Connecting Wireless PROBE Access Points

Dear Installer,

When installing access points for the first time, it is important to know your products before installation. We recommend you unbox and setup the AP (MASTER) and CPE (Slave)before installing them in the field. In this way everything will be already tested and ready to hang, saving you wasted time and money trying to figure out how to get them operational.

Although our manual is designed for simple operation, here are simple step by step setup instructions to make your installations easy and fast.

BEFORE SETUP

The PROBE PB-AP150-1 and PB-AP300-5 are designed to work in pairs of the same model for point to point and multi-point operation. Following these simple guidelines will make your installation easy.

NOTE: **YOU cannot mix PB-AP150-1 and PB-AP300-5 units on the same link.**

If using PB-AP150-1 AP mode- use PB-AP150-1 CPE models only. Up to 4 CPE units can be used.(You must consider the maximum camera bandwidth to determine what the transmitter can accept without overloading the network.)

If using PB-AP300-5 (AP)mode you must use PB-AP300-5 (CPE) models only. Up to 4 CPE units can be connected to the AP unit. (You must consider the maximum camera bandwidth to determine what the transmitter can accept.

How many IP Cameras you can transmit?

The IP cameras are connected with the CPE(slave). The bandwidth of AP(master) and the cameras decide how many cameras can be carried in one solution.

Bandwidth of wireless access point:

Frequency	Transmission Speed	Model	Transmission Distance	Total Bandwidth
5.8 GHz	150Mbps	PB-AP150-1	≤ 2km	20-60M
5.8GHz	300Mbps	PB-AP300-5	≤ 5km	40-62M

PROBE Access Point Unit Matching

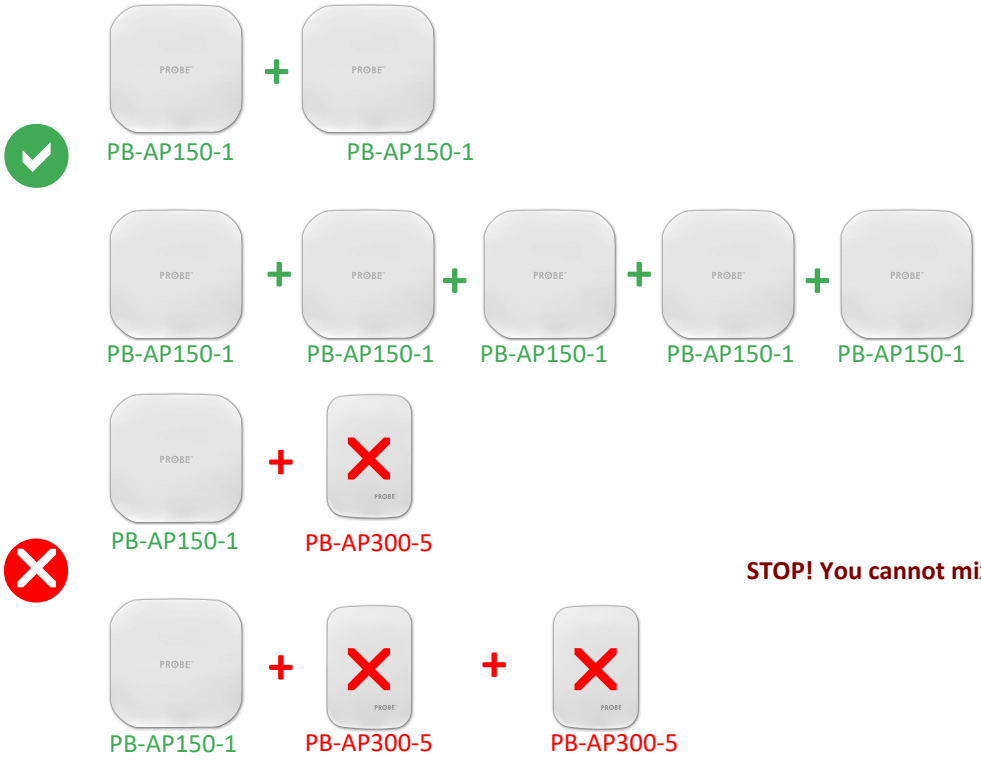
PB-AP300-5

Point to Point
Each DIP AP(master) can be connected up to 4 CPE (slave) units

Point to Multi-Point
You can use up to 10 IPC cameras (Maximum bandwidth limit applies)

