4CABLING
QUALITY SOLUTIONS CONNECTING YOUR WORLD

CAT6A

SKU SLD.C6AUUTP.XXXX

CAT6A U/UTP 23AWGX4P PVC JACKET 305M ROLL

Introducing the 4Cabling CAT6A U/UTP Ethernet Cable – the pinnacle of high-speed networking solutions. This cable is engineered for optimal performance and is designed to meet and exceed industry standards, including ISO/IEC 11801, ANSI/TIA-568.2-D, EN 50173, and IEC 61156-5. With a robust 23AWG gauge construction, this cable ensures reliable and lightning-fast data transmission, making it perfect for demanding applications such as data centers, business networks, and smart home installations.

The sleek white, yellow, blue, black or green PVC jacket not only adds a touch of professionalism but also provides enhanced durability, protecting the cable from external factors and ensuring long-lasting performance. Supplied on a convenient plastic reel,the 305m length offers flexibility in various networking setups, making it suitable for both residential and commercial installations. Whether you're upgrading your home network for seamless streaming or establishing a comprehensive business infrastructure, the 4Cabling CAT6A U/UTP cable delivers unparalleled reliability.

Stay ahead of the connectivity curve with this CAT6A cable that combines cutting-edge technology with compliance to industry standards. Elevate your networking experience and enjoy the benefits of stable, high-speed data transmission with the 4Cabling CAT6A U/UTP Ethernet Cable – the go-to choice for those who demand top-notch performance and reliability in their network connections.

FEATURES
U/UTP
Colour: White, Yellow, Blue, Black or Green
Length: 305m
Gauge: 23AWG

COMPLIANCES
ISO/IEC 11801, ANSI/TIA-568.2-D, EN 50173 and IEC 61156-5

WARRANTY
1-year limited warranty

APPROVED COMPANY ISO 9001 Quality Management Systems
QMS Certification Services

CCiQ Powering business potential

Bicsi SOUTH PACIFIC

NSW GOVERNMENT

Queensland Government
GITC APPROVED

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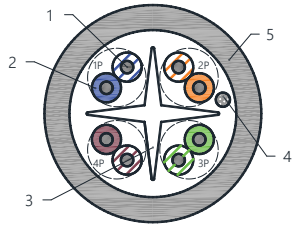
Schema



Product Description	
❶	**Inner Conductor**
❷	**Insulation**
❸	**Cross Member**
❹	**Ripcord**
❺	**Jacket**

Construction Item Description			
Conductor	Construction	AWG	23 AWG
	Material	/	Bare Solid Copper
Insulation	Material	/	HDPE 8303
	Proportion	g/cm³	0.97
	Outside Diameter	mm	1.01 ± 0.01
	Average Thickness	mm	0.22
	Color	/	1p: blue stripe + white + blue stripe & blue
			2p: orange stripe + white + orange stripe & orange
			3p: green stripe + white + green stripe & green
			4p: brown stripe + white + brown stripe & brown
Pair Twist	Lay & Direction	/	1p: S=18.5 mm (26%)
			2p: S=15.5 mm (21%)
			3p: S=20.5 mm (30%)
			4p: S=14.0 mm (19%)
Inner Assemble	Lay & Direction	/	S=90 ± 5 mm
Filler	Ripcord	/	300D
	Cross Member	/	HDPE
Outside Shield	Shield	/	/
	Construction	mm	/
	Material	/	/
	Coverage	%	/
Jacket	Material	/	**PVC , Rated 60 or 75**
	Hardness	A	81 ± 3
	Outside Diameter	mm	6.0 ± 0.2
	Average Thickness	mm	0.55 ~ 0.60
	Color	/	according to the customer's requirements
	Marking Color	/	according to the customer's requirements
Marking	Jacket	/	**E502490 UL C(UL) CMR 4PR …**

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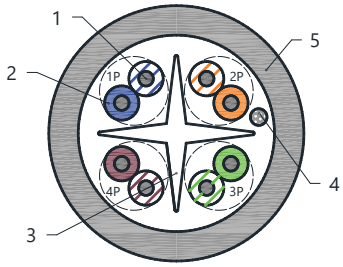
Schema



