

Ethernet Extender over Coaxial Cable for Long Distance Transmission Pair SDL5030

Introductions

The SDL5030 is a long-range coaxial cable transmission pair that uses coaxial cable as a medium to transmit network digital signals and power supplies.

SDL5030 is composed of two components, one is placed at the far end we call the remote-unit (RU), the other called local-unit (LU) connected to the host computer.

RU and LU will convert the coaxial cable signal into ethernet network signal to RJ45 socket, both ends of the socket are 100Mbps rate, the specification is 10/100M Base-T. At the far end, the RU's network sockets provide PoE power, which is IEEE 802.3at 30W, which provides power up to 25.5W to the end device via the CAT-6 network.

The coaxial cable has excellent performance and can be used to deliver 800 meters (2,600 feet) away, we recommend the use of RG-6/U coaxial cable, which is widely used in CCTV and video signal transmission. The SDL5030 uses this coaxial cable to transmit digital signals with the same performance as the ethernet cable type CAT-6, but is farther away.

Because the SDL5030 has a high throughput, it can be used as a long distance ethernet extender, and is also very suitable for use in high-traffic imaging systems such as HD IP Camera surveillance system, or reconnected to the Network Hub/Switch.

In the SDL5030 system, the power is supplied from the LU via the cable to the RU. The LU has a socket that accepts DC 48V from the AC power adapter. DC power is not directly from the power supply to the coaxial cable, for security reasons, SDL5030 system only in the RU and LU under the correct connection will start sending power and it will monitor the coaxial cable power state, at any time Protection of power transmission systems.

TVS/GDT * (surge absorber/arrester) is installed in the BNC socket at both ends of the coaxial cable.

