

**Gen*SPEED***<sup>®</sup>  
BRAND

# Datacom Cable

FOR VOICE AND DATA COMMUNICATIONS



 **General Cable**

# DATACOM

This catalog contains in-depth information on the most comprehensive line of copper Datacom products available today for voice and data communications.

In a rapidly changing industry with ever-growing demands, General Cable continues to stay ahead of the curve with engineered products that guarantee future performance. Choose from the best cable in its class — GenSPEED® Cables.

Our products are readily available through our network of authorized stocking distributors and distribution centers.



All information in this catalog is presented solely as a guide to product selection and is believed to be reliable. All printing errors are subject to correction in subsequent releases of this catalog. Although General Cable has taken precautions to ensure the accuracy of the product specifications at the time of publication, the specifications of all products contained herein are subject to change without notice.

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# Delivering Solutions THAT KEEP YOU CONNECTED

## QUALITY

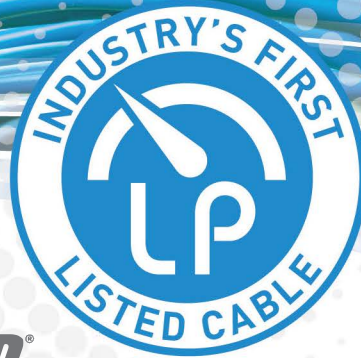


General Cable is committed to meeting customer requirements through continuous quality improvements. As a significant part of our commitment to quality, General Cable's manufacturing facilities are certified to the ISO 9001:2000 quality standard. Our telecommunications cable manufacturing facility has received TL 9000 quality standards registration as a supplement to the ISO program.

This quality system is based on the ISO 9001 program with added telecommunications-specific performance metrics. We strive to provide value optimization through innovation and quality solutions.

- Our in-house testing capabilities are extensive, with strict adherence to our product specifications as well as industry standards.
- Cables are safety listed and verified.
- Third-party testing labs like ETL and UL are utilized to quantify and confirm our quality and provide final qualification data that sets the foundation for our extended product warranty.
- General Cable products have stood the test of time with proven reliability and performance.





**GenSPEED**  
BRAND

## High-Powered PoE Applications Call for LP Cables That Keep Their Cool

Future-proof your installations now with General Cable's UL Listed Limited Power (LP) cabling solutions ... the first in the industry to be certified.

Independently validated by Underwriters Laboratories (UL), GenSPEED® Brand's LP Listed cables provide a simple way to ensure installations are future-proofed against the continually evolving Power over Ethernet (PoE) standards. As PoE applications draw more power in the coming years, make sure the cables you install today won't be susceptible to performance issues caused by heat generation down the road. Ensure a hassle-free installation without constraints to bundle size by choosing one of General Cable's GenSPEED Brand solutions that feature the LP rating.

Learn more about the new rating and our LP Listed GenSPEED Brand solutions by calling us at 800-424-5666 or visit [gcna.us/LP](http://gcna.us/LP).



*Cable Choice Matters...Choose General Cable*



 **General Cable**



**GenSPEED<sup>®</sup> 10**  
CAT 6A SOLUTIONS

**SMALLEST  
DIAMETER  
IN THE  
INDUSTRY**

## Introducing the New Generation of Small Diameter Category 6A Cables

General Cable's industry-trusted 10 Gig Solutions goes BIG by introducing the new generation of small diameter **GenSPEED<sup>®</sup> 10 Category 6A Solutions**. With a revolutionary design developed to find the perfect blend of product performance and product size, the new GenSPEED 10 products offer the smallest Cat 6A cables in the industry with enhanced performance and maneuverability.

### **Smaller, Lighter & More Flexible**

GenSPEED 10 features our smallest diameter ever. Its improved design, lighter weight and increased flexibility translates to simplified cable handling.

### **Small Cable, Big Savings**

The new GenSPEED 10 standard packaging can fit 36 reels or 20 boxes per pallet, allowing for improved shipping and warehouse efficiency, lowering overall project costs.

### **Improved Conduit Fill and Easier Installation**

Reduced diameter means optimized cable management: less conduit, less cable tray and more cable in existing conduit and trays, which also lower overall costs.

 **General Cable**



# One Company Connecting The World

## POWERFUL PRESENCE · PRODUCTS PERFORMANCE · PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. We are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a network of manufacturing facilities in our core markets and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables us to better serve our customers globally and as they expand into new geographic markets.

**General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally and locally.**



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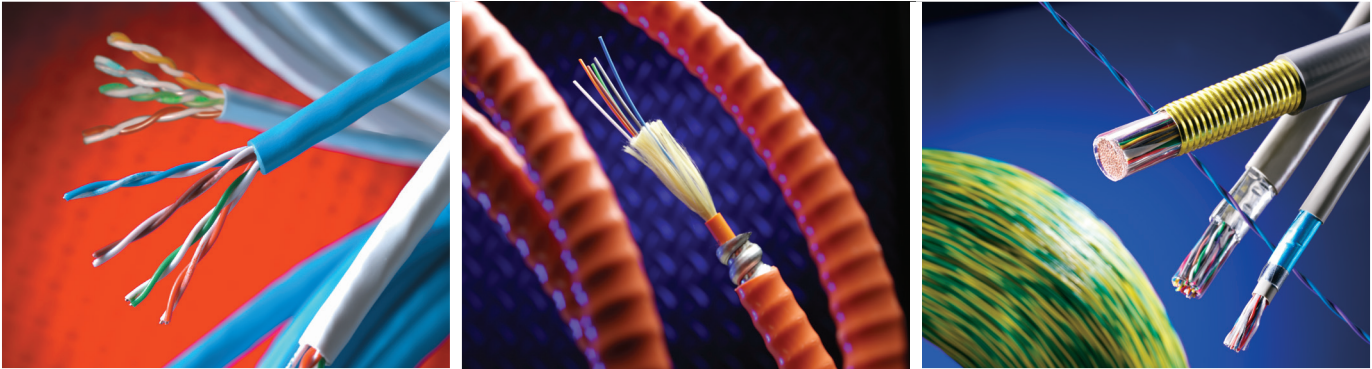


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# GenAssurance<sup>SM</sup> Product Warranty

## FOR GENERAL CABLE DATACOM PRODUCTS



General Cable is committed to exceeding our customers' expectations for quality and performance. We strive to ensure this quality through extensive in-house and third-party testing with strict adherence to our product specifications and industry standards. As such, our products carry a standard one-year limited warranty. Additionally, a 25-year extended warranty protection plan is available for registered products.



### **Standard Warranty**

Products covered are Voice and Data Communications cables, including Category 3 cable and higher, Fiber Optic cables, Central Office cables (e.g., switchboard cable), Terminating cable, and Distribution Frame Wire, Electronics and Telecommunications (e.g., OSP and OVD) products.

### **Standard Warranty Term and Conditions**

General Cable warrants that its product will conform to its applicable specifications and will be otherwise free from defects in material and workmanship for a period of 12 months from the date the product is shipped from its factory (the "Warranty Period").

General Cable must be given immediate written notice of any defect and the opportunity to inspect the product to determine whether a breach of warranty has occurred. This warranty covers only products installed at the original installation location. All repairs or replacements covered by this warranty will be shipped to the destination point specified in the original order. The defective product will, at General Cable's option, be either scrapped or returned to General Cable at its expense and per its shipping instructions.

If General Cable replaces a product under this warranty, the replacement will be warranted for the balance of the original Warranty Period.



General Cable's sole responsibility under this warranty will be to repair or replace, at its option and expense, any length of product found to be defective during either installation or normal or proper use. This warranty does not apply to normal wear and tear or damage caused by negligence, lack of maintenance, accident, abnormal operation, improper installation or service, unauthorized repair, fire, floods, and acts of God. All costs incidental to repairing or replacing defective products, including but not limited to removal, disassembly, reinstallation and reconstruction, will be borne by the buyer, and in no event will General Cable be liable for such costs.

**THE FOREGOING CONSTITUTES GENERAL CABLE'S SOLE AND EXCLUSIVE OBLIGATIONS AND LIABILITIES. GENERAL CABLE MAKES NO OTHER WARRANTIES ON ITS PRODUCTS, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED.**

**In no event will General Cable be liable for any incidental, special, consequential or punitive damages of any nature or kind, however arising, whether in contract, tort or otherwise, even if General Cable is deemed to be aware of the possibility of such damages.**

**General Cable, in no event, will be responsible for any claims or damage arising out of or connected with this warranty or the manufacture, sale, delivery, installation, or use of the product in excess of the purchase price of the product.**

Count on us to deliver  
the solutions that keep  
you connected.

## Extended Warranty

General Cable offers a 25-year limited cable warranty on Datacom and Electronics products. Registration is required, and the warranty is administered by General Cable. To register, please complete the registration form, found at [www.generalcable.com](http://www.generalcable.com) in the Product Warranty section, and return along with required documents.

In addition to offering an extended 25-year limited warranty on Datacom and Electronics products, General Cable now offers the same extended limited warranty on OVD and OSP Telecom products. In order to become eligible for the Telecom extended GenAssurance warranty, the network project must use only General Cable Datacom copper and fiber for the structured cable portion (horizontal cable and inside backbone). Upon meeting this criteria, submit the completed registration documents to General Cable, and the extended GenAssurance warranty will be provided for the Telecom cable products.

## Datacom System Warranties

System warranties include the link and channel. End-to-end warranties are typically issued by the connectivity partner.

- Panduit — Premier Connectivity Partner



Registered PanGen and NetGen solutions have a 25-year warranty that covers repair or replacement of defective components and one point of contact for all cable and component inquiries. The warranty is issued by Panduit and maintained by both Panduit and General Cable. Program information can be found at [www.pangensolutions.com](http://www.pangensolutions.com).

Additional connectivity partners are available. Please reach out to your sales representative for more information.

# GenSPEED® Category 6A Cables

1

## Introducing the New Generation of Small Diameter Category 6A Cables

For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with products that anticipate future performance requirements and provide best value in cabling solutions, which is why we are pleased to introduce the new generation of small diameter GenSPEED® 10 Category 6A Solutions.

With a revolutionary design developed to find the perfect blend of product performance and product size, the new GenSPEED® 10 Category 6A Cables offer the smallest diameter in the industry with enhanced performance and maneuverability. Its innovative technology and reduced size is perfect for migrating to a Cat 6A infrastructure, allowing for improved cable management, installation and handling when preparing your system for 10 Gigabit applications.

General Cable recognizes that application and performance needs may vary, which is why we offer you several copper 10 Gigabit solutions: GenSPEED® 10 MTP™ Cat 6A 10 Gig Cable; GenSPEED® 10 UTP Cat 6A 10 Gig Cable; GenSPEED® 10,000 Shielded Cat 6A 10 Gig Cable; and GenSPEED® Cat 6A OSP Cable.

General Cable's industry-leading 10 Gig solution, GenSPEED® 10 MTP Category 6A Cable, provides superior alien crosstalk protection and EMI Immunity in the industry's smallest Cat 6A Cables. Without needing to be grounded, GenSPEED® 10 MTP's Mosaic Variable Laser Cut Tape shields the cable from noise coming from external cable sources, which is referred to as alien crosstalk (PSANEXT and PSAACRF). Its improved design, lighter weight and increased flexibility translates to simplified cable handling and optimized cable management: less conduit, less cable tray and more cable in existing conduit and trays which lowers overall project costs.

Our second offering, GenSPEED® 10 UTP Category 6A Cable, is a cost-effective, standard-compliant 10 Gig UTP featuring the smallest diameter in the industry with guaranteed performance that meets or exceeds all TIA Standards. Perfect for component upgrades, this cable is fully backwards-compatible to legacy infrastructures and prepares your system for future 10 Gigabit applications. GenSPEED® 10 solves the one Gigabit limitation of Category 5e and Category 6 and is an ideal solution for bandwidth-intensive applications. Its smaller diameter allows for greater cable density, reducing cable management costs.

General Cable also offers two shielded options in Category 6A. GenSPEED® 10,000 U/FTP is designed with individually shielded pairs for optimized isolation and immunity from external noise characterized by power sum alien crosstalk (PSANEXT) in cable bundles. GenSPEED® 10 F/UTP is an overall shield design. Shields are an extremely effective way of protecting the cable from outside noise ("alien sources") by moving the electromagnetic energy away from the pairs and directing it through the shield and drain wire to the ground. Of course, U/FTP and F/UTP cables are only effective if they are properly grounded. GenSPEED® 10,000 Shielded cables offer you the ultimate PSANEXT protection.

Future-proof your cabling system today with GenSPEED® Brand 10 Gig solutions from General Cable.

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# GenSPEED® Category 6A Quick Reference Guide

JACKET COLOR	PACKAGE	GenSPEED® 10 MTP (p.3)		GenSPEED® 10 UTP (p.9)		GenSPEED® 10,000 U/FTP (p.11)	
		CMR	CMP	CMR	CMP	CMR	CMP
<b>Blue</b>							
	Pull-Pac	7143839	7141839	7143800	7141800		
	Spool-Pac®		7141879		7141869		
	Spool	7143849	7141849	7143819	7141819	7133786	7131786
<b>White</b>							
	Pull-Pac	7143840	7141840	7143801	7141801		
	Spool-Pac®		7141880		7141870		
	Spool	7143850	7141850	7143820	7141820	7133787	7131787
<b>Yellow</b>							
	Pull-Pac	7143842	7141842	7143802	7141802		
	Spool-Pac®		7141882		7141871		
	Spool	7143852	7141852	7143822	7141822	7133788	7131788
<b>Gray</b>							
	Pull-Pac	7143841	7141841	7143803	7141803		
	Spool-Pac®		7141881		7141872		
	Spool	7143851	7141851	7143821	7141821	7133789	7131789
<b>Red</b>							
	Pull-Pac	7143844	7141844	7143804	7141804		
	Spool-Pac®		7141884		7141873		
	Spool	7143854	7141854	7143824	7141824	7133790	7131790
<b>Orange</b>							
	Pull-Pac	7143846	7141846	7143805	7141805		
	Spool-Pac®		7141886		7141874		
	Spool	7143856	7141856	7143826	7141826	7133791	7131791
<b>Green</b>							
	Pull-Pac	7143843	7141843	7143806	7141806		
	Spool-Pac®		7141883		7141875		
	Spool	7143853	7141853	7143823	7141823	7133792	7131792
<b>Black</b>							
	Pull-Pac	7143848	7141848	7143807	7141807		
	Spool-Pac®		7141888		7141876		
	Spool	7143858	7141858	7143828	7141828	7133795	7131795
<b>Pink</b>							
	Pull-Pac	7143847	7141847	7143808	7141808		
	Spool-Pac®		7141887		7141878		
	Spool	7143857	7141857	7143827	7141827	7133793	7131793
<b>Purple</b>							
	Pull-Pac	7143845	7141845	7143809	7141809		
	Spool-Pac®		7141885		7141877		
	Spool	7143855	7141855	7143825	7141825	7133797	7131797

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

# GenSPEED® 10 MTP™ Small Diameter Category 6A Cable

Superior Alien Crosstalk Protection and EMI Immunity in the Industry's Smallest Full Channel, Component Compliant 6A Cable

## Features and Benefits

- Utilizes innovative Mosaic™ Variable Laser Cut Tape to provide superior protection against alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF.
- Variable laser cut pattern delivers maximum protection against EMI noise.
- Smaller cable diameter allows for greater cable density, reducing cable management costs.
- Simplified design and improved bend radius make it easier to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP-LP 0.7A with certified performance for high-power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- CMP 105°C jacket rating provides greater protection against increased operating temperatures and for high-wattage applications.
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- All GenSPEED products are made in the U.S.A.

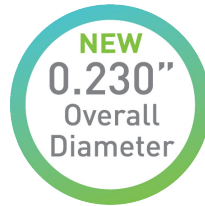
## Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

## Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP 0.7A\*
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E<sub>x</sub>)

\*0.7A is the ampacity rating of the cable, which equals to 140 watts using 50 volts over four pairs.



## CONSTRUCTION

### Conductors

- 23 AWG solid bare annealed copper

### Insulation

- Plenum: Fluoropolymer

### Color Code

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

### ANEXT Protection:

- Mosaic™ Variable Laser Cut Tape

### Jacket

- Plenum: Low-Smoke, Flame-Retardant PVC

## PHYSICAL DATA

	CMP (Plenum)
Nominal Cable Diameter (in)	0.230
Nominal Cable Weight (lbs/1000 ft)	30
Minimum Bend Radius (in)	1
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +105

## PART NUMBERS

Jacket Color	CMP (Plenum)	
	Spool	
 Blue	<b>7151849</b>	
 White	<b>7151850</b>	
 Gray	<b>7151851</b>	
 Yellow	<b>7151852</b>	
 Green	<b>7151853</b>	
 Red	<b>7151854</b>	
 Purple	<b>7151855</b>	
 Orange	<b>7151856</b>	
 Pink	<b>7151857</b>	
 Black	<b>7151858</b>	

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



FEATURING

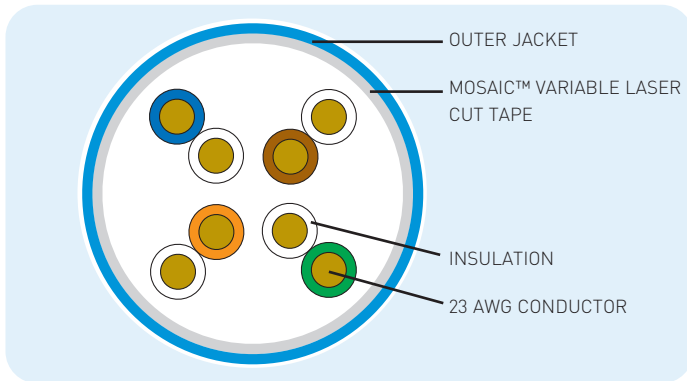
**MOSAIC**  
VARIABLE LASER CUT TAPE

**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR*	ACR*	Insertion Loss	PSNEXT	NEXT	PSACRF	ACRF	Return Loss	TCL	PSANEXT		PSAACRF			
	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)
	General Cable Guaranteed	General Cable Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	General Cable Typical	TIA Guaranteed	General Cable Guaranteed	General Cable Typical
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	75.0	79.0	67.0	75.0	79.0
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	75.0	79.0	66.2	74.4	78.2
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	75.0	79.0	58.2	66.2	70.2
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	75.0	79.0	54.1	62.1	66.1
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	75.0	79.0	52.2	60.2	64.2
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	75.0	79.0	48.3	56.3	60.3
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	73.6	77.6	42.3	50.3	54.3
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	70.5	74.5	38.2	46.2	50.2
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	67.9	71.9	34.7	42.7	46.7
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	66.0	70.0	32.2	40.2	44.2
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	64.5	68.5	30.2	38.2	42.2
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	63.3	67.3	28.7	36.7	40.7
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	61.5	65.5	26.2	34.2	38.2
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	60.0	64.0	24.2	32.2	36.2

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
 \*PSACR & ACR not specified in ANSI/TIA 568.2-D

**CROSS-SECTION**



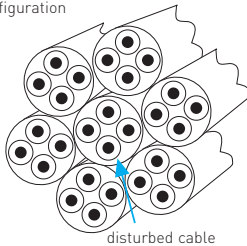
**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalanced</b> Individual Pair %	4.00	< 1
<b>Delay Skew (Max)</b> ns/100 m	45	
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f):	Ohms 1-500 MHz	100 ± 15

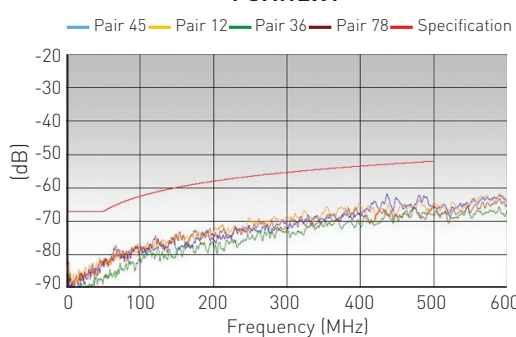
**4 PAIR CABLES:**

Bundles of 7 Test Results

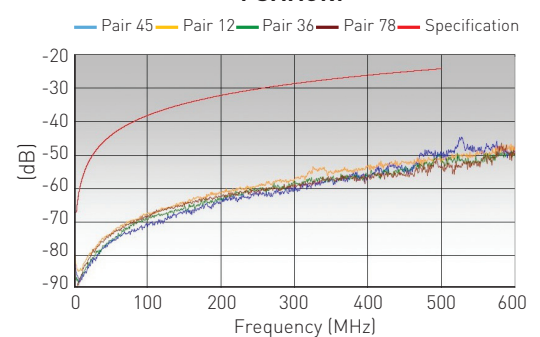
Six-around-one configuration



**PSANEXT**



**PSAACRF**



Data subject to change without notice.



# GenSPEED® 10 MTP™ Category 6A Cable

## Superior Alien Crosstalk Protection and EMI Immunity

### Features and Benefits

- Utilizes innovative Mosaic™ Variable Laser Cut Tape to provide superior protection against alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF.
- Variable laser cut pattern delivers maximum protection against EMI noise.
- Smaller cable diameter allows for greater cable density, reducing cable management costs.
- Simplified design and improved bend radius make it easier to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP-LP 0.7A with certified performance for high-power PoE applications.
- UL Listed CMR-LP 0.5A with certified performance for high power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- CMP 105°C jacket rating provides greater protection against increased operating temperatures and for high-wattage applications.
- The internal separator optimizes internal pair geometry to yield superior electrical performance and maintain flexibility.
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- All GenSPEED products are made in the U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- NEC/CEC Type CMR (UL 1666) for Riser
- UL Listed CMP-LP 0.7A\*
- UL Listed CMR-LP 0.5A
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E<sub>2</sub>)

\*0.7A is the ampacity rating of the cable, which equals to 140 watts using 50 volts over four pairs.



FEATURING

**MOSAIC**  
VARIABLE LASER CUT TAPE



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Plenum: Fluoropolymer
- Non-Plenum: Thermoplastic

#### Color Code

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

#### Separator

- Cross-Web

#### ANEXT Protection:

- Mosaic™ Variable Laser Cut Tape

#### Jacket

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

### PHYSICAL DATA

	CMP (Plenum)	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.250	0.255
Nominal Cable Weight (lbs/1000 ft)	32	32
Minimum Bend Radius (in)	1	1.06
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +105	-20 to +75

### PART NUMBERS

Standard packaging: 1000' Pull-Pac or spool. Spool-Pac by special order.

Jacket Color	CMP (Plenum)		CMR (Non-Plenum)	
	Spool	Pull-Pac®	Spool	Pull-Pac®
Blue	7141849	7141839	7143849	7143839
White	7141850	7141840	7143850	7143840
Gray	7141851	7141841	7143851	7143841
Yellow	7141852	7141842	7143852	7143842
Green	7141853	7141843	7143853	7143843
Red	7141854	7141844	7143854	7143844
Purple	7141855	7141845	7143855	7143845
Orange	7141856	7141846	7143856	7143846
Pink	7141857	7141847	7143857	7143847
Black	7141858	7141848	7143858	7143848

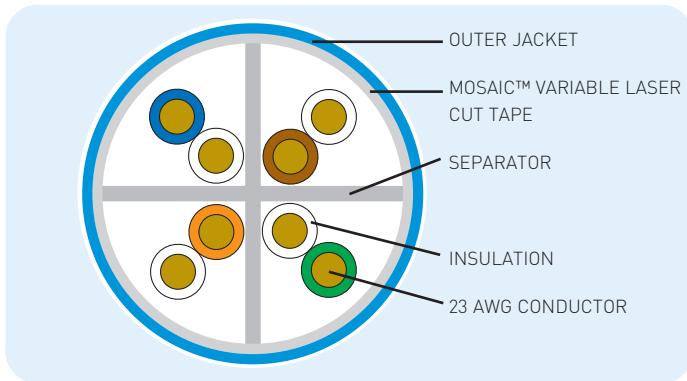
Non-stock items may be subject to minimum order quantities.

**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR*	ACR*	Insertion Loss	PSNEXT	NEXT	PSACRF	ACRF	Return Loss	TCL	PSANEXT		PSAACRF				
	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	
	General Cable Guaranteed	General Cable Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	General Cable Typical	General Cable Typical	TIA Guaranteed	General Cable Guaranteed	General Cable Typical
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	75.0	79.0	67.0	75.0	79.0	
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	75.0	79.0	66.2	74.4	78.2	
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	75.0	79.0	58.2	66.2	70.2	
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	75.0	79.0	54.1	62.1	66.1	
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	75.0	79.0	52.2	60.2	64.2	
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	75.0	79.0	48.3	56.3	60.3	
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	73.6	77.6	42.3	50.3	54.3	
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	70.5	74.5	38.2	46.2	50.2	
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	67.9	71.9	34.7	42.7	46.7	
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	66.0	70.0	32.2	40.2	44.2	
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	64.5	68.5	30.2	38.2	42.2	
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	63.3	67.3	28.7	36.7	40.7	
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	61.5	65.5	26.2	34.2	38.2	
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	60.0	64.0	24.2	32.2	36.2	

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
 \*PSACR & ACR not specified in ANSI/TIA 568.2-D

**CROSS-SECTION**



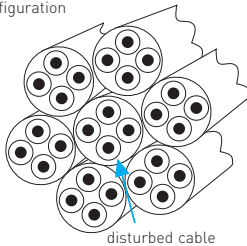
**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalanced</b> Individual Pair %	4.00	< 1
<b>Delay Skew (Max)</b> ns/100 m	45	
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f):	Ohms 100 ± 15	

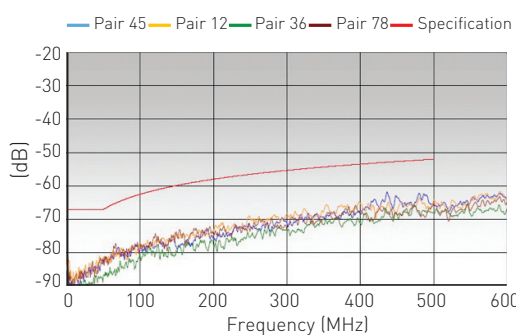
**4 PAIR CABLES:**

Bundles of 7 Test Results

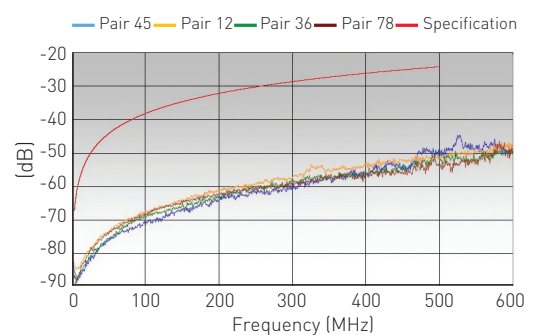
Six-around-one configuration



**PSANEXT**



**PSAACRF**



Data subject to change without notice.

