patch panel earthing/grounding. The panels shall have universal T568B wiring card for terminations. The panels shall be made of 16 gauge steel, and shall have a black painted finish with white silk-screening. The plastic elements shall be fire-retardant with a UL flammability rating of 94V-0. The panel shall be offered in 12-, 24, 48-port configurations as well as an 89D 12-port configuration. The patch panel shall be configured with six port modules. **The 110 termination on the rear of the panel must follow normal installation color sequence (blue, orange, green, brown) from left to right; and must be designed for use in high megabit applications such as Gigabit Ethernet.**

### APPLICATION

Category 6 patch panels **must** be designed for use on 19" standard racks and cabinets; **must** allow for standard 110 terminations on the rear of the panel and **must** follow the normal installation color sequence (blue, orange, green, brown) from left to right; and **must** be designed for use in high megabit applications such as Gigabit Ethernet.

### FEATURES

- Universal T568B wiring cards for 110 style IDC terminations.
- Color-coded front labeling for easy port identification (TIA-606-A compliant).
- Grounding standoff for optional earthing/grounding.

### STANDARDS COMPLIANCE

Category 6 patch panels **must** meet or exceed the Category 6/Class E requirements for channel/component level performance per TIA/EIA-568-B.2-1 and ISO/IEC 11801-B. Components certified per cULus, NOM and ACA requirements.

### PHYSICAL SPECIFICATIONS

Dimensions: 12-, 24-Port - 1.725"H x 19"W x 1.474"D

48 Port - 3.475"H x 19"W x 1.474"D

12-port Patch Block - 10.0"H x 2.3"W x 1.474"D

Capacity: 12-, 24-, 48-port and 12-Port Patch Block

Materials: 16 gauge steel, painted black, PCB and plastic components are rated UL94V-0

## DESIGN SPECIFICATIONS

- Color coded front window labeling for easy port identification.
- Mounts on 19" equipment racks.
- Panel offered in 12-, 24-, 48-Port configurations and Universal 12-port U89 Block for wall mount applications.
- Connector modules are in groups of six.
- Includes rear cable management bars.

## 4.0 ORDERING PROCEDURES

- 4.1 The Agency shall issue a WV-39 State Contract Release Order to the vendor for commodity/commodities covered under this contract. The WV-39 State Contract Release Order shall include the quantity and commodity/commodity to be purchased.
- 4.2 The Vendor MUST accept the WV-39 form by email, mail, or facsimile. The Vendor must acknowledge receipt of the Order
- 4.3 Community colleges, institutions, counties, municipalities, public schools, and other local government entities utilizing this contract shall establish ordering procedures directly with the Vendor.
- 4.4 The State reserves the right to utilize inter-state agreements, such as the Western States Contracting Alliance (WSCA), to purchase equipment, outside of the terms and conditions of any contract resulting from an award of this RFQ, pursuant to West Virginia State Code, Section §5A-3-19.

## 5.0 DELIVERY

- 5.1 Delivery shall be to the building dock and/or loading area designated by the WV-39 Release Order.
- 5.2 If requested, the Vendor must provide inside delivery. Agencies requiring inside delivery must provide this requirement on the WV-39 Release Order to the Vendor indicating specific delivery location.
- 5.3 All materials ordered in Charleston, or any destination point in between Charleston-Huntington, Charleston-Beckley, Charleston-Parkersburg, and or Charleston-Clarksburg by any other agency other than the Office of Technology, **must** be delivered within 5 business days after receipt of the order.

5.4 All materials ordered by the Office of Technology **must** be delivered to the Capitol Complex in the following timeframes after the receipt of the order (the exact delivery location will be provided when the order is placed):

- a) If total for materials ordered is \$1,000 or below – delivery **must** be within two (2) business hours;
- b) If total for materials ordered is greater than \$1,000, but less than \$5,000 – delivery **must** be within two (2) business days;
- c) If total for materials ordered is greater than \$5,000 – delivery **must** be within five (5) business days.

## 6.0 INVOICING AND PAYMENT

- 6.1 The Vendor **MUST** accept the State of West Virginia VISA Purchasing Card for payment by all authorized State agencies for purchases against this contract.
- 6.2 It will be the responsibility of the successful vendor to bill the individual spending Units based on the WV-39 State Contract Release Order. Only one invoice per WV-39 State Contract Release Order shall be received. Invoice totals shall match WV-39 Release Order.

## 7.0 REPORTING

- 7.1 The vendor must provide a quarterly report of purchases to the Office of Technology, with a copy to Purchasing, showing the following items:
  - 1. Name of the ordering state agency;
  - 2. Materials ordered; and
  - 3. Total cost expended for that quarter.

The report shall be delivered to the Office of Technology and the Purchasing Division no later than the fifteenth day of the month following each quarter period. The vendor shall also provide Office of Technology and Purchasing an annual report with this same information, to be delivered at the end of each fiscal year. Failure to submit such reports may be grounds for contract termination.

Reports are to be sent to:

Marta Dean ([MARTA.L.DEAN@WV.GOV](mailto:MARTA.L.DEAN@WV.GOV))

Krista Ferrell ([KRISTA.S.FERRELL@WV.GOV](mailto:KRISTA.S.FERRELL@WV.GOV))

Frank Whittaker ([FRANK.M.WHITTAKER@WV.GOV](mailto:FRANK.M.WHITTAKER@WV.GOV))

## 8.0 COST

- 8.1 The cost per item (supplied by the vendor) **must** include delivery to the building dock and/or loading area designated by the ordering state agency.
- 8.2 All pricing submitted shall be FOB: Destination. (Vendor pays shipping.)
- 8.3 The successful bidder shall not substitute any other brand from those awarded, nor sell any additional items under their contract not specifically covered herein, without prior written permission of the Purchasing Division.
- 8.4 The Contract resulting from this solicitation shall be a fixed price contract with the successful vendor. **The prices quoted in the vendor(s) quote will not be subject to any increase for the original contract term of one year. Price increase at renewal can be accepted or rejected by the Purchasing Division.**

### 8.5 Attachment A: Cost Sheet:

8.5.1 The cost sheet contains a list of all the materials to be covered by the contract. A vendor **should** bid on all items listed on the attached cost sheet. Vendor **should** indicate the brand bid for all items. There are 17 items listed below in section 8.6 that should include a part number.

8.5.2 Vendors are required to submit a hard copy of the cost sheet with their bid. Vendors are also strongly encouraged to submit an electronic version of the excel document and return with bid. If any deviation exists between the electronic version and the printed version, the printed one submitted shall prevail.

8.5.3 Vendors are requested to include one (1) convenience hard copy and one (1) convenience CD that contain the information included on the hard copies of the entire bid (including pricing pages) to the Purchasing Division. This convenience copy is in addition to the original hard copy and electronic version of the pricing pages as requested by the Purchasing Division.

### 8.6 Samples

8.6.1 There are 17 items on the cost sheet referencing brands names and are marked with an asterisk (Reference 3.2 column of cost sheet). The item numbers are 45, 46, 47, 48, 49, 50, 72, 73, 74, 75, 81, 82, 83, 101, 102, 103, & 104.

8.6.2 Vendors intending to bid an alternative product for these 17 items **must** provide descriptive literature and samples. Failure to provide descriptive literature and samples may result in the bid being rejected as non-responsive.

Samples & descriptive literature **must** be provided for each of the following 17 products bid:



- Manufacturers category 5e cable specifications (Items 45 & 46)
- Manufacturers category 5e RJ45 snap-in connector (Item 47)
- Manufacturers category 5E cable specifications (Items 48 & 49)
- Manufacturers category 5E RJ45 snap-in connector (Item 50)
- Manufacturers category 5E 12-,24-,48-port copper patch panels (Items 72, 73, 74 & 75)
- Manufacturers category 6 cable specifications (Items 81 & 82)
- Manufacturers category 6 RJ45 snap-in connectors (Item 83)
- Manufacturers category 6 12-,24-,48-port copper patch panels (Items 101,102,103,104)

8.6.3 These samples should be received no later than five (5) days after the bid opening date to allow WVOT time to make a determination of equality to the brand specified.

8.6.4 If bidder wishes to have samples returned, they must include a pre-paid label or other information to have the items returned at vendor's expense.

## 9.0 AWARD

Contract shall be a single award to the lowest-cost vendor with the most complete bid.

## STATEWIDE CONTRACT - CABLE13

### COST SHEET

| ITEM<br>NUM. | BID<br>Quantity | Unit | Description   | Reference<br>3.2 *** | Unit Price | Extension Price |
|--------------|-----------------|------|---|----------------------|------------|-----------------|
| 1            | 50              | EA   | PLASTIC CABLE TIES; 7 15/16" IN LENGTH, 100PK<br>3-M PART # 3-M06226 OR EQUAL       |                      | \$6.16     | \$308.00        |
| 2            | 200             | EA   | VELCRO TYRAP WIRE TIES; 8" IN LENGTH;<br>HELLERMAN TYTON PART # GT50X80P2 OR EQUAL  |                      | \$0.30     | \$60.00         |
| 3            | 500             | EA   | CABLE SUPPORT J-HOOK;<br>ERICO PART # CAT32 OR EQUAL                                |                      | \$1.46     | \$730.00        |
| 4            | 200             | EA   | ELECTRICAL TAPE; 3-M SCOTCH SUPER 88<br>3M PART # 88-SUPER-3/4" X 66FT OR EQUAL     |                      | \$3.61     | \$722.00        |
| 5            | 50              | EA   | 3M MOLDABLE PUTTY STIX PART # 3M-MPS-2+ OR EQUAL                                    |                      | \$12.18    | \$609.00        |
| 6            | 500             | EA   | CABLE RETAINER CLIP; ERICO PART # CATCR50 OR EQUAL                                  |                      | \$0.56     | \$280.00        |
| 7            | 500             | EA   | SINGLE GANG LOW VOLTAGE MOUNTING BRACKETS;<br>ARLINGTON PART # LV-1 OR EQUAL        |                      | \$0.76     | \$380.00        |
| 8            | 30              | EA   | 3/4"W X 25YDS LONG BLACK VELCRO IN A ROLL<br>VELCRO PART# 189645 OR EQUAL           |                      | \$18.39    | \$551.70        |
| 9            | 10              | EA   | 3M WIRE MARKER DISPENSER 0 THRU 9 ON A ROLL<br>3-M PART # STD-0-9 (FILLED) OR EQUAL |                      | \$22.19    | \$221.90        |
| 10           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 0 PART# SDR-0 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 11           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 1 PART# SDR-1 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 12           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 2 PART# SDR-2 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 13           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 3 PART# SDR-3 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 14           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 4 PART# SDR-4 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 15           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 5 PART# SDR-5 OR EQUAL            |                      | \$1.40     | \$42.00         |
| 16           | 30              | EA   | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 6 PART# SDR-6 OR EQUAL            |                      | \$1.40     | \$42.00         |