STOP! You cannot mix PB-AP-150-1 and PB-AP300-5 units

PB-AP150-1



Point to Point

Each DIP AP(master) can be connected up to 4 CPE (slave) units

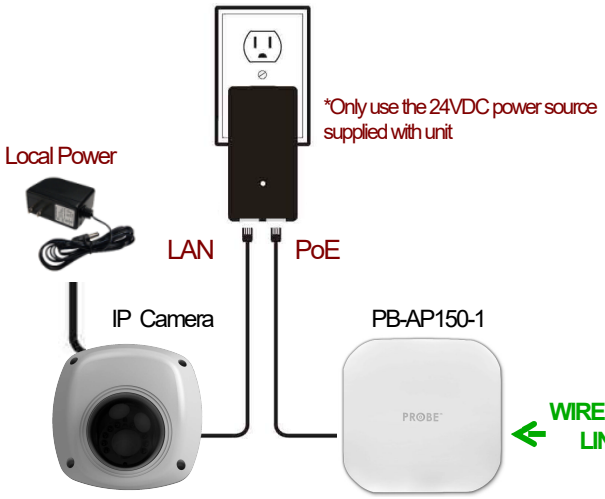
Point to Multi-Point

You can use up to 10 IPC cameras (Maximum bandwidth limit applies)

STOP! You cannot mix PB-AP-150-1 and PB-AP300-5 units

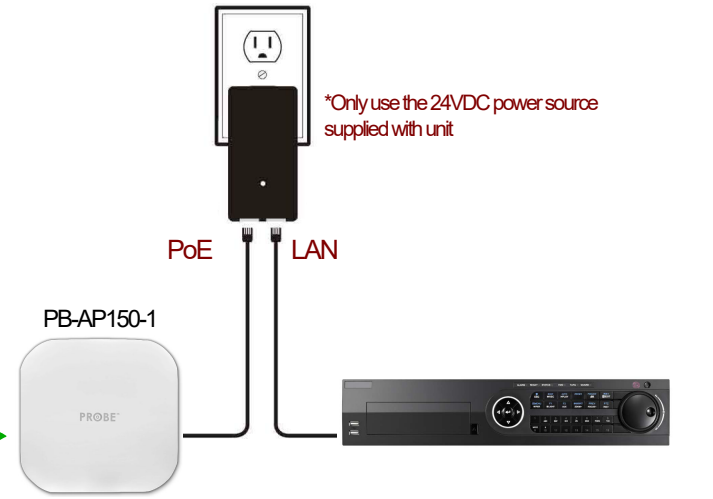
Point to Point Setup

Connecting diagram PoE 24VDC Power* to Camera and PB-AP150-1



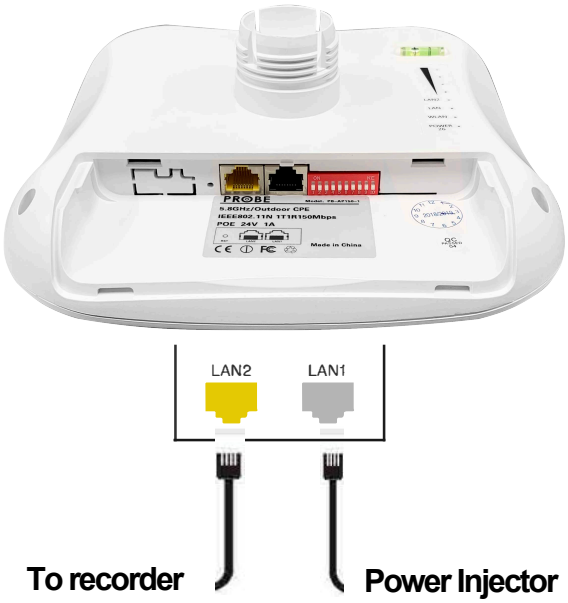
1. The bottom of the adapter has two RJ45 connections. One marked POE and one marked LAN.
2. Using one CATS cable(Network cable), connect one end to "LAN" and the other end to your camera.
3. Make sure the camera is powered by separate appropriate power supply.