# GenSPEED® 10 MTP™ with 17 FREE® Category 6A Cable

## An Unshielded 6A Cable with Superior Protection Against Alien Crosstalk



### Features and Benefits

- Lower smoke, less toxic, and halogen free
- More environmentally friendly
- Increased flexibility for easy installation
- 10 MTP™ unshielded-twisted pair (UTP) design provides industry-leading protection from external cable noise sources, also known as alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF
- Mosaic Crossblock™ is a thin metallic tape of segmented sections separated by an insulating layer. Since there is no metal-to-metal contact, there is no path for current to flow longitudinally, and thus, no need for grounding
- The Internal Separator optimizes internal pair geometry to yield superior electrical performance and maintain flexibility. This unique cross-web stabilizes each pair to create a smaller, round cable profile
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666)
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-1
- IEC 61034-2

Featuring  
**mosaic**  
CROSSBLOCK™



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Non-Plenum: Polyolefin

#### Color Code

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

#### Separator

- Cross-web

#### Jacket

- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.318
Nominal Cable Weight (lbs/1000 ft)	47
Minimum Bend Radius (in)	1.25
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +75

### PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool
	CMR (Non-Plenum)
Blue	<b>7133849-17F</b>
White	<b>7133850-17F</b>
Yellow	<b>7133852-17F</b>
Gray	<b>7133851-17F</b>
Red	<b>7133854-17F</b>
Orange	<b>7133856-17F</b>
Green	<b>7133853-17F</b>
Black	<b>7133858-17F</b>
Pink	<b>7133857-17F</b>
Purple	<b>7133855-17F</b>

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

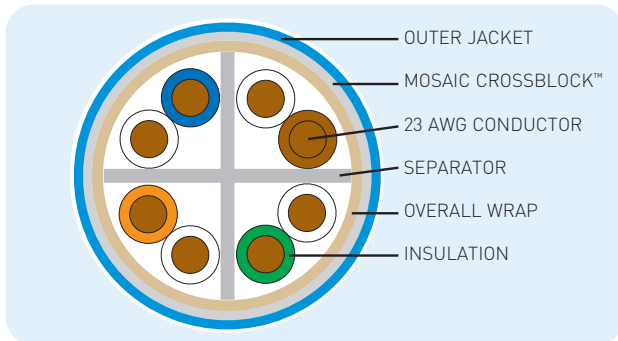
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**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR* (min)		Insertion Loss (min)	PSNEXT (min)			ACRF (min)		Return Loss (min)	TCL (min)	PSANEXT (min)			PSAACRF (min)		
	General Cable Guaranteed	General Cable Guaranteed		TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed			TIA Guaranteed	General Cable Guaranteed	General Cable Typical	TIA Guaranteed	General Cable Guaranteed	General Cable Typical
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	73.0	79.0	67.0	73.0	79.0	
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	73.0	79.0	66.2	72.2	78.2	
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	73.0	79.0	58.2	64.2	70.2	
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	73.0	79.0	54.1	60.1	66.1	
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	73.0	79.0	52.2	58.2	64.2	
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	73.0	79.0	48.3	54.3	60.3	
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	71.6	77.6	42.3	48.3	54.3	
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	68.5	74.5	38.2	44.2	50.2	
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	65.9	71.9	34.7	40.7	46.7	
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	64.0	70.0	32.2	38.2	44.2	
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	62.5	68.5	30.2	36.2	42.2	
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	61.3	67.3	28.7	34.7	40.7	
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	59.5	65.5	26.2	32.2	38.2	
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	58.0	64.0	24.2	30.2	36.2	

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
 \*PSACR & ACR not specified in ANSI/TIA 568.2-D

**GenSPEED® 10 MTP™ with 17 FREE® CATEGORY 6A CROSS-SECTION**



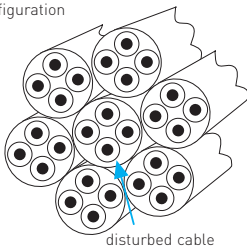
**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalanced</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	35
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-500 MHz	Ohms 100 ± 15	

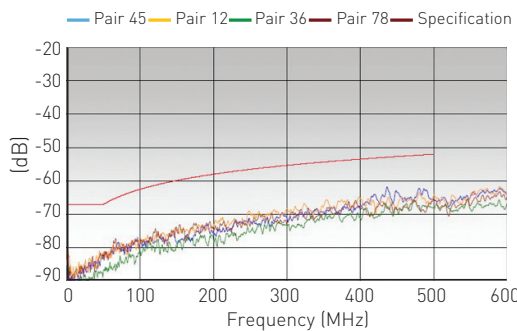
**4 PAIR CABLES:**

Bundles of 7 Test Results

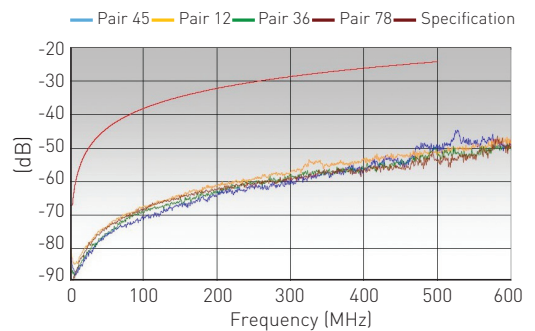
Six-around-one configuration



**PSANEXT**



**PSAACRF**



**Going Green with General Cable**

General Cable has accelerated its environmental commitment, addressing its green alternative approach by identifying greener opportunities and promoting green cabling solutions wherever feasible. This includes promoting our existing green products, partnering with key customers in their green endeavors, identifying and providing resources for green product gaps, becoming a member of the U.S. Green Building Council (USGBC) and participating in collaborative ventures such as the Green Suppliers Network (GSN).



# GenSPEED® 10 UTP Category 6A Cable

## Reliable Performance in the Industry's Smallest Full Channel 6A Cable

### Features and Benefits

- Innovative design provides guaranteed performance using the industry's smallest 6A cable.
- Smaller cable diameter allows for greater cable density, reducing cable management costs.
- Simplified design and improved bend radius make it easier to strip, terminate and route, reducing installation time and expense.
- CMP 90°C jacket rating provides consistent performance in a wide range of operating environments.
- UL Listed CMP-LP 0.6A with certified performance for high power PoE applications.
- UL Listed CMR-LP 0.5A with certified performance for high power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- Innovative cross-web separator with patented design provides superior internal electrical characteristics by locking the pairs into a systematic orientation within the cable.
- Streamlined design allows for 36 reels per pallet, improving distribution and warehousing efficiency.
- TRU-MARK® print legend contains footage markings from 1000' to 0'.
- All GenSPEED products are Made in the U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- NEC/CEC Type CMR (UL 1666) for Riser
- UL Listed CMP-LP 0.6A
- UL Listed CMR-LP 0.5A
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E<sub>x</sub>)



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Plenum: Fluoropolymer
- Non-Plenum: Thermoplastic

#### Color Code

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

#### Separator

- Engineered Cross-Web

#### Jacket

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

#### ANEXT Protection











- Encapsulated Isolation Wrap

### PHYSICAL DATA

	CMP (Plenum)	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.250	0.260
Nominal Cable Weight (lbs/1000 ft)	32	32
Minimum Bend Radius (in)	1	1.06
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +90	-20 to +75

### PART NUMBERS

Standard packaging: 1000' Pull-Pac or spool. Spool-Pac by special order.

Jacket Color	CMP (Plenum)		CMR (Non-Plenum)	
	Spool	Pull-Pac®	Spool	Pull-Pac®
 Blue	7141819	7141800	7143819	7143800
 White	7141820	7141801	7143820	7143801
 Yellow	7141822	7141802	7143822	7143802
 Gray	7141821	7141803	7143821	7143803
 Red	7141824	7141804	7143824	7143804
 Orange	7141826	7141805	7143826	7143805
 Green	7141823	7141806	7143823	7143806
 Black	7141828	7141807	7143828	7143807
 Pink	7141827	7141808	7143827	7143808
 Purple	7141825	7141809	7143825	7143809

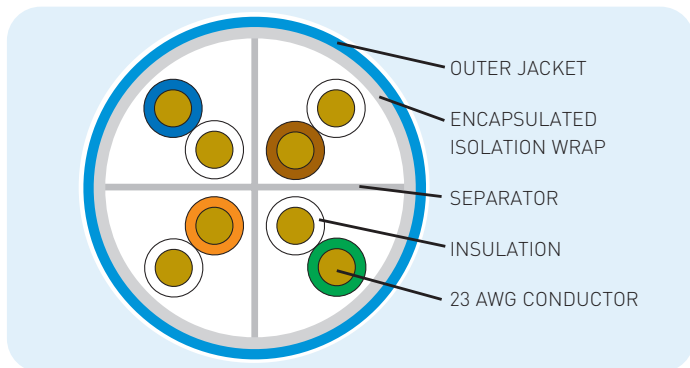
Non-stock items may be subject to minimum order quantities.

**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR** (min)	ACR** (min)	Insertion Loss (min)	PSNEXT (min)	NEXT (min)	PSACRF (min)	ACRF (min)	Return Loss (min)	TCL (min)	PSANEXT (min)		PSAACRF (min)	
	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA	GC Guaranteed	TIA	GC Guaranteed
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	69.0	67.0	69.0
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	69.0	66.2	68.2
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	69.0	58.2	60.2
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	69.0	54.1	56.1
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	69.0	52.2	54.2
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	69.0	48.3	50.3
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	67.6	42.3	44.3
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	64.5	38.2	40.2
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	61.9	34.7	36.7
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	60.0	32.2	34.2
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	58.5	30.2	32.2
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	57.3	28.7	30.7
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	55.5	26.2	28.2
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	54.0	24.2	26.2
600*	—	—	50.1*	30.6*	32.6*	9.2*	12.2*	14.7*	22.2*	—	50.8*	—	22.6*
700*	—	—	54.5*	29.6*	31.6*	7.9*	10.9*	14.2*	21.5*	—	49.8*	—	21.3*
750*	—	—	56.7*	29.2*	31.2*	7.3*	10.3*	14.0*	21.2*	—	49.4*	—	20.7*

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
 \*Values are for reference only.  
 \*\*PSACR & ACR not specified in ANSI/TIA 568.2-D

**CROSS-SECTION**



**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45ns/100m	
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-500 MHz	Ohms 100 ± 15	

Data subject to change without notice.

# GenSPEED® 10,000 Category 6A U/FTP (STP) Cable

## An Individually Shielded 10 Gig Option for Peace of Mind



### Features and Benefits

- Individually pair shielded design allows for maximum pair separation, increasing key electrical performance parameters and providing EMI protection
- Typical positive PSACR beyond 500 MHz for increased available bandwidth
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 1000 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)

### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Non-Plenum: Foamed HDPE
- Plenum: Foamed Fluoropolymer

#### Color Code

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

#### Shield

- Each pair is individually shielded with an aluminum foil

#### Drain Wire

- 24 AWG stranded (7/32) solid tinned copper

#### Jacket

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

### PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.305	0.295
Nominal Cable Weight (lbs/1000 ft)	43	47
Minimum Bend Radius (in)	2.44	2.36
Maximum Pulling Force (lbs)	32	32
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +90

### ELECTRICAL PERFORMANCE

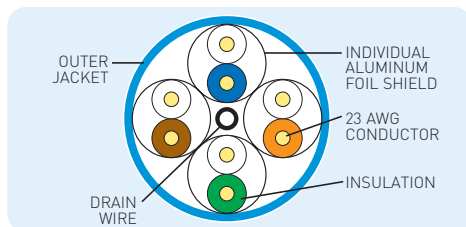
Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)	PSANEXT (min)	PSAACRF (min)
1	2.1	74.3	20.0	77.0	77.0
4	3.8	74.3	23.0	77.0	76.2
10	5.9	74.3	25.0	77.0	68.2
16	7.5	74.2	25.0	77.0	64.1
20	8.4	72.8	25.0	77.0	62.2
31.25	10.5	69.9	23.6	77.0	58.3
62.5	15.0	65.4	21.5	75.6	52.3
100	19.1	62.3	20.1	72.5	48.2
200	27.6	57.8	18.0	68.0	42.2
250	31.1	56.3	17.3	66.5	40.2
300	34.3	55.1	16.8	65.3	38.7
350	37.2	54.1	16.3	64.3	37.3
400	40.1	53.3	15.9	63.5	36.2
500	45.3	51.8	15.2	62.0	34.2
600	50.1	50.6	14.7	60.8	32.6

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

### ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	20
<b>Nom. Velocity of Propagation</b> % Speed of Light	CMR: 78 CMR: 75	
<b>Characteristic Impedance</b> Frequency (f): 1-600 MHz	Ohms 100 ± 15	

### CROSS-SECTION



### PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool		Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)		CMR (Non-Plenum)	CMP (Plenum)
Blue	<b>7133786</b>	<b>7131786</b>	Red	<b>7133790</b>	<b>7131790</b>
White	<b>7133787</b>	<b>7131787</b>	Orange	<b>7133791</b>	<b>7131791</b>
Yellow	<b>7133788</b>	<b>7131788</b>	Green	<b>7133792</b>	<b>7131792</b>
Gray	<b>7133789</b>	<b>7131789</b>	Purple	<b>7133730</b>	<b>7133730</b>

Note: Non-stock items may be subject to minimum order quantities. Other colors available.

Data subject to change without notice.



# GenSPEED® 10 Category 6A F/UTP (ScTP) Cable

## An Enhanced Overall Shielded Cable



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Non-Plenum: Thermoplastic
- Plenum: Fluoropolymer

#### Color Code

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

#### Separator

- Cross-Web

#### Core Tape

- Non-Plenum: Mylar
- Plenum: Mylar

#### Drain Wire

- 24 AWG solid tinned copper

#### Shield

- Polyester-backed aluminum foil (aluminum side in)

#### Jacket

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

### PHYSICAL DATA

	CMP (Plenum)	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.260	0.265
Nominal Cable Weight (lbs/1000 ft)	33	40
Minimum Bend Radius (in)	2.5	2.5
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +105	-20 to +75

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (min)	NEXT (min)	Return Loss (min)	PSANEXT (min)			PSAACRF (min)		
				TIA Guaranteed	General Cable Guaranteed	General Cable Typical	TIA Guaranteed	General Cable Guaranteed	General Cable Typical
1	2.1	74.3	20.0	67.0	73.0	85.0	67.0	73.0	85.0
4	3.8	65.3	23.0	67.0	73.0	85.0	66.2	72.2	84.2
10	5.9	59.3	25.0	67.0	73.0	85.0	58.2	64.2	76.2
16	7.5	56.2	25.0	67.0	73.0	85.0	54.1	60.1	72.1
20	8.4	54.8	25.0	67.0	73.0	85.0	52.2	58.2	70.2
31.25	10.5	51.9	23.6	67.0	73.0	85.0	48.3	54.3	66.3
62.5	15.0	47.4	21.5	65.6	71.6	83.6	42.3	48.3	60.3
100	19.1	44.3	20.1	62.5	68.5	80.5	38.2	44.2	56.2
150	23.7	41.7	18.9	59.9	65.9	77.9	34.7	40.7	52.7
200	27.6	39.8	18.0	58.0	64.0	76.0	32.2	38.2	50.2
250	31.1	38.3	17.3	56.5	62.5	74.5	30.2	36.2	48.2
300	34.3	37.1	16.8	55.3	61.3	73.3	28.7	34.7	46.7
400	40.1	35.3	15.9	53.5	59.5	71.5	26.2	32.2	44.2
500	45.3	33.8	15.2	52.0	58.0	70.0	24.2	30.2	42.2

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool		Jacket Color	Spool	
	CMP (Plenum)	CMR (Non- Plenum)		CMP (Plenum)	CMR (Non- Plenum)
Blue	7141586	7143586	Red	7141590	7143590
White	7141587	7143587	Orange	7141591	7143591
Yellow	7141588	7143588	Green	7141592	7143592
Gray	7141589	7143589	Purple	7141593	7143593

Note: Non-stock items may be subject to minimum order quantities. Other colors available.

Data subject to change without notice.



### Features and Benefits

- An overall shielded or foiled-twisted pair (F/UTP) cable, requiring grounding and providing industry-leading protection from external cable noise sources, also known as alien crosstalk (PSANEXT and PSAACRF)
- CMP 105C jacket rating provides consistent performance in a wide range of operating environments.
- UL Listed CMP-LP 0.7A with certified performance for high power PoE applications
- The internal separator optimizes internal pair geometry to yield superior electrical performance and maintain flexibility. This unique cross-web stabilizes each pair to create a smaller, round cable profile
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE++
- ANSI/ TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

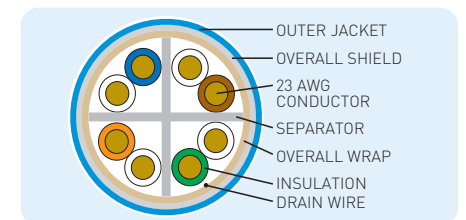
- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum\*
- UL Listed CMP-LP (0.7A) for Plenum\*\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class Ea)

\*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.  
\*\*0.7A is the ampacity rating of the cable, which equates to 140 watts using 50 volts over four pairs.

### ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-500 MHz	Ohms 100 ± 15	

### CROSS-SECTION



# GenSPEED® 10 Category 6A Interlock Armored Cable

## Standards-Compliant

### Features and Benefits

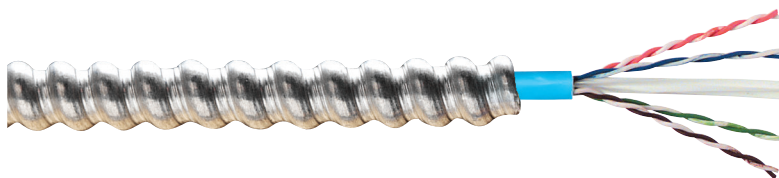
- Interlock armor provides outstanding mechanical protection
- Flexible and easy to install
- Eliminates the need for conduit, reducing installation time
- Single-pull installation
- Application assurance warranty
- Made in U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE++
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Indoor applications only

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E<sub>A</sub>)



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- 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

#### Separator

- Cross-web

#### Jacket

- Flame-Retardant PVC

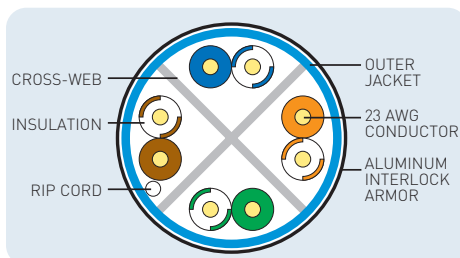
### PHYSICAL DATA

	CMP (Plenum)
	1 Cable
Nominal Cable Diameter (in)	0.450
Nominal Cable Weight (lbs/1000 ft)	86.4
Minimum Bend Radius (in)	5.40
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +90

### ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.20
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew (Max)</b> ns/100 m	45	
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-250 MHz	Ohms	100 ± 15

### CROSS-SECTION



### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)	PSANEXT (min)	PSAACRF (min)
1	2.1	74.3	20.0	67.0	67.0
4	3.8	65.3	23.0	67.0	66.2
10	5.9	59.3	25.0	67.0	58.2
16	7.5	56.2	25.0	67.0	54.1
20	8.4	54.8	25.0	67.0	52.2
31.25	10.5	51.9	23.6	67.0	48.3
62.5	15.0	47.4	21.5	65.6	42.3
100	19.1	44.3	20.1	62.5	38.2
150	23.7	41.7	18.9	59.9	34.7
200	27.6	39.8	18.0	58.0	32.2
250	31.1	38.3	17.3	56.5	30.2
350	37.2	36.1	16.3	55.3	28.7
400	40.1	35.3	15.9	53.5	26.2
500	45.3	33.8	15.2	52.0	24.2

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 568.2-D

### PART NUMBERS

Color	Part Number	Reel
Blue	9141300	1000' reel

Data subject to change without notice.

# GenSPEED® Category 6A Outside Plant Cable

## Standards-Compliant



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- High Density Polyethylene

#### 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

#### Flooding Compound

- Waterproof gel

#### Jacket

- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

Nominal Cable Diameter (in)	0.365
Nominal Cable Weight (lbs/1000 ft)	47.3
Minimum Bend Radius (in)	1.5
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	-30 to +60
Operation:	-45 to +80

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (min)	NEXT (min)	Return Loss (min)	PSANEXT (min)	PSAACRF (min)
	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed	TIA Guaranteed
1	2.1	74.3	20.0	67.0	67.0
4	3.8	65.3	23.0	67.0	66.2
10	5.9	59.3	25.0	67.0	58.2
16	7.5	56.2	25.0	67.0	54.1
20	8.4	54.8	25.0	67.0	52.2
31.25	10.5	51.9	23.6	67.0	48.3
62.5	15.0	47.4	21.5	65.6	42.3
100	19.1	44.3	20.1	62.5	38.2
150	23.7	41.7	18.9	59.9	34.7
200	27.6	39.8	18.0	58.0	32.2
250	31.1	38.3	17.3	56.5	30.2
300	34.3	37.1	16.8	55.3	28.7
400	40.1	35.3	15.9	53.5	26.2
500	45.3	33.8	15.2	52.0	24.2

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBER

Standard packaging: 1000' Reel

Jacket Color	Reel
Black	8136100

Note: Non-stock items may be subject to minimum order quantities. Other colors available.

### Features and Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Gel-filled construction to prevent moisture migration in underground and wet applications
- Wide temperature range for extreme weather environments
- TRU-Mark® print legend contains footage markings from 1000' to 0'

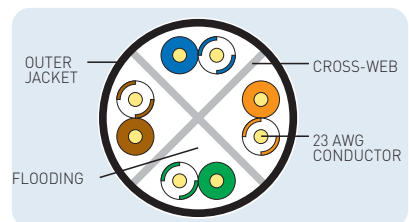
### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Duct and conduit installations

### Standard Compliances

- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ANSI/NEMA WC 66
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirement

### CROSS-SECTION



### ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.00
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	70
Characteristic Impedance Frequency (f): 1-500 MHz	Ohms 100 ± 15

Data subject to change without notice.





# GenSPEED® 10 UTP Indoor/Outdoor Plenum Category 6A Cable

## Features

- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Made in U.S.A.

## Electrical Characteristics

- Outer jacket ensures electrical performance during long term water submersion
- Dry core construction for cleaner termination
- UL Listed CMP-LP 0.8A with certified performance for high-power PoE applications

## Applications

- Intended for installation in below-grade conduit, duct, and other wet environments
- Cable jacket must remain unabraded to avoid water ingress. Water must not be allowed to ingress into the cable ends
- IEEE 802.3: 10G BASE-T, 1000 BASE-T
- 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

## Standard Compliances

- NEC/CEC Type CMP (NFPA 262) for plenum
- UL Listed SUN RES (720 hour) Rated to be installed permanently outdoor in direct sunlight
- ANSI/TIA 568.2-D
- RoHS Compliant Directive 2011/65/EU
- UL 444
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)
- Wet Location rated per UL 83
- UL Listed CMP-LP 0.8A - equivalent to 160 watts using 50 volts over four pairs



## CONSTRUCTION

### Conductors

- 23 AWG solid bare annealed copper

### Insulation

- Fluoropolymer

### Color Code

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

### Separator

- Cross-web

### Core Wrap

- Polyester encapsulated isolation core wrap

### Jacket

- Fluoropolymer



## PHYSICAL DATA

Nominal Cable Diameter (in)	0.260
Nominal Cable Weight (lbs/1000 ft)	33
Minimum Bend Radius (in)	2.1
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +125

## PART NUMBERS

Standard packaging: 1000' Spool

### Jacket Color

 Black	<b>7141007</b>
 White	<b>7141001</b>

Note: Non-stock items may be subject to minimum order quantities. Other colors available.

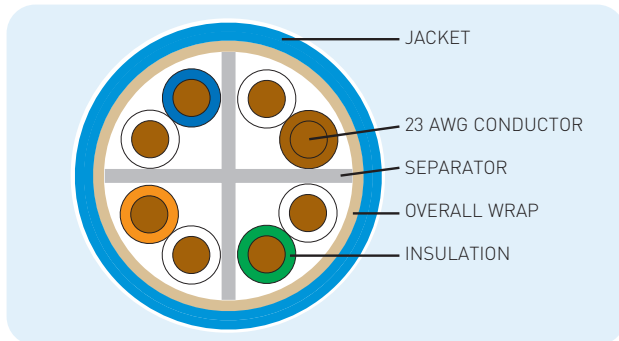
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**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR** (min)	ACR** (min)	Insertion Loss (min)	PSNEXT (min)	NEXT (min)	PSACRF (min)	ACRF (min)	Return Loss (min)	TCL (min)	PSANEXT (min)		PSAACRF (min)		
	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA / GC Guaranteed	TIA Guaranteed	GC Guaranteed	TIA Guaranteed	GC Guaranteed
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	69.0	67.0	69.0	
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	69.0	66.2	68.2	
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	69.0	58.2	60.2	
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	69.0	54.1	56.1	
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	69.0	52.2	54.2	
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	69.0	48.3	50.3	
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	67.6	42.3	44.3	
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	64.5	38.2	40.2	
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	61.9	34.7	36.7	
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	60.0	32.2	34.2	
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	58.5	30.2	32.2	
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	57.3	28.7	30.7	
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	55.5	26.2	28.2	
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	54.0	24.2	26.2	
600*	—	—	50.1*	30.6*	32.6*	9.2*	12.2*	14.7*	22.2*	—	50.8*	—	22.6*	
700*	—	—	54.5*	29.6*	31.6*	7.9*	10.9*	14.2*	21.5*	—	49.8*	—	21.3*	
750*	—	—	56.7*	29.2*	31.2*	7.3*	10.3*	14.0*	21.2*	—	49.4*	—	20.7*	

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
 \*Values are for reference only.  
 \*\*PSACR & ACR not specified in ANSI/TIA 568.2-D

**TYPICAL GenSPEED® 10 CATEGORY 6A  
INDOOR/OUTDOOR CROSS-SECTION**



**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.00
<b>DC Resistance Unbalanced</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-500 MHz	Ohms 100 ± 15	

Data subject to change without notice.

# GenSPEED® Category 6 Cables

## 2

General Cable offers a complete line-up of Category 6 cables to meet all your networking needs. This “standard, enhanced, premium” strategy allows you to choose a cable that meets your bandwidth needs for each application you deploy. When you need a reliable cable with warranty assurance, choose from the series of GenSPEED® Category 6 Cables.

GenSPEED 6 is a standard-compliant Category 6 cable that features a unique tape design engineered for consistent electrical performance. Its TRU-Mark® print legend contains footage markings from 1000' to 0', making usage easier to track. Also ask your General Cable representative about our 17 FREE™ line of riser-rated GenSPEED 6 cables, which may qualify for LEED credit from the U.S. Green Building Council.

General Cable's GenSPEED 6000 has been enhanced to provide the market with a cost-effective, high-bandwidth and high-performance cabling solution for more robust and complex applications at Gigabit speed and full duplex transmissions. The GenSPEED 6000 solution provides a cable system infrastructure with assurance for advanced applications demanding more bandwidth.

Featuring a revolutionary design, GenSPEED 6500 Premium provides the industry with one of the best-performing Category 6 cables in its class. GenSPEED 6500 Premium offers high power-sum attenuation-to-crosstalk ratio (PSACR) and low attenuation performance for better signal strength and power.

All GenSPEED Category 6 cables are third-party verified for guaranteed performance and conform to ANSI/TIA/EIA 568.2-D standards. GenSPEED 6 and 6000 Enhanced are offered in a variety of colors and can be shipped in General Cable's easy-to-use Pull-Pac® or Spool-Pac® cartons or on a spool. GenSPEED 6500 Premium is available in a Spool-Pac or on a spool.

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# GenSPEED® Category 6 Quick Reference Guide

JACKET COLOR	PACKAGE	PREMIUM		ENHANCED		STANDARD	
		Category 6 GenSPEED® 6500 Premium (p. 19)		Category 6 GenSPEED® 6000 Enhanced (p. 21)		Category 6 GenSPEED® 6 (p. 23)	
		CMR	CMP	CMR	CMP	CMR	CMP
<b>Blue</b>							
	Pull-Pac®			7133900	7131900	7133800	7131800
	Spool-Pac®	7133930	7131930	7133940	7131940	7133840	7131840
	Spool	7133970	7131970	7133960	7131960	7133860	7131860
<b>White</b>							
	Pull-Pac®			7133901	7131901	7133801	7131801
	Spool-Pac®	7133931	7131931	7133941	7131941	7133841	7131841
	Spool	7133971	7131971	7133961	7131961	7133861	7131861
<b>Yellow</b>							
	Pull-Pac®			7133902	7131902	7133802	7131802
	Spool-Pac®	7133932	7131932	7133942	7131942	7133842	7131842
	Spool	7133972	7131972	7133962	7131962	7133862	7131862
<b>Gray</b>							
	Pull-Pac®			7133903	7131903	7133803	7131803
	Spool-Pac®	7133933	7131933	7133943	7131943	7133843	7131843
	Spool	7133973	7131973	7133963	7131963	7133863	7131863
<b>Red</b>							
	Pull-Pac®			7133904	7131904	7133804	7131804
	Spool-Pac®	7133934	7131934	7133944	7131944	7133844	7131844
	Spool	7133974	7131974	7133964	7131964	7133864	7131864
<b>Orange</b>							
	Pull-Pac®			7133905	7131905	7133805	7131805
	Spool-Pac®	7133935	7131935	7133945	7131945	7133845	7131845
	Spool	7133975	7131975	7133965	7131965	7133865	7131865
<b>Green</b>							
	Pull-Pac®			7133906	7131906	7133806	7131806
	Spool-Pac®	7133936	7131936	7133946	7131946	7133846	7131846
	Spool	7133976	7131976	7133966	7131966	7133866	7131866
<b>Black</b>							
	Pull-Pac®			7133907	7131907	7133807	7131807
	Spool-Pac®	7133937	7131937	7133947	7131947	7133847	7131847
	Spool	7133977	7131977	7133967	7131967	7133867	7131867
<b>Pink</b>							
	Pull-Pac®			7133908	7131908	7133808	7131808
	Spool-Pac®	7133938	7131938	7133948	7131948	7133848	7131848
	Spool	7133978	7131978	7133968	7131968	7133868	7131868
<b>Purple</b>							
	Pull-Pac®			7133909	7131909	7133809	7131809
	Spool-Pac®	7133939	7131939	7133959	7131959	7133859	7131859
	Spool	7133979	7131979	7133969	7131969	7133869	7131869

Note: Non-stock items may be subject to minimum order quantities.  
 \* Bulk reels are available in 2000' (2R), 2500' (2.5R), and 3000' (3R) lengths.