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|----|-----|----|---|--|----------|------------|
| 17 | 30  | EA | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 7 PART# SDR-7 OR EQUAL  |  | \$1.40   | \$42.00    |
| 18 | 30  | EA | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 8 PART# SDR-8 OR EQUAL  |  | \$1.40   | \$42.00    |
| 19 | 30  | EA | 3M WIREMARKER NUMBER REFILL FOR STD-0-9<br>NUMBER 9 PART# SDR-9 OR EQUAL  |  | \$1.40   | \$42.00    |
| 20 | 100 | EA | ADJUSTABLE CABLE SUPPORT;<br>ERICO PART#CAT425 OR EQUAL   |  | \$8.00   | \$800.00   |
| 21 | 20  | EA | PHILLIPS HEAD 3/4" LONG 10-32 RACK SCREWS<br>W/WASHERS 100PK<br>MIDDLE ATLANTIC PRODUCTS PART # HP OR EQUAL   |  | \$14.81  | \$296.20   |
| 22 | 20  | EA | VERTICAL WIRE MANAGER FOR 19" OR 23" RELAY RACKS<br>MOUNTING HARDWARE INCLUDED<br>GREAT LAKES PART# 1984-VCM OR EQUAL   |  | \$176.00 | \$3,520.00 |
| 23 | 20  | EA | VERTICAL WIRE MANAGER FOR 19" OR 23" RELAY RACKS<br>MOUNTING HARDWARE INCLUDED<br>CHATSWORTH PART# 12096-703 OR EQUAL   |  | \$256.00 | \$5,120.00 |
| 24 | 20  | EA | VERTICAL WIRE MANAGER FOR 19" OR 23" RELAY RACKS<br>MOUNTING HARDWARE INCLUDED<br>AFCO SYSTEMS PART# AS-CTRG-84-WBLK OR EQUAL   |  | \$176.00 | \$3,520.00 |
| 25 | 20  | EA | VERTICAL WIRE MANAGER FOR 19" OR 23" RELAY RACKS<br>MOUNTING HARDWARE INCLUDED<br>SOUTHWEST PART# SWE2729BLK OR EQUAL   |  | \$176.00 | \$3,520.00 |
| 26 | 40  | EA | DISTRIBUTION RACKS; ALUMINUM BASE COLOR OF BLACK<br>MUST BE APPROXIMATELY 15" IN DEPTH; APPROXIMATELY<br>20" IN WIDTH; & 84" HEIGHT<br>GREAT LAKES PART# GLRR-1984BA OR EQUAL |  | \$107.00 | \$4,280.00 |
| 27 | 40  | EA | DISTRIBUTION RACKS; ALUMINUM BASE COLOR OF BLACK<br>MUST BE APPROXIMATELY 15" IN DEPTH; APPROXIMATELY<br>20" IN WIDTH; & 84" HEIGHT.<br>CHATSWORTH PART# 46353-703 OR EQUAL   |  | \$178.44 | \$7,137.60 |
| 28 | 10  | EA | 48" WALL MOUNT SWING OUT RACK;<br>GREAT LAKES PART # GL48SR OR EQUAL  |  | \$244.00 | \$2,440.00 |
| 29 | 10  | EA | 36" WALL MOUNT SWING OUT RACK;<br>GREAT LAKES PART # GL36SR OR EQUAL  |  | \$222.00 | \$2,220.00 |
| 30 | 10  | EA | 24" WALL MOUNT SWING OUT RACK;<br>GREAT LAKES PART # GL24SR OR EQUAL  |  | \$202.00 | \$2,020.00 |

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|----|----|----|--|--|------------|-------------|
| 31 | 10 | EA | 84" NETWORKING CABINET; CABINET WILL INCLUDE THE FOLLOWING: CASTERS, LEVELERS, GROUND LUG, TWO PAIR SQUARE HOLE RAILS, M6 HARDWARE, BOTTOM GLAND, TOP GLAND, 10IN FAN TOP, PERFORATED MESH FRONT DOOR, PERFORATED MESH REAR DOOR, TWO SOLID SIDE PANELS, TWO 9411-1602 POWER STRIPS INTERNAL 8729-PD-3 FRONT, 8429-PR-3-0001 SPOTWELDED REAR TWO 8436-01-SP-3 SIDES.<br>BELDEN PART# XDP84-3-1S0046 OR EQUAL |  | \$2,004.00 | \$20,040.00 |
| 32 | 10 | EA | 72" NETWORKING CABINET; CABINET WILL INCLUDE THE FOLLOWING: CASTERS, LEVELERS, GROUND LUG, TWO PAIR SQUARE HOLE RAILS, M6 HARDWARE, BOTTOM GLAND, TOP GLAND, 10IN FAN TOP, PERFORATED MESH FRONT DOOR, PERFORATED MESH REAR DOOR, TWO SOLID SIDE PANELS, TWO 9411-1602 POWER STRIPS INTERNAL 8729-PD-3 FRONT, 8429-PR-3-0001 SPOTWELDED REAR TWO 8436-01-SP-3 SIDES.<br>BELDEN PART# XDP72-3-1S0012 OR EQUAL |  | \$1,992.00 | \$19,920.00 |
| 33 | 10 | EA | 84" NETWORKING CABINET; BASE UNIT WITH LOUVERED TOP; PLEXIGLAS VENTED FRONT DOOR W/LOCK; UPPER HALF LOUVERED STEEL REAR DOOR W/LOCK; SOLID REMOVABLE SIDE PANELS; TWO PAIR 19" MOUNTING RAILS W/BRACKETS & MOUNTING SCREWS; COLOR BLACK OR GREY; 16 POSITION POWER STRIP W / CIRCUIT BREAKER & 12' CORD; CASTERS; 84"H X 29" W X 36" D; GREAT LAKES PART # 840E-2936WVCC OR EQUAL                            |  | \$1,647.00 | \$16,470.00 |
| 34 | 10 | EA | 72" NETWORKING CABINET; BASE UNIT WITH LOUVERED TOP; PLEXIGLAS VENTED FRONT DOOR W/LOCK; UPPER HALF LOUVERED STEEL REAR DOOR W/LOCK; PAIR OF SOLID REMOVABLE SIDE PANELS; TWO PAIR 19" MOUNTING RAILS W/BRACKETS & MOUNTING SCREWS; COLOR BLACK OR GREY; 16 POSITION POWER STRIP W / CIRCUIT BREAKER & 12' CORD; CASTERS; 72"H X 29" W X 36" D<br>GREAT LAKES PART # 720E-2936WVCC OR EQUAL                  |  | \$1,619.00 | \$16,190.00 |

|    |         |    |  |     |            |             |
|----|---------|----|--|-----|------------|-------------|
| 35 | 5       | EA | 48" NETWORKING CABINET; BASE UNIT WITH LOUVERED TOP; PLEXIGLAS VENTED FRONT DOOR W/LOCK; UPPER HALF LOUVERED STEEL REAR DOOR W/LOCK; PAIR OF SOLID REMOVABLE SIDE PANELS; TWO PAIR 19" MOUNTING RAILS W/BRACKETS & MOUNTING SCREWS; COLOR BLACK OR GREY; 6 POSITION POWER STRIP W / CIRCUIT BREAKER & 12' CORD; CASTERS; 48"H X 24" W X 32" D<br>GREAT LAKES PART # 480E-2432WVCC OR EQUAL |     | \$1,313.00 | \$6,565.00  |
| 36 | 10      | EA | STATIONARY SHELVES FOR 19" MOUNTING IN NETWORKING CABINETS;<br>GREAT LAKES PART # 7206-FM OR EQUAL   |     | \$33.00    | \$330.00    |
| 37 | 20      | EA | FAN ASSEMBLY W/FAN GUARDS & THREE 75 CFM FANS FOR NETWORKING CABINETS;<br>GREAT LAKES PART # TPE-24F OR EQUAL  |     | \$185.00   | \$3,700.00  |
| 38 | 1000    | FT | RACEWAY MOLDING; ONE-PIECE; NON-METALLIC; 3/4" WIDTH; 6 FT. LENGTH;<br>DEKDUCT PART # 043-LD00 OR EQUAL  |     | \$1.04     | \$1,040.00  |
| 39 | 1000    | FT | RACEWAY MOLDING; ONE-PIECE; NON-METALLIC; 1 1/2" WIDTH; 6 FT. LENGTH;<br>DEKDUCT PART # 042-LD00 OR EQUAL  |     | \$1.57     | \$1,570.00  |
| 40 | 1000    | FT | RACEWAY MOLDING; ONE-PIECE; NON-METALLIC; 2 1/2" WIDTH; 6 FT. LENGTH;<br>DEKDUCT PART # 045-LD00 OR EQUAL  |     | \$2.55     | \$2,550.00  |
| 41 | 1000    | FT | RACEWAY MOLDING; TWO-PIECE; NON-METALLIC; 4" WIDTH X 2" DEPTH;<br>DEKDUCT PART # 046-4020DWP OR EQUAL  |     | \$3.63     | \$3,630.00  |
| 42 | 20,000  | FT | 25 PAIR PLENUM CATEGORY 3 CABLE<br>SUPERIOR ESSEX PART# WCETEL24/25PC3P OR EQUAL   |     | \$0.59     | \$11,800.00 |
| 43 | 20,000  | FT | 50 PAIR PLENUM CATEGORY 3 CABLE<br>SUPERIOR ESSEX PART# WCETEL24/50PC3P OR EQUAL   |     | \$1.23     | \$24,600.00 |
| 44 | 20,000  | FT | 100 PAIR PLENUM CATEGORY 3 CABLE<br>SUPERIOR ESSEX PART# WCETEL24/100PC3P OR EQUAL   |     | \$2.34     | \$46,800.00 |
| 45 | 100,000 | FT | CAT. 5e MIN COMPLIANT PVC CABLE; NON-PLENUM; WHITE IN COLOR; 1,000 FT. PER EASY PULL BOX;<br>MOHAWK PART # M57554 OR EQUAL   | *** | \$0.08     | \$8,300.00  |
| 46 | 200,000 | FT | CAT. 5e MIN COMPLIANT CABLE; PLENUM; WHITE IN COLOR; 1,000 FT. PER EASY PULL BOX;<br>MOHAWK PART # M57547 OR EQUAL   | *** | \$0.15     | \$29,400.00 |



