

# GenSPEED® 6500 Premium Category 6 Cable

## 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
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

## Applications

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

## Standard Compliances

- ANSI/TIA/EIA 568 B.2-1 (Category 6)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444



## 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	0.250
Nominal Cable Weight (lbs/1000ft)	30	32
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 +75

## PART NUMBERS

Standard packaging: 1000' Spool-Pac®

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

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

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

Data subject to change without notice.

## GenSPEED® 6500 Electrical Performance

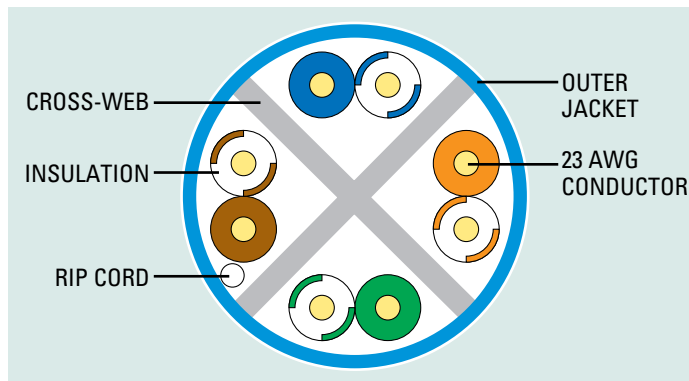
Frequency MHz	PSACR (min)		ACR (min)		Attenuation (max)		PSNEXT (min)		NEXT (min)	
	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed
1	70.3	77.4	72.3	79.4	2.0	1.9	72.3	79.3	74.3	81.3
4	59.3	66.8	61.5	68.8	3.8	3.5	63.3	70.3	65.3	72.3
10	51.3	58.8	53.3	60.8	6.0	5.5	57.3	64.3	59.3	66.3
16	46.7	54.2	48.7	56.2	7.6	7.0	54.2	61.2	56.2	63.2
20	44.3	51.9	46.3	53.9	8.5	7.8	52.8	59.8	54.8	61.8
31.25	39.2	47.0	41.2	49.0	10.7	9.9	49.9	56.9	51.9	58.9
62.5	29.9	38.0	32.0	40.0	15.4	14.3	45.4	52.4	47.4	54.4
100	22.5	30.8	24.5	32.8	19.8	18.5	42.3	49.3	44.3	51.3
200	8.8	17.5	10.8	19.5	29.0	27.2	37.8	44.8	39.8	46.8
250	3.5	12.4	5.5	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 100m (328 ft.) length. Results beyond 350 MHz for reference only.

Frequency MHz	PSELFEXT (min)		ELFEXT (min)		Return Loss (min)		LCL (min)		ELTCTL (min)	
	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	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	55.7	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	41.7	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	5.1
62.5	28.9	34.9	31.8	37.9	21.5	23.5	32.0	32.0	5.0	5.0
100	24.8	30.8	27.8	33.8	20.1	22.1	30.0	30.0	5.0	5.0
200	18.8	24.8	21.8	27.8	18.0	20.0	27.0	27.0	5.0	5.0
250	16.8	22.8	19.8	25.8	17.3	19.3	26.0	26.0	5.0	5.0
350	—	19.9	—	22.9	—	18.3	—	—	—	—
500	—	16.8	—	19.8	—	17.2	—	—	—	—

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

## GenSPEED® 6500 PREMIUM CATEGORY 6 CROSS-SECTION



## ELECTRICAL CHARACTERISTICS

<b>DC Resistance (max)</b> Ohms/100m (328ft) @ 20°C	8.9
<b>DC Resistance Unbalance (max)</b> Individual Pair %	3.0
<b>Delay Skew (max)</b> ns/100m	45
<b>Nom. Velocity of Propagation</b> % Speed of Light	CMP: 72 CMR: 70
<b>Characteristic Impedance</b> Frequency (f):	Ohms 1-500 MHz 100 ± 15
<b>Input Impedance</b> Frequency (f):	Ohms 1-100 MHz 100 ± 15 100-350 MHz 100 ± 22 350-500 MHz 100 ± 32