# GenSPEED® 6500 Premium Category 6 Cable

## Signal Strength and Power

### Features and Benefits

- Designed and engineered with precision balance to offer ultimate headroom
- High-end optimized performance to support the most bandwidth-intense applications
- New and improved separator construction allowing for more pair separation
- Performance guaranteed to 350 MHz
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures and for high-wattage applications
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum\*
- UL Listed CMP-LP (0.6A) for Plenum\*\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

\*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.

\*\*0.6A is the ampacity rating of the cable, which equates to 120 watts using 50 volts over four pairs.



### 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)	0.260	0.255
Nominal Cable Weight (lbs/1000 ft)	32	31
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	50	50
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +90

### PART NUMBERS

Standard packaging: 1000' Spool-Pac®

Jacket Color	Spool-Pac®		Spool	
	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
 Blue	<b>7133930</b>	<b>7131930</b>	<b>7133970</b>	<b>7131970</b>
 White	<b>7133931</b>	<b>7131931</b>	<b>7133971</b>	<b>7131971</b>
 Yellow	<b>7133932</b>	<b>7131932</b>	<b>7133972</b>	<b>7131972</b>
 Gray	<b>7133933</b>	<b>7131933</b>	<b>7133973</b>	<b>7131973</b>
 Red	<b>7133934</b>	<b>7131934</b>	<b>7133974</b>	<b>7131974</b>
 Orange	<b>7133935</b>	<b>7131935</b>	<b>7133975</b>	<b>7131975</b>
 Green	<b>7133936</b>	<b>7131936</b>	<b>7133976</b>	<b>7131976</b>
 Black	<b>7133937</b>	<b>7131937</b>	<b>7133977</b>	<b>7131977</b>
 Pink	<b>7133938</b>	<b>7131938</b>	<b>7133978</b>	<b>7131978</b>
 Purple	<b>7133939</b>	<b>7131939</b>	<b>7133979</b>	<b>7131979</b>

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.

**ELECTRICAL PERFORMANCE**

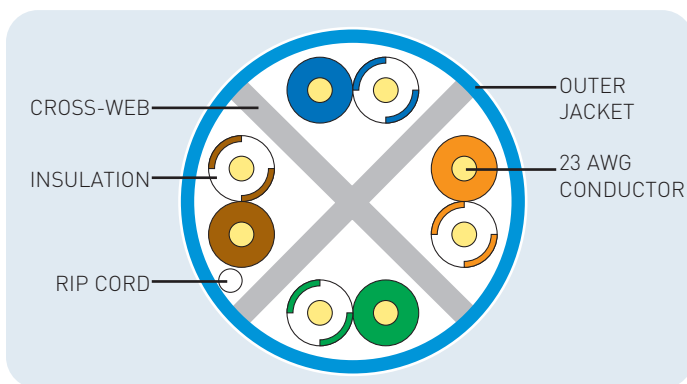
Frequency MHz	PSACR* (min)		ACR* (min)		Insertion Loss (max)		PSNEXT (min)		NEXT (min)	
	Guaranteed		Guaranteed		TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed
1	77.4		79.4		2.0	1.9	72.3	79.3	74.3	81.3
4	66.8		68.8		3.8	3.5	63.3	70.3	65.3	72.3
10	58.8		60.8		6.0	5.5	57.3	64.3	59.3	66.3
16	54.2		56.2		7.6	7.0	54.2	61.2	56.2	63.2
20	51.9		53.9		8.5	7.8	52.8	59.8	54.8	61.8
31.25	47.0		49.0		10.7	9.9	49.9	56.9	51.9	58.9
62.5	38.0		40.0		15.4	14.3	45.4	52.4	47.4	54.4
100	30.8		32.8		19.8	18.5	42.3	49.3	44.3	51.3
200	17.5		19.5		29.0	27.2	37.8	44.8	39.8	46.8
250	12.4		14.4		32.8	30.9	36.3	43.3	38.3	45.3
350	3.5		5.5		—	37.6	—	41.1	—	43.1
500	—		—		—	46.5	—	38.8	—	40.8

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 568.2-D

Frequency MHz	PSACRF (min)		ACRF (min)		Return Loss (min)		TCL (min)		ELTCTL (min)	
	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed
1	64.8	70.8	67.8	73.8	20.0	20.0	40.0	40.0	35.0	35.0
4	52.8	58.8	55.8	61.8	23.0	23.0	40.0	40.0	23.0	23.0
10	44.8	50.8	47.8	53.8	25.0	25.0	40.0	40.0	15.0	15.0
16	40.7	46.7	43.7	49.7	25.0	25.0	38.0	38.0	10.9	10.9
20	38.8	44.8	41.8	47.8	25.0	25.0	37.0	37.0	9.0	9.0
31.25	34.9	40.9	37.9	43.9	23.6	25.0	35.1	35.1	—	5.1
62.5	28.9	34.9	31.9	37.9	21.5	23.5	32.0	32.0	—	5.0
100	24.8	30.8	27.8	33.8	20.1	22.1	30.0	30.0	—	5.0
200	18.8	24.8	21.8	27.8	18.0	20.0	27.0	27.0	—	5.0
250	16.8	23.8	19.8	26.8	17.3	19.3	26.0	26.0	—	5.0
350	—	19.9	—	22.9	—	18.3	—	—	—	—
500	—	16.8	—	19.8	—	17.2	—	—	—	—

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

**GenSPEED® 6500 PREMIUM CATEGORY 6 CROSS-SECTION**



**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m [328 ft] @ 20°C	9.38	6.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	35
<b>Nom. Velocity of Propagation</b> % Speed of Light	CMP: 72 CMR: 70	
<b>Characteristic Impedance</b> Frequency (f): 1-500 MHz	Ohms 100 ± 15	

Data subject to change without notice.

# GenSPEED® 6000 Enhanced Category 6 Cable

## Optimally Balanced Enhanced Performance

### Features and Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Performance guaranteed to 350 MHz
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.5A) for Plenum\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

\*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.



### 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)	0.240	0.230
Nominal Cable Weight (lbs/1000 ft)	28	28
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 +90

### 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.

**ELECTRICAL PERFORMANCE**

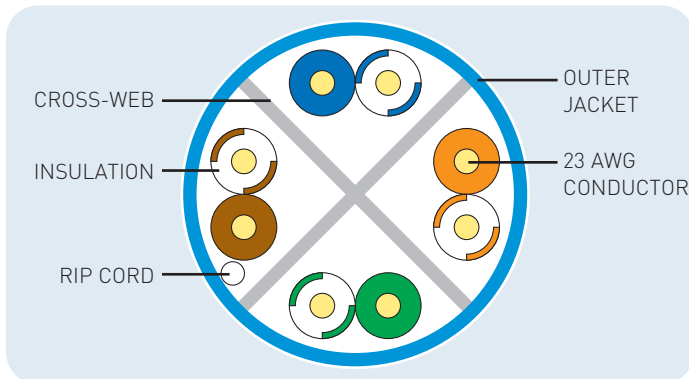
Frequency MHz	PSACR* (min)		ACR* (min)		Insertion Loss (max)		PSNEXT (min)		NEXT (min)	
	Guaranteed	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed
1	75.3	77.3	2.0	2.0	72.3	77.3	74.3	79.3		
4	64.5	66.5	3.8	3.8	63.3	68.3	65.3	70.3		
10	56.4	58.4	6.0	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 568.2-D

Frequency MHz	PSACRF (min)		ACRF (min)		Return Loss (min)		TCL (min)		ELTCTL (min)	
	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	Guaranteed	TIA 568.2-D	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**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m [328 ft.] @ 20°C	9.38	7.20
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	CMP: 30 CMR: 40
<b>Nom. Velocity of Propagation</b> % Speed of Light		CMP: 70 CMR: 68
<b>Characteristic Impedance</b> Frequency (f):		Ohms 100 ± 15
	1-500 MHz	

Data subject to change without notice.



# GenSPEED® 6 Category 6 Cable (23 AWG)

## Standards-Compliant Extended Frequency

### Features and Benefits

- Unique separator design engineered for consistent electrical performance
- Performance guaranteed to 350 MHz
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures
- 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.5A) for Plenum\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

\*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.



### 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

- Divider

#### 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	0.205
Nominal Cable Weight (lbs/1000 ft)	24	25
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 +90

### 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	7133800	7131800	7133840	7131840	7133860	7131860
White	7133801	7131801	7133841	7131841	7133861	7131861
Yellow	7133802	7131802	7133842	7131842	7133862	7131862
Gray	7133803	7131803	7133843	7131843	7133863	7131863
Red	7133804	7131804	7133844	7131844	7133864	7131864
Orange	7133805	7131805	7133845	7131845	7133865	7131865
Green	7133806	7131806	7133846	7131846	7133866	7131866
Black	7133807	7131807	7133847	7131847	7133867	7131867
Pink	7133808	7131808	7133848	7131848	7133868	7131868
Purple	7133809	7131809	7133859	7131859	7133869	7131869

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.

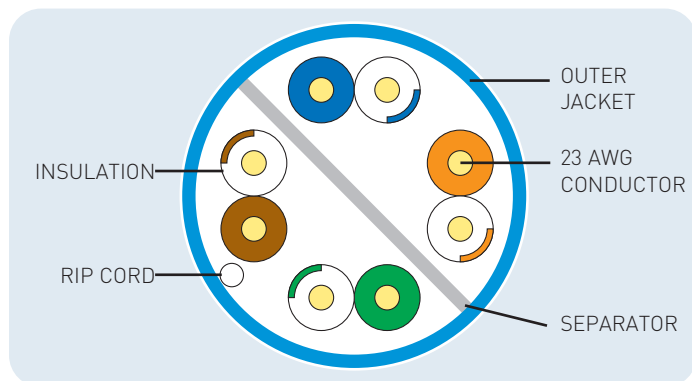
Non-stock items may be subject to minimum order quantities.

**ELECTRICAL PERFORMANCE**

Frequency MHz	PSACR* (min)	ACR* (min)	Insertion Loss (max)	PSNEXT (min)	NEXT (min)	PSACRF (min)	ACRF (min)	Return Loss (min)	TCL (min)	ELTCTL (min)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0	40.0	35.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0	40.0	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0	40.0	15.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0	38.0	10.9
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0	37.0	9.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6	35.1	—
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5	32.0	—
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1	30.0	—
150	14.9	16.9	24.7	39.7	41.7	21.3	24.3	18.9	28.2	—
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0	27.0	—
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3	26.0	—
350	—	—	39.8	34.1	36.1	13.9	16.9	16.3	—	—
400	—	—	43.0	33.3	35.3	12.8	15.8	15.9	—	—
500	—	—	48.9	31.8	33.8	10.8	13.8	15.2	—	—

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz are for reference only.  
 \*PSACR & ACR not specified in ANSI/TIA 568.2-D

**GenSPEED® 6 CATEGORY 6 (23 AWG) CROSS-SECTION**



**ELECTRICAL CHARACTERISTICS**

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	CMP: 30 CMR: 35
<b>Nom. Velocity of Propagation</b> % Speed of Light		CMP: 70 CMR: 68
<b>Characteristic Impedance</b> Frequency (f): 1-350 MHz		Ohms 100 ± 15

# GenSPEED® 6 EfficienC MAX® Category 6 Cable (22 AWG) Standards-Compliant with Enhanced PoE Performance

## Features and Benefits

- Large-gauge conductors for reduced heat generation, higher maximum current-carrying capabilities and improved attenuation performance
- Improved cable temperature rating (90°C) for greater protection against increased operating temperatures and for high-wattage applications
- Unique separator design engineered for consistent electrical performance
- Performance guaranteed to 350 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Supports the growth of higher-wattage devices (IT/IP, IoT, and IoE)
- Compatible with new higher-speed, higher-power USB 3.1 SuperSpeed

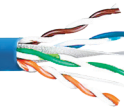
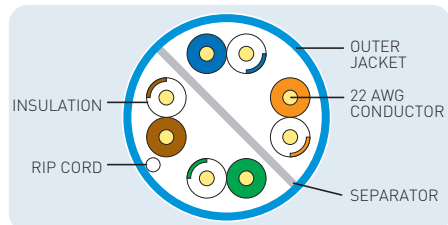
## Standard Compliances

- ANSI/TIA 568.2-D
- TIA TSB-184:2009
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.6A)\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

\*0.6A is the ampacity rating of the cable, which equates to 120 watts using 50 volts over four pairs.

## ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	6.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	35
<b>Nom. Velocity of Propagation</b> % Speed of Light	74	
<b>Characteristic Impedance</b> Frequency (f): 1-350 MHz	Ohms 100 ± 15	



## CONSTRUCTION

**Conductors**  
• 22 AWG solid bare annealed copper

**Insulation**  
• Fluoropolymer

**Color Code**  
• Pair 1: Blue-White/Blue  
• Pair 2: Orange-White/Orange  
• Pair 3: Green-White/Green  
• Pair 4: Brown-White/Brown

**Separator**  
• Divider

**Rip Cord**  
• Applied longitudinally under jacket

**Jacket**  
• Low-Smoke, Flame-Retardant PVC

## PHYSICAL DATA

	CMP (Plenum)
Nominal Cable Diameter (in)	0.240
Nominal Cable Weight (lbs/1000 ft)	29
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +90

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	1.9	74.3	20.0
4	3.5	65.3	23.0
10	5.5	59.3	25.0
16	7.0	56.2	25.0
20	7.9	54.8	25.0
31.25	9.9	51.9	23.6
62.5	14.3	47.4	21.5
100	18.4	44.3	20.1
150	23.0	41.7	18.9
200	27.0	39.8	18.0
250	30.6	38.3	17.3
350	37.0	36.1	16.3
400	40.0	35.3	15.9
500	45.5	33.8	15.2

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

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II
	CMP (Plenum)
Blue	8131800
White	8131801
Yellow	8131802
Gray	8131803
Red	8131804
Orange	8131805
Green	8131806

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. Other colors available.

Data subject to change without notice.

# GenSPEED® 6 with 17 FREE® Category 6 Cable

## Standards-Compliant



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Non-Plenum: Polyolefin

#### Color Code

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

#### Separator

- Divider

#### Jacket

- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.230
Nominal Cable Weight (lbs/1000 ft)	27
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-20 to +75

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	74.3	20.0
4	3.8	65.3	23.0
10	6.0	59.3	25.0
16	7.6	56.2	25.0
20	8.5	54.8	25.0
31.25	10.7	51.9	23.6
62.5	15.4	47.4	21.5
100	19.8	44.3	20.1
150	24.7	41.7	18.9
200	29.0	39.8	18.0
250	32.8	38.3	17.3
350	39.8	36.1	16.3
400	43.0	35.3	15.9
500	48.9	33.8	15.2

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

### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging.

Spool-Pac® and Spool by special order.

Jacket Color	Pull-Pac® II	Spool-Pac®	Spool
	CMR (Non-Plenum)	CMR (Non-Plenum)	CMR (Non-Plenum)
Blue	7133800-17F	7133840-17F	7133860-17F
White	7133801-17F	7133841-17F	7133861-17F
Yellow	7133802-17F	7133842-17F	7133862-17F
Gray	7133803-17F	7133843-17F	7133863-17F
Red	7133804-17F	7133844-17F	7133864-17F
Orange	7133805-17F	7133845-17F	7133865-17F
Green	7133806-17F	7133846-17F	7133866-17F
Black	7133807-17F	7133847-17F	7133867-17F
Purple	7133809-17F	7133859-17F	7133869-17F

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.

### Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- Unique tape design engineered for consistent electrical performance
- Performance guaranteed to 350 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

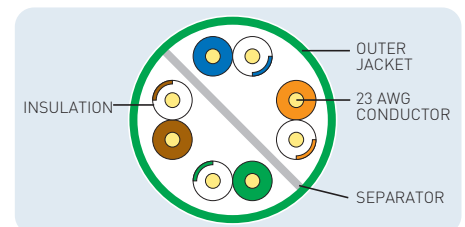
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

### ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	30
<b>Nom. Velocity of Propagation</b> % Speed of Light	68	
<b>Characteristic Impedance</b> Frequency (f): 1-350 MHz	Ohms 100 ± 15	

### CROSS-SECTION





# GenSPEED® 6 Category 6 F/UTP (ScTP) Cable

## Standards-Compliant



### Features and Benefits

- Foil shield reduces electromagnetic interference (EMI) for optimal performance
- Performance guaranteed to 250 MHz
- Improved cable temperature rating (105°C Plenum, 75°C Riser) for greater protection against increased operating temperatures and for high-wattage applications
- UL Listed CMP-LP 0.7A with certified performance for high power PoE applications
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

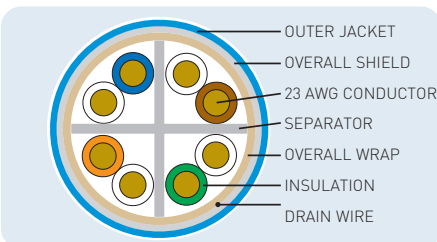
- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum\*
- UL Listed CMP-LP (0.7A) for Plenum\*\*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

\*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.  
 \*\*0.7A is the ampacity rating of the cable, which equates to 140 watts using 50 volts over four pairs.

### ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Nom. Velocity of Propagation</b> % Speed of Light	70
<b>Characteristic Impedance</b> Frequency (f): 1-250 MHz	Ohms 100 ± 15

### CROSS-SECTION



### 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

#### Core Wrap

- Non-Plenum: Mylar
- Plenum: Mylar

#### Drain Wire

- 24 AWG solid tinned copper

#### Shield

- Polyester-backed aluminum foil (aluminum side in)

#### Jacket

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

### PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.265	0.260
Nominal Cable Weight (lbs/1000 ft)	34	39
Minimum Bend Radius (in)	2.50	2.50
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +105

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	PSNEXT (min)	Return Loss (min)
1	2.0	72.3	20.0
4	3.8	63.3	23.0
10	6.0	57.3	25.0
16	7.6	54.2	25.0
20	8.5	52.8	25.0
31.25	10.7	49.9	23.6
62.5	15.4	45.4	21.5
100	19.8	42.3	20.1
150	24.7	39.7	18.9
200	29.0	37.8	18.0
250	32.8	36.3	17.3
350	39.8	34.1	16.3
400	43.0	33.3	15.9
500	48.9	31.8	15.2

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 250 MHz are for reference only.

### PART NUMBERS

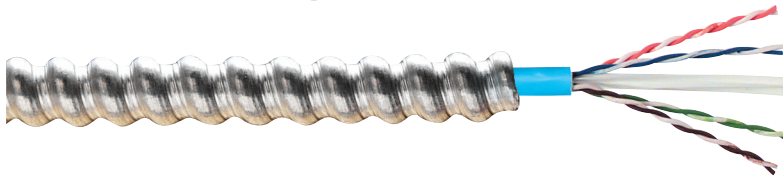
Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)
Blue	6133785	6131785
White	6133787	6131787
Yellow	6133788	6131788
Gray	6133789	6131789
Red	6133790	6131790
Orange	6133791	6131791
Green	6133792	6131792
Black	6133793	6131793
Pink	6133795	6131795
Purple	6133794	6131794

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

Data subject to change without notice.

# GenSPEED® 6 Category 6 Interlock Armored Cable Standards-Compliant



## CONSTRUCTION

### Conductors

- 23 AWG solid bare annealed copper

### Insulation

- Polyolefin

### 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

### Separator

- Cross-web

### Jacket

- Flame-Retardant PVC

## PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.450
Nominal Cable Weight (lbs/1000 ft)	82
Minimum Bend Radius (in)	5.40
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +75

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	74.3	20.0
4	3.8	65.3	23.0
10	6.0	59.3	25.0
16	7.6	56.2	25.0
20	8.5	54.8	25.0
31.25	10.7	51.9	23.6
62.5	15.4	47.4	21.5
100	19.8	44.3	20.1
150	24.7	41.7	18.9
200	29.0	39.8	18.0
250	32.8	38.3	17.3
350	39.8	36.1	16.3
400	43.0	35.3	15.9
500	48.9	33.8	15.2

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

## PART NUMBERS

Color	Part Number	Reel
Blue	9133300	1000' reel
Blue	9133300.2R	2000' reel
White	9133305	1000' reel
White	9133305.2R	2000' reel

## Features and Benefits

- Interlock armor provides outstanding mechanical protection
- Flexible and easy to install
- Eliminates the need for conduit, reducing installation time
- Single-pull installation
- Application assurance warranty
- Made in U.S.A.

## Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Indoor applications only

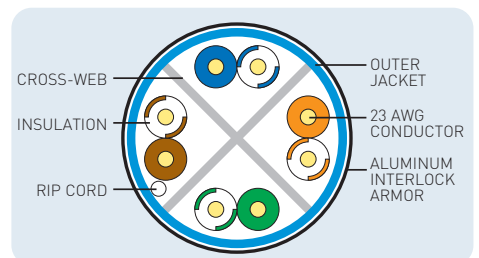
## Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 [Building Automation]
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

## ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.20
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	40
<b>Nom. Velocity of Propagation</b> % Speed of Light	70	
<b>Characteristic Impedance</b> Frequency (f): 1-250 MHz	Ohms 100 ± 15	

## CROSS-SECTION



Data subject to change without notice.



# GenSPEED® 6 Category 6 Outside Plant Cable

## Standards-Compliant

### Features and Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Gel-filled construction to prevent moisture migration in underground and wet applications
- Wide temperature range for extreme weather environments
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Duct and conduit installations

### Standard Compliances

- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirement



### CONSTRUCTION

#### Conductors

- 23 AWG solid bare annealed copper

#### Insulation

- Polyolefin

#### 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

#### Flooding Compound

- Waterproof gel

#### Jacket

- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

Nominal Cable Diameter (in)	0.250
Nominal Cable Weight (lbs/1000 ft)	32
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	-30 to +60
Operation:	-45 to +80

### ELECTRICAL CHARACTERISTICS

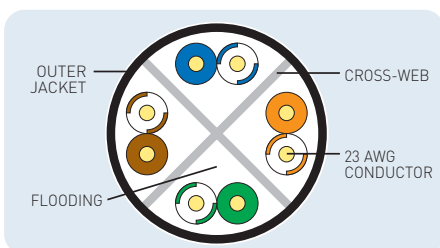
<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	69
<b>Characteristic Impedance</b> Frequency (f): 1-250 MHz	Ohms 100 ± 15

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	74.3	20.0
4	3.8	65.3	23.0
10	6.0	59.3	25.0
16	7.6	56.2	25.0
20	8.5	54.8	25.0
31.25	10.7	51.9	23.6
62.5	15.4	47.4	21.5
100	19.8	44.3	20.1
200	29.0	39.8	18.0
250	32.8	38.3	17.3

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.

### CROSS-SECTION



### PART NUMBER

Standard packaging: 1000' Reel

Jacket Color	Reel
Black	<b>7136100</b>

Data subject to change without notice.

# GenSPEED® 6 Category 6 Residential CMX Outdoor-CMR Cable Standards-Compliant



## CONSTRUCTION

### Conductors

- 23 AWG solid bare annealed copper

### Insulation

- Polyolefin

### Color Code

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

### Separator

- Divider

### Rip Cord

- Applied longitudinally under jacket

### Jacket

- Flame-Retardant PVC

## PHYSICAL DATA

Nominal Cable Diameter (in)	0.240
Nominal Cable Weight (lbs/1000 ft)	28
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-40 to +75

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	74.3	20.0
4	3.8	65.3	23.0
10	6.0	59.3	25.0
16	7.6	56.2	25.0
20	8.5	54.8	25.0
31.25	10.7	51.9	23.6
62.5	15.4	47.4	21.5
100	19.8	44.3	20.1
150	24.7	41.7	18.9
200	29.0	39.8	18.0
250	32.8	38.3	17.3
350	39.8	36.1	16.3
400	43.0	35.3	15.9
500	48.9	33.8	15.2

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

## PART NUMBERS

Standard packaging: Pull-Pac® II

Jacket Color	1000' Pull-Pac® II
	Blue <b>6137160</b>
	White <b>6137147</b>
	Gray <b>6137146</b>
	Ivory <b>6137143</b>
	Beige <b>6137144</b>
	Black <b>6137145</b>

Note: For installations using staple guns, the 4-pair construction requires the use of T-25 size staples.

Data subject to change without notice.

## Features and Benefits

- CMX rating allows the cable to be exposed to temperature variations for short distances from the Network Interface Device on the outside of a house to the point where the cable enters the house
- CMR rating also allows the cable to be used in traditional indoor CMR installations
- Sunlight-resistant
- Sequential footage markings
- Wax box for increased durability on job site.
- Third-party verified for guaranteed performance

## Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

## Standard Compliances

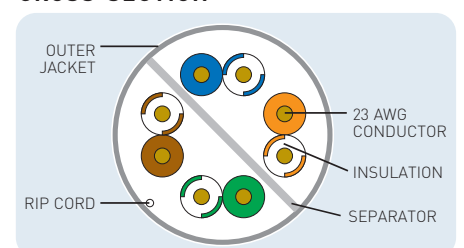
- ANSI/TIA 568.2-D
- NEC/CEC Type CMX Outdoor - CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

## ELECTRICAL CHARACTERISTICS

	Max.	Nom.
<b>DC Resistance</b> Ohms/100 m (328 ft) @ 20°C	9.38	7.50
<b>DC Resistance Unbalance</b> Individual Pair %	4.00	< 1
<b>Delay Skew</b> ns/100 m	45	35
<b>Nom. Velocity of Propagation</b> % Speed of Light	68	
<b>Characteristic Impedance</b> Frequency (f): 1-350 MHz	Ohms 100 ± 15	

Note: CMX outdoor rating allows the cable to be exposed for short distances from the Network Interface Device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried, direct buried or aerially lashed.

## CROSS-SECTION





GenSPEED® Category 5e cables are available in a wide variety of performance levels and constructions. With many options to pick from, you can select the GenSPEED Category 5e product that meets your specific performance requirements.

GenSPEED 5500 Premium Category 5e cable ensures increased headroom, lower bit-error rates and higher signal transmission quality. GenSPEED 5350 exceeds Category 5e transmission requirements, offering electrical performance for 1000 BASE-T and beyond Ethernet applications.

With steady, continuous performance, GenSPEED 5000 meets Category 5e requirements for present and future network requirements. Offered in a variety of constructions, there is a GenSPEED 5000 cable for nearly every application — including backbone, horizontal, outside, outside plant and residential cabling. General Cable also offers its 17 FREE™ line of riser-rated GenSPEED 5000 cables, which may qualify for LEED credit from the U.S. Green Building Council.

All GenSPEED cables are safety listed to the NEC and CEC requirements, and most are verified for electrical performance. This independent third-party testing further confirms the quality and performance of all GenSPEED Enhanced Cables.

GenSPEED's installer-friendly design means that customers won't lose valuable time and money. GenSPEED cables feature unique product-specific packaging for easy identification and TRU-Mark® footage marking so installers don't waste time pulling cable that's too short.

