GenSPEED® BRAND

Datacom Cable

FOR VOICE AND DATA COMMUNICATIONS

MARCH 2018

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 — Gen*SPEED*® Cables.

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

General Cable

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.

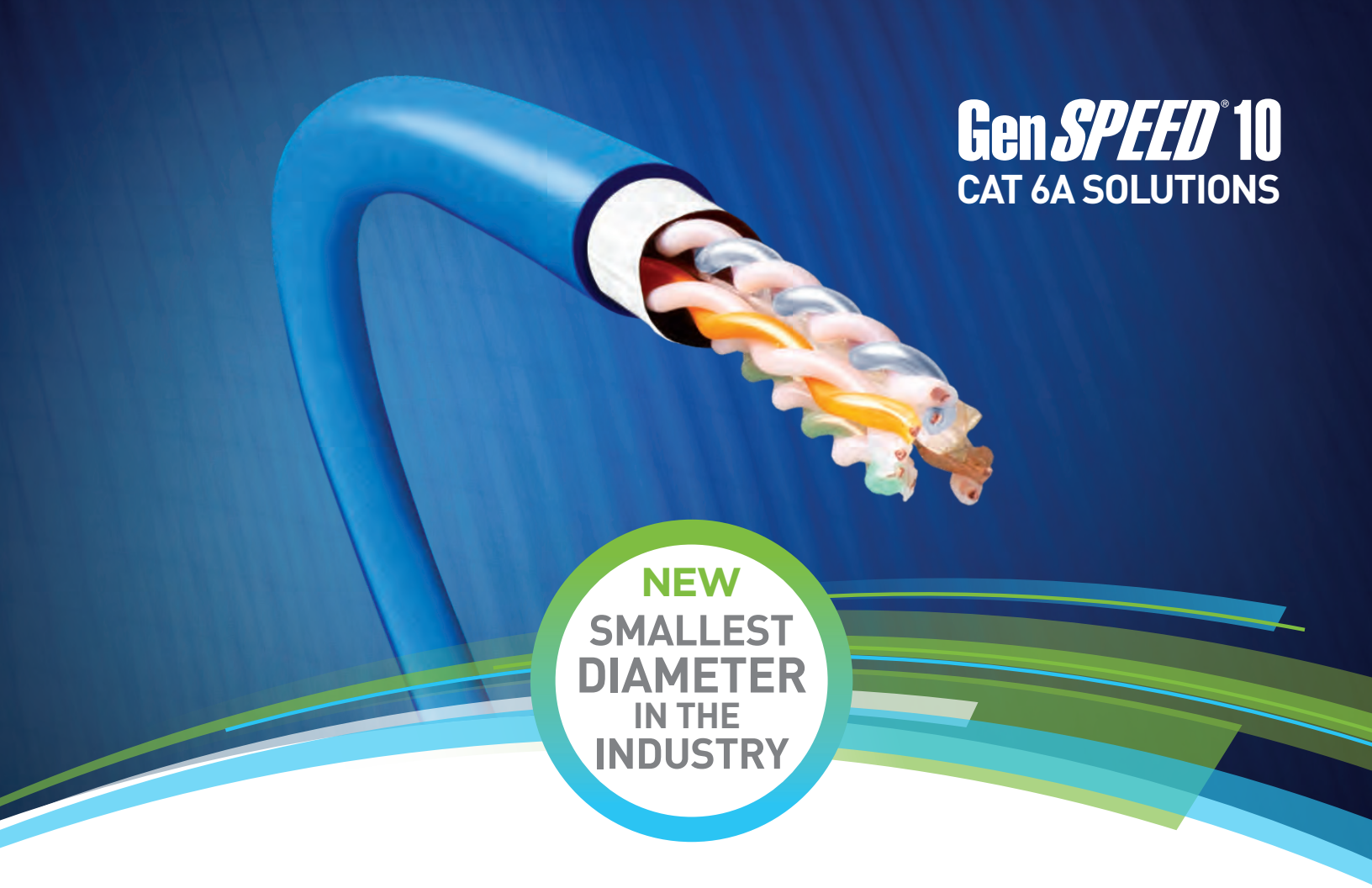
CUSTOMER SERVICE

General Cable is dedicated to customer service and satisfaction. Call our team of professionally trained sales associates at

800-424-5666

with any questions to meet your application needs.

GENERALCABLE.COM



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 **Gen*SPEED*® 10 Category 6A Solutions**. With a revolutionary design developed to find the perfect blend of product performance and product size, the new Gen*SPEED* 10 products offer the smallest Cat 6A cables in the industry with enhanced performance and maneuverability.

Smaller, Lighter & More Flexible

Gen*SPEED* 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 Gen*SPEED* 10 standard packaging can fit 36 reels 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.

Learn more about the new Gen*SPEED* 10 Solutions by calling us at 800-424-5666 or visit gcna.us/genspeed10

General Cable

www.generalcable.com 1.800.243.8020

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.

General Cable | ONE COMPANY
CONNECTING THE WORLD

Visit our Website at
www.generalcable.com

General Cable

Corporate Social Responsibility

CREATING SHARED VALUE

General Cable believes corporate social responsibility (CSR) is about creating shared value. That means keeping a dual focus in our business decisions: what is good for us as a company and what contributes to the greater good of the communities in which we live and work.

SAFETY

Working safer by working together

General Cable has one worldwide safety vision and goal – ***ZERO & BEYOND***. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system. General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.

SUSTAINABILITY

Responsible practices in daily operations

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues. General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.

CITIZENSHIP

A commitment to being good citizens

Being responsible citizens in our communities is of the utmost importance to us. Unequivocal honesty, integrity, forthrightness and fair dealing have long been part of General Cable's core values and are expected globally in all of our business relationships with our customers, employees, suppliers, neighbors and competitors. Our company leaders and employees strive to make a difference throughout a host of volunteer activities and financial support, improving the communities in which we live and work.

INNOVATION

Technologies that power and connect the world

General Cable is delivering innovation that matters. We are focusing on R&D expertise and investing in developing wire and cable solutions that meet the challenges confronting our customers and the world. In working together and using all the ingenuity and creativity we have, we will reach the goal of being the preeminent supplier of wire and cabling solutions in the industry, with both green constructions and designs for the ever-growing renewable energy market.

GREEN INITIATIVE

A commitment to achieving industry-leading standards and responding proactively to environmental global issues.

+1.859.572.8000
info@generalcable.com

Visit www.GeneralCableCSR.com to learn more.

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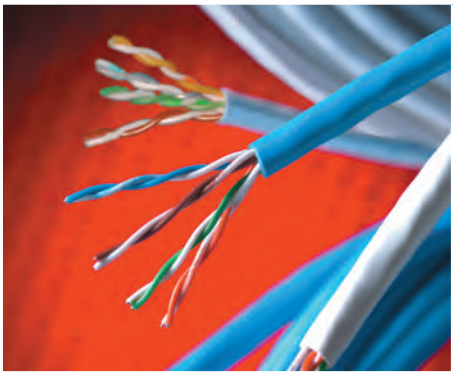
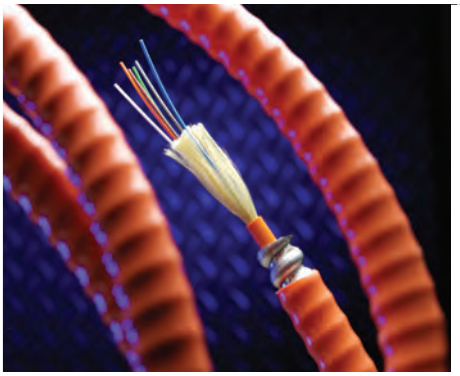
GenAssurance℠ Product Warranty

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 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

PanGen®
STRUCTURED CABLING SOLUTIONS

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.

Additional connectivity partners include:

- Allen-Tel
- Hubbell
- Leviton
- Siemon

General Cable

Quality is Forethought.

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. At General Cable, quality is not just a process, it is forethought. It is the forethought of using the best materials and proactive prevention. This level of **Quality** is best represented in three core steps: **Design, Technology, and Control**.

Design

Control

Technology

General Cable Corporation is committed to developing, producing, and marketing products that meet the performance, quality, value and safety requirements of our customers by continuously improving all areas of our business. We apply Lean Sigma Company-wide, seeking innovative ways to differentiate our products and services and to serve as our customers' and suppliers' most valued business partner.

DESIGN

Compliances

ISO – General Cable's manufacturing facilities are certified to the ISO 9001:2000 quality standard. This standard assures that formalized business processes are being implemented to ensure efficiency, quality, and continuous improvement.

RoHS is the restriction on hazardous substances, a European Union directive that restricts use of heavy metal substances. At General Cable, we strive to be an environmentally responsible company. As such, all of our applicable Datacom products are certified or being upgraded to the RoHS standard.

Materials

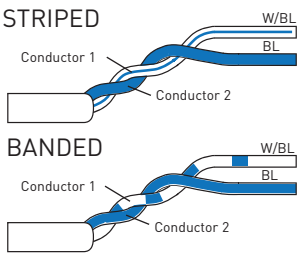
Quality is what you put in your product. General Cable is proud to be partnered with industry-leading material suppliers. Names such as DuPont and Corning are synonymous with product excellence and innovation. Their premium materials are infused into General Cable's copper and fiber optic data communication cables, making our products top-line quality.

plus CORNING Optical Fiber

DuPont™ Teflon®

Striping and Color

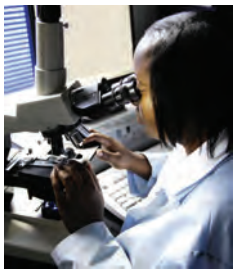
General Cable Datacom Category 6 products are transitioning to striped marking. This extruded marking method provides for deeper, continuous differentiating colors along the entire length of the insulated conductors. General Cable has increased the color chip used for our category cables for maximum color vibrancy.



Packaging

General Cable made packaging enhancements to address tangling and kinking of cable during installation. The standard spool-in-a-box for our Category 6 family of products is now offered in an EZ-Brake Spool-Pac® box with knobs to adjust tension control and pulling speeds. We also redesigned our Pull-Pac® cartons by shaving off the tabs, lengthening the tube and securing the collar to the box.

TECHNOLOGY



Testing Equipment – General Cable replaced differing quality testing equipment in every plant. Consistency increases among test results throughout the plants, since all test parameters are set to exact specifications while checking attenuation and return loss.

Remote Plant Monitoring – General Cable transfers all data tests from every product sampling to a universal database. Any General Cable employee can access the database and confirm the results of all products shipped from our plants.

Trending – General Cable observes test result patterns for every single product originated in the plants. If any product veers from top performance, our proactive steps will correct the issue instantaneously.

Outside Vapor Deposition – General Cable uses optical fiber manufactured by an outside vapor deposition (OVD) process. This produces fiber with greater consistency of bandwidth across the entire length of the cable, translating into better performance and higher quality.

CONTROL

General Cable employs Lean Sigma, which is a management philosophy that combines the views of Lean and Six Sigma. Lean focuses on the continuous process of eliminating waste and non-value-added activities to improve the flow of information and materials. Six Sigma utilizes the DMAIC problem-solving methodology to identify and eliminate sources of variation that affect product characteristics that are critical to the customer's perception of quality. Combining and applying these systems across all business processes maximizes quality and service to the customer while improving overall value.

General Cable has more than doubled product sampling rates for quality and control. Including several checks and balances in the process at both pre- and post-packaging steps ensures our products maintain electrical and physical specifications before leaving the plant. General Cable improved production lines by investing in new manufacturing and test equipment. These updates increase the consistency of all products manufactured throughout the plants. Centralized databases provide constant monitoring of product quality and "Engineering on the Fly" capabilities to aid in the development of new products.

Gen*SPEED*® Category 6A Cables

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 Gen*SPEED*® 10 Category 6A Solutions.

With a revolutionary design developed to find the perfect blend of product performance and product size, the new Gen*SPEED*® 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: Gen*SPEED*® 10 MTP™ Cat 6A 10 Gig Cable; Gen*SPEED*® 10 UTP Cat 6A 10 Gig Cable; Gen*SPEED*® 10,000 Shielded Cat 6A 10 Gig Cable; and Gen*SPEED*® Cat 6A OSP Cable.

