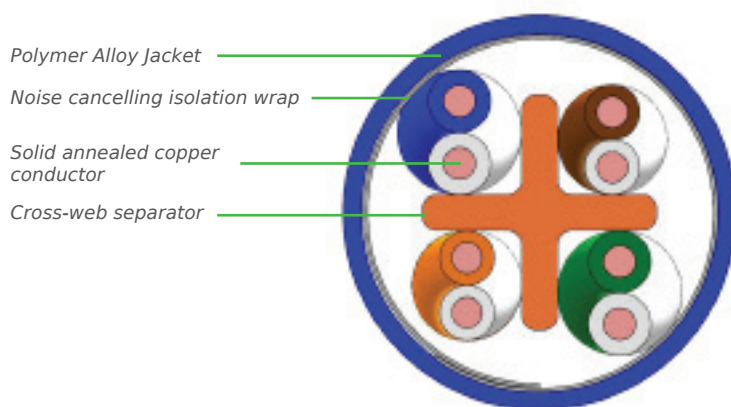# molex

PowerCat 6A UTP CMP/CMR Cable ❯

PowerCat 6A UTP cable is capable of supporting 10GBASE-T applications and features an innovative noise-canceling aluminum/polyester isolation wrap surrounding the core that delivers excellent alien crosstalk (AXT) performance.

The product features a low outside diameter of 0.275" (Plenum) 0.25" (Riser), allowing for easier, more efficient installation and cable management. This also improves density and cooling. PowerCat 6A U/UTP cable is third party verified by ETL for Category 6A component compliance and is ideal for PoE applications requiring higher levels of current and is an excellent choice for high-bandwidth, mission-critical applications and wireless access points.

Polymer Alloy Jacket

Noise cancelling isolation wrap

Solid annealed copper conductor

Cross-web separator

6A UTP CMP/CMR Cable

FEATURES AND ADVANTAGES

Noise canceling insulated metallic isolation wrap surrounds surrounds the pairs for AXT protection
Low outside diameter of 0.275" (Riser) and 0.25" (Plenum) allows for improved cable density and handling
High cable density and reduced bend radius lowers installation cost
No grounding or bonding required
HDBaseT compliant
Power over Ethernet (PoE) IEEE 802.3bt-2018 compliant
ANSI/TIA 568.2-D compliant
ETL verified Category 6A
Ideal for A/V applications up to 100m channel
Limited Power (LP) Rating - Plenum: 0.7A, Riser: 0.5A

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PowerCat 6A UTP CMP/CMR Cable ❯

APPLICATIONS

10BASE-T through 10GBASE-T Ethernet

Power over Ethernet (PoE) IEEE 802.3bt-2018

ATM and token ring

Backwards compatible to legacy protocols and applications

SPECIFICATIONS

Commercial Standards
ANSI/TIA-568.2-D
CSA C22.2
IEEE 802.3bt-2018
UL 444
ETL Verified

Flame Rating:
Plenum NFPA-70,CMP
Riser-NFPA 70, CMR

Environmental Standards
RoHS Compliant
REACH compliant

Limited Power (LP) Rating:
Plenum: 0.7A
Riser: 0.5A

Mechanical
Tensile strength: 25lb

Electrical
Mutual Capacitance (nominal):
5.1nF Ohms/100m
DC Resistance:
9.38 Ohms/100m maximum
Skew ns/100m maximum: 45
Pair to Ground Unbalance:
330 pF/100m maximum

Velocity of Propagation nominal %:
CMP: 70
CMR: 67
DC Resistance Unbalance: 4% maximum

Physical
Pair Count: 4
Conductor: Solid Bare Copper
AWG: 23
Cable Diameter:
0.275" (Riser) 0.25" (Plenum)
Weight: 33lbs/kft (Plenum), 34lb/lft (Riser)
Mininum Bend Radius:
1.00" (Plenum), 1.25" (Riser)
Jacket: Flame-retardant polymer alloy
Isolation Wrap:
Polyester/Aluminum/Polyester
Operating Temperature:
CMP, CMR: - 20 to 105°C
Installation Temperature:
CMP, CMR: - 5 to 50°C

PoE
Our PowerCat 6A system is suitable for the most demanding PoE applications:
IEEE 802.3bt from Type 1 to Type 4, and CISCO UPoE+

HD Base-T PoH up to 100W

RP3 compliant as defined by EN 50174-2:2018, ISO/IEC 14763-2:2019 and AS/NZS 14763.2:2020

Notes:
For new installations of PoE Type 3 / Class 5 and above that wish to be eligible for the Molex 25 year Application Assurance Warranty, we require Category 6A cable to be used throughout.