Through leadership and participation on industry committees, technical expertise and a focus on cultivating strong relationships, General Cable provides customers with first-class technical support and a competitive advantage. General Cable's comprehensive warranty program means that all GenSPEED cables conform to standard specifications and are free from defects in material and workmanship.

For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with products that meet future performance requirements and provide the best value in cabling solutions.

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# GenSPEED® Category 5e Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD		ENHANCED		PREMIUM	
		Category 5e GenSPEED® 5000 (p. 32)		Category 5e GenSPEED® 5350 Enhanced (p. 30)		Category 5e GenSPEED® 5500 Premium (p. 29)	
		CMR	CMP	CMR	CMP	CMR	CMP
<b>Blue</b>							
	Pull-Pac®	5133299E	5131278E	6133712	6131690	6133299	6131278
	Spool-Pac®	5133374E	5131431E	6133707	6131688	6133403	6131433
	Spool	5133300E	5131282E	6133703	6131686	6133282	6131282
<b>White</b>							
	Pull-Pac®	5133255E	5131361E	6133713	6131691	6133255	6131361
	Spool-Pac®	5133342E	5131450E	6133708	6131689	6133339	6131449
	Spool	5133250E	5131365E	6133704	6131687	6133492	6131618
<b>Yellow</b>							
	Pull-Pac®	5133289E	5131379E	6133715	6131693	6133289	6131546
	Spool-Pac®	5133448E	5131546E	6133717	6131695	6133369	6131379
	Spool		5131648E	6133719	6131697	6133348	6131382
<b>Gray</b>							
	Pull-Pac®	5133200E	5131418E	6133714	6131692	6133200	6131418
	Spool-Pac®	5133329E	5131456E	6133716	6131694	6133331	6131619
	Spool	5133204E	5131475E	6133718	6131696	6133334	
<b>Red</b>							
	Pull-Pac®	5133274E	5131477E			6133274	6131477
	Spool-Pac®	5133427E	5131553E	6133732	6131732	6133635	6131635
	Spool		5131383E	6133782	6131782		
<b>Orange</b>							
	Pull-Pac®	5133383E	5131422E	6133761	6131761	6133746	6131422
	Spool-Pac®			6133833	6131833	6133383	6131576
	Spool	5133667E		6133733	6131733		
<b>Green</b>							
	Pull-Pac®	5133512E	5131547E	6133699	6131699	6133512	6131547
	Spool-Pac®	5133693E	5131575E	6133731	6131731	6133615	6131575
	Spool	5133649E	5131649E	6133700	6131700	6133616	6131757
<b>Black</b>							
	Pull-Pac®	5133696E	5131683E		6131707	6133696	6131683
	Spool-Pac®	6133650E					6131829
	Spool	6133726E	5131689E				
<b>Pink</b>							
	Pull-Pac®	5133290E	5131380E			6133290	6131709
	Spool-Pac®	5133447E	5131478E			6133447	6131478
	Spool					6133341	
<b>Purple</b>							
	Pull-Pac®	5133445E	5131730E		6131698	6133445	6131710
	Spool-Pac®					6133446	
	Spool						

Note: Non-stock items may be subject to minimum order quantities.  
 \* Bulk reels are available in 2000' (2R) and 3000' (3R) lengths.

# GenSPEED® 5500 Premium Category 5e Cable

## Enhanced Transmission Throughput

### 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

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

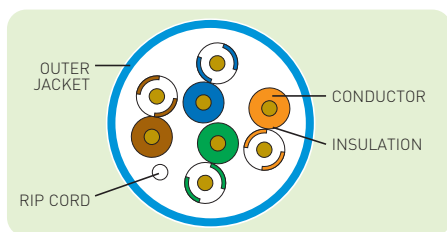
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

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

### CROSS-SECTION



### 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

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	70.3	20.0
4	3.9	61.3	23.0
10	6.2	55.3	25.0
16	7.9	52.2	25.0
20	8.9	50.8	25.0
25	10.0	49.3	24.3
31.25	11.2	47.9	23.6
62.5	16.3	43.4	21.5
100	21.0	40.3	20.1
155	26.9	37.4	18.8
200	31.0	35.8	18.0
250	35.3	34.3	17.3
300	39.2	33.1	16.8
350	42.9	32.1	16.3

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### 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	6133635	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.

Data subject to change without notice.

# GenSPEED® 5350 Enhanced Category 5e Cable

## High Performance



### CONSTRUCTION

#### Conductors

- 24 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

#### 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)	0.200	0.190
Nominal Cable Weight (lbs/1000 ft)	20	22
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

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	66.3	20.0
4	4.0	57.3	23.0
10	6.4	51.3	25.0
16	8.1	48.2	25.0
20	9.2	46.8	25.0
25	10.3	45.3	24.3
31.25	11.6	43.9	23.6
62.5	16.8	39.4	21.5
100	21.7	36.3	20.1
155	27.7	33.4	18.8
200	32.0	31.8	18.0
250	36.4	30.3	17.3
300	40.5	29.1	16.8
350	44.3	28.1	16.3

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### 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	6133712	6131690	6133707	6131688	6133703	6131686
White	6133713	6131691	6133708	6131689	6133704	6131687
Yellow	6133715	6131693	6133717	6131695	6133719	6131697
Gray	6133714	6131692	6133716	6131694	6133718	6131696
Red			6133732	6131732	6133782	6131782
Orange	6133761	6131761	6133833	6131833	6133733	6131733
Green		6131699		6131731		6131700
Black		6131707				
Pink						
Purple						

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.



### Features and Benefits

- For applications that require optimal Cat 5e performance with flexibility for the future
- Performance guaranteed to 350 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

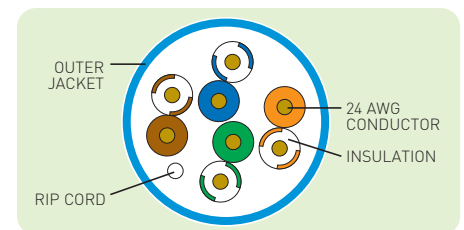
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

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

### CROSS-SECTION



# GenSPEED® 5350 with 17 FREE® Enhanced Category 5e Cable High Performance



## Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- Engineered to provide stable and continuous performance
- Performance guaranteed to 350 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

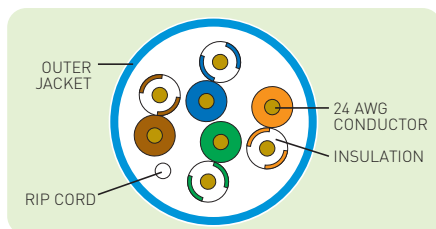
## Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

## ELECTRICAL CHARACTERISTICS

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

## CROSS-SECTION



## CONSTRUCTION

### Conductors

- 24 AWG solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin

### 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: Zero-Halogen Polyolefin

## PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.200
Nominal Cable Weight (lbs/1000 ft)	22
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	25
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-20 to +75

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	66.3	20.0
4	4.0	57.3	23.0
10	6.4	51.3	25.0
16	8.1	48.2	25.0
20	9.2	46.8	25.0
25	10.3	45.3	24.3
31.25	11.6	43.9	23.6
62.5	16.8	39.4	21.5
100	21.7	36.3	20.1
155	27.7	33.4	18.8
200	32.0	31.8	18.0
250	36.4	30.3	17.3
300	40.5	29.1	16.8
350	44.3	28.1	16.3

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging.

Jacket Color	Pull-Pac® II
	CMR (Non-Plenum)
Blue	6133712-17F
White	6133713-17F
Gray	6133714-17F

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 Category 5e Cable

## Standards-Compliant Extended Frequency



### 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, Flame-Retardant PVC

### PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.195	0.180
Nominal Cable Weight (lbs/1000 ft)	19	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

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1
155	28.1	32.4	18.8
200	32.4	30.8	18.0
250	36.9	29.3	—
300	41.0	28.1	—
350	44.9	27.1	—

Note: Values are expressed in dB per 100 m [328 ft.] length @ 20°C. Values above 200 MHz are for information only.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### 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	5133650E		5133726E	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.

### 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

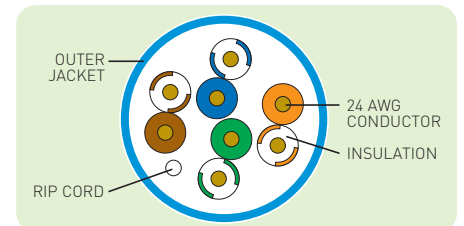
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100 m [328 ft] @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.00
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	CMR: 72 CMP: 70
Characteristic Impedance Frequency (f): 1-200 MHz	Ohms 100 ± 15

### CROSS-SECTION



# GenSPEED® 5000 with 17 FREE® Category 5e Cable Standards-Compliant

## Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

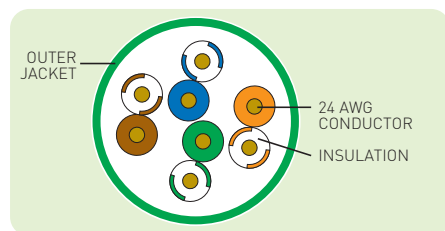
## Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

## ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	70
<b>Characteristic Impedance</b> Frequency (f): 1-200 MHz	Ohms 100 ± 15

## CROSS-SECTION



## CONSTRUCTION

### Conductors

- 24 AWG solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin

### 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: Zero-Halogen Polyolefin

## PHYSICAL DATA

PHYSICAL DATA	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.200
Nominal Cable Weight (lbs/1000 ft)	22
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	25
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-20 to +75

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1
155	28.1	32.4	18.8
200	32.4	30.8	18.0
250	36.9	29.3	—
300	41.0	28.1	—
350	44.9	27.1	—

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 200 MHz are for information only. Spec meets ANSI/TIA 568.2-D standard for Cat 5e UTP cabling.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

## PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging. Spool-Pac® and Spool by special order.

Jacket Color	Pull-Pac® II	Spool-Pac®	Spool
	CMR (Non-Plenum)	CMR (Non-Plenum)	CMR (Non-Plenum)
Blue	5133299E-17F	5133374E-17F	5133300E-17F
White	5133255E-17F	5133342E-17F	5133250E-17F
Yellow	5133289E-17F	5133448E-17F	
Gray	5133200E-17F	5133329E-17F	5133204E-17F
Red	5133274E-17F	5133427E-17F	
Orange	5133383E-17F		5133667E-17F
Green	5133512E-17F	5133693E-17F	5133649E-17F
Black	5133696E-17F		
Purple	5133445E-17F		

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 Category 5e F/UTP (ScTP) Cable

## Standards-Compliant



### CONSTRUCTION

#### Conductors

- 24 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

#### Core Tape

- Polyester

#### Drain Wire

- 26 AWG stranded (7/34) solid tinned copper

#### Shield

- Polyester-backed aluminum foil (aluminum side in)

#### Jacket

- Flame-Retardant PVC

### PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.250	0.225
Nominal Cable Weight (lbs/1000 ft)	36	32
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

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1
155	28.1	32.4	—
200	32.4	30.8	—
250	36.9	29.3	—
300	41.0	28.1	—
350	44.9	27.1	—

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)
Blue	2133496E	2131611E
White	2133774E	2131778E
Yellow	2133777E	2131777E
Gray	2133495E	2131673E
Red	2133778E	2131774E
Orange	2133776E	2131776E
Green	2133775E	2131775E
Black	2133779E	2131779E

Data subject to change without notice.



### Features and Benefits

- Foil shield reduces electromagnetic interference (EMI) for optimal performance
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

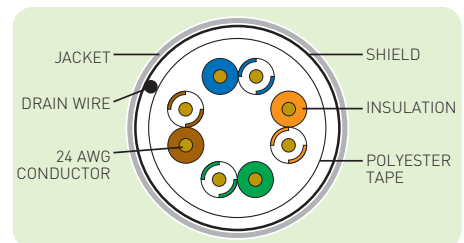
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	CMP: 72 CMR: 70
<b>Characteristic Impedance</b> Frequency (f): 1-100 MHz	Ohms 100 ± 15

### CROSS-SECTION



# GenSPEED® 5000 Category 5e Interlock Armored Cable Standards-Compliant

## Features and Benefits

- Interlock armor provides outstanding mechanical protection
- Flexible and easy to install
- Eliminates the need for conduit, reducing installation time
- Single-pull installation

## Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video
- Indoor applications only

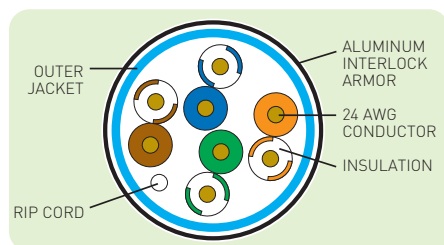
## Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

## ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20 °C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	70
<b>Characteristic Impedance</b> Frequency (f): 1-100 MHz	Ohms 100 ± 15

## CROSS-SECTION



## CONSTRUCTION

### Conductors

- 24 AWG solid bare annealed copper

### Insulation

- Polyolefin

### 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

- Flame-Retardant PVC

### Armor

- Aluminum interlock armor

## PHYSICAL DATA

	CMR (Non-Plenum)	
	1 Cable	2 Cables
Nominal Cable Diameter (in)	0.450	0.620
Nominal Cable Weight (lbs/1000 ft)	58.5	96.0
Minimum Bend Radius (in)	5.40	7.44
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	0 to +60	
Operation:	-20 to +75	

## ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20 °C.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

## PART NUMBERS

		Reel			
Color	Part Number	Unit 1	Unit 2	Reel	
Blue	<b>8133300</b>	5000R Blue		1000' reel	
Blue	<b>8133300.2R</b>	5000R Blue		2000' reel	
Blue/Blue	<b>8133301</b>	5000R Blue	5000R Blue	1000' reel	
Blue/Blue	<b>8133301.2R</b>	5000R Blue	5000R Blue	2000' reel	
Blue/White	<b>8133307</b>	5000R Blue	5000R White	1000' reel	
Blue/White	<b>8133307.2R</b>	5000R Blue	5000R White	2000' reel	
White	<b>8133305</b>	5000R White		1000' reel	
White	<b>8133305.2R</b>	5000R White		2000' reel	
White/White	<b>8133306</b>	5000R White	5000R White	1000' reel	
White/White	<b>8133306.2R</b>	5000R White	5000R White	2000' reel	

Data subject to change without notice.

# GenSPEED® 5000 Category 5e Outside Plant Cable

## Standards-Compliant



### CONSTRUCTION

#### Conductors

- 24 AWG solid bare annealed copper

#### Insulation

- Polyolefin

#### Color Code

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

#### Optional Armor

- Aluminum applied helically (inner jacket is used with this construction)
- Armor diameter 12 mm

#### Flooding Compound

- Waterproof gel

#### Jacket

- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

	No Armor	Aluminum Armor
Nominal Cable Diameter (in)	0.230	0.340
Nominal Cable Weight (lbs/1000 ft)	25	50
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	-30 to +60	-30 to +60
Operation:	-45 to +80	-45 to +80

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1
155	28.1	32.4	—
200	32.4	30.8	—
250	36.9	29.3	—
300	41.0	28.1	—
350	44.9	27.1	—

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only.  
\*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Reel

Jacket Color	Reel	Armor
Black	5136100	None
Black	5136101	Aluminum

### Features and Benefits

- Protects against environmental elements that can cause electrical performance failures
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Prevents moisture migration

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video
- Armored: aerial, duct and buried installations
- Non-armored design is recommended for duct installation

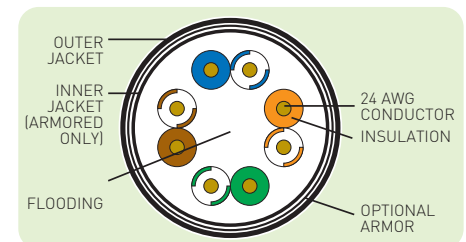
### Standard Compliances

- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirements

### ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.00
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	69
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

### CROSS-SECTION



Data subject to change without notice.





# GenSPEED® 5000 Category 5e Residential CMX Outdoor-CMR Cable

## Standards-Compliant

### Features and Benefits

- CMX rating allows the cable to be exposed to temperature variations for short distances from the Network Interface Device on the outside of a house to the point where the cable enters the house
- CMR rating also allows the cable to be used in traditional indoor CMR installations
- Sunlight-resistant
- Sequential footage markings
- Wax box on 1000' PPCs for increased durability on the job site
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

### Standard Compliances

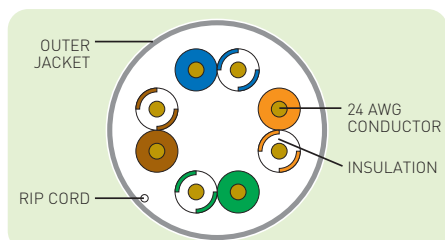
- ANSI/TIA 568.2-D
- NEC/CEC Type CMX OUTDOOR-CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

### ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	4.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	70
<b>Characteristic Impedance</b> Frequency (f): 1-100 MHz	Ohms 100 ± 15

Note: CMX outdoor rating allows the cable to be exposed for short distances from the Network Interface Device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried, direct buried or aerially lashed.

### CROSS-SECTION



### CONSTRUCTION

#### Conductors

- 24 AWG solid bare annealed copper

#### Insulation

- Polyolefin

#### Color Code

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

#### Jacket

- Flame-Retardant PVC

#### Rip Cord

- Applied longitudinally under jacket

### PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.210
Nominal Cable Weight (lbs/1000 ft)	26
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	25
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-40 to +75

### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
1	2.0	65.3	20.0
4	4.1	56.3	23.0
10	6.5	50.3	25.0
16	8.2	47.2	25.0
20	9.3	45.8	25.0
25	10.4	44.3	24.3
31.25	11.7	42.9	23.6
62.5	17.0	38.4	21.5
100	22.0	35.3	20.1
155	28.1	32.4	—
200	32.4	30.8	—
250	36.9	29.3	—
300	41.0	28.1	—
350	44.9	27.1	—

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only. \*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: Pull-Pac® II

Jacket Color	600' Pull-Pac® II	1000' Pull-Pac® II
	CMR (Non-Plenum)	CMR (Non-Plenum)
Blue		2137160E
White		2137147E
Gray	2137114E	2137146E
Ivory	2137113E	2137143E
Beige		2137144E

Note: For installations using staple guns, the 4-pair construction requires the use of T-25 size staples.

Data subject to change without notice.

# GenSPEED® 5000 Category 5e Backbone 25 Pair Cable

## Standards-Compliant



### CONSTRUCTION

#### Conductors

- 25 pairs of 24 AWG solid bare annealed copper

#### Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

#### Color Code

- See Color Code Chart on page 95, except no bandmarking; only solid colors

#### Rip Cord

- Applied longitudinally under jacket

#### Jacket

- Non-Plenum: Flame-retardant PVC
- Plenum: Low-smoke, flame-retardant PVC

#### Separator

- Non-Plenum: N/A
- Plenum: Core filler

### PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.500	0.500
Nominal Cable Weight (lbs/1000 ft)	125	160
Minimum Bend Radius (in)	4.0	4.0
Maximum Pulling Force (lbs)	50	50
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75




### ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
<b>0.772</b>	1.8	67.0	—
<b>1</b>	2.0	65.3	20.0
<b>4</b>	4.1	56.3	23.0
<b>8</b>	5.8	51.8	24.5
<b>10</b>	6.5	50.3	25.0
<b>16</b>	8.2	47.2	25.0
<b>20</b>	9.3	45.8	25.0
<b>25</b>	10.4	44.3	24.3
<b>31.25</b>	11.7	42.9	23.6
<b>62.5</b>	17.0	38.4	21.5
<b>100</b>	22.0	35.3	20.1

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.

### PART NUMBERS

Standard packaging: 1000' Reel

Jacket Color	Reel	Reel
	CMR (Non-Plenum)	CMP (Plenum)
 Blue	<b>2133694E</b>	
 White	<b>2133781E</b>	<b>2131550E</b>
 Gray	<b>2133269E</b>	<b>2131752E</b>

### Features and Benefits

- Connects all systems of a multi-level distributed system to an intermediate system
- Sequential footage markings

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

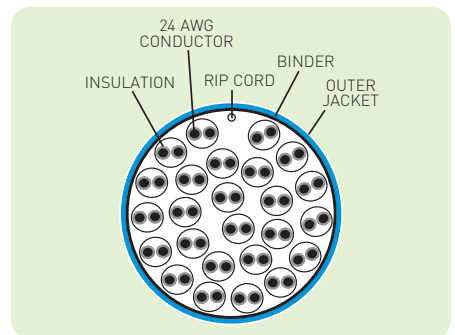
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>DC Resistance Unbalance (max)</b> Individual Pair %	5.00
<b>Delay Skew (max)</b> ns/100 m	45
<b>Propagation Delay (max)</b> ns @ 100 MHz	CMP: 518 CMR: 538
<b>Nom. Velocity of Propagation</b> % Speed of Light	CMP: 72 CMR: 68
<b>Characteristic Impedance</b> Frequency (f):	Ohms 1-100 MHz 100 ± 15

### CROSS-SECTION



Data subject to change without notice.



# Category 3 Cables

4

As your one-stop resource, General Cable provides a comprehensive line of Category 3 wiring products. General Cable offers a mix of quality plenum, riser and multi-dwelling residential cables designed for sophisticated voice and data systems.

General Cable's Category 3 Plenum Cable is installed in a building's return air plenums for both convenience and aesthetics. Category 3 Riser Cable is ideal for installation in vertical riser and general horizontal applications. Available from 2 to 300 pair counts, Category 3 Plenum and Riser Cables meet all your Power Sum NEXT backbone voice transmission requirements.

All General Cable's Category Cables meet applicable TIA/EIA 568 C.2 safety standards. Each safety-listed cable meets the Canadian Standards Association (CSA) and the National Electric Code (NEC) requirements. Independent third-party testing further confirms the quality and performance of all cables.

Available in various jacket colors and pair counts, General Cable's category cables meet installers' needs for virtually every application. Fabricated in state-of-the-art facilities, these cables are backed by years of technical expertise and are guaranteed to meet your expectations.

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Category 3 Non-Plenum	45

# Category 3 Plenum



PRODUCT NUMBER	PAIRS	JACKET COLOR	PKG	O.D. (INCHES)	WEIGHT (LBS/KFT)
<b>Flexguard® Flame-Retardant PVC Jacket</b>					
<b>2131243</b>	2	White	PP	0.13	10
<b>2131244</b>	3	White	PP	0.15	13
<b>2131245</b>	4	White	PP	0.17	17
<b>2131313</b>	4	Gray	PP	0.17	17
<b>2131453</b>	4	Blue	PP	0.17	17
<b>2131463</b>	4	Green	PP	0.17	17
<b>2131246</b>	6	White	PP	0.18	24
<b>2131250</b>	6	White	SP	0.18	24
<b>2131505</b>	25	White	RL	0.42	102
<b>2131505.99</b>	25	White	POL	0.42	102

Data subject to change without notice.

## Product Construction

### Conductors:

- 24 AWG solid bare annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC

### Color Code:

- See Color Code Chart on page 97

### Rip Cord:

- Applied longitudinally under jacket (except 3 and 4 pair)

### Jacket:

- Flexguard® flame-retardant PVC
- Sequential footage markings

## Packaging

- 1000' Pull-Pac® (PP)
- 1000' spool (SP)
- 1000' Spool-Pac® (SPC)
- 1000' reel (RL)
- Per order length (POL)

## Applications

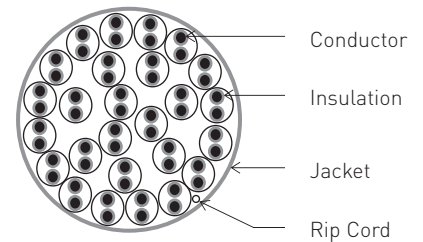
- IEEE 802.3: 10 BASE-T
- IEEE 802.12: 100 BaseVG
- Token Ring, ATM
- T1
- Voice

## Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-90-661

## Electrical Characteristics

	24 AWG	Frequency	Insertion Loss dB/100 m (max)	Power Sum Near-End Crosstalk dB (min)
<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20 °C	9.38	<b>772 kHz</b>	2.2	43
<b>Mutual Capacitance (max)</b> pF/ft @ 1 kHz	17	<b>1 MHz</b>	2.6	41
<b>Characteristic Impedance</b> Frequency (f): 1.0-16.0 MHz	Ohms 100 ± 15	<b>4 MHz</b>	5.6	32
<b>Structural Return Loss (SRL)</b> Frequency (f): 1.0-10.0 MHz 10.0-16.0 MHz	dB (min) 12 12-10 log (f/10)	<b>8 MHz</b>	8.5	27
		<b>10 MHz</b>	9.7	26
		<b>16 MHz</b>	13.1	23



## Physical Data

	CMP (Plenum)
<b>Temperature Rating (°C)</b>	
Installation:	0 to +60
Operation:	-20 to +75



4 Pair  
25 Pair



RoHS Compliant  
Directive 2011/65/EU



# Category 3 Non-Plenum

## Product Construction

### Conductors:

- 24 AWG solid bare annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC (6-25 pr)
- Polyolefin (2-4 pr)

### Color Code:

- See Color Code Chart on page 97

### Rip Cord:

- Applied longitudinally under jacket

### Jacket:

- Flame-retardant PVC
- Sequential footage markings

## Packaging

- 1000' Pull-Pac® (PP)
- 1000' Spool-Pac® (SPC)
- 1000' spool (SP)
- 1000' reel (RL)
- Per order length (POL)

## Applications

- IEEE 802.3: 10 BASE-T
- IEEE 802.12: 100 BaseVG
- Token Ring, ATM
- T1
- Voice

## Compliances

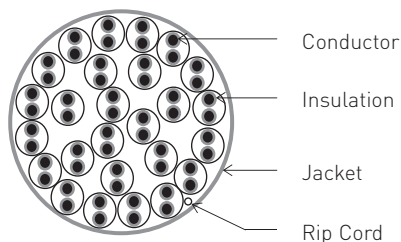
- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-100-661



PRODUCT NUMBER	PAIRS	JACKET COLOR	PKG.	O.D. (INCHES)	WEIGHT (LBS/KFT)
2133008	2	Beige	PP	0.14	9
2133009	2	Gray	PP	0.14	9
2133011	2	Gray	SP	0.14	9
2133012	3	Beige	PP	0.15	13
2133013	3	Gray	PP	0.15	13
2133015	3	Gray	SP	0.15	13
2133016	4	Beige	PP	0.17	16
2133017	4	Gray	PP	0.17	16
2133359	4	White	SPC	0.17	16
2133358	4	Gray	SPC	0.17	16
2133018	4	Beige	SP	0.17	16
2133019	4	Gray	SP	0.17	16
2133275	4	Blue	PP	0.17	16
2133296	4	White	PP	0.17	16
2133020	6	Beige	PP	0.21	23
2133021	6	Gray	PP	0.21	23
2133022	6	Beige	SP	0.21	23
2133023	6	Gray	SP	0.21	23
2133033	25	Gray	RL	0.42	105
2133033.99	25	Gray	POL	0.42	105

Data subject to change without notice.

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



## Physical Data

	CMR (Non-Plenum)
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-10 to +60

## Electrical Characteristics

	24 AWG
<b>DC Resistance (max)</b> Ohms/100 m (328 ft) @ 20°C	9.38
<b>Mutual Capacitance (max)</b> pF/ft @ 1 kHz	17
<b>Characteristic Impedance</b> Frequency (f): 1.0-16.0 MHz	Ohms 100 ± 15
<b>Structural Return Loss (SRL)</b> Frequency (f): 1.0-10.0 MHz 10.0-16.0 MHz	dB (min) 12 12-10 log (f/10)

Frequency	Insertion Loss dB/100 m (max)	Power Sum Near-End Crosstalk dB (min)
772 kHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	27
10 MHz	9.7	26
16 MHz	13.1	23



# Central Office Cables

General Cable is a highly recognized manufacturer of a comprehensive line of Central Office cable. As a primary national supplier, our top-quality product line includes cables with the ability to run both analog and digital services. General Cable's preferred central office cables are engineered for T1, DS1, DS1C, DS2 and other broadband services.

Designed to provide the optimum in performance, the products' transmission, physical and mechanical characteristics are committed to the highest standards of product quality. All of these cables provide enhanced crosstalk and attenuation performance for customers who need broadband solutions. In addition, Telcordia test reports are available upon request for the terminating cable line of products.