General Cable's industry-leading 10 Gig solution, Gen*SPEED*® 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, Gen*SPEED*® 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, Gen*SPEED*® 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. Gen*SPEED*® 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. Gen*SPEED*® 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. Gen*SPEED*® 10,000 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. Gen*SPEED*® 10,000 Shielded cables offer you the ultimate PSANEXT protection.

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

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General Cable

GenSPEED® Category 6A Quick Comparison Chart

JACKET COLOR	PACKAGE	GenSPEED® 10 MTP (p.3)		GenSPEED® 10 UTP (p.7)		GenSPEED® 10,000 U/FTP (p.9)	
		CMR (COMING SOON)	CMP	CMR (COMING SOON)	CMP	CMR	CMP
Blue							
	Spool-Pac®		7141879		7141869		
	Spool		7141849		7141819	7133786	7131786
White							
	Spool-Pac®		7141880		7141870		
	Spool		7141850		7141820	7133787	7131787
Yellow							
	Spool-Pac®		7141882		7141871		
	Spool		7141852		7141822	7133788	7131788
Gray							
	Spool-Pac®		7141881		7141872		
	Spool		7141851		7141821	7133789	7131789
Red							
	Spool-Pac®		7141884		7141873		
	Spool		7141854		7141824	7133790	7131790
Orange							
	Spool-Pac®		7141886		7141874		
	Spool		7141856		7141826	7133791	7131791
Green							
	Spool-Pac®		7141883		7141875		
	Spool		7141853		7141823	7133792	7131792
Black							
	Spool-Pac®		7141888		7141876		
	Spool		7141858		7141828		
Pink							
	Spool-Pac®		7141887		7141878		
	Spool		7141857		7141827		
Purple							
	Spool-Pac®		7141885		7141877		
	Spool		7141855		7141825	7133830	7131830

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

GenSPEED® 10 MTP™ Category 6A Cable

Superior Alien Crosstalk Protection and EMI Immunity in the Industry's Smallest Full Channel 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-C.2 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 easer to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP- LP 0.7A with certified performance for high-power PoE applications.
- 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-C.2
- NEC/CEC Type CMP (NFPA 262)
- UL Listed CMP-LP 0.7A*
- 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_A)

*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

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

PHYSICAL DATA

	CMP (Plenum)
Nominal Cable Diameter (in)	0.25
Nominal Cable Weight (lbs/1000 ft)	32
Minimum Bend Radius (in)	1
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +105

PART NUMBERS

Standard packaging: 1000' Spool

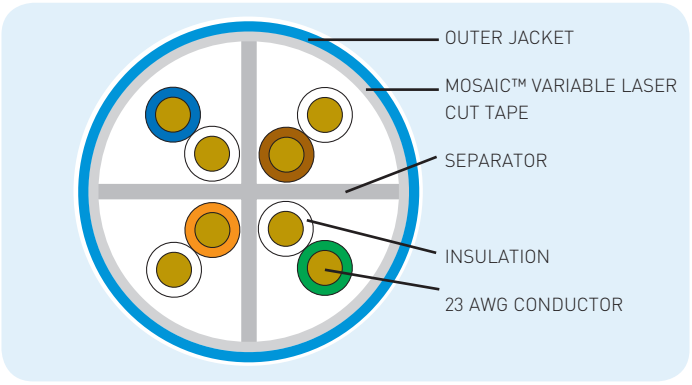
Jacket Color	CMP (Plenum) Spool	CMP (Plenum) Spool-Pac
Blue	7141849	7141879
White	7141850	7141880
Gray	7141851	7141881
Yellow	7141852	7141882
Green	7141853	7141883
Red	7141854	7141884
Purple	7141855	7141885
Orange	7141856	7141886
Pink	7141857	7141887
Black	7141858	7141888

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)		
	General Cable Guaranteed	General Cable Guaranteed	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	General Cable Guaranteed	General Cable Typical	TIA 568-C.2	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-C.2

CROSS-SECTION



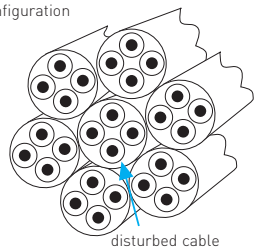
ELECTRICAL CHARACTERISTICS

	Max.	Nom.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.00
DC Resistance Unbalanced Individual Pair %	4.00	< 1
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	

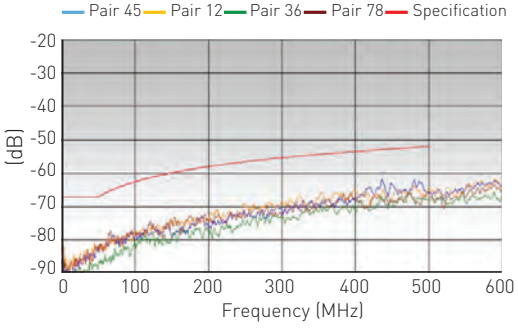
4 PAIR CABLES:

Bundles of 7 Test Results

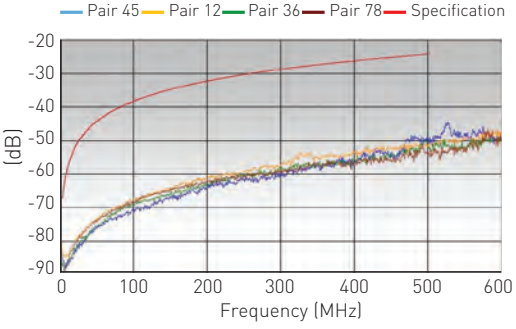
Six-around-one configuration



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-C.2 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-C.2
- 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

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

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

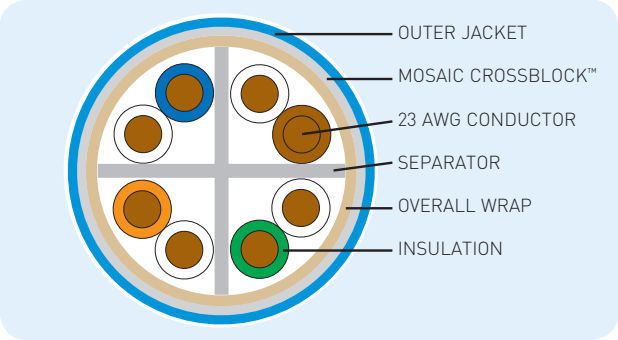
Data subject to change without notice.

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)		
	General Cable Guaranteed	General Cable Guaranteed	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	General Cable Guaranteed	General Cable Typical	TIA 568-C.2	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-C.2

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

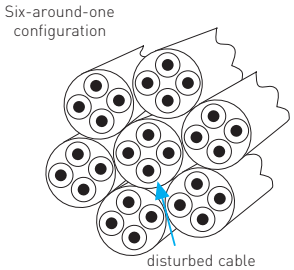


ELECTRICAL CHARACTERISTICS

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

4 PAIR CABLES:

Bundles of 7 Test Results



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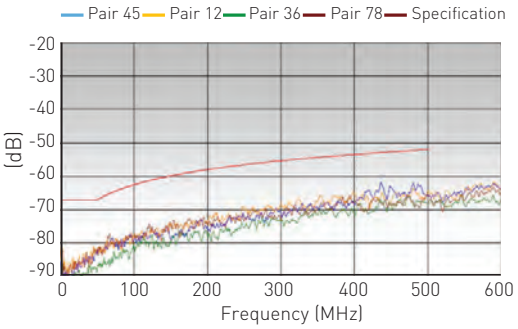
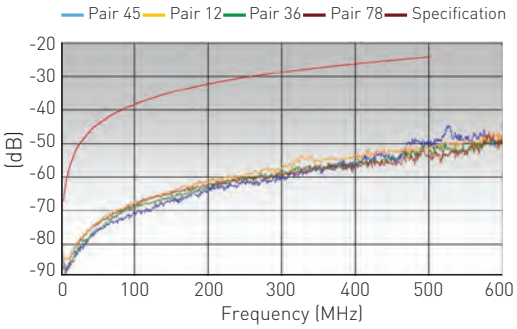


PSAACRF



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.
- 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.
- 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-C.2
- 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
- ISO/IEC 11801 Ed. 2.0 (Class E_A)

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

Separator
- Engineered Cross-Web

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

ANEXT Protection
- Encapsulated Isolation Wrap

PHYSICAL DATA

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

PART NUMBERS

Standard packaging: 1000' Spool

	CMP (Plenum)	
Jacket Color	**Spool**	**Spool-Pac**
Blue	**7141819**	**7141869**
White	**7141820**	**7141870**
Yellow	**7141822**	**7141871**
Gray	**7141821**	**7141872**
Red	**7141824**	**7141873**
Orange	**7141826**	**7141874**
Green	**7141823**	**7141875**
Black	**7141828**	**7141876**
Purple	**7141825**	**7141877**
Pink	**7141827**	**7141878**

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

General Cable

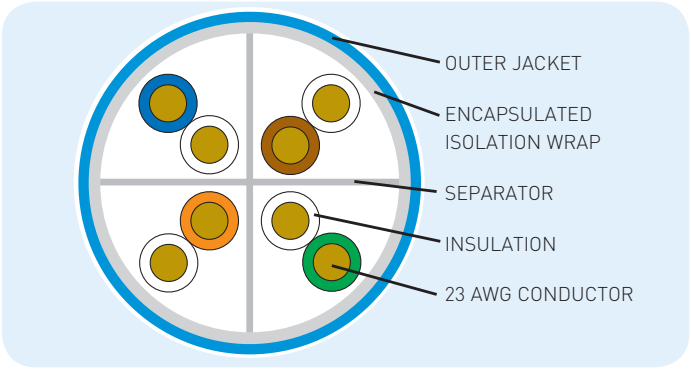
LISTED VERIFIED RoHS Compliant Directive 2011/65/EU Made in U.S.A.

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-C.2

CROSS-SECTION



ELECTRICAL CHARACTERISTICS

	Max.	Nom.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45ns/100m	
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® 10,000 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, 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-C.2
- 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 CHARACTERISTICS

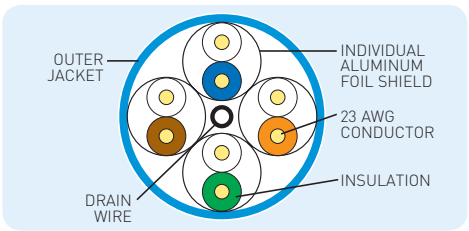
	Max.	**Nom.**
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.00
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	20
Nom. Velocity of Propagation % Speed of Light	CMP: 78 CMR: 75	
Characteristic Impedance Frequency (f): 1-600 MHz	Ohms 100 ± 15	

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

CROSS-SECTION



PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	**Spool**	
	CMR (Non-Plenum)	**CMP** (Plenum)
Blue	**7133786**	**7131786**
White	**7133787**	**7131787**

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

Data subject to change without notice.

