

# CAT 6 Outdoor Network Cables by LanPro.

LPOUTDOORCAT6\_PFD\_ENB01W

## Features:

- Exceeds all Standards for CAT 6 communication cable and is able to pass a CAT 6A certification test even though it is a CAT 6 cable.
- Extremely durable.
- Resistant to UV Rays.
- Abrasion resistant.
- Unshielded / Shielded.
- Black PE jacket.
- Direct Burial.
- Capable of 250 MHz transmission giving you additional performance.
- Rattenweg™, (PE Rodent Resistance option).
- Fire retardant CMX or optionally CM, CMR, CMP and LSZH internal jacket which enables this part of the cable to run into premises after the PE jacket is removed at the entrance to the building.
- Operating voltage ≤ 48 Volt rms

## Applications:

- Outdoor cable runs to Wireless Access Points (AP), Bridges or CPE.
- Outdoor cable runs to IP Video Surveillance Cameras.
- Inter-building networks.
- Ethernet, Phone, Paging, Alarm, Video and Power-over-Ethernet (PoE) Networks.
- The perfect CAT 6 cable for outdoor residential and commercial installations.
- Situations where reliability is of paramount importance, as in military complexes, hospitals, extreme weather locations, airports.



## CAT 6 Outdoor Network cables by LanPro.

LanPro manufactures high grade outdoor CAT 6 cables. The outer jacket is constructed with black high-density polyethylene (PE), which is extremely durable and offers a very long product life (20 year life) with resistance against water permeation, moisture, UV, grease, oils, extreme temperatures. This external jacket offers a positive protection against corrosion, erosion, friction and there is an optional rodent attack protection PE type that pests like rats will not like to bite.

LanPro manufactures several models of Outdoor CAT 6 Network Cables: U/UTP Single PE Jacket Gel-filled, U/UTP Single PE Jacket with Water block tape, and the double Jacketed PE+CMX models is F/UTP. The shielded version with drain wire made of 100% copper reduces greatly the EM interference encountered in hostile outdoor environments, being recommended for radios and other wireless IP based equipment. Other special outdoor cables can be produced under request as well as in special lengths, colors and terminations.

The internal jacket is CMX gray color as standard, and can be supplied in different colors and fire ratings (CM, CMR, CMP, and LSZH) as a special order.

Outdoor CAT 6 is UL, ULc, and ETL approved and exceeds TIA/EIA 568-B.2-1 specifications for Category 6 (CAT 6).

Now with "flexible-x" construction, CAT 6 cable isolates the pairs throughout the length of the cable, improving field installation as well as performance.

For Gigabit Ethernet, 100BASE-Tx, token-ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog (Broadband, Baseband), digital video and Voice over IP (VoIP), it can also be used for Video surveillance IP cameras.

The use of traditional indoor grade Category 6 cable in outdoor applications subjects it to rapid deterioration. Installation of indoor CAT 5e cable inside a conduit does not make it outdoor suitable either. Conduits filled with water will deteriorate the cable rapidly.

Therefore, choosing a high quality outdoor (UV-rated) CAT 6 cable with PE jacket and HDPE conductor insulation is extremely important. Lanpro outdoor cables will avoid costly network outages, keeping network reliability high and maintenance costs low. Some of our CAT6 cables, like the LP-C6370BKC with Double Jacket, F/UTP Shielded are direct burial. However, the use of a conduit is recommended.

If the cable is not well made or UV-rated, it may snag when coming out of the box, causing an installation breakdown or failure in sunlight over time. Wi-Fi towers and their installations MUST use this kind of product to avoid fast deterioration of the cabling set-up due to weather, dust, sun, and rude environment.

We, at LanPro, have taken every aspect of an installation into account along with maintaining a decent cost solution while designing this product.

And now, with the optional External PE Jacket Rattenweg™, (PE Rodent Resistance option), you keep rodents from biting and damaging the PE Jacket.

## A Specifications

Electrical	
Impedance	100Ω
Max. DC Resistance at 20°C	73 Ω/Km
Resistance Imbalance	≤ 2 %
Velocity of Propagation	80%
Skew	35 ns/100 m
Mutual Capacitance	5.1 nF max/100 m
Capacitance imbalance	≤1.2pF/m
Conductor resistance	8.9Ω max/100 m
Operating voltage	≤ 48 Volt rms
Isolation Resistance @500V	Min 5000 MΩ/Km @ 20°C
Test Voltage(1 min)	- 1KV /1 min (DC)
Mechanical	
Bending Radius	8 x external diameter during install, 4 x external diameter afterwards
Operating Temperature	-40°C to 60°C
Installation Temperature	0°C to 50°C
Storage Temperature	-40°C to 60°C
Tensile strenght	≤ 15.3 Kg (150 N)
Cable weight per 1000 ft (304.8 m)	25.9 Kg (57.2 lbs)
Cable Construction	
Conductor pairs	Solid Bare Copper (BC) 23AWG (0.57 mm)
Insulation Pairs	High Density Polyethylene (HDPE) (1.34 mm)
Pairs Color	Blue/White with blue stripe, Orange/White with orange stripe, Green/White with green stripe, Brown/White with brown stripe.
Inner Jacket	UL Approved CMX inner jacket (with or without gel) (7.2 mm) Typical jacket thickness: 0.024 in (0.60 mm) CM, CMR, CMP Optional.
LSZH Option	This optional rating for the internal jacket: add Suffix: 01
Ripcord	Optional
Drain Wire	Only on shielded cables, e.g: F/UTP version AWG 26 solid copper.
Sheath	Black PE Polyethylene, or Rattenweg™ (PE Rodent Resistance option), O.D.:9 mm

