

ProPlex™

CAT6a Ethernet Cables PCCAT6APX Extended Length and PCCAT6AP

The World's Most Durable Ethernet Cables



RoHS
Compliant

NEW! PCCAT6APX with full verified CAT6a performance up to 100 metres!

Road-worthy CAT6a cables for touring applications. 10-Gigabit networking for the road!

ProPlex CAT6a flexible yet rugged patch cables combine outstanding data transmission, noise rejection and very low skew with the ability to withstand the most extreme handling and conditions, indoors and outdoors. Available as fully assembled patch cables, in standard and custom lengths, with your choice of heavy-duty RJ-45 connector formats: ProShell Extra; EtherCon; EtherCon IP Rated; and RJ45. Panel mount connectors are also available for a complete OEM Ethernet wiring solution.

General Specifications		
	PCCAT6AP	PCCAT6APX
Conductors	24 AWG (0.25 mm ²) 7x0.2 mm stranded tinned copper.	24 AWG (0.25 mm ²) 7x0.2 mm stranded tinned copper.
Insulation	Cellular PO, Nom. Diameter 0.055" [1.4 mm]	Cellular PO, Nom. Diameter 0.055" [1.4 mm]
Pairs	Colour Coded singles twisted into pairs	
	Colour Code: White X Blue; White X Orange; White X Green; White X Brown	
Assembly	Structure: 4 pairs cabled together. Each pair wrapped with an aluminium foil providing 100% coverage. An overall braid with strength yarns	
Shields	Tinned copper braid, 80% nom coverage.	
Jacket	Material: Industrial grade PU compound OD: 8.1 mm +/- 0.3 mm Colour: Black UV Resistant	Material: Industrial grade PU compound OD: 8.1 mm +/- 0.3 mm Colour: Black UV Resistant
Marking	ProPlex PCCAT6AP 24AWG S/FTP Data Cable Cat6a verified [lot no.]	ProPlex PCCAT6APX 24AWG S/FTP Data Cable Cat6a Extended verified [lot no.]
Weight	45.7 lbs./mft (68 Kg/Km)	48.4 lbs./mft (72 Kg/Km)
Temperature Range	Working: -40 °C to +70 °C	
Bending Radius	75 mm min.	
Typical Operational Installation Length	Up to 85 m (@ 20 °C)	Up to 100 m (@ 20 °C)
Tensile Force	150 N max.	
Compliance	Flame test: IEC 60332.1 Environmental: per IEC 61156-6 and ISO/IEC 11801 RoHS compliance: 2002/95/EC	

Innovative, Performance-Driven Show Technology Since 1983

tmb.com

Los Angeles
+1 818-899-8818

London
+44 (0)20-8574-9700

New York
+1 201-896-8600

Beijing
+86 10-8492-1587

Toronto
+1 519-538-0888



Electrical Specifications

	PCCAT6AP	PCCAT6APX
Dielectric Strength	700 Vrms/min.	700 Vrms/min.
Pair Mutual Capacitance	42 pF/m	40 pF/m
Capacitance Unbalance	1.4 pF/m (800 Hz)	1.4 pF/m (800 Hz)
Pair characteristic impedance	100 +/- 5 Ohm	100 +/- 5 Ohm
NVP (Nominal Velocity of Propagation)	78 %	80 %
Max skew delay	25 nSec/100m	25 nSec/100m
Conductor DC resistance (20° C)	93 Ohm	93 Ohm
Resistance unbalance (within pairs)	2% max.	2% max.
Insulation resistance	Not less than 5 GΩ-km	Not less than 5 GΩ-km
Alien cross talk	Proven by design per IEC 61156-6	Proven by design per IEC 61156-6
Coupling Attenuation	Type I per IEC 61156-6	Type I per IEC 61156-6
Transfer impedance	Grade 1 per IEC 61156-6	Grade 1 per IEC 61156-6
Transverse conversion loss (TCL)	Level A per IEC 61156-6	Level A per IEC 61156-6

Transmission Performance - PCCAT6AP

Freq. MHz	Attenuation dB/100m 20°C	PS NEXT Loss dB	NEXT Loss dB	RL dB	PS ANEXT dB	PS ELFEXT dB	ELFEXT dB
	Typical value	Typical value	Typical value	Typical value	Typical value	Typical value	Typical value
1	2.4	72.3	75.3	20	67	65	68
4	4.2	63.3	66.3	23	67	53	56
10	6.4	57.3	60.3	25	67	45	48
20	9.1	52.8	55.8	25	67	39	42
30	11.5	50.1	53.1	23.8	67	35.4	38.4
100	21.4	42.3	45.3	21.1	62.5	25	28
150	26.6	39.7	42.7	18.8	59.8	21.5	24.5
200	50.5	37.8	40.8	18	58	19	22
250	34.3	36.3	39.3	17.3	56.5	17	20
300	37.7	35.1	38.1	17.3	55.3	15.5	18.5
400	44.5	33.3	36.3	17.3	53.4	13	16
500	50.5	31.8	34.8	17.3	52	11	14

ProPlex PCCAT6AP meets attenuation specs up to 85m (275 ft).

Transmission Performance - PCCAT6APX

Freq. MHz	Attenuation dB/100m 20°C	PS NEXT Loss dB	NEXT Loss dB	RL dB	PS ANEXT dB	PS ELFEXT dB	ELFEXT dB
	Typical value	Typical value	Typical value	Typical value	Typical value	Typical value	Typical value
1	2.4	72.3	94.1	25	67	67	70
4	3.9	92.8	90.7	28	67	66	70
10	6.1	91.1	90.1	31	67	64.5	68
20	8.7	93.4	89.5	25	67	62	65
30	10.8	91.1	89.1	23	67	58.5	62
100	20.1	90.6	89.1	28	62.5	54.3	58
150	24.6	87.3	88.6	25	59.8	47	50
200	28.5	86.1	85	25	58	44.2	47
250	32.1	84.5	84.8	25	56.5	42	45
300	35.3	81.9	81.8	25	55.3	36.9	40
400	41.1	78.5	78.5	25	53.4	32.3	35
500	46.1	76	77.3	25	52	27	30

ProPlex PCCAT6APX meets attenuation specs up to 100 m (328 ft).