General Cable

TIA 568-C.2 Made in U.S.A. RoHS Compliant Directive 2011/65/EU

GenSPEED® 10,000 Category 6A F/UTP (ScTP) Cable

An Enhanced Overall Shielded Cable

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- 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: Polypropylene
- Plenum: Fluoropolymer

Shield
- Polyester-backed aluminum foil (aluminum side in)

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)	0.310	0.298
Nominal Cable Weight (lbs/1000 ft)	40	50
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 +75	-20 to +90

ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (min)	NEXT (min)	Return Loss (min)	PSANEXT (min)			PSAACRF (min)		
	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	General Cable Guaranteed	General Cable Typical	TIA 568-C.2	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-C.2

PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	**CMP** (Plenum)
Blue	**7133586**	**7131586**
White	**7133587**	**7131587**

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)
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for 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. 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

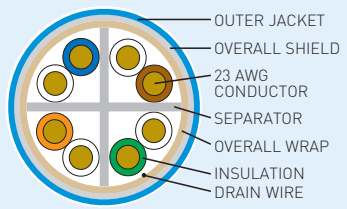
- ANSI/TIA 568-C.2
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum*
- UL Listed CMP-LP (0.7A) for Plenum**
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E_A)

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

CROSS-SECTION



Made in U.S.A. | TIA 568-C.2 | UL LISTED | UL VERIFIED | RoHS Compliant Directive 2011/65/EU

General Cable

GenSPEED® 10,000 with 17 FREE® Category 6A Cable

Signal Strength and Power

Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- Performance guaranteed to 500 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance
- Extensive design development conducted to find the perfect blend of product performance and consistent manufacturability
- Innovative T-Top cross-web provides superior internal electrical characteristics by locking the pairs into a systematic orientation within the cable
- Superior flame and smoke characteristics achieved through innovative design and careful selection of materials with certified suppliers
- AirEs jacket provides superior flexibility and maximum separation of pairs from cable to cable for consistent PSANEXT and PSAACRF performance

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

- ISO/IEC 11801 Ed. 2.0 (Class E_A)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

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
- T-Top cross-web

Jacket
- Non-Plenum: Zero-Halogen Polyolefin

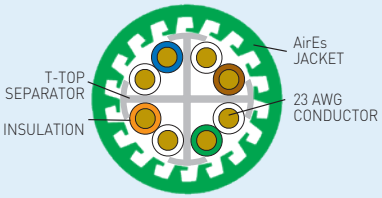
PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.330
Nominal Cable Weight (lbs/1000 ft)	48
Minimum Bend Radius (in)	1.5
Maximum Pulling Force (lbs)	40
Temperature Rating (°C)	
Installation:	-10 to +60
Operation:	-20 to +75

ELECTRICAL CHARACTERISTICS

	Max.	Nom.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	30
Nom. Velocity of Propagation % Speed of Light	70	
Characteristic Impedance Frequency (f): 1-500 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
8	5.3	60.8	24.5	67.0	60.1
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
25	9.4	53.3	24.3	67.0	50.2
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
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-C.2

PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	**Spool** **CMR** (Non-Plenum)
Blue	**7133819-17F**
White	**7133820-17F**

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

Data subject to change without notice.

General Cable

ETL VERIFIED · UL LISTED · TIA 568-C.2 · Made in U.S.A. · RoHS Compliant Directive 2011/65/EU

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 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2	TIA 568-C.2
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-C.2

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'

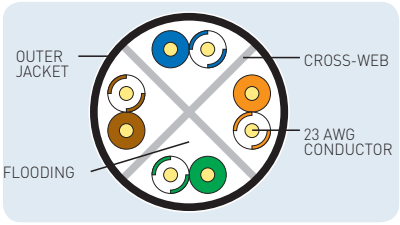
Applications

- 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-C.2
- 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.

Made in U.S.A.

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

General Cable

Gen*SPEED*® Category 6 Cables

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 Gen*SPEED*® Category 6 Cables.

Gen*SPEED* 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 Gen*SPEED* 6 cables, which may qualify for LEED credit from the U.S. Green Building Council.

General Cable's Gen*SPEED* 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 Gen*SPEED* 6000 solution provides a cable system infrastructure with assurance for advanced applications demanding more bandwidth.

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

All Gen*SPEED* Category 6 cables are third-party verified for guaranteed performance and conform to ANSI/TIA/EIA 568-C.2 standards. Gen*SPEED* 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. Gen*SPEED* 6500 Premium is available in a Spool-Pac or on a spool.

GenSPEED® Category 6 Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD Category 6 GenSPEED® 6 (p. 21) CMR	STANDARD Category 6 GenSPEED® 6 (p. 21) CMP	ENHANCED Category 6 GenSPEED® 6000 Enhanced (p. 19) CMR	ENHANCED Category 6 GenSPEED® 6000 Enhanced (p. 19) CMP	PREMIUM Category 6 GenSPEED® 6500 Premium (p. 17) CMR	PREMIUM Category 6 GenSPEED® 6500 Premium (p. 17) CMP
Blue							
	Pull-Pac®	7133800	7131800	7133900	7131900		
	Spool-Pac®	7133840	7131840	7133940	7131940	7133930	7131930
	Spool	7133860	7131860	7133960	7131960	7133970	7131970
White							
	Pull-Pac®	7133801	7131801	7133901	7131901		
	Spool-Pac®	7133841	7131841	7133941	7131941	7133931	7131931
	Spool	7133861	7131861	7133961	7131961	7133971	7131971
Yellow							
	Pull-Pac®	7133802	7131802	7133902	7131902		
	Spool-Pac®	7133842	7131842	7133942	7131942	7133932	7131932
	Spool	7133862	7131862	7133962	7131962	7133972	7131972
Gray							
	Pull-Pac®	7133803	7131803	7133903	7131903		
	Spool-Pac®	7133843	7131843	7133943	7131943	7133933	7131933
	Spool	7133863	7131863	7133963	7131963	7133973	7131973
Red							
	Pull-Pac®	7133804	7131804	7133904	7131904		
	Spool-Pac®	7133844	7131844	7133944	7131944	7133934	7131934
	Spool	7133864	7131864	7133964	7131964	7133974	7131974
Orange							
	Pull-Pac®	7133805	7131805	7133905	7131905		
	Spool-Pac®	7133845	7131845	7133945	7131945	7133935	7131935
	Spool	7133865	7131865	7133965	7131965	7133975	7131975
Green							
	Pull-Pac®	7133806	7131806	7133906	7131906		
	Spool-Pac®	7133846	7131846	7133946	7131946	7133936	7131936
	Spool	7133866	7131866	7133966	7131966	7133976	7131976
Black							
	Pull-Pac®	7133807	7131807	7133907	7131907		
	Spool-Pac®	7133847	7131847	7133947	7131947	7133937	7131937
	Spool	7133867	7131867	7133967	7131967	7133977	7131977
Pink							
	Pull-Pac®	7133808	7131808	7133908	7131908		
	Spool-Pac®	7133848	7131848	7133948	7131948	7133938	7131938
	Spool	7133868	7131868	7133968	7131968	7133978	7131978
Purple							
	Pull-Pac®	7133809	7131809	7133909	7131909		
	Spool-Pac®	7133859	7131859	7133959	7131959	7133939	7131939
	Spool	7133869	7131869	7133969	7131969	7133979	7131979

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-C.2
- 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®

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

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.

General Cable

UL LISTED UL VERIFIED TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

ELECTRICAL PERFORMANCE

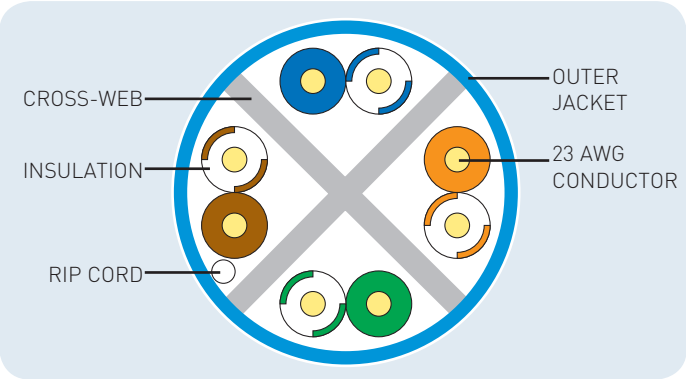
Frequency MHz	PSACR* (min)	ACR* (min)	Insertion Loss (max)		PSNEXT (min)		NEXT (min)	
	Guaranteed	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed
1	77.4	79.4	2.0	1.9	72.3	79.3	74.3	81.3
4	66.8	68.8	3.8	3.5	63.3	70.3	65.3	72.3
10	58.8	60.8	6.0	5.5	57.3	64.3	59.3	66.3
16	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-C.2

Frequency MHz	PSACRF (min)		ACRF (min)		Return Loss (min)		TCL (min)		ELTCTL (min)	
	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	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.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	6.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	35
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 70	
Characteristic Impedance 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-C.2
- 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)	0.235	0.215
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

	Pull-Pac® II		**Spool-Pac®**		**Spool**	
Jacket Color	**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**	**7133959**	**7131959**	**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.

General Cable

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

ELECTRICAL PERFORMANCE

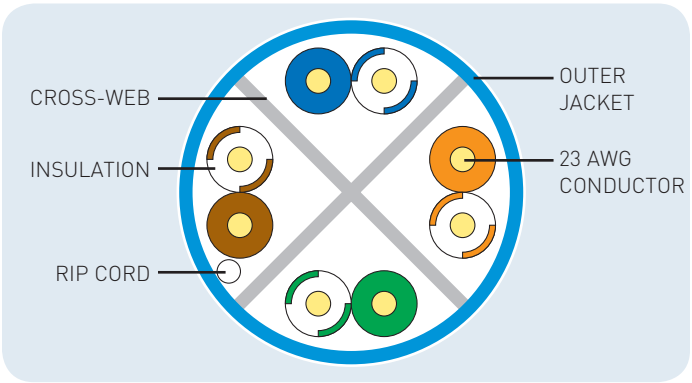
Frequency MHz	PSACR* (min)	ACR* (min)	Insertion Loss (max)		PSNEXT (min)		NEXT (min)	
	Guaranteed	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed	TIA 568-C.2	Guaranteed
1	75.3	77.3	2.0	2.0	72.3	77.3	74.3	79.3
4	64.5	66.5	3.8	3.8	63.3	68.3	65.3	70.3
10	56.4	58.4	6.0	5.9	57.3	62.3	59.3	64.3
16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

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C. Results beyond 350 MHz for reference only.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

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

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

GenSPEED® 6000 ENHANCED CATEGORY 6 CROSS-SECTION



ELECTRICAL CHARACTERISTICS

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

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

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-C.2
- 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

ELECTRICAL CHARACTERISTICS

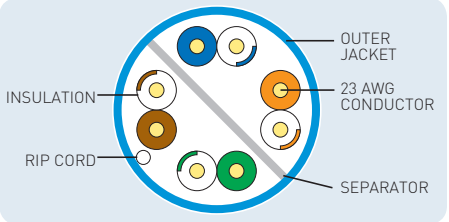
	Max.	Nom.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	CMP: 30 CMR: 35
Nom. Velocity of Propagation % Speed of Light		CMP: 70 CMR: 68
Characteristic Impedance Frequency (f): 1-350 MHz		Ohms 100 ± 15

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

CROSS-SECTION



PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		**Spool-Pac®**		**Spool**	
Jacket Color	**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**

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.

General Cable

ETL LISTED® UL® LISTED UL® VERIFIED ICEA TIA ADVANCING GLOBAL COMMUNICATIONS TIA 568-C.2 Made in U.S.A. RoHS Compliant Directive 2011/65/EU

GenSPEED® 6 Category 6 Cable (22 AWG)

Standards-Compliant with Enhanced PoE Performance

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)	0.220
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.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II CMP (Plenum)
Blue	**8133800**
White	**8133801**

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 minimumorder quantities. Other colors available.

Data subject to change without notice.

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

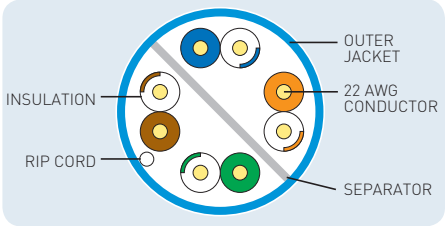
- ANSI/TIA 568-C.2
- TIA TSB-184:2009
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.6A)*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

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

ELECTRICAL CHARACTERISTICS

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

CROSS-SECTION



LISTED VERIFIED TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

General Cable

GenSPEED® 6 with 17 FREE® Category 6 Cable
Standards-Compliant

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

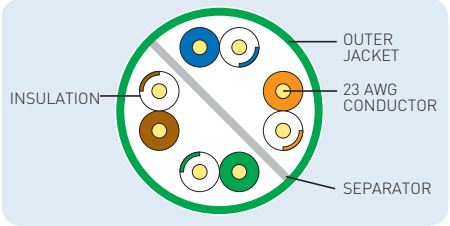
Applications
- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

Standard Compliances
- ANSI/TIA 568-C.2
- 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.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.50
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	30
Nom. Velocity of Propagation % Speed of Light	68	
Characteristic Impedance Frequency (f): 1-350 MHz	Ohms 100 ± 15	

CROSS-SECTION



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. Spec meets ANSI/TIA/EIA 568-C.2 standard for Cat 6 UTP cabling.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

PART NUMBERS

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

Jacket Color	**Pull-Pac® II** **CMR** (Non-Plenum)	**Spool-Pac®** **CMR** (Non-Plenum)	**Spool** **CMR** (Non-Plenum)
Blue	**7133800-17F**	**7133840-17F**	**7133860-17F**
White	**7133801-17F**	**7133841-17F**	**7133861-17F**

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. Other colors available.

