



PRODUCT DESCRIPTION

Category 6 Riser (CMR) is ideal for voice, data, video and security communication mediums for all your network installation requirements. Manufactured to the highest quality standards and approved by 3rd party organizations such as UL and ETL, Hyperline Cable, when compared to TIA guidelines; meets or surpasses the specifications in every category. The cable construction is comprised of 8 x 23-gauge solid bare copper cores, which are then insulated with high density polyethylene insulation and organized into four color coded twisted pair sets of conductors. Along with a CMR rated jacket and a rip cord to facilitate easy jacket removal, Hyperlines Cat 6 CMR cable is easy to use during installations and pulls smoothly with no kinks.

APPLICATIONS

- Structured cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- Overall metal shielded providing good protection from EMI noise.
- IEEE 802.3ab 1000BASE-T, 1000BASE-TX and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

PHYSICAL & ELECTRICAL CHARACTERISTICS

at 20 °C	
Temperature & voltage rating	75°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ•m
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m

USAGE & ENVIRONMENTAL CONDITION

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

PERFORMANCE COMPLIANCE

- UL 444
- CSA 22.2 NO.214
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)

FEATURES

- Award winning trademarked packaging
- High performance of transmission
- High quality of safety property
- Sweep frequency up to 400 MHz (Enhanced) verified to 250 MHz
- Meets/exceeds ANSI/TIA-568-C.2 specification
- Meets ISO/IEC 11801 (Edition2.2)
- Meets IEC 61156-5 (Edition2.0)
- Flame Test –UL 1666 (CMR)
- Wide-mouth and Reelex carton
- Quick Count marking system in feet

Available in ten different jacket colors



ELECTRICAL PERFORMANCE COMPARISON (At 20 °C)

Frequency (MHz)	INSERTION LOSS		NEXT		PS.NEXT		ACR	
	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline
	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m
1	2.0	2.0	74.3	77.30	72.3	75.30	72.3	75.28
4	3.8	3.7	65.3	68.27	63.3	66.27	61.5	64.49
10	6.0	5.9	59.3	62.30	57.3	60.30	53.3	56.35
16	7.6	7.5	56.2	59.24	54.2	57.24	48.6	51.68
20	8.5	8.4	54.8	57.78	52.8	55.78	46.3	49.31
25	9.5	9.5	53.3	56.33	51.3	54.33	43.8	46.83
31.3	10.7	10.6	51.9	54.88	49.9	52.88	41.2	44.20
62.5	15.4	15.3	47.4	50.36	45.4	48.36	32.0	34.98
100	19.8	19.8	44.3	47.30	42.3	45.30	24.5	27.50
200	29.0	29.0	39.8	42.78	37.8	40.78	10.8	13.80
250	32.8	32.9	38.3	41.33	36.3	39.33	5.5	8.48
300		36.4		40.14		38.14		3.72
350		39.8		39.14		37.14		N.A.
400		43.0		38.27		36.27		N.A.

Frequency (MHz)	PS.ACR		ACRF		PS.ACRF		RETURN LOSS	
	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline
	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m
1	70.3	73.2	67.8	70.8	64.8	67.8	20.0	20.0
4	59.5	62.4	55.8	58.7	52.8	55.7	23.0	23.0
10	51.3	54.3	47.8	50.8	44.8	47.8	25.0	25.0
16	46.6	49.6	43.7	46.7	40.7	43.7	25.0	25.0
20	44.3	47.3	41.8	44.7	38.8	41.7	25.0	25.0
25	41.8	44.8	39.8	42.8	36.8	39.8	24.3	24.3
31.3	39.2	42.2	37.9	40.9	34.9	37.9	23.6	23.6
62.5	30.0	32.9	31.9	34.8	28.9	31.8	21.5	21.5
100	22.5	25.5	27.8	30.8	24.8	27.8	20.1	20.1
200	8.8	11.8	21.8	24.7	18.8	21.7	18.0	18.0
250	3.5	6.4	19.8	22.8	16.8	19.8	17.3	17.3
300		1.72		21.2		18.2		16.7
350		N.A.		19.9		16.9		16.3
400		N.A.		18.7		15.7		15.8

Values above 250MHz are for information only



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ELECTRICAL SPECIFICATIONS (At 20 °C)

Frequency (MHz)	Propagation Delay	
	TIA-568-C.2	Hyperline
	Max. dB/100m	Max. dB/100m
1	570	570
4	552	552
10	545	545
16	543	543
20	542	542
25	541	541
31.3	540	540
62.5	539	538
100	538	537
200	537	536
250	536	536
300		536
350		535
400		535

Values above 250MHz are for information only

MATERIALS & CONSTRUCTION

Conductor	Material	23AWG solid bare copper	
Insulation	Material	Polyolefin (PO)	
	Color code & diameter	Blue & white/blue Stripe	1.08 ± 0.02 mm
		Orange & white/orange stripe	1.05 ± 0.02 mm
		Green & white/green stripe	1.08 ± 0.02 mm
		Brown & white/brown stripe	1.05 ± 0.02 mm
Twisted	Description	Left hand direction	
Filler	Material	Polyolefin (PO)	
Assembly	Description	Left hand direction	
Jacket	Material	Flame retardant polyvinyl chloride (FRPVC) or Polyethylene (PE)	
	Diameter	7.20 ± 0.2 mm	
	Thickness	0.45 ± 0.05 mm	
	Color	Per Hyperline standard	
Shield	Material	Al Mylar tape 100 % coverage and mylar side facing out	



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MATERIALS & CONSTRUCTION

Drain wire	Material	24AWG solid tinned copper
Nominal Velocity of Propagation	(NVP) 69%	
NRTL Program	c(UL)us listed CMR ETL Verified / CSA certified	
Marking	ELITE 1000X CAT 6 GIGASYSTEM TESTED TO 400MHz --- E142890 F/UTP 4PR 23AWG 75 C(UL)US CMR --- ETL VERIFIED TO TIA-568-C.2 mmyy1 RoHS COMPLIANT XXXFT	

ORDERING

Part Number	Product Description
FUTP4-C6-SOLID-CMR-WH-305	Category 6 Riser, F/UTP, 23 AWG, White 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-BL-305	Category 6 Riser, F/UTP, 23 AWG, Blue 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-GY-305	Category 6 Riser, F/UTP, 23 AWG, Grey 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-OR-305	Category 6 Riser, F/UTP, 23 AWG, Orange 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-GN-305	Category 6 Riser, F/UTP, 23 AWG, Green 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-VT-305	Category 6 Riser, F/UTP, 23 AWG, Violet 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-BK-305	Category 6 Riser, F/UTP, 23 AWG, Black 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-YL-305	Category 6 Riser, F/UTP, 23 AWG, Yellow 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-RD-305	Category 6 Riser, F/UTP, 23 AWG, Red 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMR-PK-305	Category 6 Riser, F/UTP, 23 AWG, Pink 305 Meter/1000 FT Pull Box



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