Connecting diagram PoE 24VDC* Power to PB-AP150-1



DC Power ·····▸ Connect PoE to LAN port on AP UNIT
LAN Port ·····▸ Connect with PC(Switch or NVR)
NOTE: If you want to enter web page, you need to bind IP address of PC

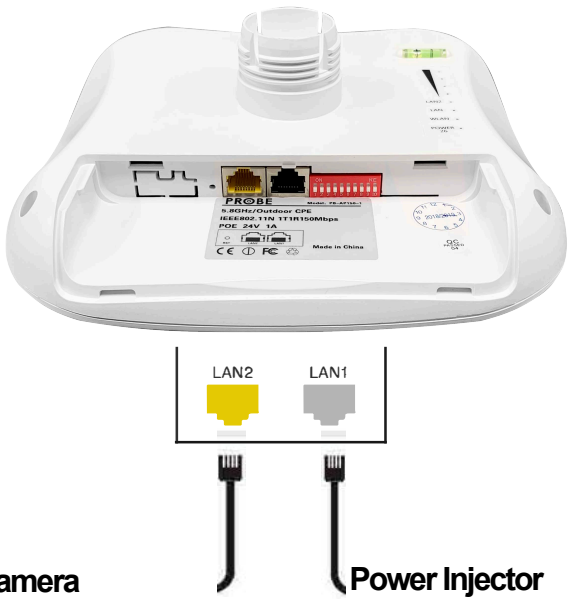
AP (MASTER)



To recorder or network use LAN2 port

Power Injector PoE Port to AP unit LAN1 only.

CPE (SLAVE)



IP Camera *use separate power for camera

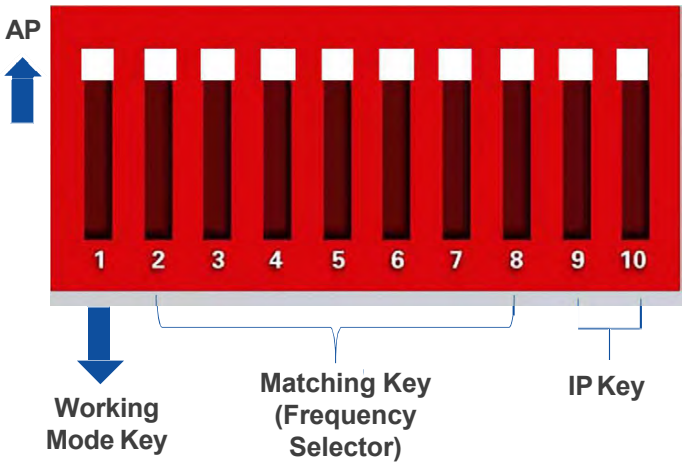
Power Injector PoE out to LAN1 only.

Local Power

Configuring AP (Master)and CPE (Slave)

1 Setting up the AP (MASTER) - Use the settings below for Point to Point. (refer to manual for additional settings)

*Each DIP AP (Master) can connect up to 4 CPE (Slave units). ***Maximum bandwidth limitation applies*

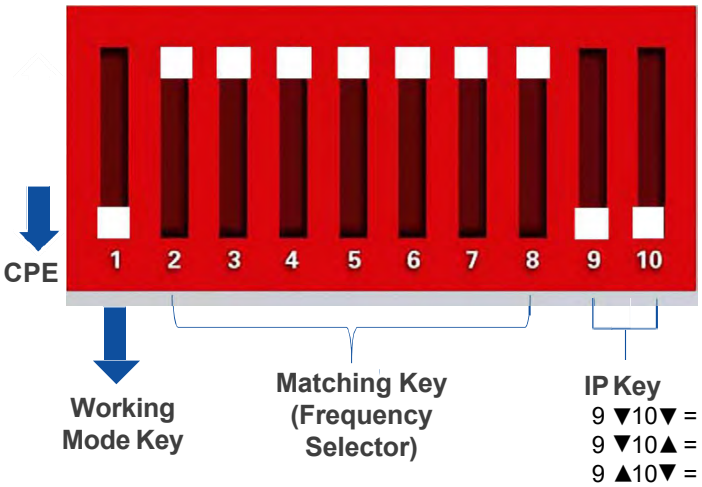


- **Button 1** changes the mode of the device.
  UP is for making AP master
- **Button 2 to 8** are for matching AP and CPE together. Different combinations corresponds to different SSIDs and different segments.
- **Button 9&10** are for point to multi-point functionality.

