

TrueNet®

Category 5e Four-Pair Plenum Cable



ADC's TrueNet® Category 5e plenum cable is an integral part of the TrueNet channel solution. Thanks to AirES® technology this cable is up to 28% smaller than competitive products, and this reduction in size also results in a safer product with less material to burn in the unlikely event of a fire. AirES also improves attenuation, crosstalk, delay skew and impedance due to the unique dialectical characteristics associated with air.

Features:

- Patented AirES technology
- Manufactured with lead-free materials
- Patented impedance matching for zero bit-errors
- Designed for Gigabit Ethernet applications
- Component of the TrueNet zero bit-error warranty
- Available in a side-by-side configuration

Compliances:

- UL Subject 444
- (UL)-C(UL) Type CMP
- ICEA S-90-661
- NEC 800 Type CMP
- ISO/IEC 11801 Class D
- ETL verified TIA/EIA-568-B.2 Category 5e horizontal cable requirements

SPEC SHEET



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Specifications

CONSTRUCTION

Features AirES technology

Conductors:	24 AWG solid bare copper
Insulation:	100% FEP
Pairing:	Short, staggered pair lays
Jacket:	Lead-free, flame retardant PVC
Nominal outer diameter:	4.57 mm (.180")

ELECTRICAL CHARACTERISTICS

Conductor DC resistance (maximum):	9.38 Ω /100 meters (28.6 Ω /1000 ft) @ 20 °C (68 °F)
DC resistance unbalance (maximum):	2%
Mutual capacitance (maximum):	5.6 nF/100 meters (17 pF/ft)
Operating temperature (maximum):	75 °C (167 °F)
Operating voltage (maximum):	300 VDC
Worst case cable skew:	25 nS/100 meters (25 nS/328 ft)
Nominal velocity of propagation:	75%

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FREQ (MHz)	FITTED IMPEDANCE (Ohms)	INSERTION LOSS (dB/100m)		RETURN LOSS (dB/100m)		Pair-Pair NEXT (dB/100m)		PSNEXT (dB/100m)	
	SPEC	Max	TIA Spec	Min	TIA Spec	Min	TIA Spec	Min	TIA Spec
1	100 +/- 5	1.9	2.0	33.1	20.0	79.8	65.3	78.1	62.3
4	100 +/- 3	3.7	4.1	30.1	23.0	72.4	56.3	67.9	53.3
8	100 +/- 3	5.3	5.8	32.7	24.5	64.4	51.8	63.5	48.8
10	100 +/- 3	6.0	6.5	31.4	25.0	63.7	50.3	62.4	47.3
16	100 +/- 3	7.6	8.2	37.0	25.0	61.4	47.2	59.7	44.2
20	100 +/- 3	8.6	9.3	37.5	25.0	59.7	45.8	58.0	42.8
25	100 +/- 3	9.6	10.4	35.1	24.3	58.7	44.3	56.9	41.3
31.25	100 +/- 3	10.8	11.7	34.4	23.6	58.7	42.9	54.9	39.9
62.5	100 +/- 3	15.5	17.0	33.2	21.5	52.4	38.4	50.3	35.4
100	100 +/- 3	19.8	22.0	29.8	20.1	49.3	35.3	47.2	32.3
155	100 +/- 3	25.1		29.3		51.3		47.9	
200	100 +/- 3	28.9		22.9		47.5		45.5	
250	100 +/- 3	32.5		25.0		42.6		41.1	
300	100 +/- 3	35.9		22.5		43.6		41.1	
350	100 +/- 3	39.3		22.4		41.1		39.6	

FREQ (MHz)	Pair-Pair ACR (dB/100m)		PSACR (dB/100m)		Pair-Pair ELFEXT (dB/100m)		PSELFEXT (dB/100m)	
	Min	TIA Spec	Min	TIA Spec	Min	TIA Spec	Min	TIA Spec
1	78.0	63.3	76.3	60.3	70.2	63.8	70.0	60.8
4	68.6	52.2	64.2	49.2	58.9	51.8	58.7	48.8
8	59.1	46.0	58.1	43.0	52.8	45.7	52.5	42.7
10	57.8	43.8	56.4	40.8	51.1	43.8	50.8	40.8
16	53.8	39.0	52.0	36.0	47.4	39.7	47.1	36.7
20	51.2	36.5	49.4	33.5	45.0	37.8	44.9	34.8
25	49.0	33.9	47.3	30.9	43.0	35.8	42.6	32.8
31.25	47.9	31.2	44.1	28.2	41.4	33.9	41.1	30.9
62.5	36.9	21.4	34.8	18.4	35.2	27.9	35.2	24.9
100	29.4	13.3	27.4	10.3	32.0	23.8	31.7	20.8
155	26.2		22.8		28.7		28.6	
200	18.7		16.6		27.4		27.3	
250	10.1		8.6		25.8		25.4	
300	7.7		5.2		24.4		23.8	
350	1.8		0.3		22.8		22.1	

NOTE: The above listed discrete frequency electrical performance values are provided for engineering information only. Actual compliance testing is based on swept frequency measurements. The spec values are also based on the TIA/EIA-568-B.2 specification.

Ordering Information

Description	Weight (Lbs/kft)	Catalog Number*
4-pair cable		
Reel packaging	21	TN5ESP-XXYY
Reelx-1000'	20	TN5ESP-XXII
Reel in a box-1000'	22	TN5ESP-XXRB

*To order cable sheath color, replace XX with:

BL = Blue
 WT = White
 GY = Gray
 GN = Green
 YL = Yellow
 RD = Red

*To designate reel length, replace YY with:

02 = 1000'
 04 = 2000'
 05 = 2500'
 06 = 3000'

SPEC SHEET

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From North America, Call Toll Free: 1-800-366-3891 • Outside of North America: +1-952-938-8080
 Fax: +1-952-917-3237 • For a listing of ADC's global sales office locations, please refer to our web site.

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101
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