Data subject to change without notice.

General Cable

ETL LISTED® UL LISTED UL VERIFIED TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

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

Standards-Compliant

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
- Barrier tape

Shield
- Polyester-backed aluminum foil

Drain Wire
- 24 AWG stranded (7/32) 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)	0.310	0.298
Nominal Cable Weight (lbs/1000 ft)	40	50
Minimum Bend Radius (in)	2.25	2.50
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +90

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

PART NUMBERS

Standard packaging: 1000' Spool

	Spool	
Jacket Color	**CMR** (Non-Plenum)	**CMP** (Plenum)
Blue	**6133785**	**6131785**
White	**6133787**	**6131787**

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

Data subject to change without notice.

Features and Benefits

- Foil shield reduces electromagnetic interference (EMI) for optimal performance
- Performance guaranteed to 250 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'

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

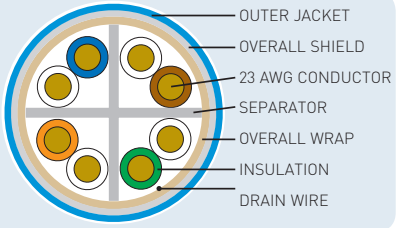
- ANSI/TIA 568-C.2
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum*
- UL Listed CMP-LP (0.7A) for Plenum**
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- 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

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	Ohms
Frequency (f): 1-250 MHz	100 ± 15

CROSS-SECTION



TIA 568-C.2

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

General Cable

GenSPEED® 6 Category 6 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: 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-C.2
- 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)

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)
	1 Cable
Nominal Cable Diameter (in)	0.450
Nominal Cable Weight (lbs/1000 ft)	67.8
Minimum Bend Radius (in)	5.40
Maximum Pulling Force (lbs)	32
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +75

ELECTRICAL CHARACTERISTICS

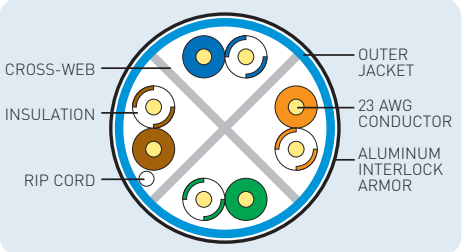
	Max.	Nom.
DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38	7.20
DC Resistance Unbalance Individual Pair %	4.00	< 1
Delay Skew ns/100 m	45	40
Nom. Velocity of Propagation % Speed of Light	70	
Characteristic Impedance Frequency (f): 1-250 MHz	Ohms 100 ± 15	

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

CROSS-SECTION



PART NUMBERS

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

Data subject to change without notice.

General Cable

RoHS Compliant Directive 2011/65/EU

UL LISTED

TIA 568-C.2

Made in U.S.A.

GenSPEED® 6 Category 6 Outside Plant 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
- 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 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.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

PART NUMBER

Standard packaging: 1000' Reel

Jacket Color	Reel
Black	**7136100**

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

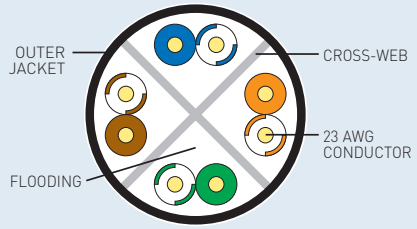
Standard Compliances

- ANSI/TIA 568-C.2
- 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

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): 1-250 MHz	Ohms 100 ± 15

CROSS-SECTION



Data subject to change without notice.

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

GenSPEED® 6 Category 6 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
- 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

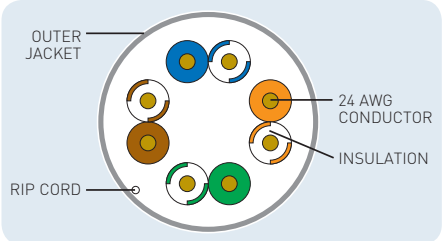
Standard Compliances
- ANSI/TIA 568-C.2
- NEC/CEC Type CMX Outdoor - CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

ELECTRICAL CHARACTERISTICS

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



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

PART NUMBERS
Standard packaging: Pull-Pac® II

Jacket Color	1000' Pull-Pac® II
Blue	**6137160**
White	**6137147**

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

Data subject to change without notice.

TIA 568-C.2

GenSPEED® Category 5e Cables 3

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 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.

Index **Page**

GenSPEED® Category 5e Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD Category 5e GenSPEED® 5000 (p. 41) CMR	STANDARD Category 5e GenSPEED® 5000 (p. 41) CMP	ENHANCED Category 5e GenSPEED® 5350 Enhanced (p. 37) CMR	ENHANCED Category 5e GenSPEED® 5350 Enhanced (p. 37) CMP	PREMIUM Category 5e GenSPEED® 5500 Premium (p. 35) CMR	PREMIUM Category 5e GenSPEED® 5500 Premium (p. 35) CMP
Blue							
	Pull-Pac®	5133299E	5131278E	6133712	6131690	6133299	6131278
	Spool-Pac®	5133374E	5131431E	6133707	6131688	6133403	6131433
	Spool	5133300E	5131282E	6133703	6131686	6133282	6131282
White							
	Pull-Pac®	5133255E	5131361E	6133713	6131691	6133255	6131361
	Spool-Pac®	5133342E	5131450E	6133708	6131689	6133339	6131449
	Spool	5133250E	5131365E	6133704	6131687	6133492	6131618
Yellow							
	Pull-Pac®	5133289E	5131379E	6133715	6131693	6133289	6131546
	Spool-Pac®	5133448E	5131546E	6133717	6131695	6133369	6131379
	Spool		5131648E	6133719	6131697	6133348	6131382
Gray							
	Pull-Pac®	5133200E	5131418E	6133714	6131692	6133200	6131418
	Spool-Pac®	5133329E	5131456E	6133716	6131694	6133331	6131619
	Spool	5133204E	5131475E	6133718	6131696	6133334	
Red							
	Pull-Pac®	5133274E	5131477E			6133274	6131477
	Spool-Pac®	5133427E	5131553E		6131732		6131635
	Spool		5131383E				
Orange							
	Pull-Pac®	5133383E	5131422E	6133761		6133746	6131422
	Spool-Pac®					6133383	6131576
	Spool	5133667E			6131733		
Green							
	Pull-Pac®	5133512E	5131547E		6131699	6133512	6131547
	Spool-Pac®	5133693E	5131575E		6131731	6133615	6131575
	Spool	5133649E	5131649E		6131700	6133616	6131757
Black							
	Pull-Pac®	5133696E	5131683E		6131707	6133696	6131683
	Spool-Pac®						6131829
	Spool		5131689E				
Pink							
	Pull-Pac®	5133290E	5131380E			6133290	6131709
	Spool-Pac®	5133447E	5131478E			6133447	6131478
	Spool					6133341	
Purple							
	Pull-Pac®	5133445E	5131730E			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

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-C.2

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		**Spool-Pac®**		**Spool**	
Jacket Color	**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**

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.

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

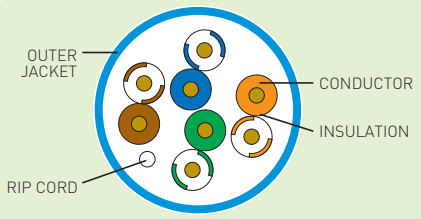
Standard Compliances

- ANSI/TIA 568-C.2
- 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



TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

GenSPEED® 5350 Enhanced Category 5e Cable
High Performance

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-C.2
- 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)

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 CHARACTERISTICS

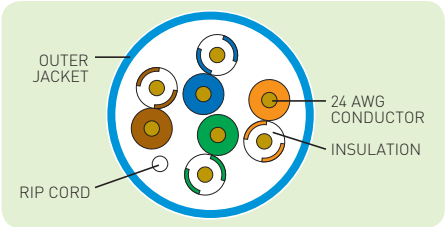
DC Resistance (max) Ohms/100 m (328 ft) @ 20°C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-350 MHz	Ohms 100 ± 15

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	—
200	32.0	31.8	—
250	36.4	30.3	—
300	40.5	29.1	—
350	44.3	28.1	—

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

CROSS-SECTION



PART NUMBERS
Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		**Spool-Pac®**		**Spool**	
Jacket Color	**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**

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® 5350 with 17 FREE® Enhanced Category 5e Cable

High Performance

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	—
200	32.0	31.8	—
250	36.4	30.3	—
300	40.5	29.1	—
350	44.3	28.1	—

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

PART NUMBERS

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

Jacket Color	**Pull-Pac® II** **CMR** (Non-Plenum)
Blue	**6133500-17F**
White	**6133501-17F**

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.

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

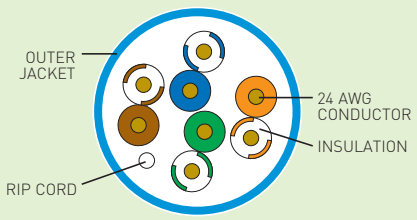
Standard Compliances

- ANSI/TIA 568-C.2
- 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

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	70
Characteristic Impedance Frequency (f): 1-350 MHz	Ohms 100 ± 15

CROSS-SECTION



Data subject to change without notice.

VERIFIED

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

General Cable

GenSPEED® 5000 Category 5e Cable

Standards-Compliant Extended Frequency

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-C.2
- 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)

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

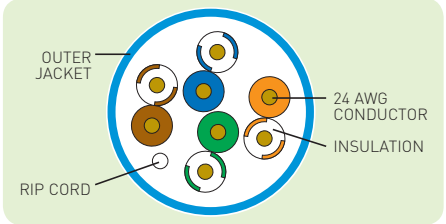
PHYSICAL DATA

	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 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	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-200 MHz	Ohms 100 ± 15

CROSS-SECTION



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 200 MHz are for information only.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		**Spool-Pac®**		**Spool**	
Jacket Color	**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**

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.

General Cable

UL LISTED UL VERIFIED ETL LISTED CSA TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

GenSPEED® 5000 with 17 FREE® Category 5e Cable

Standards-Compliant

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	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	17.3
300	41.0	28.1	16.8
350	44.9	27.1	16.3

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-C.2 standard for Cat 5e UTP cabling.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

PART NUMBERS

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

Jacket Color	**Pull-Pac® II** **CMR** (Non-Plenum)	**Spool-Pac®** **CMR** (Non-Plenum)	**Spool** **CMR** (Non-Plenum)
Blue	**5133299E-17F**	**5133374E-17F**	**5133300E-17F**
White	**5133255E-17F**	**5133342E-17F**	**5133250E-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. Other colors available.

Data subject to change without notice.