With extended experience in the field of cross-connect wires, General Cable provides a variety of indoor and outdoor UL-listed cross-connect and distributing frame wire for interconnecting equipment and supplying service in central offices, distribution cabinets and point-to-point hookups.

General Cable meets installers' needs with a breadth of products for virtually any application. Aimed at providing convenience and flexibility, all cables are manufactured, tested and approved to UL, the NEC and applicable TIA/EIA and Telcordia standards.

With years of technical expertise and a focus on cultivating strong relationships, General Cable provides customers with first-class technical support and a competitive advantage. For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with a variety of products that meet future performance requirements and provide the best value in cabling solutions. General Cable's cross-connect and distribution frame wire offer unparalleled, world-class quality.

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# Distributing Frame Wire Tight Twist

Type "DT" • Spec. 5009

## Product Construction

### Conductors:

- 22 and 24 AWG solid tinned annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC
- Insulation thickness = 0.008"

### Packaging

- Standard spool (SP)
- Bell spool (BSP)
- Bell spool dimensions (tapered)
  - Inner Drum: 7.25" tapered to 6.25"
  - Flange: 12.25"
  - Traverse: 4.25"
- Other lengths and put-ups are also available

### Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting equipment units in telephone central offices and point-to-point hookups

### Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 5 compatible, 1 inch and below
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-136-CORE



PRODUCT NUMBER	PAIR LAY	TYPE	CDRS	COLOR CODE	O.D. (INCHES)	WEIGHT (LBS/KFT)	SHIP LENGTH
<b>1" AND BELOW</b>							
<b>2113187</b>	5/8"	DT22P	2	R/V	0.084	4.7	3000' CL
<b>2113188</b>	5/8"	DT24P	2	R/V	0.074	3.1	5000' CL
<b>2113099</b>	0.75"	DT22P	2	R/V	0.084	4.7	3500' BSP
<b>2113098</b>	0.75"	DT24P	2	R/V	0.074	3.1	5000' BSP
<b>2113181</b>	1.00"	DT22P	2	V/BL	0.084	4.7	600' SP
<b>2113185</b>	1.00"	DT22P	2	V/BL	0.084	4.7	3000' CL
<b>2113150</b>	1.00"	DT22P	2	V/BL	0.084	4.7	1000' SP
<b>2113111</b>	1.00"	DT22P	2	V/BL	0.084	4.7	3500' BSP
<b>2113182</b>	1.00"	DT24P	2	V/BL	0.074	3.1	600' SP
<b>2113186</b>	1.00"	DT24P	2	V/BL	0.074	3.1	5000' CL
<b>2113112</b>	1.00"	DT24P	2	V/BL	0.074	3.1	5000' BSP
<b>1.75" AND ABOVE</b>							
<b>2113163</b>	1.75"	DT22P	2	W/BL	0.084	4.7	3000' CL
<b>2113169</b>	1.75"	DT22P	2	W/O	0.084	4.7	3000' CL
<b>2113168</b>	1.75"	DT22P	2	W/G	0.084	4.7	3000' CL
<b>2113166</b>	1.75"	DT22P	2	R/G	0.084	4.7	3000' CL
<b>2113192</b>	1.75"	DT22P	2	BK/BL	0.084	4.7	2600' HT
<b>2113191</b>	1.75"	DT22P	2	BK/BL	0.084	4.7	3000' CL
<b>2113178</b>	1.75"	DT22P	2	BK/O	0.084	4.7	3000' CL
<b>2113200</b>	1.75"	DT22P	2	Y/G	0.084	4.7	3000' CL
<b>2113202</b>	1.75"	DT22P	2	W/R	0.084	4.7	2600' HT
<b>2113170</b>	1.75"	DT22P	2	W/R	0.084	4.7	3000' CL
<b>2113177</b>	1.75"	DT22P	2	W/BK	0.084	4.7	3000' CL
<b>2113204</b>	1.75"	DT22P	2	R/Y	0.084	4.7	3000' CL

Data subject to change without notice.

## Electrical Characteristics

	22 AWG	24 AWG
<b>DC Resistance (max)</b> Ohms/1000 ft	17.8	28.6
<b>Coaxial Capacitance (nom)</b> microfarads/kft @ kHz	0.150	0.125
<b>Characteristic Impedance</b> Ohms @ 1 MHz (nom)	100	100

# Distributing Frame Wire

Type "DT" • Spec. 5009



PRODUCT NUMBER	PAIRS	AWG	COLOR CODE	PKG.	PKG./CAR-TON	O.D. (INCHES)	WEIGHT (LBS/KFT)
7051535	1	24	O/W	1000' SP	4	0.074	3.1
7051592	1	24	R/W	1000' SP	4	0.074	3.1
7051600	1	24	BK/W	1000' SP	4	0.074	3.1
7022551	1	24	Y/BL	6000' BSP	2	0.074	3.1
7022577	1	24	Y/G	6000' BSP	2	0.074	3.1
7022585	1	24	Y/R	6000' BSP	2	0.074	3.1
7056534	1	24	G/W	1000' SP	4	0.074	3.1
2113046	1	24	W/BL	1000' SP		0.074	3.1
7022601	2	24	Y/BL-R/G	3000' BSP	2	0.098	6.2
2113100	1	22	W/O	1000' SP	4	0.084	5.0
7051618	1	22	BK/W	1000' SP	4	0.084	5.0
7051626	1	22	R/W	1000' SP	4	0.084	5.0
7051634	1	22	BL/W	1000' SP	4	0.084	5.0
2113196	1	22	BL/W	4200' SP	2	0.084	5.0
2113203	1	22	R/W	4200' SP	2	0.084	5.0
2113087	1	22	V/W	4500' BSP	2	0.084	5.0
7022460	1	22	W/BL	4500' BSP	2	0.084	5.0
7022478	1	22	W/O	4500' BSP	2	0.084	5.0
7022486	1	22	W/G	4500' BSP	2	0.084	5.0
7022494	1	22	W/R	4500' BSP	2	0.084	5.0
7022502	1	22	R/G	4500' BSP	2	0.084	5.0
2113040	1	22	W/BK	3000' BSP		0.084	5.0
2113184	2	22	W/BL-R/G	2000' BSP	2	0.116	9.4

Data subject to change without notice.

## Electrical Characteristics

	22 AWG	24 AWG
<b>DC Resistance (max)</b> Ohms/1000 ft	17.8	28.6
<b>Coaxial Capacitance (nom)</b> microfarads/kft @ kHz	0.150	0.125
<b>Characteristic Impedance</b> Ohms @ 1 MHz (nom)	100	100

## Product Construction

### Conductors:

- 22 and 24 AWG solid tinned annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC
- Insulation thickness = 0.008"

### Pairing:

- Four twists per foot minimum

### Packaging

- Standard spool (SP)
- Bell spool (BSP)
- Bell spool dimensions (tapered)  
Inner Drum: 7.25" tapered to 6.25"  
Flange: 12.25"  
Traverse: 4.25"
- Other lengths and put-ups are also available

### Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting equipment units in telephone central offices and point-to-point hookups

### Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-136-CORE



# DSX Distribution Frame Wire

Type "Y2" • Spec. 5506

## Product Construction

### Conductors:

- 24 AWG solid tinned annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC, 90°C
- Insulation thickness = 0.008"

### Pairing:

- Six twists per foot minimum

### Color Code:

- Pair 1: Blue-White/White-Blue
- Pair 2: Orange-White/White-Orange
- Single: Green

## Physical Data

- Nominal cable diameter (in): 0.10
- Nominal cable weight (lbs/1000 ft): 8.2

## Packaging

- Spool (SP)
- Cardboard coil (CL)

## Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting equipment units in telephone central offices and point-to-point hookups

## Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU



PRODUCT NUMBER	PAIRS	PKG.	PKG./ CARTON
2114395	2.5	660' SP	4
2114396	2.5	1350' CL	2
7026156	2.5	1000' SP	4

Data subject to change without notice.

## Electrical Characteristics

	24 AWG
<b>DC Resistance (max)</b> Ohms/1000 ft @ 20°C	28.6
<b>Coaxial Capacitance (max)</b> microfarads/kft @ 23°C	0.15
<b>Insulation Resistance (min)</b> Megohm - kft @ 23°C	300
<b>Capacitance Unbalance (max)</b> Picofarads/100ft @ 1.0 kHz	70

# Customer Premise Cross-Connect Wire Spec. 5006



PRODUCT NUMBER	PAIRS	AWG	COLOR CODE				PKG./ CARTON	O.D. (INCH-ES)	WEIGHT (LBS/ KFT)
			PAIR 1	PAIR 2	PAIR 3	PAIR 4			
2114369	1	24	R/BL-BL/R				8	0.06	3
7023708	1	24	BL/W-W/BL				8	0.06	3
7041916	1	24	BL/Y-Y/BL				8	0.06	3
7023773	1	24	O/W-W/O				8	0.06	3
7023781	1	24	G/W-W/G				8	0.06	3
7036759	1	24	BK/W-W/BK				8	0.06	3
7023864	1	24	R/W-W/R				8	0.06	3
7023716	2	24	BL/W-W/BL	O/W-W/O			3	0.09	6
2114211	4	24	BL/W-W/BL	O/W-W/O	G/W-W/G	BR/W-W/BR	4	0.12	13
2114363	1	22	W/O-O/W				4	0.08	5
7041973	1	22	BL/W-W/BL				4	0.08	5
7042047	1	22	R/W-W/R				4	0.08	5

Data subject to change without notice.

### Electrical Characteristics

	22 AWG 1 PR.	24 AWG 1-4 PR.
DC Resistance (max) Ohms/1000 ft @ 20°C	18.0	28.6
Characteristic Impedance Ohms @ 1 MHz (nom)	100	100

### Product Construction

#### Conductors:

- 22 and 24 AWG solid bare annealed copper

#### Insulation:

- Flame-retardant semi-rigid PVC

#### Pairing:

- Two twists per foot minimum
- For ease of identification, a variety of different color options are available

### Packaging

- 1000' spool (SP)
- Other lengths and put-ups are also available

### Applications

- Suitable for voice and data transmission up to 4 Mbps
- For cross-connecting between terminals of a distribution frame or other premise equipment

### Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 2 compatible
- RoHS Compliant Directive 2011/65/EU

# Customer Premise Cross-Connect Wire Spec. "F" • Spec 5008



PRODUCT NUMBER	PAIRS	COLOR CODE			PKG.	PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/ KFT)
		PAIR 1	PAIR 2	PAIR 3				
2113055	1	O/W-W/O			1000' SP	8	0.07	3
2134023	1	G/W-W/G			1000' SP	8	0.07	3
2114327	1	BL/R-R/BL			1000' SP	8	0.07	3
2114375	1	R/W-W/R			1000' SP	8	0.07	3
7042500	1	BL/Y-Y/BL			1000' SP	8	0.07	3
7051543	1	BL/Y-BL			600' SP	8	0.07	3
2113054	1	BL/W-W/BL			1000' SP	8	0.07	3
2114355	1	R/W-W/R			600' SP	8	0.07	3
2114408	2	BL/W-W/BL	O/W-W/O		500' SP	8	0.09	7
7042518	2	BL/R-R/BL	O/R-R/O		1150' SP	4	0.09	7
2114307	2	BL/W-W/BL	O/W-W/O		1000' SP	4	0.09	7
7042526	3	BL/W-W/BL	O/W-W/O	G/W-W/G	600' SP	4	0.12	11

Data subject to change without notice.

### Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/1000 ft @ 20°C	28.6
Coaxial Capacitance (max) microfarads/kft @ 23°C	0.15
Insulation Resistance (min) Megohm - kft @ 23°C	300

### Product Construction

#### Conductors:

- 24 AWG solid bare annealed copper

#### Insulation:

- Flame-retardant semi-rigid PVC

#### Pairing:

- Four twists per foot minimum

### Packaging

- Supplied on non-returnable spools as shown in table (SP)

### Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting between terminals of a distribution frame or other premise equipment

### Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-1253 (Bellcore Specification TA-TSY-000130)





# Customer Premise Cross-Connect Wire Tight Twist

Type "F" • Spec. 5008

## Product Construction

### Conductors:

- 24 AWG solid bare annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC

### Pairing:

- Twelve twists per foot

### Packaging

- Supplied on non-returnable spools as shown in table (SP)

### Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting between terminals of a distribution frame or other premise equipment

### Compliances

- UL and c(UL) Type CM
- Telcordia (Bellcore) GR-1253 (Bellcore Specification TA-TSY-000130)
- Category 5 compatible



PRODUCT NUMBER	PAIRS	COLOR CODE	PKG.	PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/KFT)
		PAIR 1				
2113189	1	BL/V-V/BL	500' SP	8	0.67	3.25
2114410	1	BL/V-V/BL	300' SP	8	0.67	3.25

Data subject to change without notice.

## Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/1000 ft @ 20°C	28.6
Coaxial Capacitance (max) microfarads/kft @ 23°C	0.15
Insulation Resistance (min) Megohm - kft @ 23°C	300

# Network Outdoor Cross-Connect Wire

Type "G" • Spec. 5010

## Product Construction

### Conductors:

- 1 pair of 22 AWG solid bare annealed copper

### Insulation:

- Dual-insulated polypropylene with a flame-retardant semi-rigid PVC skin

### Pairing:

- Five twists per foot minimum

### Packaging

- 400' spool (SP)
- 8 per carton

### Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting between feeder and distribution circuits within the confines of outdoor distribution cabinets

### Compliances

- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-126-CORE (Bellcore Specification TA-NWT-000126)



PRODUCT NUMBER	COLOR CODE	PKG./ CARTON	WEIGHT (LBS/ KFT)
	PAIR 1		
7042427	W/V	8	5
2114357	R/W	8	5

Data subject to change without notice.

## Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000 ft @ 20°C	17.8
Coaxial Capacitance (max) microfarads/kft @ 23°C	0.09
Insulation Resistance (min) Megohm - kft @ 23°C	2000

# Universal Cross-Connect Wire

Type "N" • Spec. 5013



PRODUCT NUMBER	PAIRS	COLOR CODE		PKG.	PKG./ CARTON	WEIGHT (LBS/KFT)
		PAIR 1	PAIR 2			
2113057	1	W/V-V		400' SP	8	4.9
2113058	1	W/V-V		1000' SP	4	4.9
2113059	1	W/R-R		1000' SP	4	4.9
2113060	2	R/BL-BL	R/O-O	1000' SP	3	10.6

Data subject to change without notice.

## Electrical Characteristics

	22 AWG
<b>DC Resistance (max)</b> Ohms/1000 ft @ 20 °C	17.8
<b>Coaxial Capacitance (max)</b> microfarads/kft @ 23 °C	0.15
<b>Insulation Resistance (min)</b> Megohm - kft @ 23 °C	600
<b>Near-End Cross Talk (min)</b> dB @ 772 kHz	44

## Product Construction

### Conductors:

- 22 AWG solid bare annealed copper

### Insulation:

- Flame-retardant semi-rigid PVC

### Pairing:

- Four twists per foot minimum

## Packaging

- Supplied on non-returnable spools as shown in table (SP)

## Applications

- Suitable for voice and data transmission up to 16 Mbps
- UL Listed cross-connect wire for indoor use in distributing frames and cross-connect arrays; suitable for use outdoors in cross-connect cabinets and terminal boxes. Has excellent low-temperature characteristics for installation in cold climates

## Compliances

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-126-CORE [Bellcore Specification TA-NWT-000126]



# 100 Ohm Individually Braided Shielded Twisted Pair Cable

Terminating Cable for Digital Transmission • Spec. 4162 • Type CMR/CM

## Product Construction

### Conductors:

- 22 AWG solid tinned annealed copper

### Insulation:

- High-density polyethylene with a layer of flame-retardant PVC overall
- Primary insulation, nominal O.D. = 0.051"
- Secondary insulation, nominal O.D. = 0.072"

### Drain Wire:

- 22 AWG solid tinned annealed copper

### Shield:

- 34 AWG tinned copper braid 90% coverage

### Pair Jacket:

- Flame-retardant PVC jacket over each braid shielded twisted pair

### Color Code:

- Pair jackets are color-coded by use of jacket printing
- Marking or printing will correspond with the colors of the insulated pairs (e.g., white/blue printed on the pair jacket indicates the insulation colors of the pairs enclosed)

### Jacket:

- Flame-retardant PVC
- Sequential footage markings

### Packaging

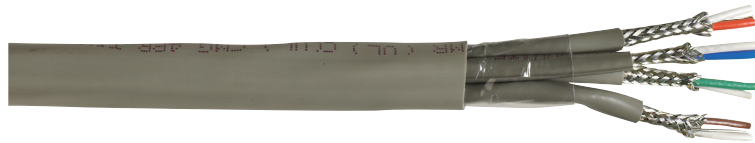
- 500' reel (RL)
- Bulk reels are available upon request

### Applications

- T1/DS1
- Suitable for use in terminating high-frequency lines to carrier equipment in central offices

### Compliances

- 1 pair: NEC/CEC Type CM (UL 1685-2000)
- 2 pair through 12 pair: NEC/CEC Type CMR (UL 1666)
- UL 444
- RoHS Compliant Directive 2011/65/EU



PRODUCT NUMBER	PAIRS	COLOR CODE	JACKET COLOR	O.D. (INCHES)	WEIGHT (LBS/KFT)
2117037	1	W/BL	Orange	0.18	26
7056898	1	W/BL	Gray	0.18	26

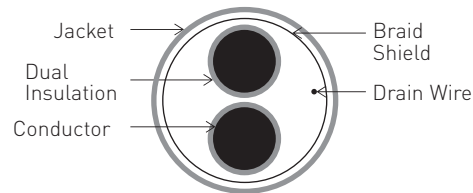
Data subject to change without notice.

## Electrical Characteristics

	22 AWG	Frequency		
		Attenuation dB/1000 ft	NEXT dB/1000 ft	FEXT dB/1000 ft
DC Resistance (max) Ohms/1000 ft @ 20°C	18	.100 MHz	2.2	97
		.772 MHz	6.1	93
Resistance Unbalanced (max) Individual Pair % @ 20°C	5	1.000 MHz	7.0	88
		1.600 MHz	9.1	85
Shield Resistance (nom) Ohms @ 1000 ft	3.3	3.150 MHz	13.2	82
		6.300 MHz	19.1	80
Mutual Capacitance (max) pF/ft @ 1 kHz	19	10.000 MHz	25.0	72
				71
Impedance Ohms/772 kHz	100 ± 5			

## Color Code Chart

PAIR NO.	COLOR CODE
1	White & Blue
2	White & Orange
3	White & Green
4	White & Brown
5	White & Slate
6	Red & Blue
7	Red & Orange
8	Red & Green
9	Red & Brown
10	Red & Slate
11	Black & Blue
12	Black & Orange



1 Pair Construction

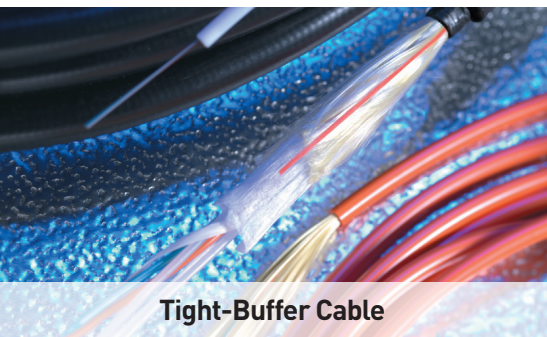


# Fiber Optic Cable for the 21<sup>ST</sup> Century

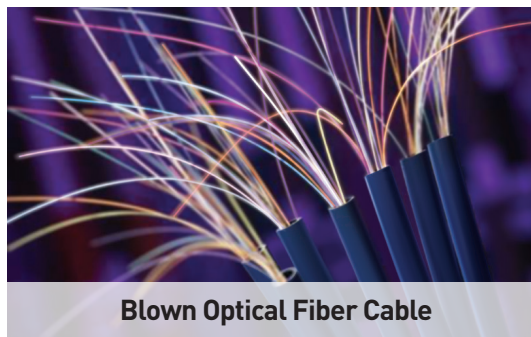
**Not the new kid on the block.** General Cable's NextGen® Brand fiber optic solutions, including Indoor/Outdoor Fiber, derive from over 25 years of technical expertise and manufacturing excellence. Long recognized as a leader in copper cabling systems, General Cable offers a broad range of fiber optic cables for every application. NextGen Brand fiber cables meet today's performance expectations while setting the standards for tomorrow.

**NextGen Brand delivers the cable construction and performance that best fit — whatever the demand.**

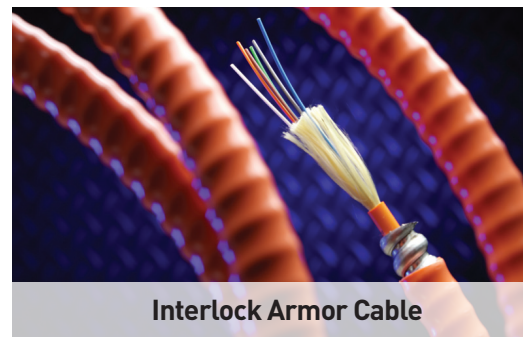
Contact General Cable for information on these other fiber solutions:



Tight-Buffer Cable



Blown Optical Fiber Cable



Interlock Armor Cable

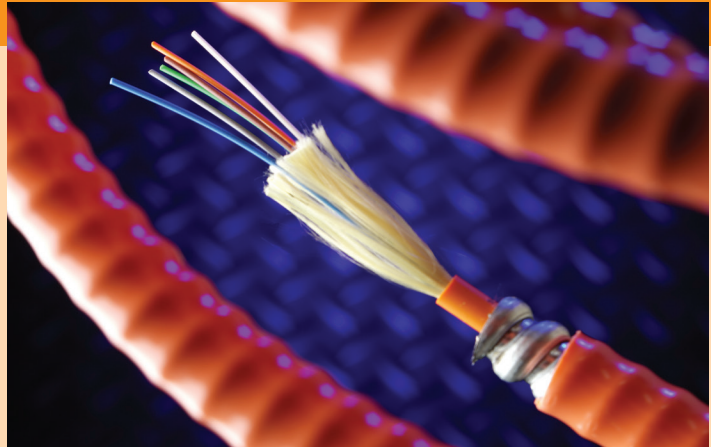
Check out General Cable's Calculation & Catalogs Apps and other mobile tools





## Optical Fiber

General Cable, Corning® Optical Fiber. Names that are synonymous with cable and fiber combine to create the ultimate in fiber optics. General Cable partners with Corning Optical Fiber to deliver the world's most reliable and technologically advanced optical fiber cables.



### Singlemode Standard

General Cable utilizes Corning® SMF-28e+™ fiber as its standard singlemode offering. This is a full-spectrum fiber that is fully backward-compatible with legacy singlemode fiber. It enables increased optical launch power of legacy singlemode fiber, improved macrobend specifications from 0.05 dB to 0.03 dB, and tighter zero dispersion wavelength (λ<sub>0</sub>) tolerance from a range of ± 10 nm to ± 7 nm. This fiber supports all broadband applications and complies with the most stringent industry standards, such as:

- ITU-T G.652 (Tables A, B, C and D)
- IEC 60793-2-50 Type B1.3
- ISO 11801 052
- TIA/EIA 492-CAAB
- Telecordia GR-20-CORE

### Long-Haul

For long-haul applications, rely on General Cable's long history of cable experience and the technology of Corning® LEAF® fiber. This is the most widely deployed non-zero dispersion shifted (NZ-DSF) fiber in the world and the first low water peak NZ-DSF fiber. Its large effective area and industry-leading polarization mode dispersion (PMD) specifications enable 10 Gb/s and 40 Gb/s network systems of the future.

### ClearCurve® ZBL

General Cable, utilizing Corning® ClearCurve® ZBL Optical Fiber, delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. This full-spectrum singlemode optical fiber, when subjected to smaller radii bends, experiences virtually no signal loss. ClearCurve fiber exceeds the most stringent bend performance requirements of ITU-T Recommendations G.657.B3 while remaining fully compliant with ITU-T Recommendation G.652.D and the installed base of Corning SMF-28e® and SMF-28e+® fiber.

### Multimode

#### ClearCurve® Multimode Fiber

Corning® ClearCurve® ultra-bendable laser-optimized™ multimode optical fiber delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. ClearCurve OM3/OM4 multimode fiber is designed to withstand tight bends and challenging cable routes with substantially less signal loss than conventional multimode fiber.

These fibers have superior measurement technology and manufacturing control, and industry-leading CPC® coatings for superior microbend and environmental performance. ClearCurve fiber performance is ensured by minEMBc, the industry's leading standards-approved bandwidth measurement for OM3 fibers. ClearCurve fibers are the only ones to use this measurement to ensure 10 Gb/s performance.

#### 50 micron

These fibers support data rates of 10 Gb/s at 850 nm. They also comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM2, OM3 and OM4\* fibers
- IEC 60793-2-10, type A1a.1, A1a.2 and A1a.3\* fibers
- TIA/EIA, 492AAAB, 492AAAC-A and 492AAAD

\* Assumes IEC draft standard is harmonized with 492AAAD, which was approved by TIA

#### 62.5 micron

These fibers support data rates of 1 Gb/s in both the 850 nm and 1300 nm windows. They comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM1 fiber
- IEC 60793-2-10, type A1b fiber
- TIA/EIA, 492AAAA-A



## Optical Fiber Code Cross-Reference

Fiber Type	General Cable	Corning® Optical Fiber	Description
Standard Loose Tube SM	AQ	SMF-28e+™ Fiber	Full spectrum, low water peak singlemode, ITU-T G.652.D, ISO 11801 052, OS2*
Performance Loose Tube SM	AT	SMF-28e+™ Fiber	Full spectrum, high performance low water peak singlemode with 0.35/0.25 attenuation, ITU-T G.652.D, ISO 11801 052, OS2*
Tight Buffer SM	AP	SMF-28e+™ Fiber	Full spectrum, low water peak singlemode with 900 μm PVC buffer, ITU-T G.652.D, ISO 11801 052, OS2*
Long-Haul SM	AL	LEAF® Fiber	Large $A_{eff}$ , low water peak, NZ-DSF singlemode, ITU-T G.655
Ultra-Bendable SM	AZ	ClearCurve® ZBL	Full spectrum with best macrobending performance, ITU-T G.652.D and ITU-T G.657.A
62.5 μm MM	CG	InfiniCor® 300 Fiber	1 Gb/s ≤ 300 m at 850 nm, OM1* 1 Gb/s ≤ 550 m at 1300 nm
62.5 μm MM	CL	InfiniCor® CL™ 1000 Fiber	1 Gb/s ≤ 500 m at 850 nm, OM1* 1 Gb/s ≤ 1000 m at 1300 nm
Ultra-bendable 50 μm MM	BI	ClearCurve® OM2 Fiber	10 Gb/s ≤ 150 m at 850 nm, OM2* 1 Gb/s ≤ 750 m at 850 nm
Ultra-bendable 50 μm MM	BE	ClearCurve® OM3 Fiber	10 Gb/s ≤ 300 m at 850 nm, OM3* 1 Gb/s ≤ 1000 m at 850 nm
Ultra-bendable 50 μm MM	BL	ClearCurve® OM4 Fiber	10 Gb/s ≤ 550 m at 850 nm, OM4* 1 Gb/s ≤ 1100 m at 850 nm
Ultra-bendable 50 μm MM	BM	ClearCurve® OM4 Fiber	10 Gb/s ≤ 600 m at 850 nm, OM4+* 1 Gb/s ≤ 1100 m at 850 nm

\* Designation per ISO 11801 Fiber Standards

SMF-28e+ is a trademark and Corning, LEAF, InfiniCor and Plus Corning Optical Fiber are registered trademarks of Corning Incorporated, Corning, NY, U.S.A.