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|----|---------|----|---|-----|--------|-------------|
| 47 | 3000    | EA | QUICK PORT 8P8C MODULAR RJ45 JACKS FOR CAT5e MIN COMPLIANT; WHITE IN COLOR BUT SELECTION OF COLORS MUST BE AVAILABLE;<br>LEVITON PART # 5G108-RW5 OR EQUAL  | *** | \$2.45 | \$7,350.00  |
| 48 | 200,000 | FT | CAT. 5E ENHANCED CABLE; NON-PLENUM RISER RATED; EASY PULL BOX ONLY; 1000 FT. PER BOX; SELECTION OF COLORS MUST BE AVAILABLE FOR OUTER JACKET; ELECTRICAL CHARACTERISTICS / SPECIFICATIONS SHEET MUST BE SUPPLIED.<br>MEGALAN 400 MOHAWK PART# M56167 OR EQUAL | *** | \$0.11 | \$21,600.00 |
| 49 | 300,000 | FT | CAT. 5E ENHANCED CABLE; PLENUM; EASY PULL BOX ONLY; 1000 FT. PER BOX; SELECTION OF COLORS MUST BE AVAILABLE FOR OUTER JACKET; ELECTRICAL CHARACTERISTICS / SPECIFICATIONS SHEET MUST BE SUPPLIED.<br>MEGALAN 400 MOHAWK PART# M56168 OR EQUAL                 | *** | \$0.21 | \$62,400.00 |
| 50 | 3,000   | EA | LEVITON QUICKPORT 8P8C MODULAR RJ45 JACKS FOR CAT5E ENHANCED; ORANGE IN COLOR BUT SELECTION OF COLORS MUST BE AVAILABLE;<br>LEVITON PART # 5G110-RO5 OR EQUAL   | *** | \$3.39 | \$10,170.00 |
| 51 | 200     | EA | CAT 5E ENHANCED 1FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART # 553-130-001 OR EQUAL   |     | \$1.18 | \$236.00    |
| 52 | 200     | EA | CAT 5E ENHANCED 3FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-003 OR EQUAL  |     | \$0.53 | \$106.00    |
| 53 | 200     | EA | CAT 5E ENHANCED 5FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-005 OR EQUAL  |     | \$0.63 | \$126.00    |
| 54 | 200     | EA | CAT 5E ENHANCED 7FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-007 OR EQUAL  |     | \$0.74 | \$148.00    |
| 55 | 200     | EA | CAT 5E ENHANCED 10FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-010 OR EQUAL   |     | \$1.00 | \$200.00    |
| 56 | 200     | EA | CAT 5E ENHANCED 14FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-014 OR EQUAL   |     | \$1.30 | \$260.00    |
| 57 | 200     | EA | CAT 5E ENHANCED 25FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-025 OR EQUAL   |     | \$2.16 | \$432.00    |
| 58 | 100     | EA | CAT 5E ENHANCED 50FT CROSSOVER CABLE RED IN COLOR QUIKTRON PART# 553-130-050 OR EQUAL   |     | \$4.05 | \$405.00    |
| 59 | 500     | EA | CAT 5E ENHANCED 350MHZ PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 1 FOOT LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET QUIKTRON PART# 570-110-001 OR EQUAL   |     | \$0.36 | \$180.00    |

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|----|------|----|--|--|---------|------------|
| 60 | 500  | EA | CAT 5E ENHANCED 350MHZ PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 18 INCHES IN LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET QUIKTRON PART# 551-110-18IN OR EQUAL         |  | \$1.27  | \$635.00   |
| 61 | 2000 | EA | CAT. 5E GIGAMAX PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 3 FOOT LENGTH; LEVITON PART# 5G460-03* (* - COLOR) OR EQUAL  |  | \$0.66  | \$1,320.00 |
| 62 | 1000 | EA | CAT. 5E GIGAMAX PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 5 FOOT LENGTH; LEVITON PART# 5G460-05* (* - COLOR) OR EQUAL  |  | \$0.73  | \$730.00   |
| 63 | 2000 | EA | CAT. 5E GIGAMAX PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 7 FOOT LENGTH; LEVITON PART# 5G460-07* (* - COLOR) OR EQUAL  |  | \$1.00  | \$2,000.00 |
| 64 | 1000 | EA | CAT. 5E GIGAMAX PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 10 FOOT LENGTH; LEVITON PART# 5G460-10* (* - COLOR) OR EQUAL   |  | \$1.10  | \$1,100.00 |
| 65 | 1000 | EA | CAT. 5E GIGAMAX PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 15 FOOT LENGTH; LEVITON PART# 5G460-15* (* - COLOR) OR EQUAL   |  | \$1.90  | \$1,900.00 |
| 66 | 500  | EA | CAT. 5E ENHANCED 350MHZ PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 25 FOOT LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET QUIKTRON PART # 551-XXX-025 OR EQUAL (XXX=COLOR) |  | \$2.52  | \$1,260.00 |
| 67 | 100  | EA | CAT 5E ENHANCED 350MHZ PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 50 FOOT LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET QUIKTRON PART# 551-XXX-050 OR EQUAL (XXX=COLOR)   |  | \$4.24  | \$424.00   |
| 68 | 100  | EA | CAT. 5E ENHANCED 350MHZ PATCH CABLES; RJ45M TO RJ45M BOOTED; NON-KEYED; 100 FOOT LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET QUIKTRON PART# 551-XXX-100 OR EQUAL (XXX=COLOR) |  | \$8.30  | \$830.00   |
| 69 | 50   | EA | LEVITON QUICKPORT HIGH DENSITY 48-PORT PATCH PANEL W/CABLE MANAGEMENT BAR<br>LEVITON PART# 49255-H48 OR EQUAL  |  | \$47.00 | \$2,350.00 |
| 70 | 50   | EA | LEVITON QUICKPORT HIGH DENSITY 24-PORT PATCH PANEL W/CABLE MANAGEMENT BAR<br>LEVITON PART# 49255-H24 OR EQUAL  |  | \$34.48 | \$1,724.00 |

|    |         |    |   |     |          |             |
|----|---------|----|---|-----|----------|-------------|
| 71 | 50      | EA | LEVITON QUICKPORT HIGH DENSITY<br>12-PORT PATCH PANEL<br>LEVITON PART#49255-H89 OR EQUAL  |     | \$9.20   | \$460.00    |
| 72 | 100     | EA | LEVITON 48-PORT 8P8C RJ45 CAT.5E RACKMOUNT PATCH<br>PANEL; MUST BE CAT5E ENHANCED CERTIFIED;<br>LEVITON PART# 5G596-U48 OR EQUAL  | *** | \$168.56 | \$16,856.00 |
| 73 | 100     | EA | LEVITON 24-PORT 8P8C RJ45 CAT.5E RACKMOUNT PATCH<br>PANEL; MUST BE CAT5E ENHANCED CERTIFIED;<br>LEVITON PART # 5G596-U24 OR EQUAL   | *** | \$84.29  | \$8,429.00  |
| 74 | 50      | EA | LEVITON 12-PORT 8P8C RJ45 CAT.5E RACKMOUNT PATCH<br>PANEL; MUST BE CAT5E ENHANCED CERTIFIED;<br>LEVITON PART # 5G596-U12 OR EQUAL   | *** | \$57.33  | \$2,866.50  |
| 75 | 50      | EA | LEVITON 12-PORT 8P8C RJ45 CAT5E WALL MT. PATCH<br>PANEL; MUST BE CAT5E ENHANCED CERTIFIED;<br>LEVITON PART # 5G596-U89 OR EQUAL   | *** | \$46.63  | \$2,331.50  |
| 76 | 20      | EA | SIEMON 12-PORT PATCH PANEL; MUST BE CAT.5E<br>CERTIFIED; SIEMON #HD5-89D-12 OR EQUAL  |     | \$46.63  | \$932.60    |
| 77 | 200     | EA | SIEMON RACK MT. 1U WIRE MANAGER<br>PART# S110-RWM-01 OR EQUAL   |     | \$23.00  | \$4,600.00  |
| 78 | 20      | EA | SIEMON WIRE MANAGER; STANDARD INTERBAY CORD<br>MANAGER; SIEMON WM-144-5 OR EQUAL  |     | \$28.00  | \$560.00    |
| 79 | 20      | EA | 2-POSITION HINGED FIXED BRACKETS FOR WALL;<br>DATATEL PART # HPM-2 OR EQUAL   |     | \$22.00  | \$440.00    |
| 80 | 100     | EA | WIRE MANAGER; STANDARD INTERBAY CORD MANAGER;<br>DATATEL PART # HCM-1D OR EQUAL   |     | \$19.12  | \$1,912.00  |
| 81 | 200,000 | FT | CAT 6 ENHANCED CABLE; NON-PLENUM; EASY PULL BOX<br>ONLY; 1,000 FT. PER BOX; SELECTION OF COLORS MUST<br>BE AVAILABLE FOR OUTER JACKET; ELECTRICAL<br>CHARACTERISTICS / SPECIFICATIONS SHEET MUST BE<br>SUPPLIED.<br>CAT 6 ADVANCENET MOHAWK PART# M57202 OR EQUAL | *** | \$0.17   | \$33,400.00 |
| 82 | 300,000 | FT | CAT 6 ENHANCED CABLE; PLENUM; EASY PULL BOX ONLY;<br>1,000 FT. PER BOX; SELECTION OF COLORS MUST BE<br>AVAILABLE FOR OUTER JACKET; ELECTRICAL<br>CHARACTERISTICS / SPECIFICATIONS SHEET MUST BE<br>SUPPLIED.<br>CAT 6 ADVANCENET MOHAWK PART# M57193 OR EQUAL     | *** | \$0.28   | \$83,700.00 |
| 83 | 5000    | EA | QUICKPORT CAT6 EXTREME 8P8C RJ45 SNAP-IN<br>CONNECTOR; BLUE IN COLOR BUT SELECTION OF<br>COLORS MUST BE AVAILABLE;<br>LEVITON PART # 61110-RL6 OR EQUAL   | *** | \$4.62   | \$23,100.00 |

|    |     |    |   |  |        |          |
|----|-----|----|---|--|--------|----------|
| 84 | 100 | EA | CAT 6 EXTREME 1FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-001 OR EQUAL  |  | \$2.66 | \$266.00 |
| 85 | 200 | EA | CAT 6 EXTREME 3FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-003 OR EQUAL  |  | \$2.85 | \$570.00 |
| 86 | 100 | EA | CAT 6 EXTREME 5FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-005 OR EQUAL  |  | \$3.50 | \$350.00 |
| 87 | 200 | EA | CAT 6 EXTREME 7FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-007 OR EQUAL  |  | \$3.54 | \$708.00 |
| 88 | 200 | EA | CAT 6 EXTREME 10FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-010 OR EQUAL   |  | \$3.68 | \$736.00 |
| 89 | 200 | EA | CAT 6 EXTREME 15FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-015 OR EQUAL   |  | \$4.34 | \$868.00 |
| 90 | 100 | EA | CAT 6 EXTREME 25FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-025 OR EQUAL   |  | \$5.50 | \$550.00 |
| 91 | 50  | EA | CAT 6 EXTREME 50FT CROSSOVER CABLE RED IN COLOR<br>QUIKTRON PART # 538-130-050 OR EQUAL   |  | \$8.00 | \$400.00 |
| 92 | 200 | EA | CAT. 6 EXTREME 650MHZ PATCH CABLES; RJ45M TO<br>RJ45M; NON-KEYED; 18 INCHES IN LENGTH; SELECTION<br>OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET<br>QUIKTRON PART# 576-XXX-18IN OR EQUAL (XXX=COLOR) |  | \$2.63 | \$526.00 |
| 93 | 200 | EA | CAT. 6 EXTREME 650MHZ PATCH CABLES; RJ45M TO<br>RJ45M; NON-KEYED; 1 FOOT LENGTH; SELECTION OF<br>COLORS SHALL BE AVAILABLE FOR OUTER JACKET<br>QUIKTRON PART# 576-XXX-001 OR EQUAL (XXX=COLOR)        |  | \$0.98 | \$196.00 |
| 94 | 400 | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 3 FOOT LENGTH;<br>LEVITON PART # 62460-03* (*-COLOR) OR EQUAL   |  | \$1.31 | \$524.00 |
| 95 | 400 | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 5 FOOT LENGTH;<br>LEVITON PART # 62460-05* (*-COLOR) OR EQUAL   |  | \$1.59 | \$636.00 |
| 96 | 400 | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 7 FOOT LENGTH;<br>LEVITON PART # 62460-07* (*-COLOR) OR EQUAL   |  | \$1.98 | \$792.00 |
| 97 | 200 | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 10 FOOT LENGTH;<br>LEVITON PART # 62460-10* (*-COLOR) OR EQUAL  |  | \$2.18 | \$436.00 |
| 98 | 100 | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 15 FOOT LENGTH;<br>LEVITON PART # 62460-15* (*-COLOR) OR EQUAL  |  | \$3.61 | \$361.00 |
| 99 | 50  | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-<br>KEYED; 20 FOOT LENGTH;<br>LEVITON PART # 62460-20* (*-COLOR) OR EQUAL  |  | \$4.50 | \$225.00 |

