



## STRANDED ETHERNET BULK WIRE

### CAT 6 F/UTP CMR OVERVIEW

This twisted pair data cable with 4 pairs of stranded 24 AWG conductors offers increased flexibility for years of continuous bending and use in live performance. The twisted pairs are separated by a 4-way separator to maintain proper spacing and reduce crosstalk between the twisted pairs. This cable also features a heavy duty aluminum foil shield which protects against interference and crosstalk between cables as well as a dedicated tinned copper drain wire for proper shielded termination.

The Cat 6 wire comes complete with a matte black, flame retardant PVC jacket that protects the interior workings of the cable from the harsh environment and installation stress. Distance markers are printed on the jacket every 2 ft so you never lose sight of how much wire you've installed.

This stranded Cat 6 wire provides a solid foundation for any commercial or home network. It is perfect for structured cabling, patch cables, transmission of digital and analog signal for data, video, and audio applications. It meets IEEE 802.3u for 100Base-T and also meets both IEEE 802.3af and IEEE 802.3at for PoE and PoE+ applications. It is also suitable for HDBaseT, AES 50, AES 67, AES/EBU, Digital Video, RS-422, and tested up to 400 MHz.



Product specifications may change without prior notification

Io Audio Technologies® is a registered trademark of Knight Electronics, Inc.  
10557 Metric Dr. Dallas, TX 75243 | 214-340-0265 | 800-323-2439 | Fax: 214-340-5870 |  
[www.ioaudiotechnologies.com](http://www.ioaudiotechnologies.com)

# SPECIFICATIONS



## Product

Part Number: **IO-E4242S-6CMR-1000B**

Number of Conductors: **8 (4 Twisted Pairs)  
plus drain wire**

## Insulation

Material: **Polyolefin**

O.D.: **1.04-1.12mm**

Colors: **White/Orange, Orange, White/Green, Blue,  
White/Blue, Green, White/Brown, Brown**

## Electrical and Mechanical Characteristics

Temperature Rating: **75°C**

Spark Test: **2.5 KV DC**

AC Leakage Current Thru Overall Jacket: **≤ 10mA (1.5KV AC)**

Cable Cold Bend: **-20°C for 4 hr**

Conductor DC Resistance: **≤ 14.0 Ω/100m**

Input Impedance (MAX / MIN): **115 Ohm / 75 Ohm**

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**

Operating Temperature: **-20°C ~ +60° C (-4°F ~ +140°F)**

## Conductors

Details: **Bare Copper (Stranded)**

Size: **24 AWG**

## Shield

Details: **Aluminum Mylar**

## Jacket

O.D.: **7.2 ± 0.2mm**

Material: **Flame Retardant PVC**

Color: **Black**

Thickness: **0.45 ± 0.05mm**

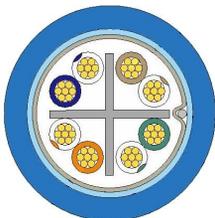
## Flammability Grade

Details: **UL 1666 (CMR)**

## Drain Wire

Details: **26 AWG Tinned Copper**

## CONFIGURATION



## STANDARDS & CLASSIFICATIONS



**ANSI/TIA-568-C.2 (2009)**  
**ISO/IEC 11801 (Edition 2.2)**  
**IEC 61156-6 (Edition 3.1)**

Product specifications may change without prior notification



## TRANSMISSION PERFORMANCE at 20°C

Freq	Insertion Loss	NEXT	PS.NEXT	ACR	PS.ACR	ACRF	PS.ACRF	Return Loss	Propagation Delay	Skew Delay
MHz	Max dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Max ns/100m	Max ns/100m
1	2.43	74.30	72.30	71.87	69.87	67.80	64.80	20.00	570.00	45.00
4	4.54	65.27	63.27	60.73	58.73	55.76	52.76	23.01	552.00	
8	6.38	60.75	58.75	54.37	52.37	49.74	46.74	24.52	546.73	
10	7.14	59.30	57.30	52.16	50.16	47.80	44.80	25.00	545.38	
16	9.06	56.24	54.24	47.17	45.17	43.72	40.72	25.00	543.00	
20	10.16	54.78	52.78	44.62	42.62	41.78	38.78	25.00	542.05	
25	11.41	53.33	51.33	41.92	39.92	39.84	36.84	24.17	541.20	
31.25	12.81	51.88	49.88	39.07	37.07	37.90	34.90	23.33	540.44	
62.5	18.46	47.36	45.36	28.90	26.90	31.88	28.88	20.74	538.55	
100	23.76	44.30	42.30	20.54	18.54	27.80	24.80	18.99	537.60	
150	29.65	41.66	39.66	12.01	10.01	24.28	21.28	17.47	536.94	
200	34.78	39.78	37.78	5.00	3.00	21.78	18.78	16.40	536.55	
250	39.42	38.33	36.33	N.A.	N.A.	19.84	16.84	15.57	536.28	
300	43.71	37.14	35.14	N.A.	N.A.	18.26	15.26	14.89	536.08	
350	47.74	36.14	34.14	N.A.	N.A.	16.92	13.92	14.31	535.92	
400	51.56	35.27	33.27	N.A.	N.A.	15.76	12.76	13.81	535.80	

Values above 250MHz are for information only.

Product specifications may change without prior notification