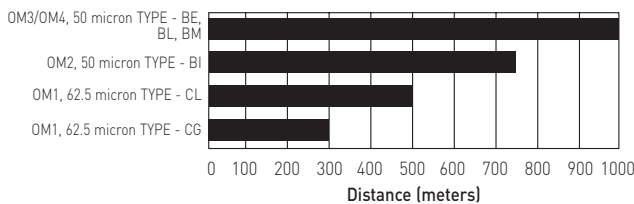
# Fiber Specification and Selection

## MULTIMODE FIBER SELECTION GUIDE

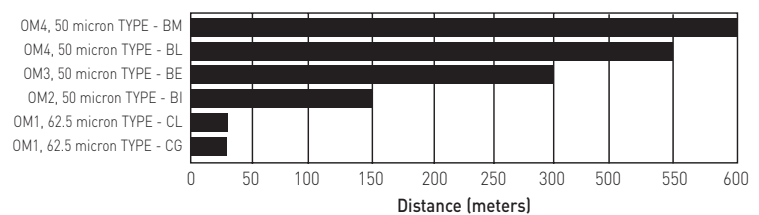
Optical Characteristics:		50/125 PRODUCT FAMILY				62.5/125 PRODUCT FAMILY		UNITS
		OM2 Type-BI	OM3 Type-BE	OM4 Type-BL	OM4 Type-BM	OM1 Type-CG	OM1 Type-CL	
Maximum Finished Cable Attenuation Coefficient	@850 nm	3.0	3.0	3.0	3.0	3.5	3.5	dB/km
	@1300 nm	1.0	1.0	1.0	1.0	1.0	1.0	dB/km
Overfill Launch Bandwidth	@850 nm	700	1500	1500	1500	200	200	MHz.km
	@1300 nm	500	500	500	500	500	500	MHz.km
Lasers Bandwidth	@850 nm	850	2000	4700	5350*	220	385	MHz.km
Gigabit Ethernet Link Length (1 Gbps)	1000 BASE-SX (850 nm)	750	1000	1100	1100	300	500	meters
	1000 BASE-LX (1300 nm)	550	550	550	550	550	1000	meters
10 Gigabit Ethernet Length (10 Gbps)	10G BASE-SR (850 nm)	150	300	550	600	33	33	meters

\* Using 3.0 dB cable attenuation and 0.7 dB connector allocation

1 Gbps Link Lengths @ 850 nm



10 Gbps Link Lengths @ 850 nm



## SINGLEMODE FIBER SELECTION GUIDE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				GIGABIT ETHERNET DISTANCE (METERS)	10 GIGABIT ETHERNET DISTANCE (METERS)	
		1310 nm	1383 nm	1550 nm	1625 nm		1310 nm	1550 nm
<b>OS2 Singlemode - Loose Tube</b>								
Premium	AQ	0.40	0.40	0.30	0.35	10,000	5,000	30,000
High Performance	AT	0.35	0.35	0.25	0.30	10,000	5,000	30,000
<b>OS2 Singlemode - Tight Buffer</b>								
Distribution	AP	0.65	-	0.65	-	10,000	5,000	30,000
Breakout	AP	1.00	-	1.00	-	10,000	5,000	30,000

## SPECIALTY FIBERS — SINGLEMODE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				TYPICAL APPLICATION
		1310 nm	1383 nm	1550 nm	1625 nm	
<b>Singlemode (NZDS)</b>						
Large Effective Area	AL	-	-	0.30	0.30	DWDM
<b>Singlemode</b>						
Bend-Insensitive	AZ	0.40	0.40	0.30	0.30	SMALL BEND RADIUS

Use the code in the "Fiber Type" column to replace the XX notation in the catalog number shown on the catalog page. This identifies the fiber that will be provided with the cable choice.

The fibers in all completed cables are tested 100% at the factory for attenuation, and each fiber must meet the minimum requirements specified by the customer.

# Tight Buffer Distribution Riser Cable

Type OFNR, CSA FT4, Indoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021PNR	2	—	0.19	5	14	20	225	1000	65	290
XX0061PNR	6	—	0.20	5	18	27	225	1000	65	290
XX0121PNR	12	—	0.25	6	24	36	320	1425	112	500
XX0241P1R	24	4	0.34	9	47	70	330	1425	112	500

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*Not for aerial or direct burial applications.

# Tight Buffer Distribution Plenum Cable

Type OFNP, CSA FT6, Indoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021PNU	2	—	0.17	4	12	17	225	1000	65	290
XX0061PNU	6	—	0.18	5	16	24	225	1000	65	290
XX0121PNU	12	—	0.22	6	23	34	320	1423	112	500
XX0241PNU	24	—	0.32	8	45	67	320	1423	112	500

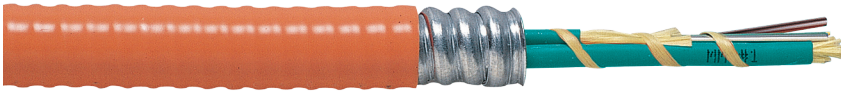
XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*Not for aerial or direct burial applications.

# Tight Buffer Distribution Interlock Armored Riser Cable

Type OFCR, CSA FT4, Indoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021PNR-ILRA	2	—	0.52	13	85	126	550	2447	165	734
XX0041PNR-ILRA	4	—	0.57	14	95	141	550	2447	165	734
XX0061PNR-ILRA	6	—	0.57	14	98	146	550	2447	165	734
XX0121PNR-ILRA	12	—	0.57	14	104	155	550	2447	165	734
XX0241PNR-ILRA	24	—	0.67	17	144	214	550	2447	165	734

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*Not for aerial or direct burial applications.

# Tight Buffer Distribution Interlock Armored Plenum Cable

Type OFCP, CSA FT6, Indoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021PNU-ILPA	2	—	0.49	12	80	119	550	2447	165	734
XX0041PNU-ILPA	4	—	0.49	12	82	122	550	2447	165	734
XX0061PNU-ILPA	6	—	0.49	12	84	125	550	2447	165	734
XX0121PNU-ILPA	12	—	0.49	12	100	149	550	2447	165	734
XX0241PNU-ILPA	24	—	0.59	15	138	205	550	2447	165	734

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*Not for aerial or direct burial applications.

# Tight Buffer Distribution Riser Cable

Type OFNR, CSA FT4, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021ANR.BK	2	—	0.19	5	14	20	300	1334	90	400
XX0061ANR.BK	6	—	0.20	6	18	27	320	1423	96	427
XX0121ANR.BK	12	—	0.25	6	24	36	400	1780	120	534
XX0241ANR.BK	24	—	0.34	9	47	70	320	1425	112	500

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*Not for aerial or direct burial applications.

# Tight Buffer Distribution Plenum Cable

Indoor/Outdoor Dry Water Block, Type OFNP, CSA FT6, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0021ANU.BK	2	—	0.17	4	11.7	17.4	300	1334	90	400
XX0061ANU.BK	6	—	0.20	5	16.0	23.8	320	1423	96	427
XX0121ANU.BK	12	—	0.23	6	22.7	33.8	400	1780	120	534
XX0241ANU.BK	24	—	0.32	8	45.0	67	320	1423	112	500

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.



## Tight Buffer Distribution Interlock Armored Riser Cable

Type OFCR, CSA FT4, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0121ANR-ILRA	12	—	0.57	14	104	155	550	2447	165	734
XX0241ANR-ILRA	24	—	0.67	17	144	214	550	2447	165	734
XX0481A1R-ILRA	48	4	0.99	25	330	491	1000	4448	300	1334
XX0721A1R-ILRA	72	6	1.09	28	422	628	1000	4448	300	1334

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.

## Tight Buffer Distribution Interlock Armored Plenum Cable

Type OFCP, CSA FT6, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0121ANU-ILPA	12	—	0.49	12	100	149	550	2447	165	734
XX0241ANU-ILPA	24	—	0.59	15	138	205	550	2447	165	734
XX0481ANU-ILPAS	48	4	0.80	20	209	311	1000	4448	300	1334
XX0721ANU-ILPAS	72	6	0.95	24	273	406	1000	4448	300	1334

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.

# Loose Tube Single Jacket Riser Cable

Type OFNR, CSA, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0064M1M-DT	6	1	0.36	9	53	80	600	2670	200	890
XX0124M1M-DT	12	2	0.36	9	52	78	600	2670	200	890
XX0244M1M-DT	24	4	0.36	9	51	76	600	2670	200	890

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.

# Loose Tube Single Jacket Plenum Cable

Type OFNP, CSA FT6, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0064M1D-DT	6	1	0.31	8	48	71	300	1334	100	445
XX0124M1D-DT	12	2	0.31	8	47	69	300	1334	100	445
XX0244M1D-DT	24	4	0.31	8	44	65	300	1334	100	445

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.

# Loose Tube Single Jacket Low-Smoke, Zero-Halogen (LSZH) Cable Type OFN/LS, Indoor/Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0064M1Z	6	1	0.36	9	59	89	600	2670	200	890
XX0124M1Z	12	2	0.36	9	60	89	600	2670	200	890
XX0244M1Z	24	4	0.36	9	61	90	600	2670	200	890

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for direct burial applications.

# Tight Buffer Distribution Low-Smoke, Zero-Halogen (LSZH) Cable Type OFNR, CSA FT4, Indoor\*\*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
			IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
							LBS	N	LBS	N
XX0061PNZ	6	—	0.20	5	15	22	225	1000	65	290
XX0121PNZ	12	—	0.23	6	21	31	320	1425	112	500
XX0241P1Z	24	4	0.53	13	92	137	800	3560	270	1201

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\*\* Not for aerial or direct burial applications.

# Loose Tube Single Jacket Cable

Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
				IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
								LBS	N	LBS	N
<b>XX0124M1A-DWB</b>	12	1	4	0.44	11.1	55	82	600	2700	180	800
<b>XX0244M1A-DWB</b>	24	2	3	0.44	11.1	55	82	600	2700	180	800
<b>XX0484M1A-DWB</b>	48	4	1	0.44	11.1	55	82	600	2700	180	800
<b>XX0724M1A-DWB</b>	72	6	0	0.47	12.0	66	98	600	2700	180	800

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

\* Not for aerial or direct burial applications.

# Loose Tube Dual Jacket Cable

Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
				IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
								LBS	N	LBS	N
<b>XX0124H1A-DWB</b>	12	1	4	0.51	13.0	78	116	600	2700	180	800
<b>XX0244H1A-DWB</b>	24	2	3	0.51	13.0	78	116	600	2700	180	800
<b>XX0484H1A-DWB</b>	48	4	1	0.51	13.0	78	116	600	2700	180	800
<b>XX0724H1A-DWB</b>	72	6	0	0.54	13.7	90	134	600	2700	180	800

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

# Loose Tube Single Jacket Armored Cable

Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
				IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
								LBS	N	LBS	N
XX0124M1F-DWB	12	1	4	0.48	12.1	91	135	600	2670	180	800
XX0244M1F-DWB	24	2	3	0.48	12.1	91	135	600	2670	180	800
XX0484M1F-DWB	48	4	1	0.48	12.1	91	135	600	2670	180	800
XX0724M1F-DWB	72	6	0	0.54	13.6	109	162	600	2670	180	800

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

# Loose Tube Dual Jacket Armored Cable

Outdoor\*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
				IN	mm	LBS/1000'	kg/km	INSTALLATION		IN-SERVICE	
								LBS	N	LBS	N
XX0124H1F-DWB	12	1	4	0.59	15.0	128	190	600	2670	180	800
XX0244H1F-DWB	24	2	3	0.59	15.0	128	190	600	2670	180	800
XX0484H1F-DWB	48	4	1	0.59	15.0	128	190	600	2670	180	800
XX0724H1F-DWB	72	6	0	0.63	15.9	143	213	600	2670	180	800

XX denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

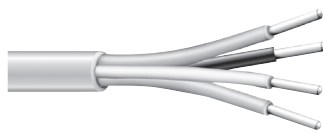


## Quick Reference Applications Guide

General Cable manufactures the most comprehensive line of Carol® Brand Electronic Cables available today for signal & data transmission, security, fire alarm & life safety, sound and audio/video & home entertainment. Our products are readily available for immediate shipment through a network of authorized stocking distributors and distribution centers.

### Alarm and Security:

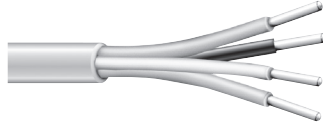
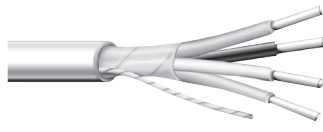
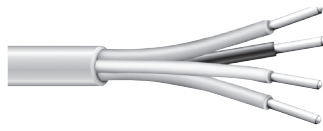
General Cable's Carol® Brand is the right solution for your alarm and security needs. Carol offers as broad an offering as anyone in the industry. Our Alarm & Security Solutions Guide makes it easier to specify and sell the right cables for every application in this ever-growing market.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>PLENUM UNSHIELDED ALARM AND SECURITY</b>		
E3004S	22/4 Multi-Cond. 7/30TC SHLD CM	<ul style="list-style-type: none"> <li>Power-Limited Control Circuits</li> <li>Wiring of Intercom, Security, Audio, Background Music</li> <li>Suggested Voltage Rating: 300 V</li> </ul>
E3032S	18/2 Multi-Cond. 7/30TC SHLD CM	
E3034S	18/4 Multi-Cond. 16/30TC SHLD CM	
E3033S	18/3 Multi-Cond. 16/30TC SHLD CM	
E3042S	16/2 Multi-Cond. 19/30TC SHLD CM	
<b>PLENUM SHIELDED ALARM AND SECURITY</b>		
E2104S	22/4 Multi-Cond. 7/30BC OA SH CMP/CL3P	<ul style="list-style-type: none"> <li>Power-Limited Control Circuits</li> <li>Wiring of Intercom, Security, Audio, Background Music</li> <li>Suggested Voltage Rating: 300 V</li> </ul>
E2106S	22/6 Multi-Cond. 7/30BC OA SH CMP/CL3P	
E2202S	18/2 Multi-Cond. 7/26BC OA SH CMP/CL3P	
E2204S	18/4 Multi-Cond. 7/26BC OA SH CMP/CL3P	
E2206S	18/6 Multi-Cond. 7/26BC OA SH CMP/CL3P	
<b>RISER (NON-PLENUM) UNSHIELDED ALARM AND SECURITY</b>		
E1002S	22/2 Multi-Cond. 7/30BC UNSH CMR/CL3R	<ul style="list-style-type: none"> <li>Power-Limited Control Circuits</li> <li>Wiring of Intercom, Security, Audio, Background Music</li> <li>Suggested Voltage Rating: 300 V</li> </ul>
E1004S	22/4 Multi-Cond. 7/30BC UNSH CMR/CL3R	
E1032S	18/2 Multi-Cond. 7/26BC UNSH CMR/CL3R	
E1034S	18/4 Multi-Cond. 7/26BC UNSH CMR/CL3R	
E1042S	16/2 Multi-Cond. 19/0117BC UNSH CMR	
<b>RISER (NON-PLENUM) SHIELDED ALARM AND SECURITY</b>		
E2002S	22/2 Multi-Cond. 7/30BC OA SH CMR/CL3R	<ul style="list-style-type: none"> <li>Power-Limited Control Circuits</li> <li>Wiring of Intercom, Security, Audio, Background Music</li> <li>Suggested Voltage Rating: 300 V</li> </ul>
E2032S	18/2 Multi-Cond. 7/26BC OA SH CMR/CL3R	
E2033S	18/3 Multi-Cond. 7/26BC OA SH CMR/CL3R	
E2034S	18/4 Multi-Cond. 7/26BC OA SH CMR/CL3R	
E2042S	16/2 Multi-Cond. 19/0117BC OA SH CMR	

### Fire Alarm:

General Cable's offering has expanded from a rather simple and unsophisticated business configured upon large, electromechanical devices to one relying upon the most modern technologies of microprocessor and chip technology. Our Carol® Brand designs have proven themselves in the area of fire system security over time; all are fabricated with solid, bare copper conductors and insulations and jackets of premium-grade PVC. Offered both with and without shields, the formerto protect these critical circuits from noise, these cables will provide the latest in available technology for the system installer and contractor.



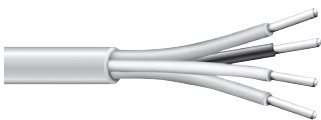
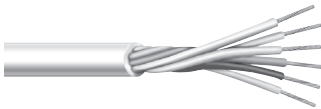
PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>PLENUM UNSHIELDED FIRE ALARM</b>		
E3502S	1/28 Multi-Cond. SBC PVC/NS/FLEX FPLP	<ul style="list-style-type: none"> <li>Residential Housing</li> <li>Business and Office Campus Environments</li> <li>Public Stadiums and Arenas</li> <li>Airport, Train, Bus and Other Transportation Hubs</li> <li>Schools, Colleges and Universities</li> <li>Commercial Buildings</li> </ul>
E3504S	18/4 Multi-Cond. SBC PVC/NS/FLEX FPLP	
E3512S	16/2 Multi-Cond. SBC PVC/NS/FLEX FPLP	
E3522S	14/2 Multi-Cond. SBC PVC/NS/FLEX FPLP	
E3532S	12/2 Multi-Cond. SBC PVC/NS/FLEX FPLP	
<b>PLENUM SHIELDED FIRE ALARM</b>		
E3602S	18/2 Multi-Cond. SBC PVC/OA/FLEX FPLP	<ul style="list-style-type: none"> <li>Residential Housing</li> <li>Business and Office Campus Environments</li> <li>Public Stadiums and Arenas</li> <li>Airport, Train, Bus and Other Transportation Hubs</li> <li>Schools, Colleges and Universities</li> <li>Commercial Buildings</li> </ul>
E3604S	18/4 Multi-Cond. SBC PVC/OA/FLEX FPLP/CMP	
E3612S	16/2 Multi-Cond. SBC PVC/OA/FLEX FPLP	
E3622S	14/2 Multi-Cond. SBC PVC/OA/FLEX FPLP	
E3632S	12/2 Multi-Cond. SBC PVC/OA/FLEX FPLP/CMP	
<b>RISER (NON-PLENUM) UNSHIELDED FIRE ALARM</b>		
E1502S	18/2 Multi-Cond. SBC UNSH TYPE FPLR	<ul style="list-style-type: none"> <li>Residential Housing</li> <li>Business and Office Campus Environments</li> <li>Public Stadiums and Arenas</li> <li>Airport, Train, Bus and Other Transportation Hubs</li> <li>Schools, Colleges and Universities</li> <li>Commercial Buildings</li> </ul>
E1504S	18/4 Multi-Cond. SBC UNSH TYPE FPLR	
E1512S	16/2 Multi-Cond. SBC UNSH TYPE FPLR	
E1522S	14/2 Multi-Cond. SBC UNSH TYPE FPLR	
E1532S	12/2 Multi-Cond. SBC UNSH TYPE FPLR	
<b>RISER (NON-PLENUM) SHIELDED FIRE ALARM</b>		
E2502S	18/2 Multi-Cond. SBC OA SH TYPE FPLR	<ul style="list-style-type: none"> <li>Residential Housing</li> <li>Business and Office Campus Environments</li> <li>Public Stadiums and Arenas</li> <li>Airport, Train, Bus and Other Transportation Hubs</li> <li>Schools, Colleges and Universities</li> <li>Commercial Buildings</li> </ul>
E2504S	18/4 Multi-Cond. SBC OA SH TYPE FPLR	
E2522S	16/2 Multi-Cond. SBC OA SH TYPE FPLR	
E2524S	16/4 Multi-Cond. SBC OA SH TYPE FPLR	
E2532S	14/2 Multi-Cond. SBC OA SH TYPE FPLR	

NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

## Classics – Comm & Control:

Paired cable designs find frequent application in circuits requiring circuit-to-circuit isolation from noise, minimization of capacitance imbalances and a reduction of EMI interference currents. Circuit separation is further enhanced in those designs employing individual circuit shields in concert with an overall shield. These Carol® Brand shielding systems are available from General Cable in myriad combinations to suit the unique needs of the circuit designer.

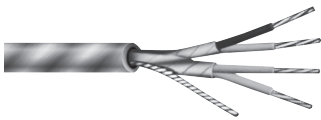
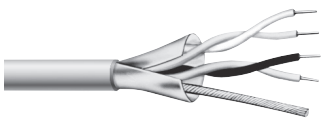
\* Paired constructions are also available



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>RISER SHIELDED CLASSICS</b>		
C2514A	22/2 Multi-Cond. 7/30TC SHLD CM	<ul style="list-style-type: none"> <li>• Remote &amp; Process Control</li> <li>• Public Address Systems</li> <li>• Building Automation for EIA 232 Serial Applications</li> <li>• HVAC/Lighting</li> </ul>
C0763A	22/6 Multi-Cond. 7/30TC SHLD CM	
C2534A	18/2 Multi-Cond. 16/30TC SHLD CM	
C2535A	18/3 Multi-Cond. 16/30TC SHLD CM	
C2543A	18/4 Multi-Cond. 19/30TC SHLD CM	
<b>RISER UNSHIELDED CLASSICS</b>		
C6348A	22/2 Multi-Cond. 7/30TC UNSH CM	<ul style="list-style-type: none"> <li>• Remote &amp; Process Control</li> <li>• Public Address Systems</li> <li>• Building Automation for EIA 232 Serial Applications</li> <li>• HVAC/Lighting</li> </ul>
C4062A	22/3 Multi-Cond. 7/30TC UNSH CM	
C4063A	22/4 Multi-Cond. 7/30TC UNSH CM	
C6351A	20/2 Multi-Cond. 7/28TC UNSH CM	
C2831A	18/3 Multi-Cond. 16/30TC UNSH CM	
<b>PLENUM SHIELDED CLASSICS</b>		
C3158	22/2 Multi-Cond. 7/30TC PVC/SHLD/FLEX CMP	<ul style="list-style-type: none"> <li>• Remote &amp; Process Control</li> <li>• Public Address Systems</li> <li>• Building Automation for EIA 232 Serial Applications</li> <li>• HVAC/Lighting</li> </ul>
C3062	18/2 Multi-Cond. 7/26BC PVC/SHLD/FLEX CMP	
C3063	18/4 Multi-Cond. 7/26BC PVC/SHLD/FLEX CMP	
C3065	18/6 Multi-Cond. 7/26BC PVC/SHLD/FLEX CMP	
C3068	16/2 Multi-Cond. 19/0117BC SHLD/FLEX CMP	
<b>PLENUM UNSHIELDED CLASSICS</b>		
C3115	22/2 Multi-Cond. 7/30TC PVC/UNSH/FLEX CMP	<ul style="list-style-type: none"> <li>• Remote &amp; Process Control</li> <li>• Public Address Systems</li> <li>• Building Automation for EIA 232 Serial Applications</li> <li>• HVAC/Lighting</li> </ul>
C3112	18/2 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP	
C3113	18/4 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP	
C3122	18/8 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP	
C3128	14/2 Multi-Cond. 19/0147BC UNSH/FLEX CL3P	

## Classics – Hi-Temp:

As with the multi-conductor designs, a wide array of insulating and jacketing materials are available to meet specific electronic applications. General Cable's Carol® Brand communication cable products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>MULTI-PAIRED UNSHIELDED HI-TEMP CLASSICS</b>		
C8122	18/1 Multi-Pr. 19/30TC UNSH FLP/PVC CMP	<ul style="list-style-type: none"> <li>• Remote Control Circuits</li> <li>• Process Control and Instrumentation</li> <li>• Suggested Voltage Rating: 300 V</li> </ul>
<b>MULTI-PAIRED SHIELDED HI-TEMP CLASSICS</b>		
C8118	24/2 Multi-Pr. 7/32TC SHLD FFEP/PVDF CMP	<ul style="list-style-type: none"> <li>• Remote Control Circuits</li> <li>• Process Control and Instrumentation</li> <li>• Suggested Voltage Rating: 300 V</li> </ul>
C8109	22/1 Multi-Pr. 7/30TC SHLD FEP/FEP CMP	
C8103	22/1 Multi-Pr. 7/30TC SHLD FEP/PVDF CMP	
C8101	18/1 Multi-Pr. 19/30TC SHLD FEP/FEP CMP	
C8104	18/1 Multi-Pr. 19/30TC SHLD FEP/PVDF CMP	
C8127	24/1 Multi-Pr. 7/32TC SHLD FEP/PVC CMP	
C8113	24/3 Multi-Pr. 7/32TC SHLD FEP/LSPVC CMP	
C8126	22/1 Multi-Pr. 7/30TC SHLD FEP/PVC CMP	
C8124	22/1 Multi-Pr. 7/30TC SHLD FEP/PVC CMP	
C8123	18/1 Multi-Pr. 19/30TC SHLD FEP/PVC CMP	
<b>MULTI-PAIRED DUAL SHIELDED HI-TEMP CLASSICS</b>		
C8117	24/1 Multi-Pr. 7/32TC FOIL/BRD SHLD FEP/FEP CMP	<ul style="list-style-type: none"> <li>• Remote Control Circuits</li> </ul>
C8129	24/2 Multi-Pr. 7/32TC FOIL/BRD SHLD FFEP/PVDF CMP	
<b>MULTI-PAIRED INDIVIDUALLY SHIELDED HI-TEMP CLASSICS</b>		
C8134	24/2 Multi-Pr. 7/32TC ISHLD FFEP/PVC CMP	<ul style="list-style-type: none"> <li>• Remote Control Circuits</li> <li>• Process Control and Instrumentation</li> <li>• Suggested Voltage Rating: 300 V</li> </ul>
C8105	22/2 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP	
C8131	22/3 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP	
C8133	22/6 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP	
C8112	22/2 Multi-Pr. 7/30TC ISHLD FEP/FEP CMP	
C8132	22/6 Multi-Pr. 7/30TC ISHLD FEP/FEP CMP	
C8128	24/2 Multi-Pr. 7/32TC ISHLD FFEP/PVDF CMP	
<b>MULTI-CONDUCTOR UNSHIELDED HI-TEMP CLASSICS</b>		
C8102	18/4 Multi-Cond. 19/30TC UNSH FEP/FEP CMP	<ul style="list-style-type: none"> <li>• Process Control and Instrumentation</li> </ul>
<b>MULTI-CONDUCTOR SHIELDED HI-TEMP CLASSICS</b>		
C8106	18/3 Multi-Cond. 19/30TC SHLD FEP/FEP CMP	<ul style="list-style-type: none"> <li>• Process Control and Instrumentation</li> </ul>
C8114	18/4 Multi-Cond. 19/30TC SHLD FEP/FEP CMP	
<b>MULTI-CONDUCTOR DUAL SHIELDED HI-TEMP CLASSICS</b>		
C8107	18/3 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP	<ul style="list-style-type: none"> <li>• Remote Control Circuits</li> <li>• Process Control and Instrumentation</li> <li>• Suggested Voltage Rating: 300 V</li> </ul>
C8110	18/4 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP	
C8120	18/6 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP	
C8111	16/2 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP	
C8119	16/3 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP	
C8108	16/6 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP	

# EXZEL®:

EXZEL® High-Endurance Electronic Cables are manufactured with the selection, quality and dependability our customers have come to expect from Carol® Brand. From special jacket colors, print legends and TRU-Mark® sequential footage markings to unique constructions, innovative materials and quality manufacturing, General Cable's expert engineers offer superior service and design assistance.

