

Specifications

Environment	CCTV IP
Devices	CCTV IP cameras, NVR, IP encoder, network switch and any device with a 10/100Mb/s Ethernet port, supporting IP.
Standard supported	Ethernet side: IEEE 802.3 10BaseT, IEEE 802.3U 100Base-TX, IP ver 4 and 6. Line side: VDSL-DMT: ITU-T G993.1 VDSL, ITU-T G997.1, G.993.2 VDSL2 (profile not selectable).
Maximum distance vs. speed between unit <i>(higher speed on camera side)</i>	Asymmetric speed, using twisted pair* and coax*: 1000ft (330m): 44/31Mbps, 44/31Mbps 2000ft (660m): 34/21 Mbps, 44/28 Mbps 3000ft(1000m): 28/10 Mbps, 39/26 Mbps 4000ft(1350m): 22/5.3 Mbps, 39/21 Mbps 5000ft(1600m): 17/1.2 Mbps, 31/14 Mbps * The actual data rate will vary on the quality of the copper wire and environment factors.
Cable between unit	Coax 75 ohm/RG59 or twisted-pair telephone wire AWG24 or better.
Cable for Ethernet port <i>(Not included)</i>	Two CAT 5/5e/6 UTP cables are required (straight or crossover), up to 330ft(100m).
Indicators <i>(on both unit)</i>	Power on. Link/nego between the two unit working. Ethernet: 10/100 Mb indicator. Ethernet: Activity.
Ethernet Connectors <i>(on both unit)</i>	One isolated BNC 75 ohm female to connect remote unit. One isolated RJ45 to connect remote unit. One or two RJ45S with LED's for Ethernet with auto reversal. One power connector, 2mm.
Pin Configuration to connect the two unit <i>(polarity insensitive)</i>	Using RJ45 plug: Pin 4 & Pin 5 (1 pair required only, blue and white/blue) Using RJ11/RJ12 plug: Pin 3 & Pin 4 (1 pair required only, blue and white/blue) Using BNC: 75 ohms coax cable: Center & Shield (shield is isolated from chassis)
Power Supply <i>(Included)</i>	Two 100-240V/5VDC 1.2A power supplies with interchangeable blades for NA, Europe and UK.
Power Consumption	3.25 Watts each unit
Temperature	Operating: 0° to 60°C Storage: -55° to 85°C Humidity: Up to 95% non-condensing
Enclosure	Plastic
Dimensions	4.50" x 3.00" x 1.25" (11.4 x 7.6 x 3.2 cm)
Weight	Approx. 1 lb. (0.5 kg)
Compliance	Regulatory: FCC, CE, RoHS Flammability: 94V0
Warranty	2 years
Ordering Information	500110 CCTV IP Extender Kit.



CCTV-IP Extender Kit

500110

Quick Installation Guide

Overview

The CCTV-IP Extender Kit (500110) allows IP camera equipment (or any other IP equipment) to be connected up to 1 mile (1600 m) using one coax cable with BNC or one Cat 5/5e/6 unshielded twisted pair cable in a point-to-point configuration. The maximum distance is dependent on speed required, type and length of cable. The kit comes with one transmitter (camera side), one receiver (network side) and two identical wall-mount power supplies. The camera side can accept one or two IP-cameras without an additional Ethernet switch/router.

Applications

Applications include Surveillance IP-camera, digital signage and information systems.

MuxLab

8495 Dalton Rd, Montreal, Quebec, Canada. H4T 1V5

Tel: (514) 905-0588 Fax: (514) 905-0589

Toll Free (North America): (877) 689-5228

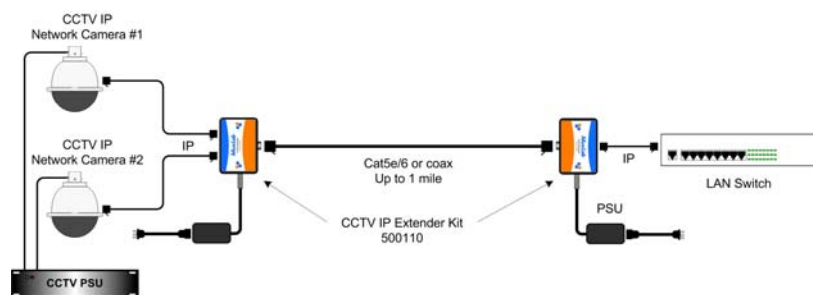
E-mail: videoease@muxlab.com URL: www.muxlab.com

Installation

1. Identify the network side unit and the camera side unit as indicated on the product labels. Note that if both unit are swapped they will still work but at reduced speed. The camera side unit must therefore be placed always on the highest throughput side.



2. On the Ethernet side, the distance between product and network/camera is the usual 330ft (100m). The cable may be straight or crossed and must be connected into one of the shielded RJ45 connectors (the ones with LEDs).
3. To connect both units together, use one of the three options:
 - 3a. A single twisted pair (AWG #24) using a RJ11 plug, only the center pair are needed. Connect it into the plastic RJ45 connector "RJ45 Link".
 - 3b. A single Cat 5/6 cable with a RJ45 plug, only the center pair are needed. Connect it into the plastic RJ45 connector "RJ45 Link".
 - 3c. A 75 ohm coax cable with BNC. Connect it to "BNC Link".
4. Connect a 5 VDC power supply to each unit, and then plug the power supply into an AC power outlet. If power is present, the green Power LED should be on. If the cable is correctly connected the Link LED should be on.
5. Connect the CCTV and network equipment to the CCTV IP extender and power on all equipment. Verify that the activity LED is blinking while images are being transmitted. The following is a typical application.



Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions with the installation of the Extender Kit:

LEDS	Condition detected	Possible cause	Action
PWR	OFF: No power.	No AC power or defective power supply.	Try swapping the two power supplies.
LINK	OFF: No functional link between the 2 units. FLASHING: Processing. ON: Normal.	Remote unit off or defective. Twisted pair cable not connected to the right pin. Cable too long.	Turn on remote unit. If defective unit return both unit to factory. Make sure both center pin are used. Length must be 5280ft (1600m) or less. If Link LED flashing does not stop after 10 seconds, check cable.
10/100	OFF: 10Mb/s ON: 100Mb/s OTHER: Speed much slower than expected.	Equipment not supporting 100 Mb/s or not set to 100Mb/s. Transmitter connected to network instead of camera.	To get the maximum throughput the camera must be able to send at 100Mb/s. Swap the Tx with the Rx. (The throughput is not the same for both units.)
Activity	OFF: No data transfer on Ethernet side. FLASHING: Normal	Camera or network not functioning. Defective or disconnected Ethernet cable.	Verify the camera and network without the Extender kit, i.e. connect the camera directly to the network. Speed must be 10Mb/s or 100Mb/s only.

If you still can not diagnose the problem, please call MuxLab Customer Technical Support at 877-689-5228 (toll-free in North America) or (+1) 514-905-0588 (International).