To confirm your PoE / RP3 cabling design is eligible for the Molex 25 year Application Assurance Warranty, your design must be verified and validated with the Molex PoE Calculator. Read more https://www.molexces.com/poe-calculator

Molex recommends that the PoE feature on an individual switch port are power disabled prior to unplugging the associated powered Device.

Molex recommends that the full range of PowerCat 6A products be used in a system to maximize cabling and PoE performance

Details on Molex requirements for Warranty can be found at https://www.molexces.com/about-us/our-warranty/

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TRANSMISSION PROPERTIES

Frequency MHz	RL dB	NEXT dB	PSNEXT dB	ACRF dB	PSANEXT dB	LCL/TCL
1	20.00	74.30	73.30	71.80	77.00	50.00
4	23.00	65.30	63.30	59.80	77.00	44.00
10	25.00	59.30	57.30	51.80	77.00	40.00
16	25.00	56.20	54.30	47.70	77.00	38.00
20	25.00	54.80	52.80	45.80	77.00	37.00
31.25	23.60	51.90	49.90	41.90	77.00	35.10
62.5	21.50	47.40	45.40	35.90	76.60	32.00
100	20.10	44.30	42.30	31.80	72.50	30.00
250	17.30	38.30	36.30	23.80	66.50	26.00
350	16.30	36.20	34.20	20.90	64.30	24.60
400	15.90	35.30	33.30	19.80	63.50	23.40
500	15.20	33.80	31.80	17.80	62.00	23.00
600	14.70*	33.60*	30.60	16.20*	60.80	22.20*
750	14.00*	31.20	29.20	14.30*	59.40	21.20*

Frequency MHz	IL dB/100m	ACR dB/100m	PSACR dB/100m	PSACRF dB/100m	PSAACRF dB/100m	EL TCTL
1	2.10	72.20	70.20	68.80	77.00	35.00
4	3.80	61.50	59.50	56.70	76.20	23.00
10	5.90	53.40	51.40	48.80	68.20	15.00
16	7.50	48.80	46.80	44.70	64.10	10.90
20	8.40	46.40	44.40	42.80	62.20	9.00
31.25	10.50	41.40	39.40	38.90	58.30	-
62.5	15.00	32.40	30.40	32.80	52.30	-
100	19.10	25.20	23.20	28.80	48.20	-
250	31.10	7.30	5.30	20.80	40.20	-
350	37.20	-1.10	-3.10	17.90	37.30	-
400	40.10	-4.80	-6.80	16.70	36.20	-
500	45.30	-11.40	-13.40	14.80	34.20	-
600	50.10*	-	-	13.20*	32.60	-
750	56.70*	-	-	11.30*	30.70	-

*Value provided for reference only

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PowerCat 6A UTP CMP/CMR Cable ❯

ORDERING INFORMATION

Order No.	SAP No.	Description
Plenum		
CAA-00449P-02	1810000038	PowerCat 6A UTP Plenum White 1000 ft Reel
CAA-00449P-04	1810000039	PowerCat 6A UTP Plenum Black 1000 ft Reel
CAA-00449P-08	1810000040	PowerCat 6A UTP Plenum Gray 1000 ft Reel
CAA-00449P-ON	1810000041	PowerCat 6A UTP Plenum Orange 1000 ft Reel
CAA-00449P-BL	1810000042	PowerCat 6A UTP Plenum Blue 1000 ft Reel
CAA-00449P-GR	1810000043	PowerCat 6A UTP Plenum Green 1000 ft Reel
CAA-00449P-YL	1810000044	PowerCat 6A UTP Plenum Yellow 1000 ft Reel
Riser		
CAA-00450R-02	1810000045	PowerCat 6A UTP Riser White 1000 ft Reel
CAA-00450R-04	1810000046	PowerCat 6A UTP Riser Black 1000 ft Reel
CAA-00450R-08	1810000047	PowerCat 6A UTP Riser Gray 1000 ft Reel
CAA-00450R-ON	1810000048	PowerCat 6A UTP Riser Orange 1000 ft Reel
CAA-00450R-BL	1810000049	PowerCat 6A UTP Riser Blue 1000 ft Reel
CAA-00450R-GR	1810000050	PowerCat 6A UTP Riser Green 1000 ft Reel
CAA-00450R-YL	1810000051	PowerCat 6A UTP Riser Yellow 1000 ft Reel

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