\*Paired constructions are available

\*LSZH constructions are available



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>MULTI-CONDUCTOR UNSHIELDED COMMUNICATION AND CONTROL</b>		
C9009A	22/2 Multi-Cond. 7/30TC UNSH CM	<ul style="list-style-type: none"> <li>• Advanced Signal Transmission in Controlled Environments</li> <li>• Medical Instrumentation &amp; Equipment</li> <li>• Consumer Electronic Peripherals</li> <li>• Industrial Process Control Systems</li> <li>• Suitable for EIA-RS-232 Applications</li> </ul>
C9010A	22/3 Multi-Cond. 7/30TC UNSH CM	
C9011A	22/4 Multi-Cond. 7/30TC UNSH CM	
C9012A	22/6 Multi-Cond. 7/30TC UNSH CM	
C9013A	22/8 Multi-Cond. 7/30TC UNSH CM	
C9014A	22/10 Multi-Cond. 7/30TC UNSH CM	
C9015A	22/15 Multi-Cond. 7/30TC UNSH CM	
C9018A	20/2 Multi-Cond. 7/28TC UNSH CM	
C9019A	20/3 Multi-Cond. 7/28TC UNSH CM	
C9020A	20/4 Multi-Cond. 7/28TC UNSH CM	
C9021A	20/6 Multi-Cond. 7/28TC UNSH CM	
C9022A	20/8 Multi-Cond. 7/28TC UNSH CM	
C9023A	20/10 Multi-Cond. 7/28TC UNSH CM	
C9024A	20/15 Multi-Cond. 7/28TC UNSH CM	
C9028A	2/18 Multi-Cond. 16/30TC UNSH CM	
C9030A	3/18 Multi-Cond. 16/30TC UNSH CM	
C9031A	4/18 Multi-Cond. 16/30TC UNSH CM	
C9032A	6/18 Multi-Cond. 16/30TC UNSH CM	
C9033A	8/18 Multi-Cond. 16/30TC UNSH CM	
C9034A	10/18 Multi-Cond. 16/30TC UNSH CM	
C9035A	15/18 Multi-Cond. 16/30TC UNSH CM	
C9039A	2/16 Multi-Cond. 19/.0117TC UNSH CM	
C9041A	3/16 Multi-Cond. 19/.0117TC UNSH CM	
C9042A	4/16 Multi-Cond. 19/.0117TC UNSH CM	
C9043A	6/16 Multi-Cond. 19/.0117TC UNSH CM	
C9044A	8/16 Multi-Cond. 19/.0117TC UNSH CM	
C9045A	10/16 Multi-Cond. 19/.0117TC UNSH CM	



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>MULTI-CONDUCTOR SHIELDED COMMUNICATION AND CONTROL</b>		
C9109A	22/2 Multi-Cond. 7/30TC SHLD CM	<ul style="list-style-type: none"> <li>• Advanced Signal Transmission in Controlled Environments</li> <li>• Medical Instrumentation &amp; Equipment</li> <li>• Consumer Electronic Peripherals</li> <li>• Industrial Process Control Systems</li> <li>• Suitable for EIA-RS-232 Applications</li> </ul>
C9110A	22/3 Multi-Cond. 7/30TC SHLD CM	
C9111A	22/4 Multi-Cond. 7/30TC SHLD CM	
C9112A	22/6 Multi-Cond. 7/30TC SHLD CM	
C9113A	22/8 Multi-Cond. 7/30TC SHLD CM	
C9114A	22/10 Multi-Cond. 7/30TC SHLD CM	
C9115A	22/15 Multi-Cond. 7/30TC SHLD CM	
C9118A	20/2 Multi-Cond. 7/28TC SHLD CM	
C9119A	20/3 Multi-Cond. 7/28TC SHLD CM	
C9120A	20/4 Multi-Cond. 7/28TC SHLD CM	
C9121A	20/6 Multi-Cond. 7/28TC SHLD CM	
C9122A	20/8 Multi-Cond. 7/28TC SHLD CM	
C9123A	20/10 Multi-Cond. 7/28TC SHLD CM	
C9124A	20/15 Multi-Cond. 7/28TC SHLD CM	
C9127A	18/2 Multi-Cond. 16/30TC SHLD CM	
C9129A	18/3 Multi-Cond. 16/30TC SHLD CM	
C9131A	18/4 Multi-Cond. 16/30TC SHLD CM	
C9132A	18/6 Multi-Cond. 16/30TC SHLD CM	
C9133A	18/8 Multi-Cond. 16/30TC SHLD CM	
C9134A	18/10 Multi-Cond. 16/30TC SHLD CM	
C9135A	18/15 Multi-Cond. 16/30TC SHLD CM	
C9138A	16/2 Multi-Cond. 19/.0117TC SHLD CM	
C9140A	16/3 Multi-Cond. 19/.0117TC SHLD CM	
C9142A	16/4 Multi-Cond. 19/.0117TC SHLD CM	
C9143A	16/6 Multi-Cond. 19/.0117TC SHLD CM	
C9144A	16/8 Multi-Cond. 19/.0117TC SHLD CM	
C9145A	16/10 Multi-Cond. 19/.0117TC SHLD CM	



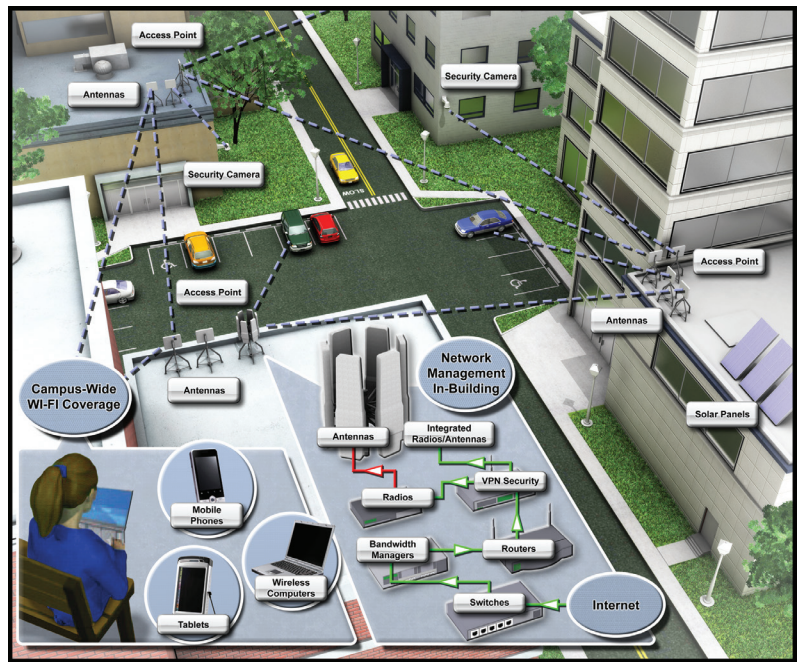
PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>MULTI-CONDUCTOR DUAL SHIELDED COMMUNICATION AND CONTROL</b>		
C9209A	22/2 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	<ul style="list-style-type: none"> <li>• Advanced Signal Transmission in Controlled Environments</li> <li>• Medical Instrumentation &amp; Equipment</li> <li>• Consumer Electronic Peripherals</li> <li>• Industrial Process Control Systems</li> <li>• Suitable for EIA-RS-232 Applications</li> </ul>
C9210A	22/3 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9211A	22/4 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9212A	22/6 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9213A	22/8 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9214A	22/10 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9215A	22/15 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	
C9218A	20/2 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9219A	20/3 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9220A	20/4 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9221A	20/6 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9222A	20/8 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9223A	20/10 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9224A	20/15 Multi-Cond. 7/28TC FOIL/BRD SHLD CM	
C9228A	18/2 Multi-Cond. 16/30TC FOIL/BRD SHLD CM	
C9230A	18/3 Multi-Cond. 16/30TC FOIL/BRD SHLD CM	
C9231A	18/4 Multi-Cond. 16/30TC FOIL/BRD SHLD CM	
C9232A	18/6 Multi-Cond. 16/30TC FOIL/BRD SHLD CM	
C9233A	18/8 Multi-Cond. 16/30TC FOIL/BRD SHLD CM	

NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

# DBRF Coax for Distributed Antenna Systems (DAS):

The ability to communicate anywhere with wireless devices or cell phones, both indoors and out, continues to be a growing demand that requires Distributed Antenna Systems (DAS). A DAS is a network of spatially separated antennas connected to a transport medium, typically coax or fiber optic cable, that provides wireless service within a building or structure.

PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
<b>DBRF COAX</b>		
DBRF100	PVC Jacket - Indoor/Outdoor	<ul style="list-style-type: none"> <li>• 2-way Land Mobile Radios</li> <li>• Wireless Local Area Networks IEEE802.11</li> <li>• Wireless Local Loop</li> <li>• Wireless Internet (WISP)</li> <li>• Wireless Cable (MMDS)</li> <li>• Wireless Broadband Data</li> <li>• Telemetry</li> <li>• Commercial Buildings</li> <li>• Residential Housing</li> <li>• Business and Office Campus Environments</li> <li>• Public Stadiums and Arenas</li> <li>• Transportation Hubs like Airports, Train Stations and Bus Stations</li> <li>• Primary and Secondary Schools, Universities and Colleges</li> <li>• Governments and Municipalities</li> </ul>
DBRF100HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF100R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF100P	LS-PVC Jacket - Indoor/CMP Plenum	
DBRF195	Polyethylene Jacket - Indoor/Outdoor	
DBRF195FL	Polyethylene Jacket - Outdoor/Flooded Water-Resistant	
DBRF195HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF195R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF195P	LS-PVC Jacket - Indoor/CMP Plenum	
DBRF200	Polyethylene Jacket - Indoor/Outdoor	
DBRF200FL	Polyethylene Jacket - Outdoor/Flooded Water-Resistant	
DBRF200HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF200R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF200P	LS-PVC Jacket - Indoor/CMP Plenum	
DBRF240	Polyethylene Jacket - Indoor/Outdoor	
DBRF240FL	Polyethylene Jacket - Outdoor/Flooded Water-Resistant	
DBRF240HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF240R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF240P	LS-PVC Jacket - Indoor/CMP Plenum	
DBRF300	Polyethylene Jacket - Indoor/Outdoor	
DBRF300FL	Polyethylene Jacket - Flooded Water-Resistant Outdoor	
DBRF300HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF300R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF300P	LS-PVC Jacket - Indoor/CMP Plenum	
DBRF400	Polyethylene Jacket - Outdoor	
DBRF400FL	Polyethylene Jacket - Outdoor/Flooded Water-Resistant	
DBRF400HF	FR-LSZH Jacket - Indoor/CMR Riser	
DBRF400R	FR-PVC Jacket - Indoor/CMR Riser	
DBRF400P	PVDF Jacket - Indoor/CMP Plenum - 150C	



## Coax:

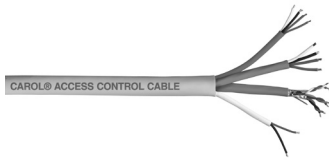
General Cable offers a complete line of Carol® Brand Coaxial Cables for today's sophisticated high-speed, wide-bandwidth electronics products that run over long distances with minimal signal loss or degradation.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
C5775	18/1 RG6/U FL+60%AL/BRD SHLD CL2/CM	<ul style="list-style-type: none"> <li>• CATV</li> <li>• MATV</li> </ul>
C5886	18/1 RG6/U FL+60%AL/BRD SHLD CMR	
C5785	18/1 RG6/U QUAD SHLD CL2/CM	
C5889	18/1 RG6/U QUAD SHLD RISER	
C1156	26/1 RG174U 88%TC/BRD SHLD	
C3524	18/1 RG6/U FL+80%AL/BRD SHLD CL2P/CMP	
C3525	18/1 RG6/U QUAD SHLD CL2P/CMP	
C3521	18/1 RG6/U FL+95%TC/BRD SHLD HD/ETL/CMP	
C3528	14/1 RG11/U FL+60%AL/BRD SHLD CL2P	
C3529	14/1 RG11/U QUAD SHLD CL2P	
C8029	18+1PR18 RG6/U CCTV/CM/CL2	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• RF/Broadcast</li> <li>• HDTV</li> </ul>
C8028	20+1PR18 RG59/U CCTV/CM/CL2	
C1142	20/1 RG59/U 95%BC/BRD SHLD CL2/CM	
C1166	20/1 RG58/U 95%TC/BRD SHLD JAN-C-17A	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• HDTV</li> </ul>
C8030	20+1PR18 RG59/U CCTV PLENUM	
495025	18/1 RG6/U FL+95%TC/BRD SHLD HD/SDI/CMP	
495028	20/1 RG59/U 95%BC/BRD SHLD CMP	
495027	14/1 RG11/U FL+95%TC/BRD SHLD PVDF CMP	
495015	14/1 RG11/U 95%BC/BRD SHLD PVDF CMP	

## Access Control:

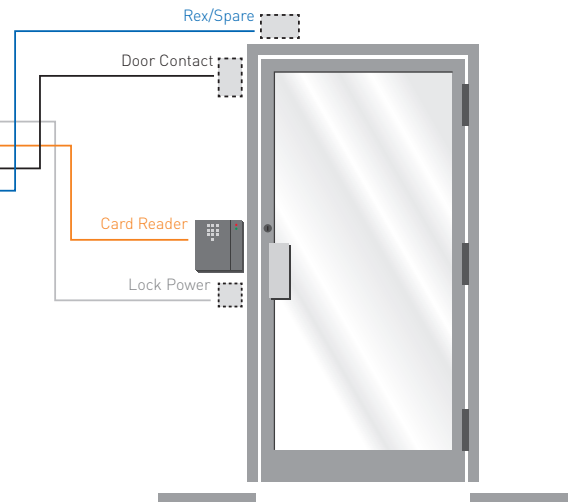
When your job requires Access Control cable, think of Carol® Brand cables first. We manufacture over 1,000 standard electronic cables that we can ship direct from stock, and we have the technical staff and design expertise to meet any customer cable requirement. The cables are installer friendly, as they save time and money on installation. With multiple cables under one jacket, time is saved in preparation and setup, pulling and termination.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
4EPL1S	4 Elements 1 Shielded Overall Jacket Access Control Plenum	<ul style="list-style-type: none"> <li>• Card Readers</li> <li>• Door Contacts</li> <li>• Lock Power</li> <li>• Retinal Scanner in Commercial Buildings</li> </ul>
4EPL4S	4 Shielded Elements Overall Jacket Access Control Plenum	
4ERS1S	4 Elements 1 Shielded Overall Jacket Access Control Riser	
4ERS4S	4 Shielded Elements Overall Jacket Access Control Riser	

### JACKET COLOR CODING & COMPONENT APPLICATION

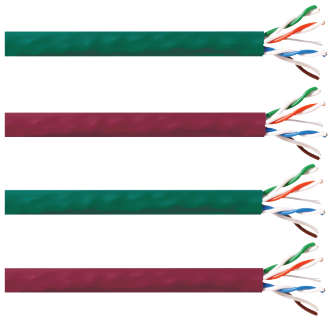
JACKET COLOR	COMPONENT	CABLE TYPE	APPLICATION
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare





## Low Skew 4 Pair® UTP Cables:

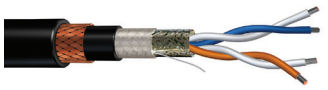
General Cable's Carol® Brand Low Skew UTP Cables are manufactured for your RGB video and Digital CCTV camera needs. While the basic elements of the Low Skew Cables construction are similar to a UTP Cable (Category cable) used for data transmission, the design of the pair twists is the secret to delivering information in a manner necessary for streaming high-quality video.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
E3842S CMP	24 AWG 4 Pair UTP, Plenum	<ul style="list-style-type: none"> <li>• Suitable for RGB Video Applications</li> <li>• Digital CCTV Cameras</li> </ul>
E1842S CMR	24 AWG 4 Pair UTP, Riser	
E3843S CMP	23 AWG 4 Pair UTP, Plenum	
E1843S CMR	23 AWG 4 Pair UTP, Riser	

## Commodore® (Armored):

For cable upgrades or installations, the offshore industry is focusing on network performance and increased bandwidth potential that will last for years. Commodore Coaxial communication and video monitoring LSZH constructions are used in control and coaxial communication applications where performance is critical.



PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
EO24P0022188	24/2P RS485 COMMODORE ABS SHPBRD	<ul style="list-style-type: none"> <li>• Oil, Gas and Petrochemical Applications</li> <li>• Deeper Drilling for Natural Gas and Resources in Extremes</li> <li>• Offshore Rigs</li> <li>• Production Platforms</li> <li>• FPSOs and Ships</li> <li>• Stabilization and Directional Drilling</li> <li>• Shipboard Applications Only</li> </ul>
EO24P0022186	24/2P RS422 COMMODORE ABS SHPBRD	
EO24P0042186	24/4P RS422 COMMODORE ABS SHPBRD	
EO24P0082186	24/8P RS422 COMMODORE ABS SHPBRD	
Z016P0022189	16/2P COMMODORE DEVICENET ABS SHPBRD	
CO18C0012170	18/1P RG6/U COMMODORE ABS SHPBRD	
CO14C0012170	14/1P RG11/U COMMODORE ABS SHPBRD	
CO21C0012170	21/1P RG58/U COMMODORE ABS SHPBRD	
CO20C0012170	20/1P RG59/U COMMODORE ABS SHPBRD	
CO13C0012170	13/1P RG213/U COMMODORE ABS SHPBRD	
EO18P0015337	18/1P COMMODORE FIELDBUS ABS SHPBRD	
EO18P0025337	18/2P COMMODORE FIELDBUS ABS SHPBRD	
EO18P0055337	18/5P COMMODORE FIELDBUS ABS SHPBRD	
EO22P0011203	22/1P COMMODORE PROFIBUS ABS SHPBRD	



# Technical Information

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# NEC and CSA Fire Resistance Levels

FIRE RESISTANCE LEVEL	TEST REQUIREMENT	NEC ARTICLE		
		800	725	760
<b>(Highest) Plenum Cables</b>	NFPA 262 (Steiner tunnel) CSA-FT6 (Steiner tunnel)	CMP	CL3P CL2P	FPLP
<b>Riser Cables Multiple Floors</b>	UL-1666 (Vertical Shaft) CSA-FT4 (Vertical Tray)	CMR	CL3R CL2R	FPLR
<b>General Purpose Cables</b>	UL-1581 (Vertical Tray) CSA-FT4 (Vertical Tray)	CMG	CL3 CL2	FPL
<b>(Lowest) Residential Cables Restricted Use</b>	UL-1581 VW-1 CSA-FT	CMX	CL3X CL2X	

Communications wire and cable for premise installations are in accordance with Article 800 and other applicable parts of the National Electrical Code (NEC), latest issue. Communications wire and cables for Canada are in accordance with the harmonized Canadian Standard Association C22.2 No. 214, Underwriters Laboratories UL 444, latest issue.

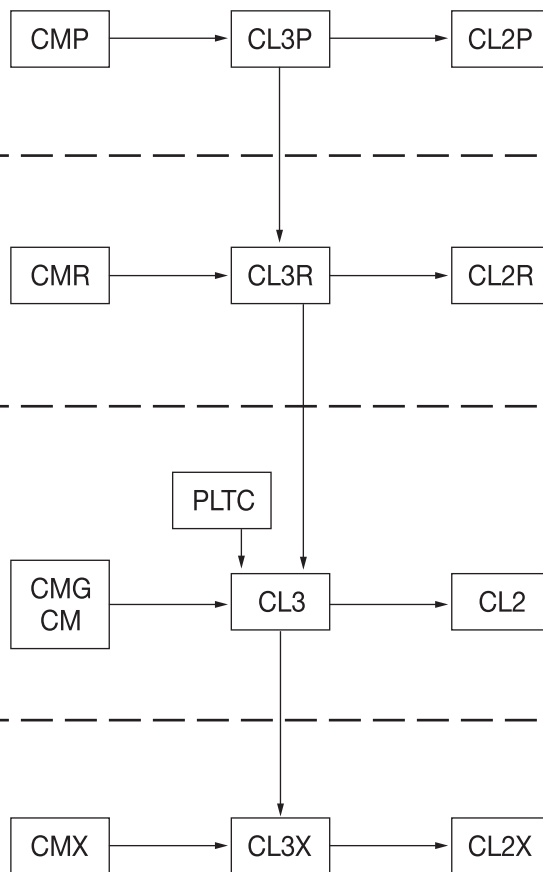
- Notes: 1. Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level.  
 2. Non-fire-rated outside plant telephone cables may not run outside of a rigid metal conduit more than 50 feet from the point of entrance into a building.  
 3. Cables rated CMG or CM may be used in runs penetrating one floor [NEC 800-154].

## Plenum

## Riser

## General Purpose

## Dwellings



TYPE	DESCRIPTION
<b>CM</b>	Communications Wires and Cables
<b>CL2 and CL3</b>	Class 2 and Class 3 Remote-Control, Signaling and Power-Limited Cables
<b>PLTC</b>	Power-Limited Tray Cable

[From 2011 NEC Handbook]

**A** → **B** Cable A shall be permitted to be used in place of Cable B

# Temperature Conversion Chart

To use this chart, find your known temperature (°F or °C) in the shaded column. If the known temperature is in °C and you wish to know its value in °F, move to the adjacent right-hand column. If the known temperature is in °F and you wish to know its value in °C, move to the adjacent left-hand column.

KNOWN °C TEMP °F			KNOWN °C TEMP °F			KNOWN °C TEMP °F			KNOWN °C TEMP °F			KNOWN °C TEMP °F		
-45.0	<b>-49.0</b>	-56.2	-17.2	<b>1.0</b>	33.8	10.6	<b>51.0</b>	123.8	38.3	<b>101.0</b>	213.8	66.1	<b>151.0</b>	303.8
-43.9	<b>-47.0</b>	-52.6	-16.1	<b>3.0</b>	37.4	11.7	<b>53.0</b>	127.4	39.4	<b>103.0</b>	217.4	67.2	<b>153.0</b>	307.4
-42.8	<b>-45.0</b>	-49.0	-15.0	<b>5.0</b>	41.0	12.8	<b>55.0</b>	131.0	40.6	<b>105.0</b>	221.0	68.3	<b>155.0</b>	311.0
-41.7	<b>-43.0</b>	-45.4	-13.9	<b>7.0</b>	44.6	13.9	<b>57.0</b>	134.6	41.7	<b>107.0</b>	224.6	69.4	<b>157.0</b>	314.6
-40.6	<b>-41.0</b>	-41.8	-12.8	<b>9.0</b>	48.2	15.0	<b>59.0</b>	138.2	42.8	<b>109.0</b>	228.2	70.6	<b>159.0</b>	318.2
-39.4	<b>-39.0</b>	-38.2	-11.7	<b>11.0</b>	51.8	16.1	<b>61.0</b>	141.8	43.9	<b>111.0</b>	231.8	71.7	<b>161.0</b>	321.8
-38.3	<b>-37.0</b>	-34.6	-10.6	<b>13.0</b>	55.4	17.2	<b>63.0</b>	145.4	45.0	<b>113.0</b>	235.4	72.8	<b>163.0</b>	325.4
-37.2	<b>-35.0</b>	-31.0	-9.4	<b>15.0</b>	59.0	18.3	<b>65.0</b>	149.0	46.1	<b>115.0</b>	239.0	73.9	<b>165.0</b>	329.0
-36.1	<b>-33.0</b>	-27.4	-8.3	<b>17.0</b>	62.6	19.4	<b>67.0</b>	152.6	47.2	<b>117.0</b>	242.6	75.0	<b>167.0</b>	332.6
-35.0	<b>-31.0</b>	-23.8	-7.2	<b>19.0</b>	66.2	20.6	<b>69.0</b>	156.2	48.3	<b>119.0</b>	246.2	76.1	<b>169.0</b>	336.2
-33.9	<b>-29.0</b>	-20.2	-6.1	<b>21.0</b>	69.8	21.7	<b>71.0</b>	159.8	49.4	<b>121.0</b>	249.8	77.2	<b>171.0</b>	339.8
-32.8	<b>-27.0</b>	-16.6	-5.0	<b>23.0</b>	73.4	22.8	<b>73.0</b>	163.4	50.6	<b>123.0</b>	253.4	78.3	<b>173.0</b>	343.4
-31.7	<b>-25.0</b>	-13.0	-3.9	<b>25.0</b>	77.0	23.9	<b>75.0</b>	167.0	51.7	<b>125.0</b>	257.0	79.4	<b>175.0</b>	347.0
-30.6	<b>-23.0</b>	-9.4	-2.8	<b>27.0</b>	80.6	25.0	<b>77.0</b>	170.6	52.8	<b>127.0</b>	260.6	80.6	<b>177.0</b>	350.6
-29.4	<b>-21.0</b>	-5.8	-1.7	<b>29.0</b>	84.2	26.1	<b>79.0</b>	174.2	53.9	<b>129.0</b>	264.2	81.7	<b>179.0</b>	354.2
-28.3	<b>-19.0</b>	-2.2	-0.6	<b>31.0</b>	87.8	27.2	<b>81.0</b>	177.8	55.0	<b>131.0</b>	267.8	82.8	<b>181.0</b>	357.8
-27.2	<b>-17.0</b>	1.4	0.6	<b>33.0</b>	91.4	28.3	<b>83.0</b>	181.4	56.1	<b>133.0</b>	271.4	83.9	<b>183.0</b>	361.4
-26.1	<b>-15.0</b>	5.0	1.7	<b>35.0</b>	95.0	29.4	<b>85.0</b>	185.0	57.2	<b>135.0</b>	275.0	85.0	<b>185.0</b>	365.0
-25.0	<b>-13.0</b>	8.6	2.8	<b>37.0</b>	98.6	30.6	<b>87.0</b>	188.6	58.3	<b>137.0</b>	278.6	86.1	<b>187.0</b>	368.6
-23.9	<b>-11.0</b>	12.2	3.9	<b>39.0</b>	102.2	31.7	<b>89.0</b>	192.2	59.4	<b>139.0</b>	282.2	87.2	<b>189.0</b>	372.2
-22.8	<b>-9.0</b>	15.8	5.0	<b>41.0</b>	105.8	32.8	<b>91.0</b>	195.8	60.6	<b>141.0</b>	285.8	88.3	<b>191.0</b>	375.8
-21.7	<b>-7.0</b>	19.4	6.1	<b>43.0</b>	109.4	33.9	<b>93.0</b>	199.4	61.7	<b>143.0</b>	289.4	89.4	<b>193.0</b>	379.4
-20.6	<b>-5.0</b>	23.0	7.2	<b>45.0</b>	113.0	35.0	<b>95.0</b>	203.0	62.8	<b>145.0</b>	293.0	90.6	<b>195.0</b>	383.0
-19.4	<b>-3.0</b>	26.6	8.3	<b>47.0</b>	116.6	36.1	<b>97.0</b>	206.6	63.9	<b>147.0</b>	296.6	91.7	<b>197.0</b>	386.6
-18.3	<b>-1.0</b>	30.2	9.4	<b>49.0</b>	120.2	37.2	<b>99.0</b>	210.2	65.0	<b>149.0</b>	300.2	92.8	<b>199.0</b>	390.2

Temperature Conversion Formulas	
°C =	$\frac{5}{9} (°F - 32)$
°F =	$(\frac{9}{5} \times °C) + 32$

# Color Code Chart

BINDER GROUP COLOR	PAIR COUNT
White-Blue	001-025
White-Orange	026-050
White-Green	051-075
White-Brown	076-100
White-Slate	101-125
Red-Blue	126-150
Red-Orange	151-175
Red-Green	176-200
Red-Brown	201-225
Red-Slate	226-250
Black-Blue	251-275
Black-Orange	276-300
Black-Green	301-325
Black-Brown	326-350
Black-Slate	351-375
Yellow-Blue	376-400
Yellow-Orange	401-425
Yellow-Green	426-450
Yellow-Brown	451-475
Yellow-Slate	476-500
Violet-Blue	501-525
Violet-Orange	526-550
Violet-Green	551-575
Violet-Brown	576-600

PAIR NO.	RING CONDUCTOR		TIP CONDUCTOR	
	INSULATION COLOR	BAND MARK	INSULATION COLOR	BAND MARK
1	Blue	White	White	Blue
2	Orange	White	White	Orange
3	Green	White	White	Green
4	Brown	White	White	Brown
5	Slate	White	White	Slate
6	Blue	Red	Red	Blue
7	Orange	Red	Red	Orange
8	Green	Red	Red	Green
9	Brown	Red	Red	Brown
10	Slate	Red	Red	Slate
11	Blue	Black	Black	Blue
12	Orange	Black	Black	Orange
13	Green	Black	Black	Green
14	Brown	Black	Black	Brown
15	Slate	Black	Black	Slate
16	Blue	Yellow	Yellow	Blue
17	Orange	Yellow	Yellow	Orange
18	Green	Yellow	Yellow	Green
19	Brown	Yellow	Yellow	Brown
20	Slate	Yellow	Yellow	Slate
21	Blue	Violet	Violet	Blue
22	Orange	Violet	Violet	Orange
23	Green	Violet	Violet	Green
24	Brown	Violet	Violet	Brown
25	Slate	Violet	Violet	Slate

Note: Bandmarking on the ring conductors is omitted on cables with 5 pairs or less.

