



## PRODUCT DESCRIPTION

Hyperline brings Category 6A FUTP performance to a new level. This cable meets the internal and alien cross-talk performance requirements of ANSI/TIA-568-C.2 as tested in a 6 around 1 configuration. With guaranteed performance out to 500 MHz and independently verified and monitored by UL, 6A cable demonstrates superior capability for 10 Gigabit Ethernet (10GbE) and all other bandwidth intensive and legacy application when compared to TIA guidelines; meets or surpasses the specifications in every category. The overall metal foil screen with drain wire along with a construction 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 and designed for Plenum rated spaces.

## APPLICATIONS

- Structure cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- IEEE 802.3an 10GBASE-T 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•Km
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
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)
- CE compliance date: 2010.01.01

## FEATURES

- Award winning trademarked packaging
- High performance rate of transmission
- High quality of safety property
- Sweep frequency up to 500 MHz (Enhanced) verified to 500 MHz
- Meets/exceeds ANSI/TIA-568-C.2 specification
- Meets ISO/IEC 11801 (Edition2.2)
- Meets IEC 61156-5 (Edition2.0)
- Flame Test –NFPA 262 (CMP)
- Wide-mouth and Reelex carton
- Quick Count marking system in feet
- Lower cross talk

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	2.1	2.0	74.3	74.3	72.3	72.3	72.2	72.2
4	3.8	3.8	65.3	65.2	63.3	63.2	61.5	61.4
8	5.3	5.3	60.8	60.7	58.8	58.7	55.5	55.4
10	5.9	5.9	59.3	59.3	57.3	57.3	53.4	53.3
16	7.5	7.4	56.2	56.2	54.2	54.2	48.7	48.7
20	8.4	8.3	54.8	54.7	52.8	52.7	46.4	46.4
25	9.4	9.3	53.3	53.3	51.3	51.3	43.9	43.9
31.25	10.5	10.5	51.9	51.8	49.9	49.8	41.4	41.3
62.5	15.0	14.9	47.4	47.3	45.4	45.3	32.4	32.3
100	19.1	19.1	44.3	44.3	42.3	42.3	25.2	25.1
200	27.6	27.5	39.8	39.7	37.8	37.7	12.2	12.2
250	31.1	31.0	38.3	38.3	36.3	36.3	7.2	7.2
300	34.3	34.2	37.1	37.1	35.1	35.1	2.8	2.8
350	37.2	37.2	36.1	36.1	34.1	34.1		N.A.
400	40.1	40.0	35.3	35.2	33.3	33.2		N.A.
500	45.3	45.2	33.8	33.8	31.8	31.8		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	70.2	70.2	67.8	67.8	64.8	64.8	20.0	20.0
4	59.5	59.4	55.8	55.7	52.8	52.7	23.0	23.0
8	53.5	53.4	49.7	49.7	46.7	46.7	24.5	24.5
10	51.4	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	46.7	46.7	43.7	43.7	40.7	40.7	25.0	25.0
20	44.4	44.4	41.8	41.7	38.8	38.7	25.0	25.0
25	41.9	41.9	39.8	39.8	36.8	36.8	24.3	24.3
31.25	39.4	39.3	37.9	37.9	34.9	34.9	23.6	23.6
62.5	30.4	30.3	31.9	31.8	28.9	28.8	21.5	21.5
100	23.2	23.1	27.8	27.8	24.8	24.8	20.1	20.1
200	10.2	10.2	21.8	21.7	18.8	18.7	18.0	18.0
250	5.2	5.2	19.8	19.8	16.8	16.8	17.3	17.3
300	0.8	0.8	18.3	18.2	15.3	15.2	16.8	16.7
350		N.A.	16.9	16.9	13.9	13.9	16.3	16.3
400		N.A.	15.8	15.7	12.8	12.7	15.9	15.8
500		N.A.	13.8	13.8	10.8	10.8	15.2	15.2



Toll Free: +1-866-634-9737

[www.hyperline.com](http://www.hyperline.com) | [info@hyperline.com](mailto:info@hyperline.com)



Toll Free: +1-888-497-3748

## MATERIALS & CONSTRUCTION

Conductor	Material	23AWG solid bare copper	
Insulation	Material	Fluorinated Ethylene Propylene (FEP)	
	Color code & diameter	Blue & white	1.10 ± 0.02 mm
		Orange & white	1.06± 0.02 mm
		Green & white	1.09 ± 0.02 mm
		Brown & white	1.06 ± 0.02 mm
Twisted	Description	Left hand direction	
Filler	Material	Fluorinated Ethylene Propylene (FEP)	
Assembly	Description	Left hand direction	
Jacket	Material	Low smoke Flame retardant polyvinyl chloride (LSFRPVC)	
	Diameter	7.0 mm ± 0.2 mm	
	Thickness	0.45 ± 0.05 mm	
	Color	Per Hyperline standard	
Shield	Material	Mylar tape, Al Mylar tape	
	Description	100% coverage and mylar side facing out	

## MATERIALS & CONSTRUCTION

Rip cord	Material	Polyester multi-yarn
Nominal Velocity of Propagation	(NVP) 72%	
NRTL Program	c(UL)us listed CMP ETL Verified	
Marking	Hyperline FUTP4-C6A-SOLID-CMP-XX-305---E303448 F/UTP 4PR 23AWG C(UL)US CMP--- ETL VERIFIED TO ANSI/TIA-568-C.2 CAT 6A 500MHz WW/YY1 XXXFT-A	

## ORDERING

Part Number	Product Description
FUTP4-C6A-SOLID-CMP-WH-305	Category 6A Plenum, FTP, 23 AWG, White 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-BL-305	Category 6A Plenum, FTP, 23 AWG, Blue 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-GY-305	Category 6A Plenum, FTP, 23 AWG, Grey 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-OR-305	Category 6A Plenum, FTP, 23 AWG, Orange 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-GN-305	Category 6A Plenum, FTP, 23 AWG, Green 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-VT-305	Category 6A Plenum, FTP, 23 AWG, Violet 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-BK-305	Category 6A Plenum, FTP, 23 AWG, Black 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-YL-305	Category 6A Plenum, FTP, 23 AWG, Yellow 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-RD-305	Category 6A Plenum, FTP, 23 AWG, Red 305 Meter/1000 FT Pull Box
FUTP4-C6A-SOLID-CMP-PK-305	Category 6A Plenum, FTP, 23 AWG, Pink 305 Meter/1000 FT Pull Box



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[www.hyperline.com](http://www.hyperline.com) | [info@hyperline.com](mailto:info@hyperline.com)



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