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

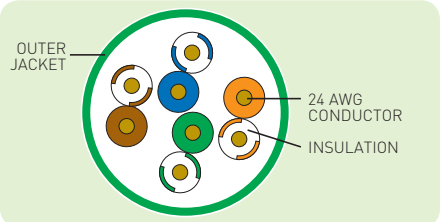
Standard Compliances

- ANSI/TIA 568-C.2
- 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

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): 1-200 MHz	Ohms 100 ± 15

CROSS-SECTION



VERIFIED

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

GenSPEED® 5000 Category 5e F/UTP (ScTP) Cable
Standards-Compliant

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

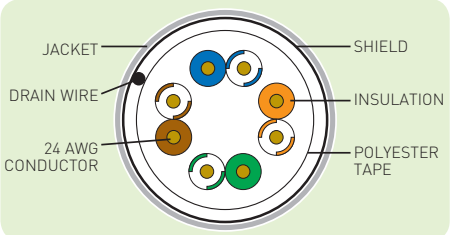
Applications
- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

Standard Compliances
- ANSI/TIA 568-C.2
- 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	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

CROSS-SECTION



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-C.2

PART NUMBERS
Standard packaging: 1000' Spool

Jacket Color	Spool: CMR (Non-Plenum)	Spool: CMP (Plenum)
Blue	**2133496E**	**2131611E**
White	**2133774E**	**2131778E**

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® 5000 Category 5e Interlock Armored Cable

Standards-Compliant

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-C.2

PART NUMBERS

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

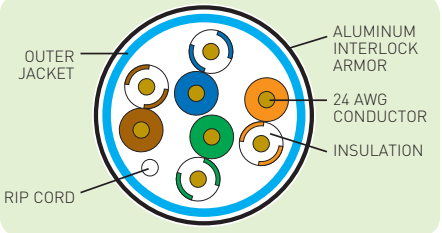
Applications
- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video
- Indoor applications only

Standard Compliances
- ANSI/TIA 568-C.2
- 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

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): 1-100 MHz	Ohms 100 ± 15

CROSS-SECTION



Data subject to change without notice.

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

GenSPEED® 5000 Category 5e Outside Plant Cable

Standards-Compliant

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-C.2
- 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

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 CHARACTERISTICS

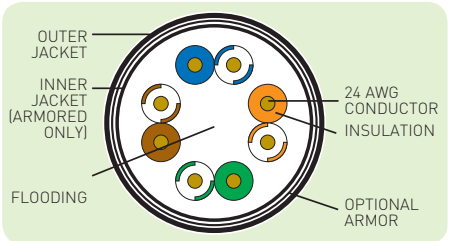
DC Resistance (max) Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.00
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	69
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

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-C.2

CROSS-SECTION



PART NUMBERS

Standard packaging: 1000' Reel

Jacket Color	Reel	Armor
Black	**5136100**	None
Black	**5136101**	Aluminum

Data subject to change without notice.

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

GenSPEED® 5000 Category 5e Residential CMX Outdoor-CMR 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

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-C.2

PART NUMBERS

Standard packaging: Pull-Pac® II

Jacket Color	**600' Pull-Pac® II** **CMR** (Non-Plenum)	**1000' Pull-Pac® II** **CMR** (Non-Plenum)
Blue		**2137160E**
White		**2137147E**

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

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

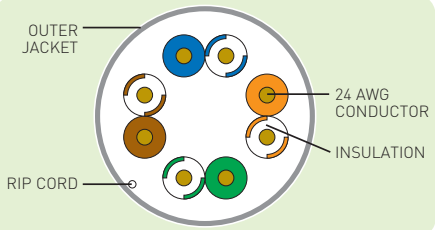
- ANSI/TIA 568-C.2
- NEC/CEC Type CMX OUTDOOR-CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

ELECTRICAL CHARACTERISTICS

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): 1-100 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



Data subject to change without notice.

VERIFIED

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

GenSPEED® 5000 Category 5e Backbone 25 Pair Cable

Standards-Compliant

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-C.2
- 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)

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 CHARACTERISTICS

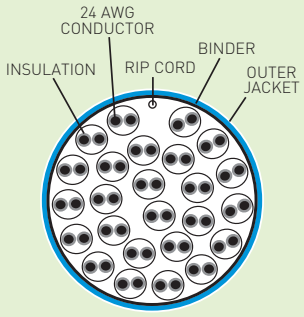
DC Resistance (max) Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	5.00
Delay Skew (max) ns/100 m	45
Propagation Delay (max) ns @ 100 MHz	CMP: 518 CMR: 538
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 68
Characteristic Impedance Frequency (f): 1-100 MHz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

ELECTRICAL PERFORMANCE

Frequency MHz	Insertion Loss (max)	NEXT (min)	Return Loss (min)
0.772	1.8	67.0	—
1	2.0	65.3	20.0
4	4.1	56.3	23.0
8	5.8	51.8	24.5
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.

CROSS-SECTION



PART NUMBERS

Standard packaging: 1000' Reel

Jacket Color	Reel CMR (Non-Plenum)	Reel CMP (Plenum)
Blue	**2133694E**	
White		**2131550E**

Data subject to change without notice.

General Cable

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

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.

Category 3 Plenum

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

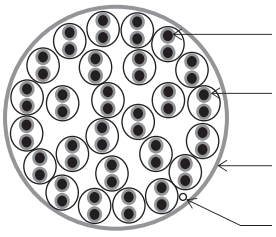
Packaging
- 1000' Pull-Pac® (PP)
- 1000' spool (SP)
- 1000' Spool-Pac® (SPC)
- 1000' reel (RL)
- Per order length (POL)

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

Compliances
- ANSI/TIA 568-C.2
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-90-661

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

Data subject to change without notice.



Physical Data

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

Electrical Characteristics

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

General Cable

UL LISTED UL VERIFIED 4 Pair 25 Pair TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

Category 3 Non-Plenum

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.

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

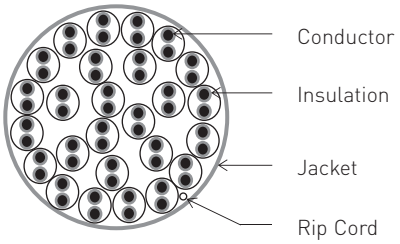
Compliances

- ANSI/TIA 568-C.2
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-100-661

Electrical Characteristics

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



Physical Data

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

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

TIA 568-C.2

4 Pair
25 Pair
VERIFIED

General Cable

Central Office Cables 5

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

Data subject to change without notice.

Electrical Characteristics

	22 AWG	24 AWG
DC Resistance (max) Ohms/1000 ft	17.8	28.6
Coaxial Capacitance (nom) microfarads/kft @ kHz	0.150	0.125
Characteristic Impedance 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"

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

c UL us LISTED

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

Distributing Frame Wire

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"

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

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

General Cable

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

c UL us LISTED

DSX Distribution Frame Wire

Type "Y2" • Spec. 5506

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
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
Capacitance Unbalance (max) Picofarads/100ft @ 1.0 kHz	70

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

c UL us LISTED

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

Customer Premise Cross-Connect Wire Spec. 5006

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

PRODUCT NUMBER	PAIRS	AWG	COLOR CODE				PKG./ CARTON	O.D. (INCHES)	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

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

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)

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

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

c UL us LISTED

Customer Premise Cross-Connect Wire Tight Twist

Type "F" • Spec. 5008

PRODUCT NUMBER	PAIRS	COLOR CODE PAIR 1	PKG.	PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/KFT)
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

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

Network Outdoor Cross-Connect Wire

Type "G" • Spec. 5010

PRODUCT NUMBER	COLOR CODE PAIR 1	PKG./ CARTON	WEIGHT (LBS/ KFT)
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

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)

c UL us LISTED

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

Universal Cross-Connect Wire

Type "N" • Spec. 5013

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)

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

General Cable

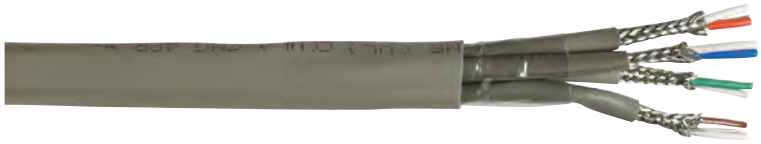
Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

c UL us LISTED

100 Ohm Individually Braided Shielded Twisted Pair Cable

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



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.

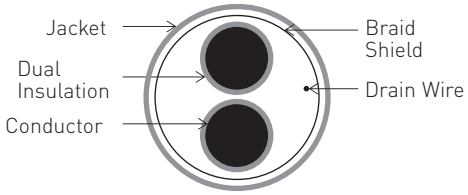
Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000 ft @ 20°C	18
Resistance Unbalanced (max) Individual Pair % @ 20°C	5
Shield Resistance (nom) Ohms @ 1000 ft	3.3
Mutual Capacitance (max) pF/ft @ 1 kHz	19
Impedance Ohms/772 kHz	100 ± 5

Frequency	Attenuation dB/1000 ft	NEXT dB/1000 ft	FEXT dB/1000 ft
.100 MHz	2.2	97	109
.772 MHz	6.1	93	94
1.000 MHz	7.0	88	92
1.600 MHz	9.1	85	90
3.150 MHz	13.2	82	88
6.300 MHz	19.1	80	83
10.000 MHz	25.0	72	71

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

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

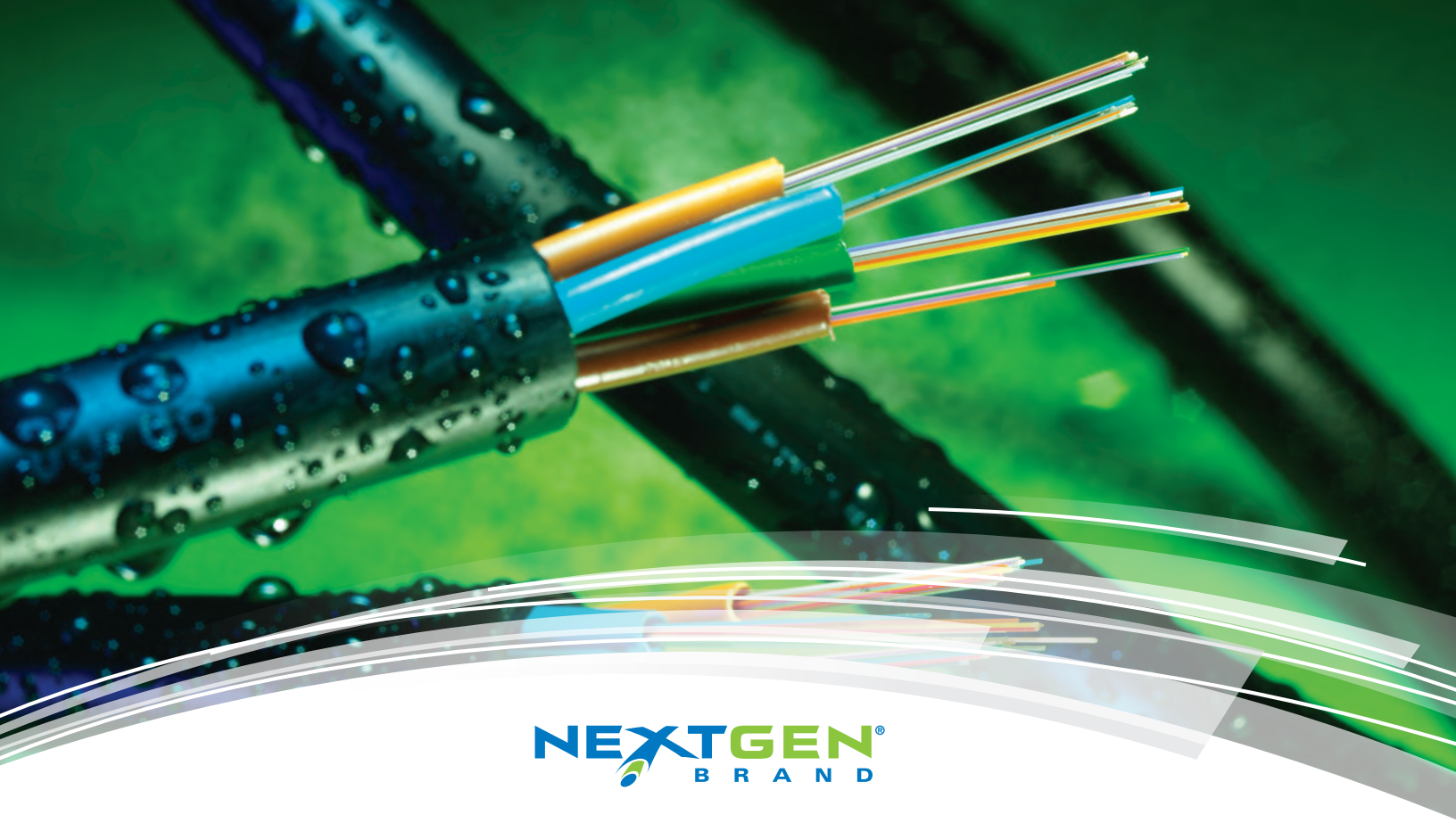
- 1 pair: NEC/CEC Type CM (UL 1685-2000)
- 2 pair through 12 pair: NEC/CEC Type CMR (UL 1666)
- UL 444
- RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