Product Description

❶ **Inner Conductor**	Composition : Solid Bare Copper (BC)
	Diameter : See table below
❷ **Insulation**	Composition : High density Polyethylene (HDPE)
	Diameter : See table below
❸ **Filler**	Type of filler : Cross-Member
	Composition : High density Polyethylene (HDPE)
❹ **Filler**	Type of filler : Ripcord
	Composition : Polyester
❺ **Jacket**	Composition : **PVC, Rated 60 or 75**
	Dimensions : See table below
	color : according to the customer's requirements

Dimensional Table

Nb pairs	*Section (AWG)*	*Diameter of inner conductor (mm)*	*Diameter of insulated conductor (mm)*	*Minimal thickness of jacket (mm)*	*Diameter of outer jacket (mm)*
4	23	NA	1.01 ± 0.01	0.55 ~ 0.60	6.0 ± 0.2

Diameters of inner conductor and insulated conductor must be designed in order to reach the electrical and transmission properties of CAT6.

Color Table

Pair No.	Conductor 1	Conductor 2
1	blue stripe + white + blue stripe	Blue
2	orange stripe + white + orange stripe	Orange
3	green stripe + white + green stripe	Green
4	brown stripe + white + brown stripe	Brown

Reference Standard

Materials		Fire performance	Electrical performance	Low	Zero Halogen (ZH)		Reach regulation	RoHs Directive
Insulation	Jacket			Smoke Density during combustion	Amount of Halogen acid gas during combustion	Degree of acidity (corrosivity) of gases for materials during combustion		
UL444 CSA C22.2 No. 214	**UL444 CSA C22.2 No. 214**	**UL 1666 (RISER CABLE FLAME TEST)**	ANSI/TIA-568.2-D ISO/IEC 11801 EN 50173 IEC 61156-5	NA	NA	NA	NA	

Mechanical Properties

Test Method	According to		
	In Standard	**UL444 & CSA C22.2 No. 214**	
	L_0=200mm, speed =100mm/min	*L_0=20mm, speed =250mm/min (or 25mm/min for PE&PP insulation)*	
	INNER CONDUCTOR	**INSULATION**	**JACKET**
Tensile Strength (MPa)	-	≥ 10.5 MPa	≥ 13.5 MPa
Elongation (%)	9%~24%	≥ 150 %	≥ 150 %

Thermal Properties

Operating Temperature Range (°C)	**Rated 60 or 75**

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Electrical Properties		
Conductor Resistance at 20°C	UL 444 & CSA C22.2 No. 214	≤ 9.5 Ω / 100m
Resistance unbalance within a pair		≤ 2%
Dielectric Strength *Test Voltage (cd/cd): 1.00KV DC or 0.7 KV AC for 1 min* *Test Voltage (cd/screen): 1.00KV DC or 0.7 KV AC for 1 min*		No breakdown
Insulation Resistance at 20°C after 2min of electrification under a DC voltage between 100 & 500V		>1500 MΩ / 100m
Mutual capacitance		5600pF / 100m MAX
Capacitance unbalance pair to ground at 800Hz or 1 kHz		≤ 160 pF / 100m
Characteristic impedance at 100MHz		100 ± 15 Ω
Spark Test		2000 ± 250VOC