(IP Address Selector) To use one AP match with maximum four CPE,different orders of button 9&10 stand for different CPE.

2 Setting up the CPE (Slave) - Use the settings below for Point to Point. (refer to manual for addtional settings)

Each DIP CPE(slave) canconnect up to 4 cameras using s switch



- **Button 1** changes the mode of the device.
  DOWN is for use with your cameras.
- **Button 2 to 8** are for matching AP and CPE together. Different combinations corresponds to different SSIDs and different segments.
- **Button 9&10** are for point to multi-point functionality.

(IP Address Selector) Touse one AP match with maximum four CPE,different orders of button 9&10 stand for different CPE.

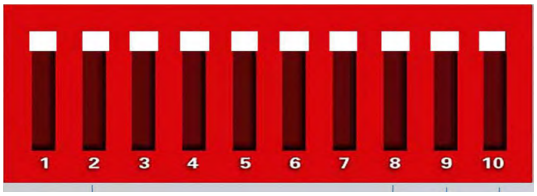
9 ▼10▼ = 1 CPE (slave) unit
9 ▼10▲ = 2 CPE (slave) unit
9 ▲10▼ = 3 CPE (slave) unit
9 ▲10▲ = 4 CPE (slave) unit

Configuring PB-AP150-1 AP (Master)and CPE (Slave) Switches

AP

2.4G:AP 172.17.127.1

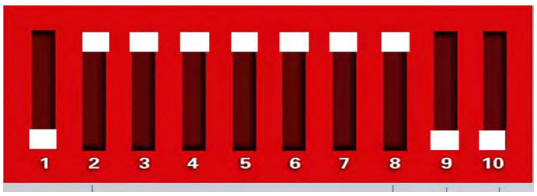
5.8G:AP 172.18.127.1



CPE

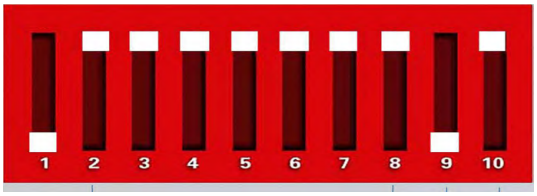
2.4G:AP 172.17.127.2

5.8G:AP 172.18.127.2



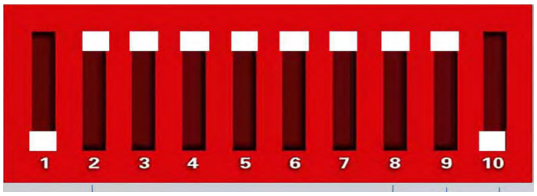
2.4G:AP 172.17.127.3

5.8G:AP 172.18.127.3



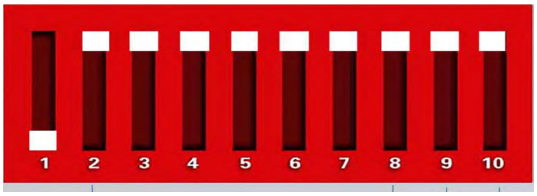
2.4G:AP 172.17.127.4

5.8G:AP 172.18.127.4



2.4G:AP 172.17.127.5

5.8G:AP 172.18.127.5



The recommended total camera count for uninterupted communications is based on bandwidth not camera model.

It is recommended not to attach more then 4 channels of video to each CPE unit using a 4 Channel PoE switch.

For complete details please refer to setup manual.

NOTE: IP address range is different for the PB-AP150-1 and the PB-AP300-5.

Setting the switch setting are simular for PB-AP 300-5.

