

# VX-160COAX

## Coaxial PoE Ethernet Extender



**MASTER / SLAVE INDOOR UNITS**

## User Manual

Ver 1.0

# 1. Introduction

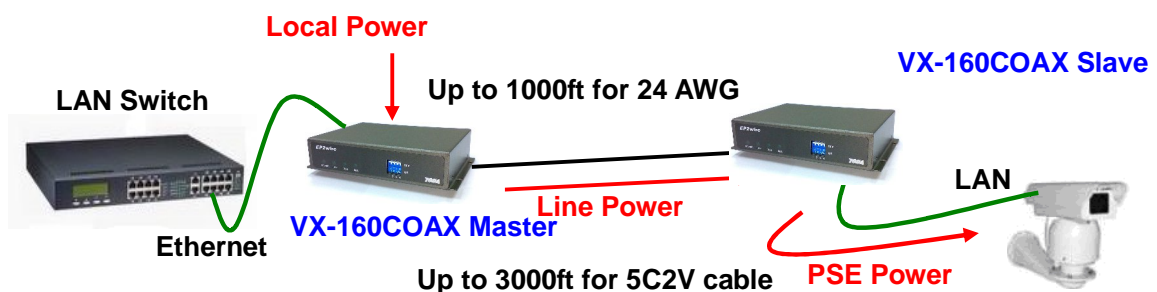
The VX-160COAX system, one master plus one slave units, provide a long-reach Ethernet extension with remote Power-over-Ethernet (PoE) capability over a 2-wire line. The VX-160COAX master unit is powered by the local high power PoE Injector, and transmits both the data and power to the remote slave unit via coaxial cable. The remote unit regenerates the power and provides the PoE capability to power up the furthest remote PD device. Up to 15.4 watts can be supplied to the PD device with 100m Ethernet cable when powered by a 48V Power adaptor. The VX-160COAX system supports wall-mount feature.

With BNC connector and connection with 5C2V cable, the VX-160COAX master unit connects with the slave unit up to 3000ft distance for coaxial cable when using a 48V high power adaptor. Users may select different data rates from dip switches on the front panels for different line gauges and distance. The maximum data rate can be up to 60 Mbps in full duplex mode depending on the cable gauges.

With the PoE feature, it conforms to the Safety Extra Low Voltage (SELV) requirement. A VX-160COAX system offers a cost effective solution for remote power applications such as LAN-to-LAN connectivity, Video Streaming, FTTB, and MDU/MTU over single twisted line.

## 2. Application Notes

### 1) Ethernet & Power Extension over coaxial cable



### 3. Features

- Coaxial PoE Ethernet Extender for 10/100M Fast Ethernet interfaces
- Built-in BNC Connectors
- Maximum 3000ft distance for 5C2V Coaxial cable
- Line rate up to 60 Mbps full duplex
- Dip Switches for line rate settings with Slave following Master
- Max. 15.4 watts for remote PD device
- IEEE 802.3af PoE Compliant
- Auto MDIX for 10/100 BaseT Ethernet LAN Ports
- Easy installation with wall-mount feature
- Low-Latency for Video/Voice/Data applications

### 4. Technical Specifications:

#### Master Unit:

##### LAN Interface:

- Auto-Detection for 10/100 BaseT and Half/Full duplex
- Fully compatible with IEEE802.3/IEEE802.3u
- Automatic MDIX Function
- Connector: RJ45

##### Line Interface:

- Line Rate: 60/60 ~ 10/10Mbps (full duplex)
- Rate Selection: Dip Switches with Slave following Master
- Safety Extra Low Voltage (SELV) Compliant (< 60V)
- Connector: BNC