# Conduit Capacities by Wire or Cable Diameter

	TRADE SIZES IN INCHES <sup>1</sup>											
	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5
<b>I.D., Inches</b>	.622	.824	1.049	1.380	1.610	2.067	2.469	3.068	3.548	4.026	4.506	5.047
<b>O.D., Inches-Conduit</b>	.840	1.05	1.315	1.660	1.900	2.375	2.875	3.500	4.000	4.500	5.000	5.563
<b>Internal Area, Sq. In.</b>	.304	.533	.864	1.496	2.036	3.356	4.788	7.393	9.887	12.730	15.947	20.006
<b>Permissible Fill, Sq. In.<sup>2</sup></b>	.12	.21	.35	.60	.81	1.34	1.92	2.96	3.95	5.09	6.38	8.00

WIRE/CABLE  
O.D. (INCHES)    AREA  
(SQ. IN.)

<b>.100</b>	.008	15	27	44	76	103	170	243	376	503	648	812	1018
<b>.125</b>	.012	9	17	28	48	66	109	156	240	322	414	519	652
<b>.150</b>	.018	6	12	19	33	46	75	108	167	223	288	360	452
<b>.175</b>	.024	5	8	14	24	33	55	79	122	164	211	265	332
<b>.200</b>	.031	3	6	11	19	25	42	60	94	125	162	203	254
<b>.225</b>	.040	3	5	8	15	20	33	48	74	99	128	160	201
<b>.250</b>	.049	2	4	7	12	16	27	39	60	80	103	129	163
<b>.275</b>	.059	2	3	5	10	13	22	32	49	66	85	107	134
<b>.300</b>	.071	1	3	4	8	11	18	27	41	55	72	90	113
<b>.325</b>	.083	1	2	4	7	9	16	23	35	47	61	76	96
<b>.350</b>	.096	1	2	3	6	8	13	19	30	41	52	66	83
<b>.375</b>	.110	1	1	3	5	7	12	17	26	35	46	57	72
<b>.400</b>	.126	0	1	2	4	6	10	15	23	31	40	50	63
<b>.425</b>	.142	0	1	2	4	5	9	13	20	27	35	44	56
<b>.450</b>	.159	0	1	2	3	5	8	12	18	24	32	40	50
<b>.475</b>	.177	0	1	1	3	4	7	10	16	22	28	35	45
<b>.500</b>	.196	0	1	1	3	4	6	9	15	20	25	32	40
<b>.600</b>	.283	0	0	1	2	2	4	6	10	13	18	22	28
<b>.700</b>	.385	0	0	0	1	2	3	4	7	10	13	16	20
<b>.800</b>	.503	0	0	0	1	1	2	3	5	7	10	12	15
<b>.900</b>	.636	0	0	0	0	1	2	3	4	6	8	10	12
<b>1.000</b>	.785	0	0	0	0	1	1	2	3	5	6	8	10
<b>1.200</b>	1.084	0	0	0	0	0	1	1	2	3	4	5	7
<b>1.400</b>	1.485	0	0	0	0	0	0	1	1	2	3	4	5
<b>1.600</b>	1.948	0	0	0	0	0	0	0	1	2	2	3	4
<b>1.800</b>	2.474	0	0	0	0	0	0	0	1	1	2	2	3
<b>2.000</b>	3.142	0	0	0	0	0	0	0	0	0	1	1	2

<sup>1</sup> Table developed for steel or aluminum conduit.

<sup>2</sup> Permissible occupied area based on NEC-prescribed 40% fill factor.

Note: The reader is cautioned to consult the NEC or BICSI installation manual for specific information regarding conduit fill. Fill rates must be adjusted down based on distances and number of bends.

# Industry Standards, Typical Uses and Electrical Requirements

For Twisted Pair Horizontal Wiring Cable

CATEGORY	INDUSTRY STANDARDS	TYPICAL USES	FREQUENCY	INSERT. LOSS dB/100 M (MAX)	CHARACTERISTICS IMPEDANCE OHMS		NEXT dB (MIN)	PSNEXT dB (MIN)	RETURN LOSS dB (MIN)	PSACRF (PSELFEXT) dB (MIN)	PSAACRF dB (MIN)	PSANEXT dB (MIN)
					MIN	MAX						
<b>Category 3</b>	ANSI/TIA/EIA 568 C.2 ANSI/ICEA S-90-661 NEMA WC63.1	10 BASE-T	772 kHz	2.2	87	117	43	—	—	—	—	—
		4 Mbps TOKEN RING	1 MHz	2.6	85	115	41	—	—	—	—	—
		52 Mbps ATM	4 MHz	5.6	85	115	32	—	—	—	—	—
		100 BASE VG	8 MHz	8.5	85	115	28	—	—	—	—	—
		AnyLAN	10 MHz	9.7	85	115	26	—	—	—	—	—
			16 MHz	13.1	85	115	23	—	—	—	—	—
<b>Category 5e</b>	ANSI/TIA/EIA 568 C.2 ANSI/ICEA S-90-661 NEMA WC63.1 ISO 11801	100 BASE-T	772 kHz	1.8	87	117	67	64	—	63.0	—	—
		52/155 Mbps ATM	1 MHz	2.0	85	115	65	62	20.0	60.8	—	—
		100 BASE VG	4 MHz	4.1	85	115	56	53	23.0	48.7	—	—
		AnyLAN	8 MHz	5.8	85	115	51	48	24.5	42.7	—	—
		100 Mbps TP PMD	10 MHz	6.5	85	115	50	47	25.0	40.8	—	—
		1000 BASE-T	16 MHz	8.2	85	115	47	44	25.0	36.7	—	—
		(Gigabit Ethernet)	20 MHz	9.3	85	115	45	42	25.0	34.7	—	—
		IEE 802.3af DTE	25 MHz	10.4	85	115	44	41	24.3	32.8	—	—
		Power (PoE)	31.25 MHz	11.7	85	115	43	40	23.6	30.9	—	—
		IEE 802.3at for PoE	62.5 MHz	17.0	85	115	38	35	21.5	24.8	—	—
		Plus	100 MHz	22.0	85	115	35	32	20.1	20.8	—	—
<b>Category 6</b>	ANSI/TIA/EIA 568 C.2 ANSI/ICEA S-90-661 NEMA WC66 ISO 11801	155/622 Mbps ATM	772 kHz	1.8	87	117	76.0	74.0	—	67.0	—	—
		1.2 Gbps ATM	1 MHz	2.0	85	115	74.3	72.3	20.0	64.8	—	—
		100 Mbps TP PMD	4 MHz	3.8	85	115	65.3	63.3	23.0	52.8	—	—
		100 BASE-T	10 MHz	6.0	85	115	59.3	57.3	25.0	44.8	—	—
		1000 BASE-T	16 MHz	7.6	85	115	56.2	54.2	25.0	40.7	—	—
		(Gigabit Ethernet)	20 MHz	8.5	85	115	54.8	52.8	25.0	38.7	—	—
		IEE 802.3af DTE	31.25 MHz	10.7	85	115	51.9	49.9	23.6	36.8	—	—
		Power (PoE)	62.5 MHz	15.4	85	115	47.4	45.4	21.5	34.9	—	—
		IEE 802.3at for PoE	100 MHz	19.8	85	115	44.3	42.3	20.1	24.8	—	—
		Plus	200 MHz	29.0	85	115	39.8	37.8	18.0	18.8	—	—
	250 MHz	32.8	85	115	38.3	36.3	17.3	16.8	—	—		
<b>Category 6a</b>	ANSI/TIA 568 C.2 RoHS	IEEE 802.3 10G	1 MHz	2.1	85	115	74.3	72.3	20.0	64.8	78.2	92.5
		BASE-T	4 MHz	3.8	85	115	65.3	63.3	23.0	52.8	66.2	83.5
		100 BASE-T	8 MHz	5.3	85	115	60.8	58.8	24.5	46.7	60.1	79.0
		100 BASE-TX	10 MHz	5.9	85	115	59.3	57.3	25.0	44.8	58.2	77.5
		10 BASE-T	16 MHz	7.5	85	115	56.2	54.2	25.0	40.7	54.1	74.4
		1000 BASE-TX	20 MHz	8.4	85	115	54.8	52.8	25.0	38.8	52.2	73.0
		155 Mb/s ATM	25 MHz	9.4	85	115	53.3	51.3	24.3	36.8	50.2	71.5
		ANSI X3.263	31.25 MHz	10.5	85	115	51.9	49.9	23.6	34.9	48.3	70.1
		100Mb/s	62.50 MHz	15.0	85	115	47.4	45.4	21.5	28.9	42.3	65.6
		IEE 802.3af DTE	100 MHz	19.1	85	115	44.3	42.3	20.1	24.8	38.2	62.5
		Power (PoE)	200 MHz	27.6	85	115	39.8	37.8	18.0	18.8	32.2	58.0
		IEE 802.3at for PoE	250 MHz	31.1	85	115	38.3	36.3	17.3	16.8	30.2	56.5
		Plus	300 MHz	34.3	85	115	37.1	35.1	16.8	15.3	28.7	55.3
			400 MHz	40.1	85	115	35.3	33.3	15.9	12.8	26.2	53.5
	500 MHz	45.3	85	115	33.8	31.8	15.2	10.8	24.2	52.0		

Data subject to change without notice. Contact your Customer Service Representative for latest information.

— No requirement

Note: Higher category may be substituted for lower category.



# Packaging Information

**GenSPEED® Packaging Options:**

- Pull-Pac® cartons offer wide-mouth payouts that enhance cable pulling while preventing tangling and kinks.
- Spool-Pac® cartons offer the option of pulling cable from spools packaged within a carton, which also prevents tangling.
- Spools are a packaging of choice for most category cables.
- Cartons have been designed and preprinted with pertinent information such as brand name, category of cable and cable type. Cartons are also labeled with pertinent product information such as UL listing, category of cable, cable type, color, footage and product description.
- The plenum cable cartons have a green color band for ease of identification, and the riser cartons are identified by a blue color band.
- All GenSPEED cables have the TRU-Mark® sequential footage marking system, from 1000 ft to 0 ft, to reduce waste on the job.
- Most packages are made with partially recycled cardboard. Please recycle. ♻️

**Other Communications Product Packaging Options:**

- Standard Pull-Pac cartons, Spool-Pac cartons and spools
- Sequential footage marking
- Cartons are labeled with pertinent product information such as UL listing, category of cable, cable type, color, footage and product description.



- ▲ **GenSPEED® Pull-Pac®**  
5000 CMR/CMP/CMX  
5350 CMR/CMP  
5500 CMR/CMP  
6 CMR/CMP  
6000E CMR/CMP  
10 UTP CMR/CMP



- ▲ **GenSPEED® D2000 Pull-Pac®**  
5000 CMR/CMP/CMX  
5350 CMR/CMP  
5500 CMR/CMP  
6 CMR/CMP  
6000E CMR/CMP  
10 MTP CMR/CMP



- ▲ **GenSPEED® Basic Spool-Pac®**  
5000 CMR/CMP  
5350 CMR/CMP  
5500 CMR/CMP  
6 CMR/CMP  
10 CMP  
10 MTP CMP



- ▲ **GenSPEED® EZ-Brake™ Spool-Pac®**  
6000E CMR/CMP  
6500P CMR/CMP

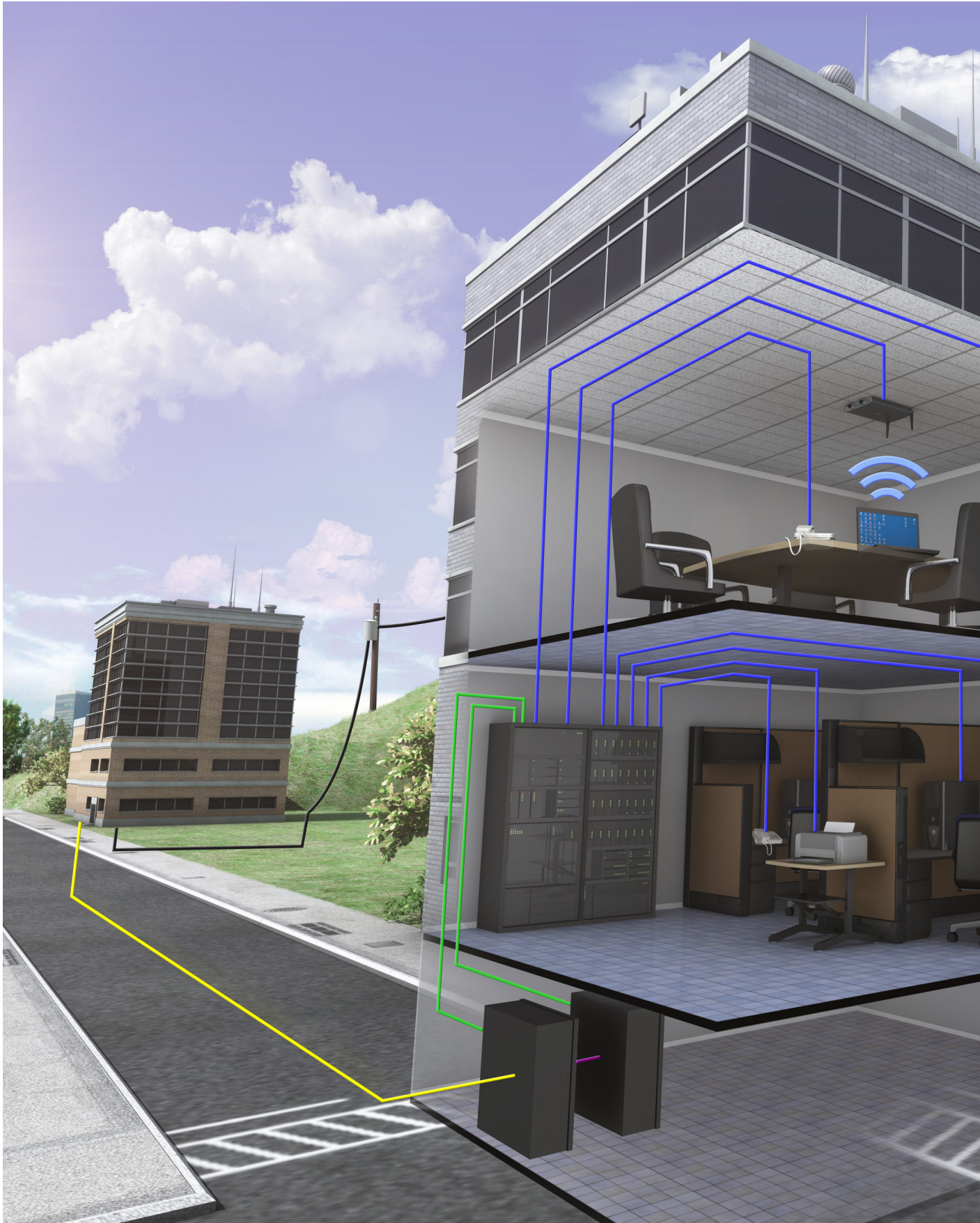


- ▲ **Spool-Pac® Cat 3**



- ▲ **Spool**  
Available for all Datacom products

# Commercial Building Datacom/Topology







## GenSPEED® CABLES

**Horizontal Cabling**  
(Copper or Fiber)

**In-Building Backbone**  
(Fiber)

**Campus Backbone**  
(Copper or Fiber)

**Datacenter**  
(Fiber Ribbon)

**Aerial/Buried OSP**  
(Copper or Fiber)





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- **GenSPEED® Brand Cat 6A 10 Gig, Cat 6 and Cat 5e Products**
- **NextGen® Brand Fiber Optic Products**
- **Carol® Brand Electronic Products**
- **Gepeco® Brand Broadcast, Professional & Commercial A/V Products**
- **General Cable Telecommunications & Central Office Cables**

General Cable has the resources, solutions and superior expertise you can depend on. Our products not only meet but exceed current cabling standards, and can be customized to fit any network or application.

**Let us work with you to plan a complete communications delivery system that will keep you and your customers *Connected at the Speed of Life.***



# Glossary

**Alien Crosstalk (AXT):** Unwanted signal coupling from one component, channel, or permanent link to another is defined as alien crosstalk. Alien crosstalk is only specified by the Standards as a power sum parameter for components and cabling to approximate the energy present when all pairs are energized. Power sum alien measured at the near-end is called Power Sum Alien Near-End Crosstalk loss (PSANEXT) and power sum alien crosstalk at the far-end is called Power Sum Alien Attenuation to Crosstalk Ratio, far-end (PSAACRF). High power sum alien crosstalk levels can compromise the operation of 10G Base-T applications.

**American Wire Gauge (AWG):** A system used to specify wire size. The greater the wire diameter, the smaller the value (e.g., 24 AWG [0.51 mm {0.020 in}]).

**Asynchronous Transfer Mode (ATM):** A high-speed switching transmission protocol that utilizes payload packages organized into 53-byte cells to carry data.

**Attenuation:** The decrease in magnitude of transmission signal strength between points, expressed as the ratio of output to input. Measured in dB, usually at a specific frequency for copper or wavelength for optical fiber, the signal strength may be power or voltage.

**Attenuation-to-Crosstalk Ratio (ACR):** The difference between attenuation and crosstalk, measured in dB at a given frequency. This difference is critical to ensure that the signal sent down the twisted-pair cable is stronger at the receiving end of the cable than any interference signals (crosstalk) from other cable pairs.

**Attenuation-to-Crosstalk Ratio, Far-End (ACRF), formerly ELFEXT:** A measure of the unwanted signal coupling from a transmitter at the near-end into another pair measured at the far-end, and relative to the received signal level.

**Bandwidth:** A range of frequencies, usually the difference between the upper and lower limits of the range, expressed in Hz. It is used to denote the potential capacity of the medium, device or system. In copper and optical fiber cabling, the bandwidth decreases with increasing length.

**Baseband transmission:** A transmission technique in which all of the available bandwidth is dedicated to a single communications channel. Only a single message transfer can occur at a given time.

**Bit Error Rate (BER):** The ratio of incorrectly transmitted bits to total transmitted bits. A primary specification for all transmission systems, it is usually expressed as a power of 10. The number of errors made in a digital transmission as compared to complete accuracy.

**Broadband transmission:** The transmission of multiple signals on a medium at the same time, sharing the entire bandwidth of the medium. The signals are multiplexed into channels with a bandwidth of 6 kHz each and occupy a different frequency on the cable. The signals are divided, usually by frequency divisions, to allow more than one channel on the cable at any time.

**Broadcast:** A technique for sending data simultaneously to all devices attached to a network with a single transmission. See multicast and unicast.

**Capacitance:** The tendency of an electronic component to store electrical energy. Pairs of wire in a cable tend to act as a capacitor. The charge on one of two conductors of a capacitor divided by the potential difference between them (measured in farads).

**Common-mode noise (and longitudinal):** The noise voltage that appears between each signal conductor to ground, caused by electrostatic induction and/or electromagnetic induction.

**Cross-connect:** A facility enabling the termination of cable elements and their interconnection or cross-connection.

**Crosstalk:** The unwanted reception of electromagnetic signals on a communications circuit from another circuit.

**Decibel (dB):** A logarithmic unit used for expressing the loss or gain of signal strength. One dB is the amount by which the pressure of a pure sine wave of sound must be varied in order for the change to be detected by the average human ear.

**Delay skew:** The difference in the propagation delay between any two pairs within the same cable sheath.

**Dielectric constant:** The ratio of capacitance of an insulated wire measured against the same wire uninsulated, but using air as the dielectric, which is equal to one.

**Elongation:** The fraction increase in the length of a material stressed in tension.

**Equal Level Far-End Crosstalk (ELFEXT):** A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end, relative to the received signal level.

**Equal Level Transverse Conversion Transfer Loss (ELTCTL):** A calculation, expressed in dB, of the difference between measured TCTL and the differential mode insertion loss of the disturbed pair.

**Ethernet:** A LAN protocol using a logical bus structure and carrier sense multiple access with collision detection.

**Far-end crosstalk loss:** A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end, relative to the transmitted signal level.

**FEP:** Fluorinated Ethylene Propylene

**Frequency:** The measure of the number of cycles (waves) per second, expressed in Hz.

**Full Duplex:** Simultaneous two-way transmission utilizing all 4 pairs.

**Gigabits per second (Gb/s):** A transmission rate denoting one billion bits per second.

**Gigabit Ethernet:** A carrier sense multiple access with collision detection LAN standard developed by the IEEE 802 group operating at one Gb/s.

**Hertz (Hz):** A unit of frequency equal to one cycle per second.

**Insertion loss:** The signal loss resulting from the insertion of a component, link or channel between a transmitter and receiver (often referred to as attenuation).

**Insulation:** The dielectric material that physically separates wires and prevents conduction between them.

**Longitudinal Conversion Loss (LCL):** A measure of how well a pair is balanced and a useful metric of a cable's ability to reject noise from external sources and to limit electromagnetic radiation from the cable to the environment. Examples of external noise sources include noisy power lines, electrical equipment, walkie-talkies, radio and radar stations, and alien crosstalk from other telecommunications cables. As structured cabling is applied to industrial environments and network speeds increase, balance becomes increasingly important.

# Glossary

**Megabits per second (Mb/s):** A unit of measure used to express the data transfer rate of a system, device or communications channel.

**Megahertz (MHz):** A unit of frequency equal to one million cycles per second (hertz).

**Near-end crosstalk (NEXT):** The unwanted signal coupling between pairs. It is measured at the end of a cable nearest the point of transmission. Contrast with far-end crosstalk.

**Nominal velocity of propagation (NVP):**

The speed of transmission along a cable relative to the speed of light in a vacuum.

**Ohm:** The standard unit of electrical

resistance that measures the opposition to the flow of direct current, called resistance, or opposition to the flow of alternating current, called impedance. One volt will cause one ampere of current to flow through one ohm of resistance. The symbol is W.

**Plenum:** A designated area used for transport of environmental air as part of the air distribution system. Because it is part of the air distribution system, cables installed in this space require a higher fire rating.

**Plenum cable:** A cable with flammability and smoke characteristics that meet the safety requirements of the National Electrical Code® (NEC®) that allow it to be routed in a plenum area without being enclosed in a conduit.

**Polyolefin:** A thermoplastic insulation material having excellent properties and moisture resistance, used in the construction of some communications cable.

**Polyvinyl Chloride (PVC):** A tough, flame-retardant, thermoplastic, water-resistant insulator. Its dielectric losses are higher than polyethylene.

**Polyvinylidene DiFluoride (PVDF):** A highly non-reactive and pure thermoplastic fluoropolymer. It is tough and has low friction.

**Power over Ethernet (PoE):** An application defined in IEEE 802.3af and IEEE 802.3at which allows the use of direct current power sources to deliver low voltage power to remote devices over telecommunications cabling.

**Power Sum Attenuation-to-Crosstalk**

**Ratio (PSACR):** The difference between attenuation and power sum crosstalk measured in dB at a given frequency. This difference is critical to ensure that the signal sent down the twisted-pair cable is stronger at the receiving end of the cable than any interference signals (crosstalk) from other cable pairs.

**Power Sum Attenuation-to-Alien Crosstalk Ratio, Far-End (PSACRF):**

A computation of the unwanted signal coupling from multiple transmitters at the near-end of surrounding cables into a pair measured at the far-end of the center cable under test, and normalized to the received signal level. See Alien Crosstalk (AXT).

**Power Sum Attenuation-to-Crosstalk Ratio, Far-End (PSACRF), formerly PS ELFEXT:**

A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end, and normalized to the received signal level.

**Power Sum Alien Near-End Crosstalk**

**(PSANEXT):** A computation of the unwanted signal coupling from multiple transmitters at the near-end of pairs in the surrounding cables into a pair measured at the near-end of the center cable under test. See Alien Crosstalk (AXT).

**Power Sum Equal Level Far-End Crosstalk**

**(PSELFEXT) Loss:** A computation of the unwanted signal coupling from multiple transmitters at the near end into a pair measured at the far end and normalized to the received signal level.

**Power Sum Near-End Crosstalk**

**(PSNEXT) Loss:** A computation of the unwanted signal coupling from multiple transmitters at the near end into a pair measured at the near end.

**Propagation delay:** The time interval required for a signal to be transmitted from one end of the circuit to the other.

**Restriction on Hazardous Substances**

**(RoHS):** The European Commission's Directive 2002/95/EC adopted January 27, 2003, also known as "RoHS," which restricts the use of certain hazardous substances in electrical and electronic equipment.

**Return loss:** A ratio of the power of the outgoing signal to the power of the reflected signal, expressed in dB.

**Rip cord:** A small filament cord used to rip through the outer cable sheath.

**Riser:** Term applied to vertical sections of cable, such as changing from underground or direct-buried plant to aerial plant. Term also applies to the space used for cable access between floors.

**Separator:** A layer of insulating material, which is placed between pairs inside a cable to enhance crosstalk. This could be in a form of tape, cross-web or just single filler.

**Signal-to-Noise Ratio (SNR):** The ratio between the detected signal power and noise in a receiver, expressed in dB. The prime determining factor in bit error rate. See Bit Error Rate (BER).

**Star Topology:** A Local Area Network (LAN) topology in which end points of the network are connected to a common central switch by point-to-point links.

**Structural Return Loss:** A measure of reflected energy of a transmitted signal due to impedance variations along the length of the cable, expressed in dB.

**T-1:** A digital transmission link with a bandwidth capacity of 1.544 Mb/s. Typical medium is 2-pair telephone wire; however, T-1 is not indicative of transmission medium.

**Transverse Conversion Loss (TCL):**

A ratio, expressed in dB, of the measured common mode voltage on a pair relative to the differential mode voltage on the same pair applied at the same end.

**Transverse Conversion Transfer Loss**

**(TCTL):** A ratio, expressed in dB, of the measured common mode voltage on a pair relative to the differential mode voltage applied at the opposite end of the same pair, or on either end of another pair.

**Velocity of propagation:** The speed of transmission along a cable relative to the speed of light in a vacuum.

**VoIP:** A term used in IP telephony for voice delivered using the Internet Protocol.



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## CONSTRUCTION

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**Markets:**  
Commercial, Residential, Institutional

**Products:**  
Building Wire (Al & Cu), Portable  
Cord, Industrial Cable

## ENERGY

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**Markets:**  
Transmission, Distribution, Generation

**Products:**  
Underground Cable, Substation Cable,  
Overhead Conductor & Cable

## ENTERPRISE & COMMUNICATIONS

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**Markets:**  
Commercial/Residential Buildings,  
Data Centers, Education, Finance,  
Federal/Government, Healthcare,  
AV, Manufacturing

**Products:**  
Datacom Cable, Fiber Optic  
Cable, Electronics Cable,  
Telecommunications Cable

## INDUSTRIAL

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**Markets:**  
Petrochemical, Food & Beverage,  
Automation, Water/Wastewater,  
Power Generation, Pulp & Paper

**Products:**  
Portable & Temporary Power Cord,  
Instrumentation Cable, Control Cable,  
Power Cable, Automation Cable

## MILITARY

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**Markets:**  
On Land, At Sea, In the Air

**Products:**  
Communications Wire & Cable  
(Cu & Fiber), Shore to Ship Power  
Cable, Wire Harnesses & Assemblies

## MINING

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**Markets:**  
Surface, Underground

**Products:**  
Portable & Trailing Mining Cable, Mine  
Power Feeder Cable, Industrial Cable

## RENEWABLE ENERGY

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**Markets:**  
Solar, Hydro, Wind

**Products:**  
Panel Wire, Cu & AL PV Wire, Tower  
Wire & Cable, Collection System  
Cable, Industrial Cable, Utility Cable

## OIL, GAS & PETROCHEMICAL

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**Markets:**  
Upstream, Downstream, Midstream

**Products:**  
Offshore Cable, Subsea Cable,  
Onshore Cable

## TELCO

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**Markets:**  
Independent Telephone Operating  
Companies (ITOCs), Regional Bell  
Operating Companies (RBOCs)

**Products:**  
Air Core Cable, Filled Core Cable,  
Wire Products, Central Office Cable

## TRANSPORTATION

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**Markets:**  
Automotive, Agricultural Equipment,  
Rail & Transit, Heavy Duty & Industrial  
Trucks, Bus

**Products:**  
On-Vehicle Data Communications,  
Control & Power Wire and Cable,  
Battery Cable, Primary Wire, Electric  
Vehicle (EV) Products, Wire Harnesses  
and Assemblies