Configuring Software Options

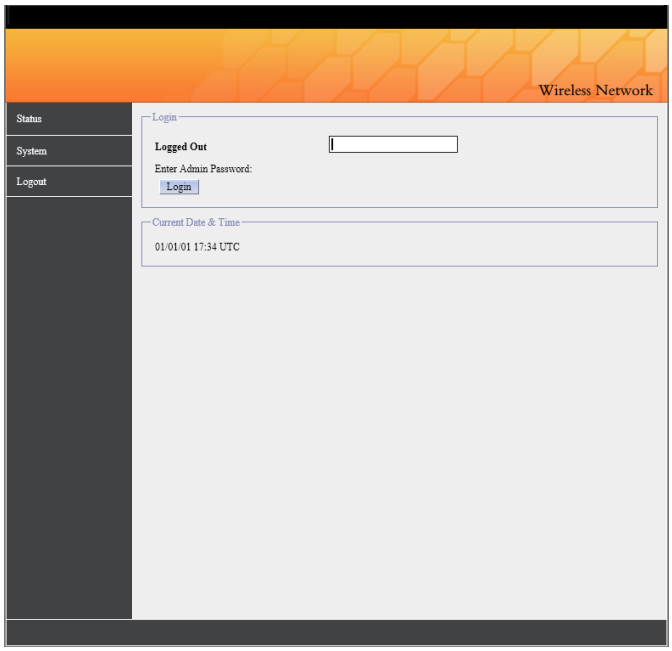
PB-AP300-5 AP -To enter into web page set your computer Static IP address as follows"

- IP address **192.168.133.1**
- Subnet Mask **255.255.0.0**
- In Internet Explorer URL type **192.168.132.1**
- Default password = **"password"**

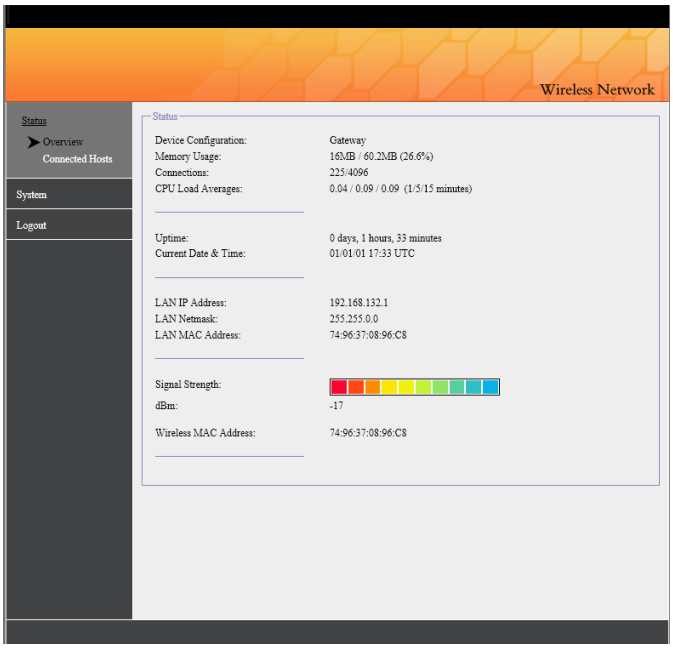
PB-AP150-1 AP -To enter into web page set your computer Static IP address as follows"

- IP address **172.18.128.1**
- Subnet Mask **255.255.0.0**
- In Internet Explorer URL type **172.18.127.1**
- Default password = **"password"**