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| 100 | 50   | EA | CAT. 6 EXTREME PATCH CABLES; RJ45M TO RJ45M; NON-KEYED; 50 FOOT LENGTH; SELECTION OF COLORS SHALL BE AVAILABLE FOR OUTER JACKET<br>QUIKTRON PART# 576-XXX-050 OR EQUAL (XXX=COLOR) |     | \$4.77   | \$238.50    |
| 101 | 50   | EA | LEVITON 48-PORT 8P8C RJ45 PATCH PANEL; MUST BE CAT. 6 ENHANCED CERTIFIED;<br>LEVITON PART # 69586-U48 OR EQUAL   | *** | \$241.80 | \$12,090.00 |
| 102 | 50   | EA | LEVITON 24-PORT 8P8C RJ45 PATCH PANEL; MUST BE CAT. 6 ENHANCED CERTIFIED;<br>LEVITON PART # 69586-U24 OR EQUAL   | *** | \$122.74 | \$6,137.00  |
| 103 | 50   | EA | LEVITON 12-PORT PATCH PANEL; MUST BE CAT. 6 ENHANCED CERTIFIED;<br>LEVITON PART # 69586-U12 OR EQUAL   | *** | \$69.20  | \$3,460.00  |
| 104 | 50   | EA | LEVITON 12-PORT 8P8C RJ45 CAT6 WALL MT. PATCH PANEL; MUST BE CAT6 ENHANCED CERTIFIED;<br>LEVITON PART # 69586-U89 OR EQUAL   | *** | \$32.95  | \$1,647.50  |
| 105 | 1000 | EA | 2-PORT SURFACE MOUNT BOX;<br>LEVITON PART # 41089-2*P (*-COLOR) OR EQUAL   |     | \$1.36   | \$1,360.00  |
| 106 | 100  | EA | 4-PORT SURFACE MOUNT BOX;<br>LEVITON PART # 41089-4*P (*-COLOR) OR EQUAL   |     | \$2.54   | \$254.00    |
| 107 | 100  | EA | SINGLE GANG IVORY BLANK WALL PLATE;<br>LEVITON PART# 86014 OR EQUAL  |     | \$0.20   | \$20.00     |
| 108 | 100  | EA | SINGLE GANG WHITE BLANK WALL PLATE;<br>LEVITON PART# 88014 OR EQUAL  |     | \$0.20   | \$20.00     |
| 109 | 100  | EA | QUICKPORT STAINLESS STEEL FLUSH WALLPHONE WALLPLATE; LEVITON PART# 4108W-0SP OR EQUAL  |     | \$5.45   | \$545.00    |
| 110 | 500  | EA | 1-PORT WALLPLATES;<br>LEVITON PART # 41080-1*P (*-COLOR) OR EQUAL  |     | \$0.93   | \$465.00    |
| 111 | 1000 | EA | 2-PORT WALLPLATES;<br>LEVITON PART # 41080-2*P (*-COLOR) OR EQUAL  |     | \$0.93   | \$930.00    |
| 112 | 100  | EA | 3-PORT WALLPLATES;<br>LEVITON PART # 41080-3*P (*-COLOR) OR EQUAL  |     | \$0.93   | \$93.00     |
| 113 | 100  | EA | 4-PORT WALLPLATES;<br>LEVITON PART # 41080-4*P (*-COLOR) OR EQUAL  |     | \$0.93   | \$93.00     |
| 114 | 50   | EA | 6-PORT WALLPLATES;<br>LEVITON PART # 41080-6*P (*-COLOR) OR EQUAL  |     | \$0.93   | \$46.50     |
| 115 | 5000 | FT | FIBER OPTIC CABLE 48-STRAND I/O MULTIMODE 62.5/125 OCC PART # DX048-105D-WLS/900-OFNR OR CORNING PART # 048KWF-T4130D20 OR EQUAL   |     | \$1.68   | \$8,400.00  |
| 116 | 5000 | FT | FIBER OPTIC CABLE 24-STRAND I/O MULTIMODE 62.5/125 OCC PART # DX024-085D-WLS/900-OFNR OR CORNING PART # 024K8F-31130-24 OR EQUAL   |     | \$1.19   | \$5,950.00  |



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| 117 | 5000 | FT | FIBER OPTIC CABLE 12-STRAND I/O MULTIMODE 62.5/125<br>OCC PART # DX012-065D-WLS/900-OFNR OR<br>CORNING PART # 012K8F-31130-24 OR EQUAL  |  | \$0.54 | \$2,700.00  |
| 118 | 5000 | FT | FIBER OPTIC CABLE 6-STRAND I/O MULTIMODE 62.5/125<br>OCC PART # DX006-055D-WLS/900-OFNR OR<br>CORNING PART # 006K8F-31130-24 OR EQUAL   |  | \$0.36 | \$1,800.00  |
| 119 | 5000 | FT | FIBER OPTIC CABLE 48-STRAND I/O PLENUM RATED<br>MULTIMODE 62.5/125<br>OCC PART # DX048-095K-WLS/900-OFNP OR<br>CORNING PART # 048KWP-T4130D20 OR EQUAL                        |  | \$2.24 | \$11,200.00 |
| 120 | 5000 | FT | FIBER OPTIC CABLE 24-STRAND I/O PLENUM RATED<br>MULTIMODE 62.5/125<br>OCC PART # DX24-075K-WLS/900/OFNP OR<br>CORNING PART # 024K8P-31130-29 OR EQUAL                         |  | \$1.15 | \$5,750.00  |
| 121 | 5000 | FT | FIBER OPTIC CABLE 12-STRAND I/O PLENUM RATED<br>MULTIMODE 62.5/125<br>OCC PART # DX12-060K-WLS/900-OFNP OR<br>CORNING PART # 012K8P-31130-29 OR EQUAL                         |  | \$0.52 | \$2,600.00  |
| 122 | 5000 | FT | FIBER OPTIC CABLE 6-STRAND I/O PLENUM RATED<br>MULTIMODE 62.5/125<br>OCC PART # DX06-045K-WLS/900-OFNP OR<br>CORNING PART # 006K8P-31130-29 OR EQUAL                          |  | \$0.36 | \$1,800.00  |
| 123 | 5000 | FT | FIBER OPTIC CABLE 48-STRAND INDOOR/OUTDOOR<br>ARMORED MULTIMODE 62.5/125<br>OCC PART # DX48-105D-WLS/900-OFNR-IAD OR<br>CORNING PART # 048KWF-T4130DA1 OR EQUAL               |  | \$2.69 | \$13,450.00 |
| 124 | 5000 | FT | FIBER OPTIC CABLE 24-STRAND INDOOR/OUTDOOR<br>ARMORED MULTIMODE 62.5/125<br>OCC PART # DX24-085D-WLS/900-OFNR-IAD OR<br>CORNING PART # 024K8F-31130-A1 OR EQUAL               |  | \$2.61 | \$13,050.00 |
| 125 | 5000 | FT | FIBER OPTIC CABLE 12-STRAND INDOOR/OUTDOOR<br>ARMORED MULTIMODE 62.5/125<br>OCC PART # DX12-065D-WLS/900-OFNR-IAD OR<br>CORNING PART # 012K8F-31130-A1 OR EQUAL               |  | \$2.25 | \$11,250.00 |
| 126 | 5000 | FT | FIBER OPTIC CABLE 6-STRAND INDOOR/OUTDOOR<br>ARMORED MULTIMODE 62.5/125<br>OCC PART # DX06-055D-WLS/900-OFNR-IAD OR<br>CORNING PART # 006K8F-31130-A1 OR EQUAL                |  | \$1.86 | \$9,300.00  |
| 127 | 5000 | FT | FIBER OPTIC CABLE 48-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED MULTIMODE 62.5/125<br>OCC PART # DX48-095K-WLS/900-OFNR-IAK OR<br>CORNING PART # 048KWP-T4130DA1 OR EQUAL |  | \$2.83 | \$14,150.00 |

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| 128 | 5000 | FT | FIBER OPTIC CABLE 24-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED MULTIMODE 62.5/125<br>OCC PART # DX24-070K-WLS/900-OFCP-IAK OR<br>CORNING PART # 024K8P-31130-A3 OR EQUAL |  | \$1.91 | \$9,550.00 |
| 129 | 5000 | FT | FIBER OPTIC CABLE 12-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED MULTIMODE 62.5/125<br>OCC PART # DX12-060K-WLS/900-OFCP-IAK OR<br>CORNING PART # 012K8P-31130-A3 OR EQUAL |  | \$1.26 | \$6,300.00 |
| 130 | 5000 | FT | FIBER OPTIC CABLE 6-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED MULTIMODE 62.5/125<br>OCC PART # DX06-050K-WLS/900-OFCP-IAK OR<br>CORNING PART # 006K8P-31130-A3 OR EQUAL  |  | \$1.01 | \$5,050.00 |
| 131 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND OUTDOOR AERIAL<br>W / 1/4" MESSENGER MULTIMODE 62.5/125<br>OCC PART # MX24-095A-WLS/900-JGS OR<br>CORNING PART # 024KWA-T4130D20 OR EQUAL         |  | \$1.08 | \$3,240.00 |
| 132 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND OUTDOOR AERIAL<br>W / 1/4" MESSENGER MULTIMODE 62.5/125<br>OCC PART # MX12-090A-WLS/900-JGS OR<br>CORNING PART # 012KWA-T4130D20 OR EQUAL         |  | \$0.85 | \$2,550.00 |
| 133 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND OUTDOOR AERIAL<br>W / 1/4" MESSENGER MULTIMODE 62.5/125<br>OCC PART # MX06-090A-WLS/900-JGS OR<br>CORNING PART # 006KWA-T4130D20 OR EQUAL          |  | \$0.66 | \$1,980.00 |
| 134 | 3000 | FT | FIBER OPTIC CABLE 48-STRAND INDOOR/OUTDOOR<br>MULTIMODE 50/125<br>OCC PART # DX048-105D-ALS/900-OFNR OR<br>CORNING PART # 048CWF-T4131D20 OR EQUAL                            |  | \$1.63 | \$4,890.00 |
| 135 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND INDOOR/OUTDOOR<br>MULTIMODE 50/125<br>OCC PART # DX024-085D-ALS/900-OFNR OR<br>CORNING PART # 024C8F-31131-24 OR EQUAL                            |  | \$1.01 | \$3,030.00 |
| 136 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND INDOOR/OUTDOOR<br>MULTIMODE 50/125<br>OCC PART # DX012-065D-ALS/900-OFNR OR<br>CORNING PART # 012C8F-31131-24 OR EQUAL                            |  | \$0.46 | \$1,380.00 |
| 137 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND INDOOR/OUTDOOR<br>MULTIMODE 50/125<br>OCC PART # DX006-055D-ALS/900-OFNR OR<br>CORNING PART # 006C8F-31131-24 OR EQUAL                             |  | \$0.24 | \$720.00   |