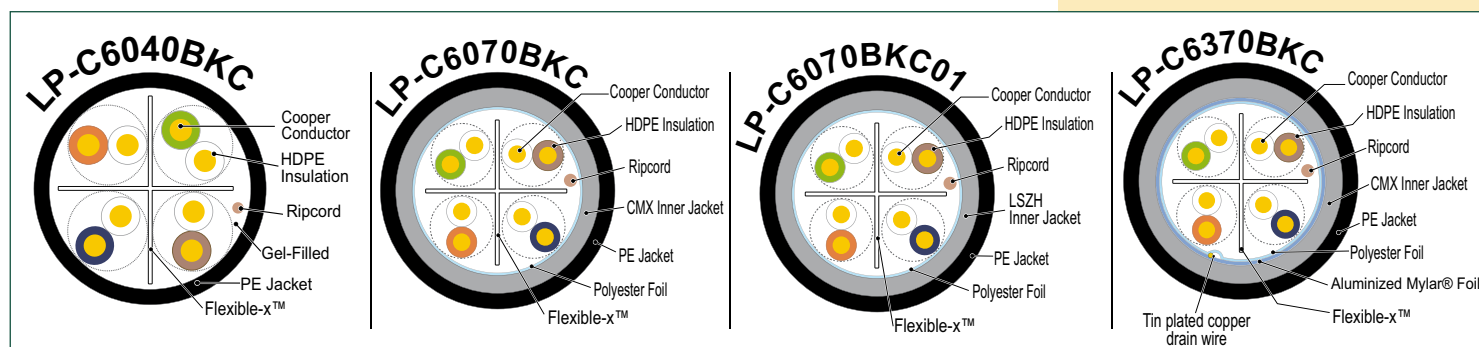
## B CAT6 Outdoor Cable Construction

P/N	Type	Category	Wire size (Awg#)	No of Pairs	Nominal Cable O.D. (mm)	Type of Jacket	Remarks	Description
LP-C6040BKC	U/UTP	CAT 6	23	4	8.0	PE	250 MHz	Network Cable, all Weather Outdoor Cat 6 type U/UTP, solid, 100% copper, AWG 23, with Single Black PE Jacket, Gel Filled, Flooded core in 1000ft wood spool.
LP-C6070BKC	U/UTP	CAT 6	23	4	9.0	PE+(CMX)	250 MHz	Network Cable, all Weather Outdoor CAT 6 type U/UTP, solid, 100% copper, AWG 23 with Double Jacket, Black PE + Gray (CMX), with Flexible-x™ nylon core for simetry in 1000ft wood spool.
LP-C6070BKC01	U/UTP	CAT 6	23	4	9.0	PE + (LSZH)	250 MHz	Network Cable, all Weather Outdoor CAT 6 type U/UTP, solid, 100% copper, AWG 23 with Double Jacket, Black PE + Gray (CMX), with Flexible-x™ nylon core for simetry in 1000ft wood spool.
LP-C6370BKC	F/UTP	CAT 6	23	4	9.0	PE+(CMX)	250 MHz	Network Cable, all Weather Outdoor CAT 6 type F/UTP (FTP), solid, 100% copper, AWG 23, Aluminum Foil with drain wire, with Double Jacket Black PE + Gray (CMX), with Flexible-x™ nylon core for simetry in 1000ft wood spool.

## C Electrical Characteristics

Frequency, MHz	RL	Attenuation	NEXT	PSNEXT	ELFEXT	PSELFEXT
MHz	dB	dB	dB	dB	dB	dB
1	22.0	2.0	93.0	90.0	93.0	90.0
4	25.0	3.7	88.0	85.0	93.0	90.0
10	28.0	5.7	88.0	85.0	83.0	80.0
31.25	28.0	8.1	88.0	85.0	83.0	80.0
62.5	27.0	10.0	88.0	85.0	73.0	70.0
100	24.0	19.0	83.0	80.0	66.0	63.0
150	22.0	23.6	83.0	80.0	63.0	60.0
200	21.0	27.7	83.0	80.0	61.0	58.0
250	20.0	31.4	80.0	58.0	58.0	55.0

## D Cable Cross Section



## E How to order

<b>LP-C6040BKC</b>	Network Cable, all Weather Outdoor Cat 6 type U/UTP, solid, 100% copper, AWG 23, with Single Black PE Jacket, Gel Filled, Flooded core in 1000ft wood spool.
<b>LP-C6070BKC</b>	Network Cable, all Weather Outdoor CAT 6 type U/UTP, solid, 100% copper, AWG 23 with Double Jacket, Black PE + Gray (CMX), with Flexible-x™ nylon core for simetry in 1000 ft wood spool.
<b>LP-C6070BKC01</b>	Network Cable, all Weather Outdoor CAT 6 type U/UTP, solid, 100% copper, AWG 23 with Double Jacket, Black PE + Gray LSZH rated, with Flexible-x™ nylon core for simetry in 1000 ft wood spool.
<b>LP-C6370BKC</b>	Network Cable, all Weather Outdoor CAT 6 type F/UTP (FTP), solid, 100% copper, AWG 23, Aluminum Foil with drain wire, with Double Jacket Black PE + Gray (CMX), with Flexible-x™ nylon core for simetry in 1000 ft wood spool.

LanPro is continuously improving its products and reserves the right to change specifications and availability without prior notice.