



**Part Number: 2424D**

**Enhanced Category 6 Nonbonded-Pair Cables**

**Product Description**

CAT6+ (300MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, Polyolefin Insulation, LSZH Jacket

**Technical Specifications**

**Product Overview**

Environmental Space:	Indoor - Euroclass Eca
Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6 and 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM

**Physical Characteristics (Overall)**

**Conductor**

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	24	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	24 AWG

**Insulation**

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	1 mm

Bonded-Pair:	No
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**Color Chart**

Number	Color
Pair 1	White/Blue & Blue
Pair 2	White/Orange & Orange
Pair 3	White/Green & Green
Pair 4	White/Brown & Brown

**Outer Jacket Material**

Material	Color	Nominal Diameter	Diameter +/- Tolerance	Ripcord
LSZH / FRNC	Blue, purple	5.5 mm	0.3 mm	Yes

**Construction and Dimensions**

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

**Cabling**

Description	
4 pairs twisted together	
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	9 MPa

**Electrical Characteristics**

## Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
93.8 Ohm/km	4 %	2 Ohm

## Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

## Impedance

Nominal Characteristic Impedance
100 Ohm

## Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
25 ns/100m	70 %

## High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2 dB/100m	75.3 dB	73.3 dB	73.3 dB	71.3 dB	70.8 dB	67.8 dB	20 dB	40 dB	35 dB
4 MHz	3.7 dB/100m	66.3 dB	64.3 dB	62.6 dB	60.6 dB	58.8 dB	55.8 dB	23 dB	40 dB	23 dB
10 MHz	5.8 dB/100m	61.8 dB	59.8 dB	56 dB	54 dB	50.8 dB	47.8 dB	25 dB	40 dB	15 dB
16 MHz	7.4 dB/100m	58.6 dB	56.6 dB	51.2 dB	49.2 dB	46.7 dB	43.7 dB	25 dB	38 dB	10.9 dB
20 MHz	8.3 dB/100m	57.1 dB	55.1 dB	48.8 dB	46.8 dB	44.8 dB	41.8 dB	25 dB	37 dB	9 dB
31.2 MHz	10.4 dB/100m	54 dB	52 dB	43.6 dB	41.6 dB	40.9 dB	37.9 dB	23.6 dB	35.1 dB	5.1 dB
62.5 MHz	15 dB/100m	49.1 dB	47.1 dB	34.1 dB	32.1 dB	34.9 dB	31.9 dB	21.5 dB	32.6 dB	
100 MHz	19.3 dB/100m	45.8 dB	43.8 dB	26.5 dB	24.5 dB	30.8 dB	27.8 dB	20.8 dB	30 dB	
200 MHz	28.3 dB/100m	40.9 dB	38.9 dB	12.6 dB	10.6 dB	22.8 dB	21.8 dB	19.5 dB	27 dB	
250 MHz	32.1 dB/100m	39.3 dB	37.3 dB	7.2 dB	5.2 dB	22.8 dB	19.8 dB	18 dB	26.5 dB	
300 MHz	35.6 dB/100m	38.1 dB	36.1 dB	2.5 dB	0.5 dB	21.3 dB	18.3 dB	17.5 dB		

High Freq Table Note: Limits below 4MHz are for information only.

## Current

Max. Recommended Current [A]
1.5 A

## Voltage

Voltage Rating [V]
72 V

## Temperature Range

Installation Temp Range:	0°C To +50°C
Operating Temp Range:	-20°C To +75°C

## Mechanical Characteristics

Bulk Cable Weight:	33 kg/km
Max Recommended Pulling Tension:	80 N
Min Bend Radius During Installation:	44 mm
Min Bend Radius During Operation:	22 mm

## Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 6
ANSI Compliance:	ANSI/TIA/EIA 568-B.2-1 (2002)

## Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2005-09-30
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## Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1
Burning Load:	350 kJ/m
Amount of Halogen acc. to IEC 60754-1 & EN50267-1:	Zero

## Part Number

### Variants

Item #	Color
2424D.10305	Black
2424D.06305	Blue
2424D.06A305	Blue
2424D.08500	Gray
2424D.08A305	Gray
2424D.05305	Green
2424D.03305	Orange
2424D.071000	Purple
2424D.07305	Purple
2424D.07A305	Purple
2424D.02A305	Red
2424D.091000	White
2424D.09500	White
2424D.09A305	White
2424D.04305	Yellow

Patent:	<a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a>
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## History

Revision Number:	4
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