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| 138 | 3000 | FT | FIBER OPTIC CABLE 48-STRAND I/O PLENUM RATED<br>MULTIMODE 50/125<br>OCC PART # DX048-095K-ALS/900-OFNP OR<br>CORNING PART # 048CWP-T4131D20 OR EQUAL                      |  | \$2.01 | \$6,030.00 |
| 139 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O PLENUM RATED<br>MULTIMODE 50/125<br>OCC PART # DX024-070K-ALS/900-OFNP OR<br>CORNING PART # 024C8P-31131-29 OR EQUAL                      |  | \$0.91 | \$2,730.00 |
| 140 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O PLENUM RATED<br>MULTIMODE 50/125<br>OCC PART # DX012-060K-ALS/900-OFNP OR<br>CORNING PART # 012C8P-31131-29 OR EQUAL                      |  | \$0.42 | \$1,260.00 |
| 141 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O PLENUM RATED<br>MULTIMODE 50/125<br>OCC PART # DX006-045K-ALS/900-OFNP OR<br>CORNING PART # 006C8P-31131-29 OR EQUAL                       |  | \$0.24 | \$720.00   |
| 142 | 3000 | FT | FIBER OPTIC CABLE 48-STRAND I/O 50UM MULTIMODE<br>ARMORED<br>OCC PART # DX48-105D-ALS/900-OFNR-IAD OR<br>CORNING PART # 048CWF-T4131DA1 OR EQUAL                          |  | \$2.68 | \$8,040.00 |
| 143 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O 50UM MULTIMODE<br>ARMORED<br>OCC PART # DX24-085D-ALS/900-OFNR-IAD OR<br>CORNING PART # 024C8F-31131-A1 OR EQUAL                          |  | \$1.62 | \$4,860.00 |
| 144 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O 50UM MULTIMODE<br>ARMORED<br>OCC PART# DX12-065D-ALS/900-OFNR-IAD OR<br>CORNING PART # 012C8F-31131-A1 OR EQUAL                           |  | \$1.11 | \$3,330.00 |
| 145 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O 50UM<br>MULTIMODE ARMORED<br>OCC PART # DX06-055D-ALS/900-OFNR-IAD OR<br>CORNING PART # 006C8F-31131-A1 OR EQUAL                           |  | \$1.04 | \$3,120.00 |
| 146 | 3000 | FT | FIBER OPTIC CABLE 48-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED 50UM MULTIMODE<br>OCC PART # DX48-095K-ALS/900-OFNR-IAK OR<br>CORNING PART # 048CWP-T4131DA1 OR EQUAL |  | \$2.90 | \$8,700.00 |
| 147 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED 50UM MULTIMODE<br>OCC PART # DX24-070K-ALS/900-OFNR-IAK OR<br>CORNING PART # 024C8P-31131-A3 OR EQUAL |  | \$1.78 | \$5,340.00 |

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| 148 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED 50UM MULTIMODE<br>OCC PART # DX12-060K-ALS/900-OFCEP-IAK OR<br>CORNING PART # 012C8P-31131-A3 OR EQUAL |  | \$1.17 | \$3,510.00 |
| 149 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND INDOOR/OUTDOOR<br>ARMORED PLENUM COATED 50UM MULTIMODE<br>OCC PART # DX06-050K-ALS/900-OFCEP-IAK OR<br>CORNING PART # 006C8P-31131-A3 OR EQUAL  |  | \$0.99 | \$2,970.00 |
| 150 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND OUTDOOR AERIAL/DUCT<br>MULTIMODE 50/125<br>OCC PART # DX012-075A-ALS/900 OR<br>CORNING PART # 012CW4-T4131D20 OR EQUAL                         |  | \$0.45 | \$1,350.00 |
| 151 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND OUTDOOR AERIAL<br>W/MESSENGER MULTIMODE 50/125<br>OCC PART # M12-090A-ALS/900-JGS OR<br>CORNING PART # 012CWA-T4131D20 OR EQUAL                |  | \$0.79 | \$2,370.00 |
| 152 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O SINGLEMODE 9/125<br>OCC PART # DX24-085D-SLX/900-OFNR-WB OR<br>CORNING PART # 024E8F-31131-24 OR EQUAL                                     |  | \$0.58 | \$1,740.00 |
| 153 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O SINGLEMODE 9/125<br>OCC PART # DX12-065D-SLX/900-OFNR-WB OR<br>CORNING PART # 012E8F-31131-24 OR EQUAL                                     |  | \$0.23 | \$690.00   |
| 154 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O SINGLEMODE 9/125<br>OCC PART # DX06-055D-SLX/900-OFNR-WB OR<br>CORNING PART # 006E8F-31131-24 OR EQUAL                                      |  | \$0.15 | \$450.00   |
| 155 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O PLENUM RATED<br>SINGLEMODE 9/125<br>OCC PART # DX24-070K-SLX/900-OFNP-WB OR<br>CORNING PART # 024E8P-31131-29 OR EQUAL                     |  | \$0.58 | \$1,740.00 |
| 156 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O PLENUM RATED<br>SINGLEMODE 9/125<br>OCC PART # DX12-060K-SLX/900-OFNP-WB OR<br>CORNING PART # 012E8P-31131-29 OR EQUAL                     |  | \$0.24 | \$720.00   |
| 157 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O PLENUM RATED<br>SINGLEMODE 9/125<br>OCC PART # DX06-045K-SLX/900-OFNP-WB OR<br>CORNING PART # 006E8P-31131-29 OR EQUAL                      |  | \$0.15 | \$450.00   |
| 158 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O ARMORED<br>SINGLEMODE 9/125<br>OCC PART # DX24-085D-SLX/900-OFCEP-IAD OR<br>CORNING PART # 024E8F-31131-A1 OR EQUAL                        |  | \$1.19 | \$3,570.00 |

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| 159 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O ARMORED SINGLEMODE 9/125<br>OCC PART # DX12-070D-SLX/900-OFCE-IAD OR<br>CORNING PART # 012E8F-31131-A1 OR EQUAL   |  | \$0.97  | \$2,910.00  |
| 160 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O ARMORED SINGLEMODE 9/125<br>OCC PART # DX06-060D-SLX/900-OFCE-IAD OR<br>CORNING PART # 006E8F-31131-A1 OR EQUAL  |  | \$0.84  | \$2,520.00  |
| 161 | 3000 | FT | FIBER OPTIC CABLE 24-STRAND I/O ARMORED PLENUM RATED SINGLEMODE 9/125<br>OCC PART # DX24-070K-SLX/900-OFCE-IAK OR<br>CORNING PART # 024E8P-31131-A3 OR EQUAL  |  | \$1.21  | \$3,630.00  |
| 162 | 3000 | FT | FIBER OPTIC CABLE 12-STRAND I/O ARMORED PLENUM RATED SINGLEMODE 9/125<br>OCC PART # DX12-060K-SLX/900-OFCE-IAK OR<br>CORNING PART # 012E8P-31131-A3 OR EQUAL  |  | \$1.04  | \$3,120.00  |
| 163 | 3000 | FT | FIBER OPTIC CABLE 6-STRAND I/O ARMORED PLENUM RATED SINGLEMODE 9/125<br>OCC PART # DX06-050K-SLX/900-OFCE-IAK OR<br>CORNING PART # 006E8P-31131-A3 OR EQUAL   |  | \$0.89  | \$2,670.00  |
| 164 | 2000 | FT | OCC FIBER OPTIC HYBRID CABLE 96 FIBER ARMORED PLENUM COATED (48 STRAND MULTI-MODE 50/125 & 48 STRAND SINGLEMODE 9/125)<br>OCC PART# DX96-140K-48ALS-48SLX/900-OFCE-IAK OR<br>EQUAL                                |  | \$3.65  | \$7,300.00  |
| 165 | 2000 | FT | FIBER OPTIC HYBRID CABLE 48 FIBER ARMORED PLENUM COATED (24 STRAND MULTI-MODE 50/125 & 24 STRAND SINGLEMODE 9/125)<br>OCC PART # DX48-095K-24ALS-24SLX/900-OFCE-IAK OR<br>CORNING PART # 048XWP-T41XXD20 OR EQUAL |  | \$2.65  | \$5,300.00  |
| 166 | 2000 | FT | FIBER OPTIC HYBRID CABLE 24 FIBER ARMORED PLENUM COATED (12 STRAND MULTI-MODE 50/125 & 12 STRAND SINGLEMODE 9/125)<br>OCC PART # DX24-075K-12ALS-12SLX/900-OFCE-IAK OR<br>CORNING PART # 024X8P-311XX-A3 OR EQUAL |  | \$1.71  | \$3,420.00  |
| 167 | 2000 | EA | SIECOR SC MM 62.5UM CONNECTORS, PART # 95-000-40<br>OR EQUAL  |  | \$8.46  | \$16,920.00 |
| 168 | 1000 | EA | SIECOR ST MM 62.5UM CONNECTORS, PART # 95-000-50<br>OR EQUAL  |  | \$8.46  | \$8,460.00  |
| 169 | 500  | EA | SIECOR SC MM 50UM CONNECTORS, PART# 95-050-41 OR<br>EQUAL   |  | \$11.41 | \$5,705.00  |



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| 170 | 500 | EA | SIECOR ST MM 50UM CONNECTORS, PART# 95-050-51 OR EQUAL   |  | \$11.41  | \$5,705.00 |
| 171 | 500 | EA | SIECOR SC SM CONNECTORS, PART# 95-200-41 OR EQUAL  |  | \$12.37  | \$6,185.00 |
| 172 | 500 | EA | SIECOR ST SM CONNECTORS, PART# 95-200-51 OR EQUAL  |  | \$12.37  | \$6,185.00 |
| 173 | 20  | EA | MULTILINK 1U RACKMOUNT FIBER ENCLOSURE<br>MULTILINK PART# FRM-1RU-2X-SO OR EQUAL                                       |  | \$70.00  | \$1,400.00 |
| 174 | 20  | EA | MULTILINK 2U RACKMOUNT FIBER ENCLOSURE<br>MULTILINK PART# FRM-2RU-4X-SO OR EQUAL                                       |  | \$88.18  | \$1,763.60 |
| 175 | 20  | EA | MULTILINK 3U RACKMOUNT FIBER ENCLOSURE<br>MULTILINK PART# FRM-3RU-9X-TS OR EQUAL                                       |  | \$115.00 | \$2,300.00 |
| 176 | 20  | EA | MULTILINK 6-PORT ST MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MST-06-P-BLK OR EQUAL                |  | \$21.40  | \$428.00   |
| 177 | 20  | EA | MULTILINK 6-PORT SC MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MSC-06-MM-P-BLK OR EQUAL             |  | \$27.88  | \$557.60   |
| 178 | 20  | EA | MULTILINK 8-PORT ST MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MST-08-P-BLK OR EQUAL                |  | \$24.25  | \$485.00   |
| 179 | 20  | EA | MULTILINK 8-PORT SC MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MSC-08-MM-P-BLK OR EQUAL             |  | \$24.25  | \$485.00   |
| 180 | 20  | EA | MULTILINK 12-PORT ST MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MST-12-P-BLK OR EQUAL               |  | \$41.00  | \$820.00   |
| 181 | 20  | EA | MULTILINK 12-PORT SC MM/SM MODULE;<br>FITS RACKMOUNT ENCLOSURES<br>MULTILINK PART# MSC-12-MM-P-BLK OR EQUAL            |  | \$41.00  | \$820.00   |
| 182 | 20  | EA | MULTILINK BLANK MODULE;<br>FITS RACK MOUNT ENCLOSURES<br>MULTILINK PART # MFMB-600BB-BLK OR EQUAL                      |  | \$3.02   | \$60.40    |
| 183 | 20  | EA | LEVITON 1U RACKMOUNT FIBER ENCLOSURE<br>LEVITON PART# 5R1UA-A03 OR EQUAL   |  | \$70.00  | \$1,400.00 |
| 184 | 20  | EA | LEVITON 2U RACKMOUNT FIBER ENCLOSURE<br>LEVITON PART# 5R2UA-A06 OR EQUAL   |  | \$88.18  | \$1,763.60 |
| 185 | 20  | EA | LEVITON 3U RACKMOUNT FIBER ENCLOSURE LEVITON<br>PART# 5R3UA-A12 OR EQUAL   |  | \$115.76 | \$2,315.20 |
| 186 | 20  | EA | LEVITON SMALL EMPTY FIBER WALL MOUNT ENCLOSURE<br>ONLY 8"HIGH X 13"WIDE X 3.5"DEEP<br>LEVITON PART# 5W110-00N OR EQUAL |  | \$59.72  | \$1,194.40 |

