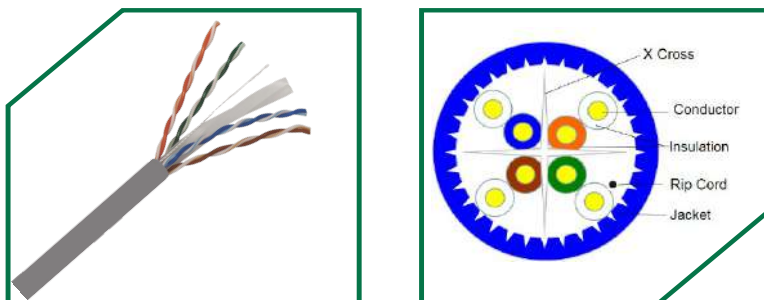


Part Number:

LSZH : PL-CA6AUTL

PVC : PL-CA6AUTP



1. General Description

High-performance Category 6A U/UTP cable engineered for advanced structured cabling systems, fully compliant with ISO/IEC Class EA standards. Designed to deliver superior high-frequency performance, stable 10 Gigabit data transmission, and reliable operation in commercial, enterprise, and data centre environments.

The cable supports high-speed Ethernet applications up to 500 MHz with enhanced signal integrity and low attenuation for long-distance structured cabling.

“Engineered for Performance. Built for Reliability.”

2. Construction

Parameter	Specification
Conductor Material	100% Bare Copper (CU)
Conductor Size	23 AWG (0.565- 0.57 mm nominal)
Number of Conductors	8 (4 Twisted Pairs)
Insulation Material	High-Density Polyethylene (HDPE)
Pair Separator	Cross Filler (PE)
Shielding	UTP (Unshielded Twisted Pair)
Outer Jacket	PVC / LSZH (Optional)
Jacket Type	Virgin Material (Non-Recycled)
Cable Diameter	7.00 ± 0.40 mm (Slim) or 7.5 – 8.0 mm (Standard optional design)
Jacket Colour	Grey (Standard) / Red / Black (Optional)

Part Number: LSZH : PL-CA6AUTL PVC : PL-CA6AUTP

3. Electrical Characteristics

Parameter	Specification
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 8.5 Ω/100m
Loop Resistance	≤ 17.0 Ω/100m
Resistance Unbalance	≤ 5%
Capacitance	≤ 5.2 nF/100m
Frequency Range	Up to 500 MHz
Operating Voltage	IEEE 802.3 PoE standard (up to 57V DC)

4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	4 x Cable Diameter
Pulling Force	≤ 110 N
Operating Temperature	-20°C to +60°C
Installation Temperature	0°C to +50°C
Flame Rating	Optional (IEC 60332-1 compliant upon request)

5. Applications

- Structured Cabling Systems
- 10 Gigabit Ethernet (10GBase-T)
- Gigabit Ethernet (1000BASE-T)
- Fast Ethernet (100BASE -TX)
- 10BASE-T Ethernet
- Office Buildings & Enterprise Network Environments
- Data Centers & High-Speed Backbone Links
- IP CCTV Systems (High Bandwidth)
- VoIP, PoE, PoE+ & PoE++ Systems
- Smart Home & Industrial Networks

Part Number: LSZH : PL-CA6AUTL PVC : PL-CA6AUTP

6. Technical Performance

The following table represents the baseline Cat6A UTP electrical performance at 100-meter channel up to 500 MHz. The unshielded construction is optimized for high-speed data transmission, supporting 10 Gigabit Ethernet applications, while maintaining excellent signal integrity. The cable is engineered with performance margins above standard requirements to ensure stable and reliable transmission.

Frequency (MHz)	RL (≥ dB)	ATT (≤ dB)	NEXT (≥ dB)	ACRF (≥ dB)	PS NEXT (≥ dB)	PS ACRF (≥ dB)
1	19.1	3.0	65.0	64.2	62.0	61.2
4	21.0	3.5	64.1	52.1	61.8	49.1
8	21.0	5.0	59.4	46.1	57.0	43.1
10	21.0	5.5	57.8	44.2	55.5	41.2
16	20.0	7.0	54.6	40.1	52.2	37.1
20	19.5	7.8	53.1	38.2	50.7	35.2
25	19.0	8.8	51.5	36.2	49.1	33.2
31.25	18.5	9.8	50.0	34.3	47.5	31.3
62.5	16.0	14.0	45.1	28.3	42.7	25.3
100	14.0	18.0	41.8	24.2	39.3	21.2
200	11.0	26.1	36.9	18.2	34.3	15.2
250	10.0	29.5	35.3	16.2	32.7	13.2
300	8.6	35.6	31.8	13.3	29.1	10.3
400	8.0	41.1	28.2	11.1	25.3	8.1
500	8.0	43.8	26.7	10.2	23.8	7.2

Part Number: LSZH : PL-CA6AUTL PVC : PL-CA6AUTP

7. Transmission Performance

- Supports 10/100/1000 Mbps & 10 Gigabit Ethernet (10GBase-T)
- Bandwidth up to 500 MHz
- Designed for PoE / PoE+ / PoE++ high-power applications
- Superior NEXT, FEXT, and Return Loss performance

8. Key Features

- 23AWG Solid Bare Copper Conductors for maximum conductivity
- Pair Separator: Cross Filler (PE)
- Low attenuation for stable 10G transmission
- Precision twisted pairs with optimized pair separation
- Fully optimized for high-power PoE applications
- Durable outer jacket (100% virgin material) for long service life
- High performance verified through Fluke testing

9. Standards Compliance

- ISO/IEC 11801 Class EA
- ANSI/TIA-568.2-D
- EN 50173-1
- EN 50288-10-1
- RoHS Compliant
- CE Compliant
- CPR (EN 50575) – upon request
- UL / ETL Verified – upon request

10. Quality Assurance

Manufactured under strict quality control to ensure:

- Consistent electrical performance
- Reliable 10G transmission
- Long-term operational stability
- Full compliance with international standards

Testing:

- 100% Fluke Tested (Channel & Permanent Link)

Part Number: **LSZH** : PL-CA6AUTL **PVC** : PL-CA6AUTP

11. Key Advantages

- Supports future-proof 10 Gigabit networks
- Superior performance in high-density environments
- Reduced interference and signal loss
- Ideal for data centres and enterprise backbone infrastructure
- Excellent balance between performance and long-term investment

12. Warranty

25-Year System Warranty

(Subject to proper installation and certified components usage)