c UL us LISTED

General Cable



NEXTGEN® BRAND

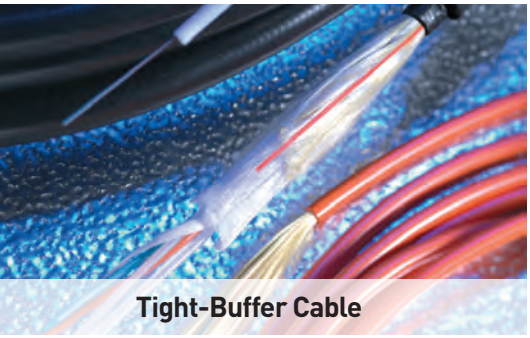
Fiber Optic Cable

for the 21ST Century

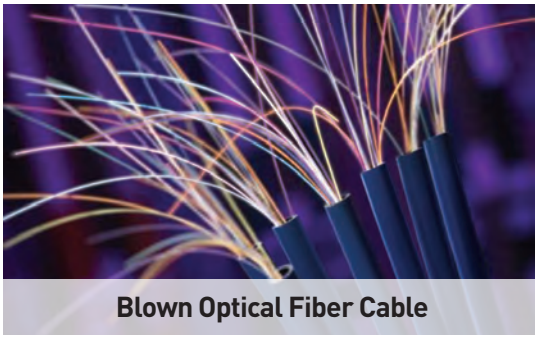
Not the new kid on the block. General Cable's NextGen® Brand fiber optic solutions, including Indoor/Outdoor Fiber, derive from over 25 years of technical expertise and manufacturing excellence. Long recognized as a leader in copper cabling systems, General Cable offers a broad range of fiber optic cables 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.

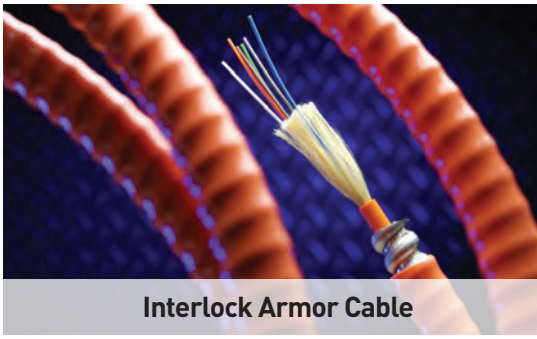
Contact General Cable for information on these other fiber solutions:



Tight-Buffer Cable



Blown Optical Fiber Cable



Interlock Armor Cable

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

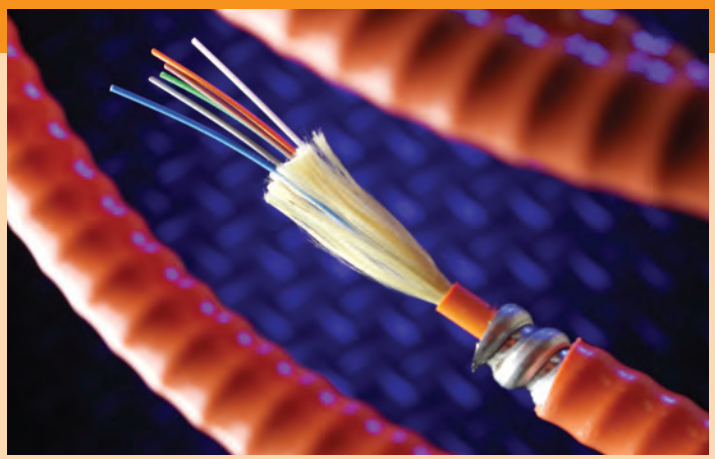
General Cable

800.424.5666
www.generalcable.com
info@generalcable.com

General Cable plus CORNING Optical Fiber

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 (l0) 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

NEXTGEN® BRAND

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

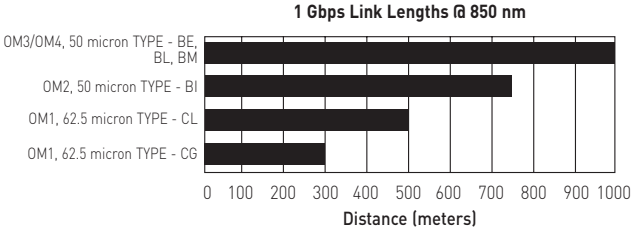
* Designation per ISO 11801 Fiber Standards

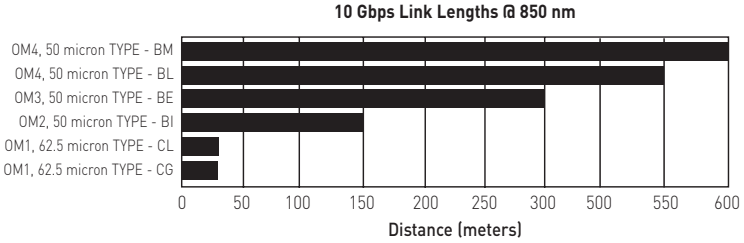
Fiber Specification and Selection

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
Laser 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





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	1310 nm	1550 nm
OS2 Singlemode - Loose Tube								
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
OS2 Singlemode - Tight Buffer								
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	
Singlemode (NZDS)						
Large Effective Area	AL	–	–	0.30	0.30	DWDM
Singlemode						
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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	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			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124M1A-DWB	12	1	4	0.44	11.1	55	82	600	2700	180	800
XX0244M1A-DWB	24	2	3	0.44	11.1	55	82	600	2700	180	800
XX0484M1A-DWB	48	4	1	0.44	11.1	55	82	600	2700	180	800
XX0724M1A-DWB	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			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124H1A-DWB	12	1	4	0.51	13.0	78	116	600	2700	180	800
XX0244H1A-DWB	24	2	3	0.51	13.0	78	116	600	2700	180	800
XX0484H1A-DWB	48	4	1	0.51	13.0	78	116	600	2700	180	800
XX0724H1A-DWB	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			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	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			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	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.

CAROL® BRAND

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
PLENUM UNSHIELDED ALARM AND SECURITY		
E3004S	22/4 Multi-Cond. 7/30TC SHLD CM	• Power-Limited Control Circuits • Wiring of Intercom, Security, Audio, Background Music • Suggested Voltage Rating: 300 V
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	
PLENUM SHIELDED ALARM AND SECURITY		
E2104S	22/4 Multi-Cond. 7/30BC OA SH CMP/CL3P	• Power-Limited Control Circuits • Wiring of Intercom, Security, Audio, Background Music • Suggested Voltage Rating: 300 V
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	
RISER (NON-PLENUM) UNSHIELDED ALARM AND SECURITY		
E1002S	22/2 Multi-Cond. 7/30BC UNSH CMR/CL3R	• Power-Limited Control Circuits • Wiring of Intercom, Security, Audio, Background Music • Suggested Voltage Rating: 300 V
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	
RISER (NON-PLENUM) SHIELDED ALARM AND SECURITY		
E2002S	22/2 Multi-Cond. 7/30BC OA SH CMR/CL3R	• Power-Limited Control Circuits • Wiring of Intercom, Security, Audio, Background Music • Suggested Voltage Rating: 300 V
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
PLENUM UNSHIELDED FIRE ALARM		
E3502S	1/28 Multi-Cond. SBC PVC/NS/FLEX FPLP	• Residential Housing • Business and Office Campus Environments • Public Stadiums and Arenas • Airport, Train, Bus and Other Transportation Hubs • Schools, Colleges and Universities • Commercial Buildings
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	
PLENUM SHIELDED FIRE ALARM		
E3602S	18/2 Multi-Cond. SBC PVC/OA/FLEX FPLP	• Residential Housing • Business and Office Campus Environments • Public Stadiums and Arenas • Airport, Train, Bus and Other Transportation Hubs • Schools, Colleges and Universities • Commercial Buildings
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	
RISER (NON-PLENUM) UNSHIELDED FIRE ALARM		
E1502S	18/2 Multi-Cond. SBC UNSH TYPE FPLR	• Residential Housing • Business and Office Campus Environments • Public Stadiums and Arenas • Airport, Train, Bus and Other Transportation Hubs • Schools, Colleges and Universities • Commercial Buildings
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	
RISER (NON-PLENUM) SHIELDED FIRE ALARM		
E2502S	18/2 Multi-Cond. SBC OA SH TYPE FPLR	• Residential Housing • Business and Office Campus Environments • Public Stadiums and Arenas • Airport, Train, Bus and Other Transportation Hubs • Schools, Colleges and Universities • Commercial Buildings
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	

General Cable

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
	RISER SHIELDED CLASSICS	
C2514A	22/2 Multi-Cond. 7/30TC SHLD CM	• Remote & Process Control • Public Address Systems • Building Automation for EIA 232 Serial Applications • HVAC/Lighting
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	
	RISER UNSHIELDED CLASSICS	
C6348A	22/2 Multi-Cond. 7/30TC UNSH CM	• Remote & Process Control • Public Address Systems • Building Automation for EIA 232 Serial Applications • HVAC/Lighting
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	
	PLENUM SHIELDED CLASSICS	
C3158	22/2 Multi-Cond. 7/30TC PVC/SHLD/FLEX CMP	• Remote & Process Control • Public Address Systems • Building Automation for EIA 232 Serial Applications • HVAC/Lighting
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	
	PLENUM UNSHIELDED CLASSICS	
C3115	22/2 Multi-Cond. 7/30TC PVC/UNSH/FLEX CMP	• Remote & Process Control • Public Address Systems • Building Automation for EIA 232 Serial Applications • HVAC/Lighting
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
	MULTI-PAIRED UNSHIELDED HI-TEMP CLASSICS	
C8122	18/1 Multi-Pr. 19/30TC UNSH FLP/PVC CMP	• Remote Control Circuits • Process Control and Instrumentation • Suggested Voltage Rating: 300 V
	MULTI-PAIRED SHIELDED HI-TEMP CLASSICS	
C8118	24/2 Multi-Pr. 7/32TC SHLD FFEP/PVDF CMP	• Remote Control Circuits • Process Control and Instrumentation • Suggested Voltage Rating: 300 V
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	
	MULTI-PAIRED DUAL SHIELDED HI-TEMP CLASSICS	
C8117	24/1 Multi-Pr. 7/32TC FOIL/BRD SHLD FEP/FEP CMP	• Remote Control Circuits
C8129	24/2 Multi-Pr. 7/32TC FOIL/BRD SHLD FFEP/PVDF CMP	
	MULTI-PAIRED INDIVIDUALLY SHIELDED HI-TEMP CLASSICS	
C8134	24/2 Multi-Pr. 7/32TC ISHLD FFEP/PVC CMP	• Remote Control Circuits • Process Control and Instrumentation • Suggested Voltage Rating: 300 V
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	
	MULTI-CONDUCTOR UNSHIELDED HI-TEMP CLASSICS	
C8102	18/4 Multi-Cond. 19/30TC UNSH FEP/FEP CMP	• Process Control and Instrumentation
	MULTI-CONDUCTOR SHIELDED HI-TEMP CLASSICS	
C8106	18/3 Multi-Cond. 19/30TC SHLD FEP/FEP CMP	• Process Control and Instrumentation
C8114	18/4 Multi-Cond. 19/30TC SHLD FEP/FEP CMP	
	MULTI-CONDUCTOR DUAL SHIELDED HI-TEMP CLASSICS	
C8107	18/3 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP	• Remote Control Circuits • Process Control and Instrumentation • Suggested Voltage Rating: 300 V
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	