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| 187 | 20  | EA | LEVITON MEDIUM EMPTY FIBER WALL MOUNT ENCLOSURE<br>ONLY 14"HIGH X 12"WIDE X 5.25" DEEP<br>LEVITON PART# 5W310-00N OR EQUAL  |  | \$79.57  | \$1,591.40 |
| 188 | 20  | EA | LEVITON LARGE EMPTY FIBER WALL MOUNT ENCLOSURE<br>ONLY 17" HIGH X 15" WIDE X 5.25" DEEP<br>LEVITON PART# 5W710-00N OR EQUAL |  | \$157.70 | \$3,154.00 |
| 189 | 50  | EA | LEVITON ST FIBER 6-PACK TO FIT EITHER WALL MOUNT<br>OR RACKMOUNT ENCLOSURES ONLY<br>LEVITON PART# 5F100-1ST OR EQUAL        |  | \$21.40  | \$1,070.00 |
| 190 | 50  | EA | LEVITON SC FIBER 6-PACK TO FIT EITHER WALL MOUNT<br>OR RACKMOUNT ENCLOSURES ONLY<br>LEVITON PART# 5F100-3SC OR EQUAL        |  | \$27.88  | \$1,394.00 |
| 191 | 50  | EA | LEVITON BLANK 6-PACK FOR FIBER ENCLOSURES<br>LEVITON PART# 5F100-BPP OR EQUAL   |  | \$3.02   | \$151.00   |
| 192 | 50  | EA | LEVITON SC FIBER 8-PACK TO FIT EITHER WALL MOUNT<br>OR RACKMOUNT ENCLOSURES<br>LEVITON PART# 5F100-8SC OR EQUAL             |  | \$0.01   | \$0.50     |
| 193 | 50  | EA | LEVITON SC FIBER 12-PACK TO FIT EITHER WALL MOUNT<br>OR RACKMOUNT ENCLOSURES<br>LEVITON PART# 5F100-CSC OR EQUAL            |  | \$41.00  | \$2,050.00 |
| 194 | 50  | EA | SIECOR ST CONNECTOR PANEL,<br>PART # WIC-CP1-25 OR EQUAL  |  | \$28.77  | \$1,438.50 |
| 195 | 50  | EA | SIECOR SC CONNECTOR PANEL,<br>PART # WIC-CP1-56 OR EQUAL  |  | \$28.77  | \$1,438.50 |
| 196 | 30  | EA | SIECOR WALL MOUNT FIBER ENCLOSURE,<br>PART # WIC-012 OR EQUAL   |  | \$57.53  | \$1,725.90 |
| 197 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER ST TO ST  |  | \$4.65   | \$465.00   |
| 198 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER ST TO SC  |  | \$4.65   | \$465.00   |
| 199 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER SC TO SC  |  | \$4.65   | \$465.00   |
| 200 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER LC TO ST  |  | \$5.65   | \$565.00   |
| 201 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER LC TO SC  |  | \$5.65   | \$565.00   |
| 202 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER LC TO LC  |  | \$6.13   | \$613.00   |
| 203 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER SC TO MTRJ  |  | \$1.00   | \$100.00   |
| 204 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>1 METER LC TO MTRJ  |  | \$1.00   | \$100.00   |

|     |     |    |  |  |        |          |
|-----|-----|----|--|--|--------|----------|
| 205 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER ST TO ST   |  | \$5.27 | \$527.00 |
| 206 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER ST TO SC   |  | \$5.27 | \$527.00 |
| 207 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER SC TO SC   |  | \$5.27 | \$527.00 |
| 208 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER LC TO ST   |  | \$6.26 | \$626.00 |
| 209 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER LC TO SC   |  | \$6.26 | \$626.00 |
| 210 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER LC TO LC   |  | \$6.75 | \$675.00 |
| 211 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 212 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>2 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 213 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER ST TO ST   |  | \$5.90 | \$590.00 |
| 214 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER ST TO SC   |  | \$5.90 | \$590.00 |
| 215 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER SC TO SC   |  | \$5.90 | \$590.00 |
| 216 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER LC TO ST   |  | \$6.80 | \$680.00 |
| 217 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER LC TO SC   |  | \$6.80 | \$680.00 |
| 218 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER LC TO LC   |  | \$7.37 | \$737.00 |
| 219 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 220 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 62.5/125<br>3 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 221 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER ST TO ST     |  | \$4.55 | \$455.00 |
| 222 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER ST TO SC     |  | \$4.55 | \$455.00 |
| 223 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER SC TO SC     |  | \$4.55 | \$455.00 |
| 224 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER LC TO ST     |  | \$5.25 | \$525.00 |

|     |     |    |  |  |        |          |
|-----|-----|----|--|--|--------|----------|
| 225 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER LC TO SC   |  | \$5.25 | \$525.00 |
| 226 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER LC TO LC   |  | \$5.90 | \$590.00 |
| 227 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 228 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>1 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 229 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER ST TO ST   |  | \$5.17 | \$517.00 |
| 230 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER ST TO SC   |  | \$5.17 | \$517.00 |
| 231 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER SC TO SC   |  | \$5.17 | \$517.00 |
| 232 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER LC TO ST   |  | \$5.88 | \$588.00 |
| 233 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER LC TO SC   |  | \$5.88 | \$588.00 |
| 234 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER LC TO LC   |  | \$6.52 | \$652.00 |
| 235 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 236 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>2 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 237 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER ST TO ST   |  | \$5.80 | \$580.00 |
| 238 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER ST TO SC   |  | \$5.80 | \$580.00 |
| 239 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER SC TO SC   |  | \$5.80 | \$580.00 |
| 240 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER LC TO ST   |  | \$6.50 | \$650.00 |
| 241 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER LC TO SC   |  | \$6.50 | \$650.00 |
| 242 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER LC TO LC   |  | \$7.15 | \$715.00 |
| 243 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 244 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 50/125<br>3 METER LC TO MTRJ |  | \$1.00 | \$100.00 |

|     |     |    |   |  |        |          |
|-----|-----|----|---|--|--------|----------|
| 245 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER ST TO ST   |  | \$5.45 | \$545.00 |
| 246 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER ST TO SC   |  | \$5.45 | \$545.00 |
| 247 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER SC TO SC   |  | \$5.45 | \$545.00 |
| 248 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER LC TO ST   |  | \$6.10 | \$610.00 |
| 249 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER LC TO SC   |  | \$6.10 | \$610.00 |
| 250 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER LC TO LC   |  | \$6.15 | \$615.00 |
| 251 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 252 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>1 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 253 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER ST TO ST   |  | \$6.07 | \$607.00 |
| 254 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER ST TO SC   |  | \$6.07 | \$607.00 |
| 255 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER SC TO SC   |  | \$6.07 | \$607.00 |
| 256 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER LC TO ST   |  | \$6.72 | \$672.00 |
| 257 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER LC TO SC   |  | \$6.72 | \$672.00 |
| 258 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER LC TO LC   |  | \$6.77 | \$677.00 |
| 259 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER SC TO MTRJ |  | \$1.00 | \$100.00 |
| 260 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>2 METER LC TO MTRJ |  | \$1.00 | \$100.00 |
| 261 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER ST TO ST   |  | \$6.60 | \$660.00 |
| 262 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER ST TO SC   |  | \$6.60 | \$660.00 |
| 263 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER SC TO SC   |  | \$6.60 | \$660.00 |
| 264 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER LC TO ST   |  | \$7.19 | \$719.00 |



|     |     |    |   |  |          |            |
|-----|-----|----|---|--|----------|------------|
| 265 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER LC TO SC   |  | \$7.19   | \$719.00   |
| 266 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER LC TO LC   |  | \$7.40   | \$740.00   |
| 267 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER SC TO MTRJ   |  | \$1.00   | \$100.00   |
| 268 | 100 | EA | DUPLEX FIBER OPTIC JUMPERS, 9/125<br>3 METER LC TO MTRJ   |  | \$1.00   | \$100.00   |
| 269 | 20  | EA | ALLIED TELESYN ST TO RJ45 FEMALE FIBER MEDIA<br>CONVERTER 10/100MEG PART# AT-FS201 OR EQUAL   |  | \$90.00  | \$1,800.00 |
| 270 | 20  | EA | ALLIED TELESYN CENTRE COM MC13 UTP/FIBER ST<br>10MBPS MEDIA CONVERTER<br>PART# ATMC13-10 OR EQUAL   |  | \$104.00 | \$2,080.00 |
| 271 | 20  | EA | TRANSITION NETWORKS ETHERNET 10BASE-T TO<br>10BASE-FL STAND-ALONE MEDIA CONVERTER;<br>TRANSITION NETWORKS PART# E-TBT-FRL-05 OR EQUAL           |  | \$105.26 | \$2,105.20 |
| 272 | 20  | EA | TRANSITION NETWORKS FAST ETHERNET 100BASE-TX TO<br>100BASE-FX STAND-ALONE MEDIA CONVERTER;<br>TRANSITION NETWORKS PART# E-100BTX-FX-05 OR EQUAL |  | \$90.00  | \$1,800.00 |

TOTAL COST OF ALL ITEMS

\$ \$940,402.30

## CABLE12 Statewide Contract

### TOTAL EVALUATED BID PRICE SHEET

TOTAL COST OF ALL ITEMS

\$940,402.30

INSIDE DELIVERY CHARGE

\$ 125.00 per Hour Minimum of 1 Hour

**TOTAL EVALUATED BID PRICE**

\$940,402.30

**THERE WILL NOT BE A SPLIT AWARD FOR THIS CONTRACT.**

## State of West Virginia

# VENDOR PREFERENCE CERTIFICATE

Certification and application\* is hereby made for Preference in accordance with **West Virginia Code, §5A-3-37**. (Does not apply to construction contracts). **West Virginia Code, §5A-3-37**, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,  
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,  
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. ☒ **Application is made for 5% resident vendor preference for the reason checked:**  
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**  
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**  
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (**West Virginia Code, §61-5-3**), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: GRANBERRY Signed: Ken Kyp  
 Date: 5-10-12 Title: Sales Rep

\*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. CABLE 13STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

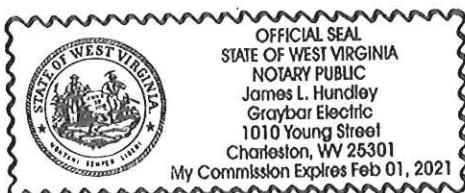
**EXCEPTION:** The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

**WITNESS THE FOLLOWING SIGNATURE**Vendor's Name: GRAYBAR ELECTRICAuthorized Signature: Ken Hys Date: 5/10/12State of West VirginiaCounty of Kanawha, to-wit:Taken, subscribed, and sworn to before me this 10<sup>th</sup> day of May, 2012.My Commission expires Feb 1, 2021.