Transmission Properties

CAT6A U/UTP

No.	Frequency	Attenuation (Max)	Propagation Delay (Max)	Propagation Delay Skew (Max)	Return Loss (Min)	NEXT (Min)	PS NEXT (Min)	EL-FEXT (Min)	PS EL-FEXT (Min)
	MHz	*dB/100m*	*ns/100m*	*ns/100m*	dB(on 100m)	dB(on 100m)	dB(on 100m)	dB(on 100m)	dB(on 100m)
1	4	3.8	552	45	23.01	66.27	63.27	55.96	52.96
2	8	5.31	546.73	45	24.52	61.75	58.75	49.94	46.94
3	10	5.93	545.38	45	25	60.3	57.3	48	45
4	16	7.49	543	45	25	57.24	54.24	43.92	40.92
5	20	8.38	542.05	45	25	55.78	52.78	41.98	38.98
6	25	9.38	541.2	45	24.32	54.33	51.33	40.04	37.04
7	31.25	10.5	540.44	45	23.64	52.88	49.88	38.1	35.1
8	50	13.36	539.09	45	22.21	49.82	46.82	34.02	31.02
9	62.5	14.99	538.55	45	21.54	48.36	45.36	32.08	29.08
10	100	19.13	537.6	45	20.11	45.3	42.3	28	25
11	125	21.51	537.22	45	19.43	43.85	40.85	26.06	23.06
12	200	27.58	536.55	45	18	40.78	37.78	21.98	18.98
13	250	31.07	536.28	45	17.32	39.33	36.33	20.04	17.04
14	300	34.27	536.08	45	17.3	38.14	35.14	18.46	15.46
15	350	37.25	535.92	45	17.3	37.14	34.14	17.12	14.12
16	400	40.05	535.8	45	17.3	36.27	33.27	15.96	12.96
17	450	42.71	535.7	45	17.3	35.5	32.5	14.94	11.94
18	500	45.26	535.61	45	17.3	34.82	31.82	14.02	11.02

Application

The cable must support class E applications and must be compatible POE, POE+ and UPOE.

Marking

Type	ink
Color	*According to the customer's requirements*
Text	**E502490 UL C(UL) CMR 4PR …**

Packing

Type of Packing	Dimension (mm)	Qt of per Packing (m)	Label Type	Cut Allowed	Tolerance Length (%)
Inner Box	395 X 395 X 230	305	**UL 0444 Standard Label**	No	0
Master Carton	480 X 410 X 415	305		No	0

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Product Design Card

Product Description： Cat6A U/UTP 4 X 2 X 23AWG (CMR)

Rev.： A	ECN Description：

Construction Item Description			Electrical Property		
Conductor	Material	Bare Solid Copper（elongation：19-24%）	Conductor Resistance at 20°C		≤ 9.5 Ω / 100m
	OD	23 AWG	Resistance unbalance within a pair		≤ 5%
Insulation	Material	HDPE 8303	Insulation Resistance at 20°C after 2min of electrification under a DC voltage between 100 & 500V		>1500 MΩ / 100m
	OD	1.01 ± 0.01 mm	Mutual capacitance		5600 pF / 100m MAX
	Average THK	0.22 mm	Capacitance unbalance pair to ground at 800Hz or 1 kHz		≤ 160 pF / 100m
	Color	1p: white + 2 blue stripes & blue	Characteristic impedance at 100MHz		100 ±15 Ω
		2p: white + 2 orange stripes & orange	Dielectric Strength Test Voltage (cd/cd,cd/screen): 1.00KV DC or 0.7 KV AC for 1 min		No breakdown
		3p: white + 2 green stripes & green	Mechanical Property		
		4p: white + 2 brown stripes & brown	insulation	elongation before aging	≥ 300%
Pair Twist	Lay & Direction	1p: S=18.5 mm (26%)		tensile strength before aging	≥12 MPa
		2p: S=15.5 mm (21%)		elongation after aging	≥ 150 %
		3p: S=20.5 mm (30%)		tensile strength after aging	≥10.5 MPa
		4p: S=14.0 mm (19%)	jacket	elongation before aging	≥ 150 %
	OD	/		tensile strength before aging	≥ 13.5 MPa
Inner Assemble	Lay	S=90±5 mm		elongation after aging	≥ 125 %
	Direction	according to the drawing		tensile strength after aging	≥ 12.5 MPa
	Filler	cross member 4.8X4.8X0.5mmT	Packing		
	OD	/	Inner Box + UL 0444 Standard Label		395 X 395 X 230mm
Filler	Material	Ripcord	Master Carton		480 X 410 X 415mm
	Construction	300D			
Outside Shield	Shield	/			
	Construction	/			
	Material	/			
	Coverage	/			
Jacket	Material	PVC, Rated 60 or 75℃			
	Hardness	81 ±3			
	OD	6.0 ± 0.2			
	Average THK	0.55~0.60			
	Color	according to the customer's requirements			
	Marking Color	according to the customer's requirements			
Marking		E502490 UL C(UL) CMR 4PR…