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

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**

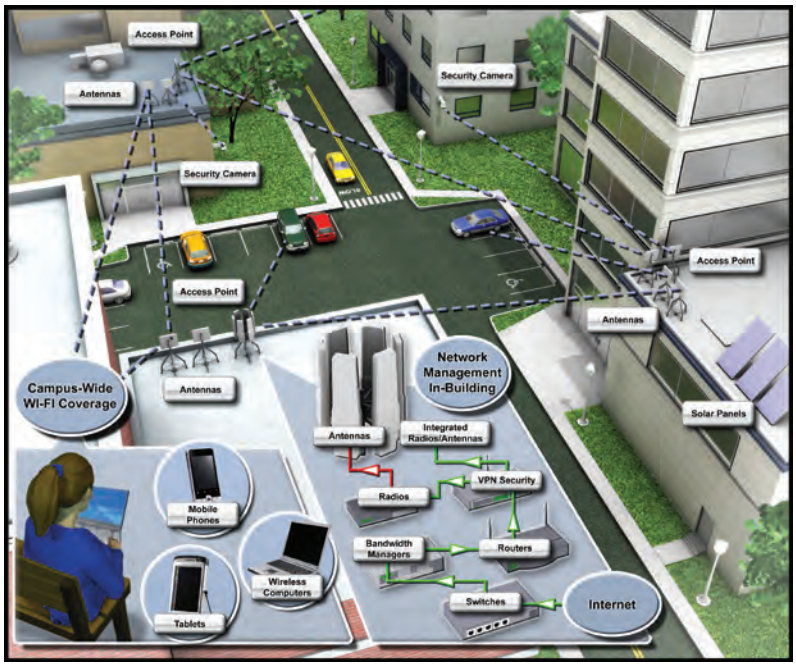
PART NUMBER	PRODUCT DESCRIPTION	APPLICATIONS
MULTI-CONDUCTOR UNSHIELDED COMMUNICATION AND CONTROL		
C9009A	22/2 Multi-Cond. 7/30TC UNSH CM	• Advanced Signal Transmission in Controlled Environments • Medical Instrumentation & Equipment • Consumer Electronic Peripherals • Industrial Process Control Systems • Suitable for EIA-RS-232 Applications
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	
MULTI-CONDUCTOR SHIELDED COMMUNICATION AND CONTROL		
C9109A	22/2 Multi-Cond. 7/30TC SHLD CM	• Advanced Signal Transmission in Controlled Environments • Medical Instrumentation & Equipment • Consumer Electronic Peripherals • Industrial Process Control Systems • Suitable for EIA-RS-232 Applications
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	
MULTI-CONDUCTOR DUAL SHIELDED COMMUNICATION AND CONTROL		
C9209A	22/2 Multi-Cond. 7/30TC FOIL/BRD SHLD CM	• Advanced Signal Transmission in Controlled Environments • Medical Instrumentation & Equipment • Consumer Electronic Peripherals • Industrial Process Control Systems • Suitable for EIA-RS-232 Applications
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
	DBRF COAX	
DBRF100	PVC Jacket - Indoor/Outdoor	• 2-way Land Mobile Radios • Wireless Local Area Networks IEEE802.11 • Wireless Local Loop • Wireless Internet (WISP) • Wireless Cable (MMDS) • Wireless Broadband Data • Telemetry • Commercial Buildings • Residential Housing • Business and Office Campus Environments • Public Stadiums and Arenas • Transportation Hubs like Airports, Train Stations and Bus Stations • Primary and Secondary Schools, Universities and Colleges • Governments and Municipalities
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	



NOTE: Fiber/Power Composite Cables, as well as other gauges, colors and packaging, are available. Contact your General Cable representative for additional options.

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	• CATV • MATV
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	• CCTV • RF/Broadcast • HDTV
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	
C8030	20+1PR18 RG59/U CCTV PLENUM	• CCTV • HDTV
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	

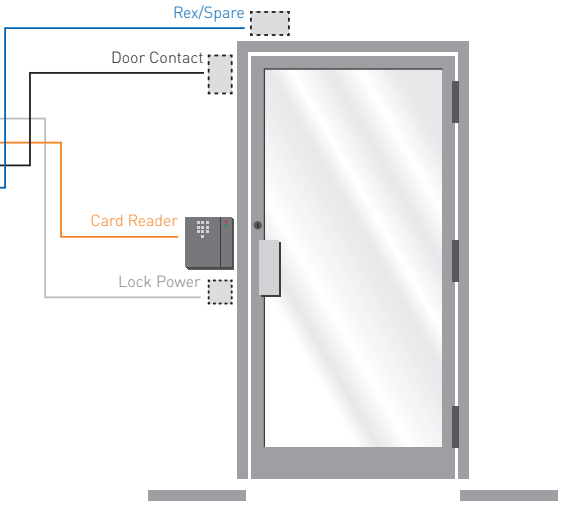
Access Control:

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	• Card Readers • Door Contacts • Lock Power • Retinal Scanner in Commercial Buildings
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

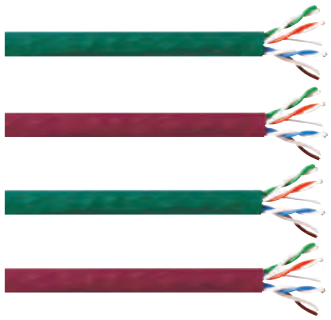
JACKET COLOR	COMPONENT	CABLE TYPE	APPLICATION
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare



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

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	• Suitable for RGB Video Applications • Digital CCTV Cameras
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	• Oil, Gas and Petrochemical Applications • Deeper Drilling for Natural Gas and Resources in Extremes • Offshore Rigs • Production Platforms • FPSOs and Ships • Stabilization and Directional Drilling • Shipboard Applications Only
EO24P0022186	24/2P RS422 COMMODORE ABS SHPBRD	
EO24P0042186	24/4P RS422 COMMODORE ABS SHPBRD	
EO24P0082186	24/8P RS422 COMMODORE ABS SHPBRD	
ZO16P0022189	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	

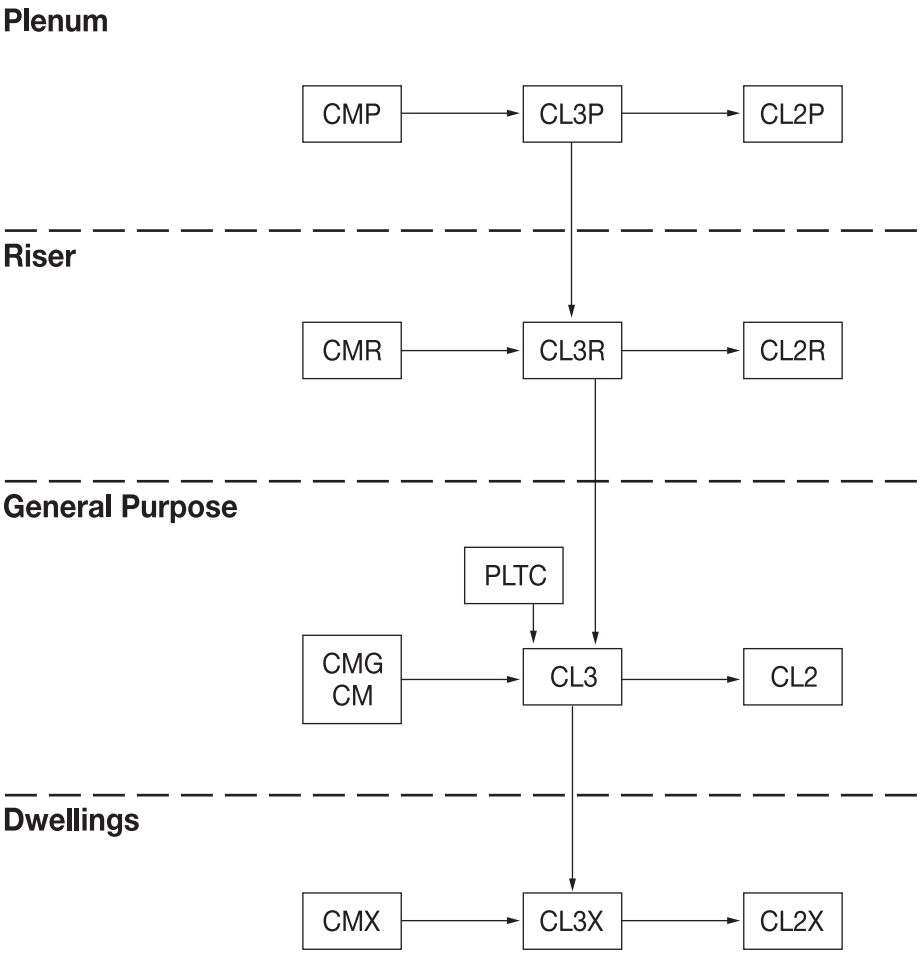
Technical Information

NEC and CSA Fire Resistance Levels

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

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).

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.



TYPE	DESCRIPTION
CM	Communications Wires and Cables
CL2 and CL3	Class 2 and Class 3 Remote-Control, Signaling and Power-Limited Cables
PLTC	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.

°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F
-45.0	**-49.0**	-56.2	-17.2	**1.0**	33.8	10.6	**51.0**	123.8	38.3	**101.0**	213.8	66.1	**151.0**	303.8
-43.9	**-47.0**	-52.6	-16.1	**3.0**	37.4	11.7	**53.0**	127.4	39.4	**103.0**	217.4	67.2	**153.0**	307.4
-42.8	**-45.0**	-49.0	-15.0	**5.0**	41.0	12.8	**55.0**	131.0	40.6	**105.0**	221.0	68.3	**155.0**	311.0
-41.7	**-43.0**	-45.4	-13.9	**7.0**	44.6	13.9	**57.0**	134.6	41.7	**107.0**	224.6	69.4	**157.0**	314.6
-40.6	**-41.0**	-41.8	-12.8	**9.0**	48.2	15.0	**59.0**	138.2	42.8	**109.0**	228.2	70.6	**159.0**	318.2
-39.4	**-39.0**	-38.2	-11.7	**11.0**	51.8	16.1	**61.0**	141.8	43.9	**111.0**	231.8	71.7	**161.0**	321.8
-38.3	**-37.0**	-34.6	-10.6	**13.0**	55.4	17.2	**63.0**	145.4	45.0	**113.0**	235.4	72.8	**163.0**	325.4
-37.2	**-35.0**	-31.0	-9.4	**15.0**	59.0	18.3	**65.0**	149.0	46.1	**115.0**	239.0	73.9	**165.0**	329.0
-36.1	**-33.0**	-27.4	-8.3	**17.0**	62.6	19.4	**67.0**	152.6	47.2	**117.0**	242.6	75.0	**167.0**	332.6
-35.0	**-31.0**	-23.8	-7.2	**19.0**	66.2	20.6	**69.0**	156.2	48.3	**119.0**	246.2	76.1	**169.0**	336.2
-33.9	**-29.0**	-20.2	-6.1	**21.0**	69.8	21.7	**71.0**	159.8	49.4	**121.0**	249.8	77.2	**171.0**	339.8
-32.8	**-27.0**	-16.6	-5.0	**23.0**	73.4	22.8	**73.0**	163.4	50.6	**123.0**	253.4	78.3	**173.0**	343.4
-31.7	**-25.0**	-13.0	-3.9	**25.0**	77.0	23.9	**75.0**	167.0	51.7	**125.0**	257.0	79.4	**175.0**	347.0
-30.6	**-23.0**	-9.4	-2.8	**27.0**	80.6	25.0	**77.0**	170.6	52.8	**127.0**	260.6	80.6	**177.0**	350.6
-29.4	**-21.0**	-5.8	-1.7	**29.0**	84.2	26.1	**79.0**	174.2	53.9	**129.0**	264.2	81.7	**179.0**	354.2
-28.3	**-19.0**	-2.2	-0.6	**31.0**	87.8	27.2	**81.0**	177.8	55.0	**131.0**	256.8	82.8	**181.0**	357.8
-27.2	**-17.0**	-1.4	0.6	**33.0**	91.4	28.3	**83.0**	181.4	56.1	**133.0**	271.4	83.9	**183.0**	361.4
-26.1	**-15.0**	5.0	1.7	**35.0**	95.0	29.4	**85.0**	185.0	57.2	**135.0**	275.0	85.0	**185.0**	365.0
-25.0	**-13.0**	8.6	2.8	**37.0**	98.6	30.6	**87.0**	188.6	58.3	**137.0**	278.6	86.1	**187.0**	368.6
-23.9	**-11.0**	12.2	3.9	**39.0**	102.2	31.7	**89.0**	192.2	59.4	**139.0**	282.2	87.2	**189.0**	372.2
-22.8	**-9.0**	15.8	5.0	**41.0**	105.8	32.8	**91.0**	195.8	60.6	**141.0**	285.8	88.3	**191.0**	375.8
-21.7	**-7.0**	19.4	6.1	**43.0**	109.4	33.9	**93.0**	199.4	61.7	**143.0**	289.4	89.4	**193.0**	379.4
-20.6	**-5.0**	23.0	7.2	**45.0**	113.0	35.0	**95.0**	203.0	62.8	**145.0**	293.0	90.6	**195.0**	383.0
-19.4	**-3.0**	26.6	8.3	**47.0**	116.6	36.1	**97.0**	206.6	63.9	**147.0**	296.6	91.7	**197.0**	386.6
-18.3	**-1.0**	30.2	9.4	**49.0**	120.2	37.2	**99.0**	210.2	65.0	**149.0**	300.2	92.8	**199.0**	390.2