AFFIX SEAL HERE

NOTARY PUBLIC

James L. Hundley

# GenSPEED® 5000 Category 5e Cable

## Features And Benefits

- Engineered to provide stable and continuous performance
- Performance guaranteed to 200 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

## Applications

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mb/s Token Ring

## Standard Compliances

- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444



## CONSTRUCTION

### Conductors

- 24 AWG solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

### Rip Cord

- Applied longitudinally under jacket

### Color Code

- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

### Jacket

- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flexguard® Flame-Retardant PVC

## PHYSICAL DATA

|                                   | CMR (Non-Plenum) | CMP (Plenum) |
|-----------------------------------|------------------|--------------|
| Nominal Cable Diameter (in)       | 0.200            | 0.180        |
| Nominal Cable Weight (lbs/1000ft) | 21               | 19           |
| Minimum Bend Radius (in)          | 1.0              | 1.0          |
| Maximum Pulling Force (lbs)       | 25               | 25           |
| Temperature Rating (°C)           |                  |              |
| Installation:                     | 0 to +60         | 0 to +60     |
| Operation:                        | -20 to +75       | -20 to +75   |

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II     |              | Spool-Pac®       |              | Spool            |              |
|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
|              | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) |
| Blue         | 5133299E         | 5131278E     | 5133374E         | 5131431E     | 5133300E         | 5131282E     |
| White        | 5133255E         | 5131361E     | 5133342E         | 5131450E     | 5133250E         | 5131365E     |
| Yellow       | 5133289E         | 5131379E     | 5133448E         | 5131546E     |                  | 5131648E     |
| Gray         | 5133200E         | 5131418E     | 5133329E         | 5131456E     | 5133204E         | 5131475E     |
| Red          | 5133274E         | 5131477E     | 5133427E         | 5131553E     |                  | 5131383E     |
| Orange       | 5133383E         | 5131422E     |                  |              | 5133667E         |              |
| Green        | 5133512E         | 5131547E     | 5133693E         | 5131575E     | 5133649E         | 5131649E     |
| Black        | 5133696E         | 5131683E     |                  |              |                  | 5131689E     |
| Pink         | 5133290E         | 5131380E     | 5133447E         | 5131478E     |                  |              |
| Purple       | 5133445E         | 5131730E     |                  |              |                  |              |

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

Non-stock items may be subject to minimum order quantities.

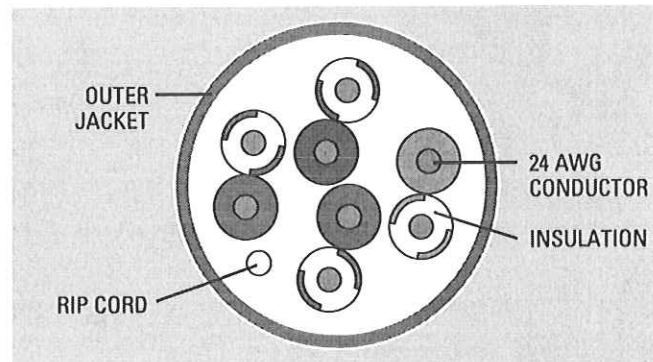
Data subject to change without notice.



**GenSPEED® 5000 ELECTRICAL PERFORMANCE**

| Frequency<br>MHz | PSACR<br>(min) | ACR<br>(min) | Attenuation<br>(max) | PSNEXT<br>(min) | NEXT<br>(min) | PSELFEXT<br>(min) | ELFEXT<br>(min) | Return Loss<br>(min) |
|------------------|----------------|--------------|----------------------|-----------------|---------------|-------------------|-----------------|----------------------|
| 1                | 60.3           | 63.3         | 2.0                  | 62.3            | 65.3          | 60.8              | 63.8            | 20.0                 |
| 4                | 49.2           | 52.2         | 4.1                  | 53.3            | 56.3          | 48.8              | 51.8            | 23.0                 |
| 10               | 40.8           | 43.8         | 6.5                  | 47.3            | 50.3          | 40.8              | 43.8            | 25.0                 |
| 16               | 36.0           | 39.0         | 8.2                  | 44.2            | 47.2          | 36.7              | 39.7            | 25.0                 |
| 20               | 33.5           | 36.5         | 9.3                  | 42.8            | 45.8          | 34.8              | 37.8            | 25.0                 |
| 25               | 30.9           | 33.9         | 10.4                 | 41.3            | 44.3          | 32.8              | 35.8            | 24.3                 |
| 31.25            | 28.2           | 31.2         | 11.7                 | 39.9            | 42.9          | 30.9              | 33.9            | 23.6                 |
| 62.5             | 18.4           | 21.4         | 17.0                 | 35.4            | 38.4          | 24.9              | 27.9            | 21.5                 |
| 100              | 10.3           | 13.3         | 22.0                 | 32.3            | 35.3          | 20.8              | 23.8            | 20.1                 |
| 155              | 1.4            | 4.4          | 28.1                 | 29.4            | 32.4          | 17.0              | 20.0            | —                    |
| 200              | —              | —            | 32.4                 | 27.8            | 30.8          | 14.8              | 17.8            | —                    |
| 250              | —              | —            | 36.9                 | 26.3            | 29.3          | 12.8              | 15.8            | —                    |
| 300              | —              | —            | 41.0                 | 25.1            | 28.1          | 11.3              | 14.3            | —                    |
| 350              | —              | —            | 44.9                 | 24.1            | 27.1          | 9.9               | 12.9            | —                    |

Note: Values are expressed in dB per 100m (328 ft.) length. Values above 200 MHz are for information only.

**GenSPEED® 5000 CATEGORY 5e CROSS-SECTION****ELECTRICAL CHARACTERISTICS**

|   |                    |
|---|--------------------|
| <b>DC Resistance (max)</b><br>Ohms/100m (328ft) @ 20°C      | 8.9                |
| <b>DC Resistance Unbalance (max)</b><br>Individual Pair %   | 3.0                |
| <b>Mutual Capacitance (nom)</b><br>pF/ft @ 1 KHz            | 14                 |
| <b>Delay Skew (max)</b><br>ns/100m                          | 45                 |
| <b>Nom. Velocity of Propagation</b><br>% Speed of Light     | CMP: 72<br>CMR: 70 |
| <b>Characteristic Impedance</b><br>Frequency (f): 1-200 MHz | Ohms<br>100 ± 15   |

# GenSPEED® 5500 Premium Category 5e Cable

## Features And Benefits

- Ensures increased headroom for future applications, lower bit-error rates, and higher signal transmission quality
- Enhanced signal-to-noise ratio, improving bit-error rate
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance
- Made in U.S.A.

## Applications

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 155 Mp/s, 622 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- IEEE 802.3at DTE for PoE Plus
- Broadband and Baseband Analog Video

## Standard Compliances

- ANSI/TIA 568-C.2
- ANSI/TIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444



Data subject to change without notice.

## CONSTRUCTION

### Conductors

- 23 AWG CMR solid bare annealed copper
- 24 AWG CMP solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

### Color Code

- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

### Rip Cord

- Applied longitudinally under jacket

### Jacket

- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

## PHYSICAL DATA

|                                    | CMR (Non-Plenum) | CMP (Plenum) |
|------------------------------------|------------------|--------------|
| Nominal Cable Diameter (in)        | 0.220            | 0.190        |
| Nominal Cable Weight (lbs/1000 ft) | 24               | 21           |
| Minimum Bend Radius (in)           | 1.0              | 1.0          |
| Maximum Pulling Force (lbs)        | 25               | 25           |
| Temperature Rating (°C)            |                  |              |
| Installation:                      | 0 to +60         | 0 to +60     |
| Operation:                         | -20 to +75       | -20 to +75   |

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II     |              | Spool-Pac®       |              | Spool            |              |
|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
|              | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) |
| Blue         | 6133299          | 6131278      | 6133403          | 6131433      | 6133282          | 6131282      |
| White        | 6133255          | 6131361      | 6133339          | 6131449      | 6133492          | 6131618      |
| Yellow       | 6133289          | 6131546      | 6133369          | 6131379      | 6133348          | 6131382      |
| Gray         | 6133200          | 6131418      | 6133331          | 6131619      | 6133334          |              |
| Red          | 6133274          | 6131477      |                  | 6131635      |                  |              |
| Orange       | 6133746          | 6131422      | 6133383          | 6131576      |                  |              |
| Green        | 6133512          | 6131547      | 6133615          | 6131575      | 6133616          | 6131757      |
| Black        | 6133696          | 6131683      |                  | 6131829      |                  |              |
| Pink         | 6133290          | 6131709      | 6133447          | 6131478      | 6133341          |              |
| Purple       | 6133445          | 6131710      | 6133446          |              |                  |              |

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead time may apply.

Non-stock items may be subject to minimum order quantities.