*TVS is Transient Voltage Suppressors

*GDT is Gas Discharge Arrester Tube

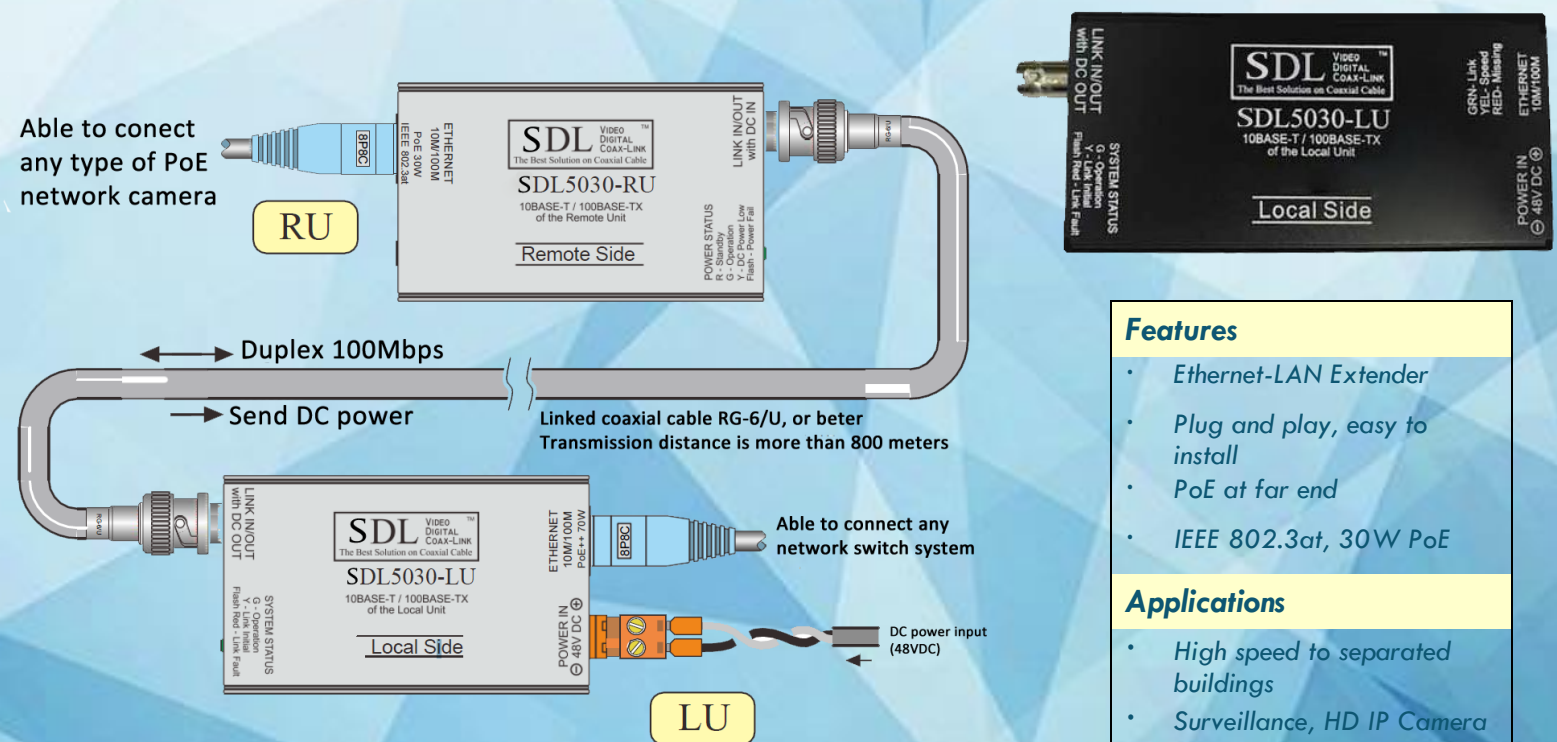


Fig. 1 SDL5030 Connection Diagrams

Remote-Unit (RU) / SDL5030-RU

Electrical Specifications (SDL5030-RU)	
Ethernet	10/100Mbps Ethernet Standard
Network Interface	10Base-T/100Base-TX Auto MDI/MDI-X
BNC port Link OUT/IN with DC IN	Link Signal : 2 to 28MHz, Multi-carrier
	DC IN : +45V to +76V
Throughput	100Mbps
PoE Power Output	DC 55V/30W. meet IEEE802.3at, Support Type 1(15.4W) and Type 2(30W)

Connector Specifications (SDL5030-RU)	
Ethernet	RJ45 connector, 8P8C
Link OUT/IN with DC IN	BNC 75 ohms female socket

Physical Specifications (SDL5030-RU)	
Unit Dimensions	(L x W x H): 90mm x 50mm x 25mm
Weight	175grams

Environmental Specifications (SDL5030-RU)	
Operating Temperature	-10 to 50°C (14 to 122°F), Ventilated
Relative Humidity	20% to 90%, non-condensing

Local-Unit (LU) / SDL5030-LU

Electrical Specifications (SDL5030-LU)	
Ethernet	10/100Mbps Ethernet standard
Network Interface	10Base-T/100Base-TX Auto MDI/MDI-X
BNC port Link OUT/IN with DC OUT	Link Signal : 2 to 28MHz, Multi-carrier
	DC OUT: +76V
Throughput	100Mbps
Power Supply	DC 48V ± 5%, 1.25Amps Max.

Connector Specifications (SDL5030-LU)	
Ethernet	RJ45 connector, 8P8C
Link OUT/IN with DC OUT	BNC 75 ohms female socket
Power In	2 Pin, Pluggable Terminal Block 5.0mm Pitch

Physical Specifications (SDL5030-LU)	
Unit Dimensions	(L x W x H) 90mm x 50mm x 25mm
Weight	145 grams

Environmental Specifications (SDL5030-LU)	
Operating Temperature	-10 to 50°C (14 to 122°F), Ventilated
Relative Humidity	20% to 90%, non-condensing

DC Power Supply

Unless otherwise noted, units are in mm.

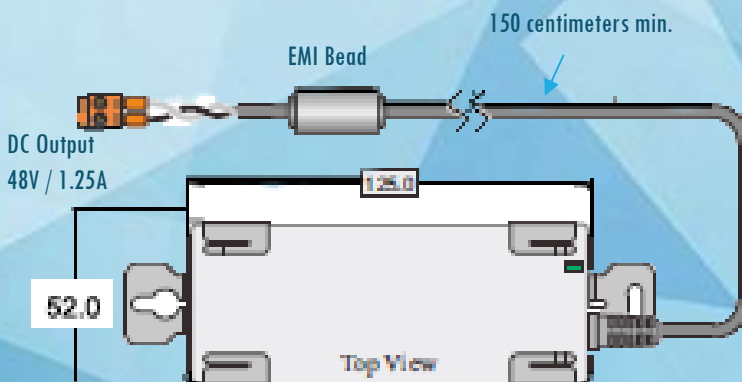


Fig. 2 DC Power Adapter

Supplier Part Number: GS60A48

Electric Specifications:

AC Input: 100 ~ 240V AC

Output: 48V DC, 1.25 Amps

Power Rating: 60 watts

Physical Specifications:

Weight: 270 grams

Weight with two holding brackets: 306 grams

Environmental Specifications:

Operating Temperature: 0 to 45°C (32 to 113°F)

Relative Humidity: 20 to 90 percent, non-condensing

Storage Temperature: -45 to 85°C (-49 to 185°F)