##### LED Indicators:

**POWER:** Power is ON

**LINE:** Cable Connection Status

**LAN:** Data Activity of LAN Port

**M/S:** LED OFF indicating Master mode

##### Local Power Adaptor:

- INPUT: 110/240VAC @ 50-60Hz
- OUTPUT: 48VDC 65W

## Slave Unit:

### LAN Interface:

- IEEE 802.3af Compliant PSE with output voltage within 44~57 Volts
- Power Auto Restart with Under Voltage Lockout (UVLO) Fault Detection
- Maximum output power 15.4 Watts
- Auto-Detection for 10/100 BaseT and Half/Full duplex
- Fully compatible with IEEE802.3/IEEE802.3u
- Automatic MDIX Function
- Connector: RJ45

### Line Interface:

- Line Rate: 60/60 ~ 10/10Mbps (full duplex)
- Rate Selection: Dip Switches with Slave following Master
- Safety Extra Low Voltage (SELV) Compliant (< 60V)
- Connector: BNC

### LED Indicators:

**POWER:** Power is ON                      **LINE:** 2-wire Line Connection Status  
**LAN:** Data Activity of LAN Port        **M/S:** LED ON indicating Slave mode

### Physical Dimension:

- VX-160COAX: 120 x 90 x 28 (mm)

### Operating Environment:

- Humidity: 5% to 95% non-condensing
- Temperature: 0 ~ 50 degree C

## 5. Packing Contents

Inside the package you should find:

- (1) One VX-160COAX master unit
- (2) One VX-160COAX Slave unit
- (3) One 48V Power Adaptor
- (4) One AC power cord
- (5) One User Manual + Accessories.

Please check if the packing is damaged or any component is missing. If so, please contact your distributor.

## 6. LED Indicators

On the front panel of VX-160COAX, there are 4 LED indicators as the following

**POWER:** “Green On” indicates power is on and normal.

**LAN:** “Green On” indicates Ethernet LAN port is in connection.  
“Flashing” indicates Ethernet LAN data activities.

**LINE:** “Green On” indicates coaxial cable is in connection.  
“Flashing” indicates coaxial cable is in line handshaking.

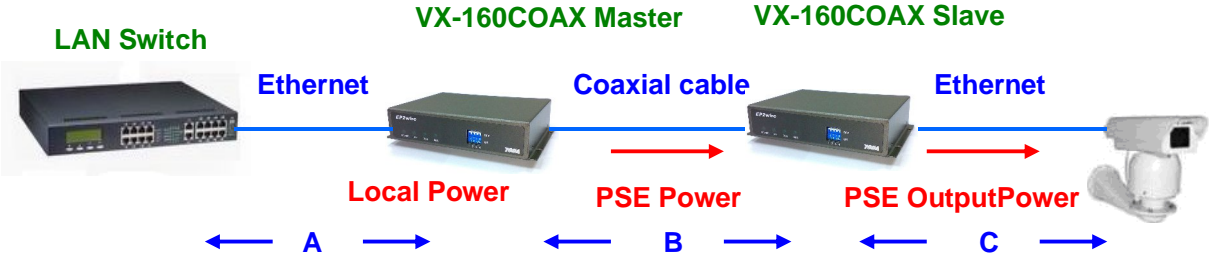
**M/S:** “Green On” indicates as VX-160COAX Slave unit.  
“OFF” indicates VX-160COAX Master unit.

## 7. Dip Switches Settings

Pin 1	Pin 2	Pin 3	Pin 4	Line Rate (Mbps)
NA	OFF	OFF	OFF	10/10
NA	ON	OFF	OFF	20/20
NA	OFF	ON	OFF	30/30
NA	ON	ON	OFF	40/40
NA	OFF	OFF	ON	50/50
NA	ON	OFF	ON	60/60
NA	OFF	ON	ON	60/60
NA	ON	ON	ON	60/60

\* The line rate settings on the master and the slave units must be the same. If not, the real line rate will follow the master setting.

# 8. Data Rates vs Distances vs PoE power



Performance for 5V2C cable with 48V Power Adaptor

Line Rate (Mbps)	Distance B (Meter)	Distance C (Meter)	Max. PSE Output Power (Watts)
60/60	200	100	15.4+
50/50	300	100	15.4+
40/40	400	100	7+
20/20	500	100	4+