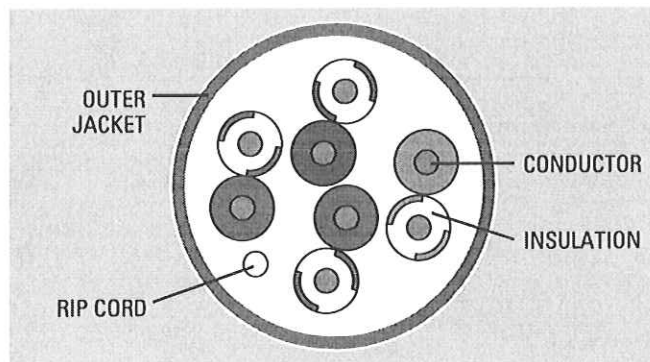
## Enhanced Transmission Throughput

### GenSPEED® 5500 ELECTRICAL PERFORMANCE

| Frequency<br>MHz | PSACR*<br>(min) | ACR*<br>(min) | Insertion Loss<br>(max) | PSNEXT<br>(min) | NEXT<br>(min) | PSACRF<br>(min) | ACRF<br>(min) | Return Loss<br>(min) |
|------------------|-----------------|---------------|-------------------------|-----------------|---------------|-----------------|---------------|----------------------|
| 1                | 66.3            | 68.3          | 2.0                     | 68.3            | 70.3          | 62.0            | 65.0          | 20.0                 |
| 4                | 55.4            | 57.4          | 3.9                     | 59.3            | 61.3          | 50.0            | 53.0          | 23.0                 |
| 10               | 47.1            | 49.1          | 6.2                     | 53.3            | 55.3          | 42.0            | 45.0          | 25.0                 |
| 16               | 42.3            | 44.3          | 7.9                     | 50.2            | 52.2          | 37.9            | 40.9          | 25.0                 |
| 20               | 39.9            | 41.9          | 8.9                     | 48.8            | 50.8          | 36.0            | 39.0          | 25.0                 |
| 25               | 37.4            | 39.4          | 10.0                    | 47.3            | 49.3          | 34.0            | 37.0          | 24.3                 |
| 31.25            | 34.7            | 36.7          | 11.2                    | 45.9            | 47.9          | 32.1            | 35.1          | 23.6                 |
| 62.5             | 25.1            | 27.1          | 16.3                    | 41.4            | 43.4          | 26.1            | 29.1          | 21.5                 |
| 100              | 17.3            | 19.3          | 21.0                    | 38.3            | 40.3          | 22.0            | 25.0          | 20.1                 |
| 155              | 8.6             | 10.6          | 26.9                    | 35.4            | 37.4          | 18.2            | 21.2          | 18.8                 |
| 200              | 2.8             | 4.8           | 31.0                    | 33.8            | 35.8          | 16.0            | 19.0          | 18.0                 |
| 250              | —               | —             | 35.3                    | 32.3            | 34.3          | 14.0            | 17.0          | 17.3                 |
| 300              | —               | —             | 39.2                    | 31.1            | 33.1          | 12.5            | 15.5          | 16.8                 |
| 350              | —               | —             | 42.9                    | 30.1            | 32.1          | 11.1            | 14.1          | 16.3                 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568-C.2

### GenSPEED® 5500 PREMIUM CATEGORY 5e CROSS-SECTION



### ELECTRICAL CHARACTERISTICS

|   |                    |
|---|--------------------|
| <b>DC Resistance (max)</b><br>Ohms/100 m (328 ft) @ 20°C    | 8.9                |
| <b>DC Resistance Unbalance (max)</b><br>Individual Pair %   | 3.0                |
| <b>Delay Skew (max)</b><br>ns/100 m                         | 45                 |
| <b>Nom. Velocity of Propagation</b><br>% Speed of Light     | CMP: 72<br>CMR: 70 |
| <b>Characteristic Impedance</b><br>Frequency (f): 1-350 MHz | Ohms<br>100 ± 15   |

# GenSPEED® 6000 Enhanced Category 6 Cable

## Features And Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance
- Made in U.S.A.

## Applications

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- IEEE 802.3at for PoE Plus
- Digital Video
- Broadband and Baseband Analog Video

## Standard Compliances

- ANSI/TIA 568-C.2
- ANSI/TIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444



Data subject to change without notice.



## CONSTRUCTION

### Conductors

- 23 AWG solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

### Color Code

- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

### Separator

- Cross-web

### Rip Cord

- Applied longitudinally under jacket

### Jacket

- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

## PHYSICAL DATA

|                                    | CMR (Non-Plenum) | CMP (Plenum) |
|------------------------------------|------------------|--------------|
| Nominal Cable Diameter (in)        | 0.235            | 0.225        |
| Nominal Cable Weight (lbs/1000 ft) | 28               | 31           |
| Minimum Bend Radius (in)           | 1.0              | 1.0          |
| Maximum Pulling Force (lbs)        | 32               | 32           |
| Temperature Rating (°C)            |                  |              |
| Installation:                      | 0 to +60         | 0 to +60     |
| Operation:                         | -20 to +75       | -20 to +75   |

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II     |              | Spool-Pac®       |              | Spool            |              |
|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
|              | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) | CMR (Non-Plenum) | CMP (Plenum) |
| Blue         | 7133900          | 7131900      | 7133940          | 7131940      | 7133960          | 7131960      |
| White        | 7133901          | 7131901      | 7133941          | 7131941      | 7133961          | 7131961      |
| Yellow       | 7133902          | 7131902      | 7133942          | 7131942      | 7133962          | 7131962      |
| Gray         | 7133903          | 7131903      | 7133943          | 7131943      | 7133963          | 7131963      |
| Red          | 7133904          | 7131904      | 7133944          | 7131944      | 7133964          | 7131964      |
| Orange       | 7133905          | 7131905      | 7133945          | 7131945      | 7133965          | 7131965      |
| Green        | 7133906          | 7131906      | 7133946          | 7131946      | 7133966          | 7131966      |
| Black        | 7133907          | 7131907      | 7133947          | 7131947      | 7133967          | 7131967      |
| Pink         | 7133908          | 7131908      | 7133948          | 7131948      | 7133968          | 7131968      |
| Purple       | 7133909          | 7131909      | 7133949          | 7131949      | 7133969          | 7131969      |

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead time may apply.

Non-stock items may be subject to minimum order quantities.



## Optimally Balanced Enhanced Performance

### GenSPEED® 6000 Electrical Performance

| Frequency<br>MHz | PSACR* (min) |  | ACR* (min) |  | Insertion Loss (max) |            | PSNEXT (min)   |            | NEXT (min)     |            |
|------------------|--------------|--|------------|--|----------------------|------------|----------------|------------|----------------|------------|
|                  | Guaranteed   |  | Guaranteed |  | TIA<br>568-C.2       | Guaranteed | TIA<br>568-C.2 | Guaranteed | TIA<br>568-C.2 | Guaranteed |
| 1                | 75.3         |  | 77.3       |  | 2.0                  | 2.0        | 72.3           | 77.3       | 74.3           | 79.3       |
| 4                | 64.5         |  | 66.5       |  | 3.8                  | 3.8        | 63.3           | 68.3       | 65.3           | 70.3       |
| 10               | 56.4         |  | 58.4       |  | 6.0                  | 5.9        | 57.3           | 62.3       | 59.3           | 64.3       |
| 16               | 51.7         |  | 53.8       |  | 7.6                  | 7.5        | 54.2           | 59.3       | 56.2           | 61.3       |
| 20               | 49.4         |  | 51.4       |  | 8.5                  | 8.4        | 52.8           | 57.8       | 54.8           | 59.8       |
| 31.25            | 44.3         |  | 46.3       |  | 10.7                 | 10.6       | 49.9           | 54.9       | 51.9           | 56.9       |
| 62.5             | 35.1         |  | 37.1       |  | 15.4                 | 15.3       | 45.4           | 50.4       | 47.4           | 52.4       |
| 100              | 27.6         |  | 29.6       |  | 19.8                 | 19.7       | 42.3           | 47.3       | 44.3           | 49.3       |
| 150              | 20.0         |  | 22.0       |  | 24.7                 | 24.7       | 39.7           | 44.7       | 41.7           | 46.7       |
| 200              | 13.8         |  | 15.8       |  | 29.0                 | 29.0       | 37.8           | 42.8       | 39.8           | 44.8       |
| 250              | 8.7          |  | 10.7       |  | 32.8                 | 32.6       | 36.3           | 41.3       | 38.3           | 43.3       |
| 350              | —            |  | 1.7        |  | —                    | 39.5       | —              | 39.2       | —              | 41.2       |
| 500              | —            |  | —          |  | —                    | 48.6       | —              | 36.8       | —              | 38.8       |

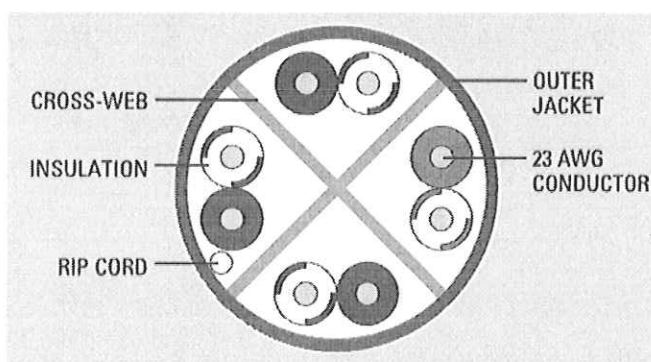
Note: Values are expressed in dB per 100 m (328 ft) length @ 20°C. Results beyond 350 MHz for reference only.

\*PSACR & ACR not specified in ANSI/TIA 568-C.2

| Frequency<br>MHz | PSACRF (min)   |            | ACRF (min)     |            | Return Loss (min) |            | TCL (min)      |            | ELTCTL (min)   |            |
|------------------|----------------|------------|----------------|------------|-------------------|------------|----------------|------------|----------------|------------|
|                  | TIA<br>568-C.2 | Guaranteed | TIA<br>568-C.2 | Guaranteed | TIA<br>568-C.2    | Guaranteed | TIA<br>568-C.2 | Guaranteed | TIA<br>568-C.2 | Guaranteed |
| 1                | 64.8           | 69.8       | 67.8           | 72.8       | 20.0              | 20.0       | 40.0           | 40.0       | 35.0           | 35.0       |
| 4                | 52.8           | 57.7       | 55.7           | 60.7       | 23.0              | 23.6       | 40.0           | 40.0       | 23.0           | 23.0       |
| 10               | 44.8           | 49.8       | 47.8           | 52.8       | 25.0              | 26.0       | 40.0           | 40.0       | 15.0           | 15.0       |
| 16               | 40.7           | 45.7       | 43.7           | 48.7       | 25.0              | 26.0       | 38.0           | 38.0       | 10.9           | 10.9       |
| 20               | 38.8           | 43.7       | 41.7           | 46.7       | 25.0              | 26.0       | 37.0           | 37.0       | 9.0            | 9.0        |
| 31.25            | 34.9           | 39.9       | 37.9           | 42.9       | 23.6              | 25.0       | 35.1           | 35.1       | —              | 5.1        |
| 62.5             | 28.9           | 33.8       | 31.8           | 36.8       | 21.5              | 23.5       | 32.0           | 32.0       | —              | 5.0        |
| 100              | 24.8           | 29.8       | 27.8           | 32.8       | 20.1              | 22.5       | 30.0           | 30.0       | —              | 5.0        |
| 150              | 21.3           | 26.3       | 24.3           | 29.3       | 18.9              | 21.6       | 28.2           | 28.2       | —              | 5.0        |
| 200              | 18.8           | 23.8       | 21.8           | 26.8       | 18.0              | 21.0       | 27.0           | 27.0       | —              | 5.0        |
| 250              | 16.8           | 21.8       | 19.8           | 24.8       | 17.3              | 20.5       | 26.0           | 26.0       | —              | 5.0        |
| 350              | —              | 18.9       | —              | 21.9       | —                 | 19.8       | —              | —          | —              | —          |
| 500              | —              | 15.8       | —              | 18.8       | —                 | 19.0       | —              | —          | —              | —          |

Note: Values are expressed in dB per 100 m (328 ft) length @ 20°C. Results beyond 350 MHz for reference only.

### GenSPEED® 6000 ENHANCED CATEGORY 6 CROSS-SECTION



### ELECTRICAL CHARACTERISTICS

|  |                    |
|--|--------------------|
| DC Resistance (max)<br>Ohms/100 m (328 ft) @ 20°C    | 8.9                |
| DC Resistance Unbalance (max)<br>Individual Pair %   | 3.0                |
| Delay Skew (max)<br>ns/100 m                         | CMP: 35<br>CMR: 40 |
| Nom. Velocity of Propagation<br>% Speed of Light     | CMP: 70<br>CMR: 68 |
| Characteristic Impedance<br>Frequency (f): 1-500 MHz | Ohms<br>100 ± 15   |