Temperature Conversion Formulas	
°C =	$\frac{5}{9}$ (°F - 32)
°F =	($\frac{9}{5}$ x °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[1]											
	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5
I.D., Inches	.622	.824	1.049	1.380	1.610	2.067	2.469	3.068	3.548	4.026	4.506	5.047
O.D., Inches-Conduit	.840	1.05	1.315	1.660	1.900	2.375	2.875	3.500	4.000	4.500	5.000	5.563
Internal Area, Sq. In.	.304	.533	.864	1.496	2.036	3.356	4.788	7.393	9.887	12.730	15.947	20.006
Permissible Fill, Sq. In.[2]	.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.)												
.100	.008	15	27	44	76	103	170	243	376	503	648	812	1018
.125	.012	9	17	28	48	66	109	156	240	322	414	519	652
.150	.018	6	12	19	33	46	75	108	167	223	288	360	452
.175	.024	5	8	14	24	33	55	79	122	164	211	265	332
.200	.031	3	6	11	19	25	42	60	94	125	162	203	254
.225	.040	3	5	8	15	20	33	48	74	99	128	160	201
.250	.049	2	4	7	12	16	27	39	60	80	103	129	163
.275	.059	2	3	5	10	13	22	32	49	66	85	107	134
.300	.071	1	3	4	8	11	18	27	41	55	72	90	113
.325	.083	1	2	4	7	9	16	23	35	47	61	76	96
.350	.096	1	2	3	6	8	13	19	30	41	52	66	83
.375	.110	1	1	3	5	7	12	17	26	35	46	57	72
.400	.126	0	1	2	4	6	10	15	23	31	40	50	63
.425	.142	0	1	2	4	5	9	13	20	27	35	44	56
.450	.159	0	1	2	3	5	8	12	18	24	32	40	50
.475	.177	0	1	1	3	4	7	10	16	22	28	35	45
.500	.196	0	1	1	3	4	6	9	15	20	25	32	40
.600	.283	0	0	1	2	2	4	6	10	13	18	22	28
.700	.385	0	0	0	1	2	3	4	7	10	13	16	20
.800	.503	0	0	0	1	1	2	3	5	7	10	12	15
.900	.636	0	0	0	0	1	2	3	4	6	8	10	12
1.000	.785	0	0	0	0	1	1	2	3	5	6	8	10
1.200	1.084	0	0	0	0	0	1	1	2	3	4	5	7
1.400	1.485	0	0	0	0	0	0	1	1	2	3	4	5
1.600	1.948	0	0	0	0	0	0	0	1	2	2	3	4
1.800	2.474	0	0	0	0	0	0	0	1	1	2	2	3
2.000	3.142	0	0	0	0	0	0	0	0	0	1	1	2

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

5000 CMR/CMP/CMX
5350 CMR/CMP
5500 CMR/CMP
6 CMR/CMP
6000E CMR/CMP

▲ GenSPEED® D2000 Pull-Pac® II

5000 CMR/CMP/CMX
5350 CMR/CMP
5500 CMR/CMP
6 CMR/CMP
6000E 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

General Cable

General Cable

Who says you can't have it all?

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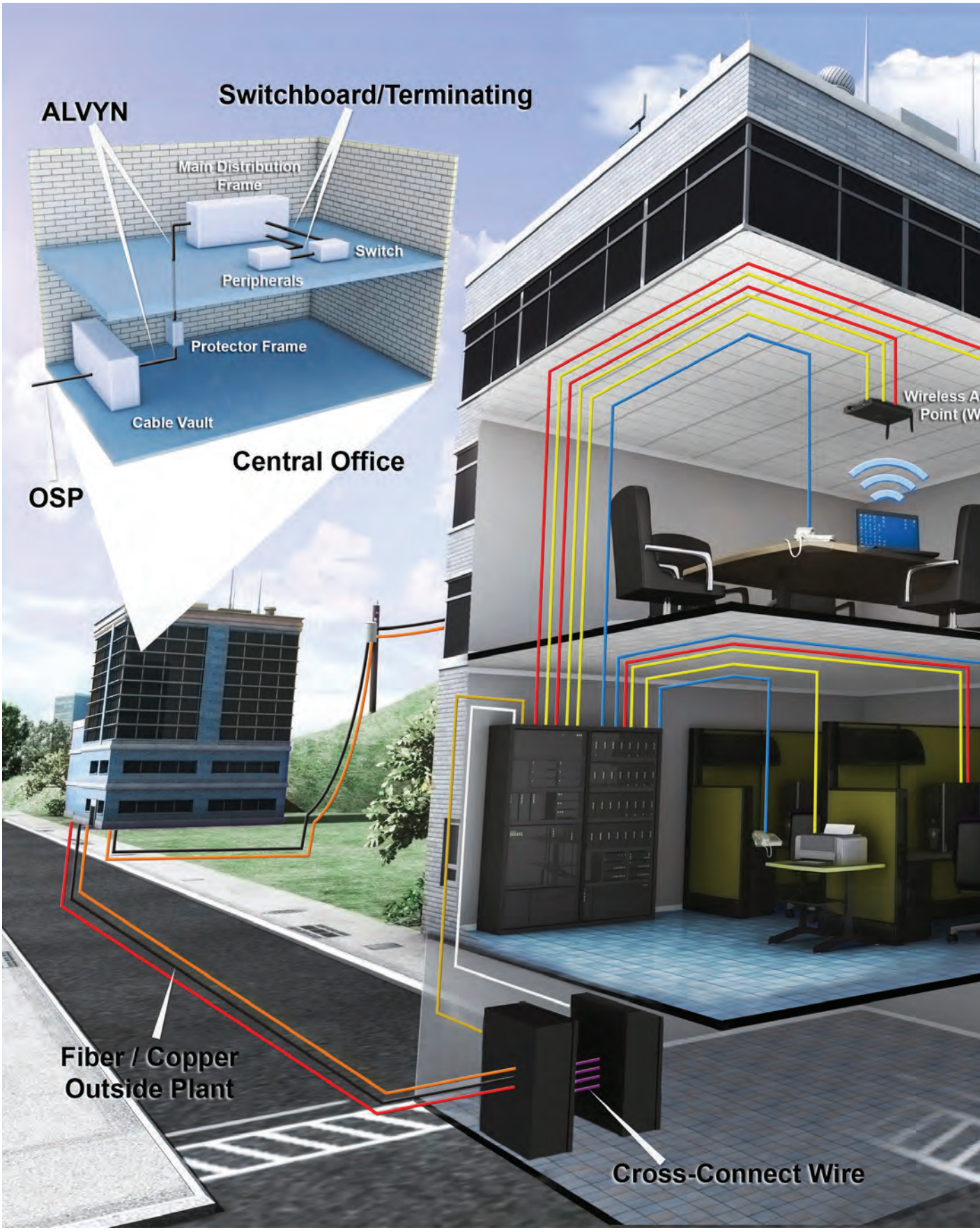

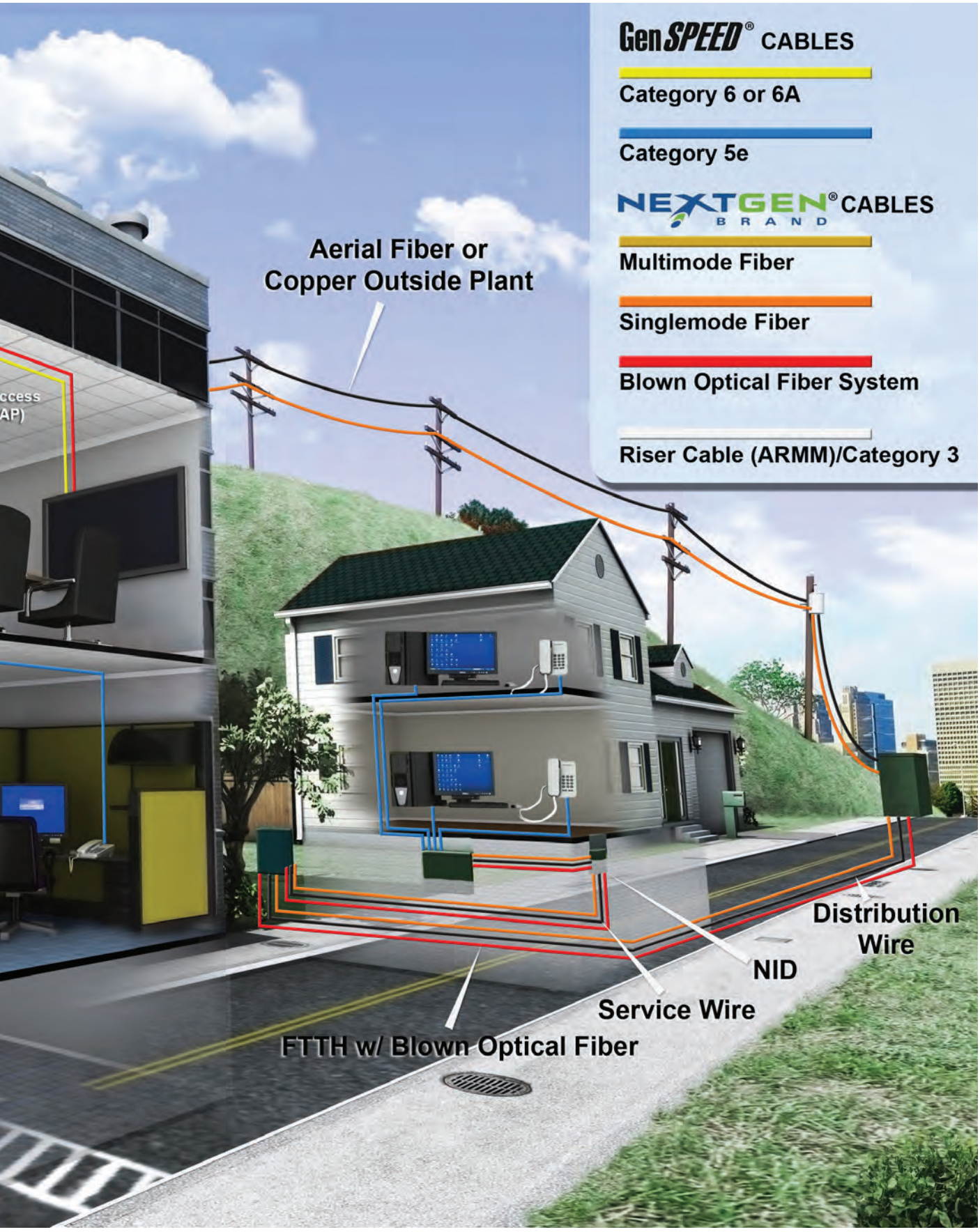
GenSPEED® CABLES
Category 6 or 6A
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Multimode Fiber
Singlemode Fiber
Blown Optical Fiber System
Riser Cable (ARMM)/Category 3
Aerial Fiber or
Copper Outside Plant
Distribution
Wire
NID
Service Wire
FTTH w/ Blown Optical Fiber

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.

Polyvinylidine 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 (PSAACRF): 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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Notes

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Markets:
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Products:
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TELCO

Markets:
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Products:
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