Login Screen



Main Screen



Point to Point Setup

Wireless Transmission Mode

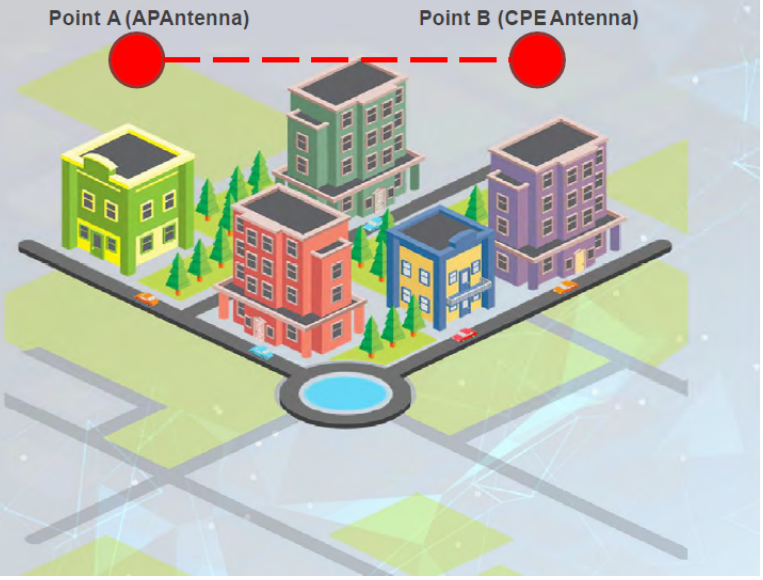
This is the common Transmission Mode for Access Point (AP)

Point-to-Point Transmission (PTP)

For example PTP Transmission

-2 units of wireless AP work as fiber cable or network cable.

-To the device which has network port can be used for wireless transmission.



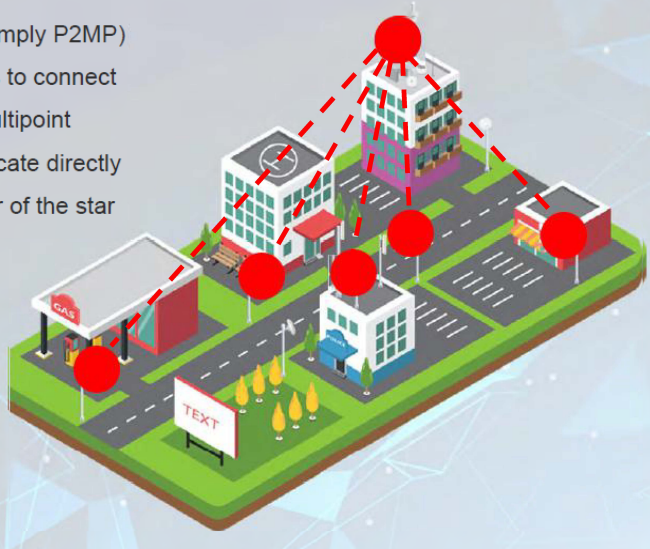
Point to Multi- Point Setup

Wireless Transmission Mode

Point-to-Multi Point Transmission (PTMP)

The Point-to-Multipoint topology (also called star topology or simply P2MP) is a common network architecture for outdoor wireless networks to connect multiple locations to one single central location. In a point-to-multipoint wireless Ethernet network, all remote locations do not communicate directly with each other but have a single connection towards the center of the star network where one or more base station is typically located.

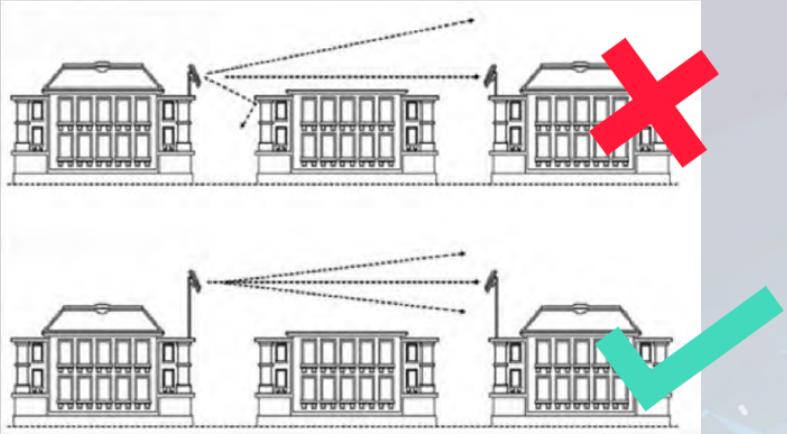
For example PTMP Transmission



Select location

Wireless Access Point Installation

1. The below installation diagrams should be used to help you plan your wireless system installation carefully for the best results possible.



The above installation image illustrates that it is important to mount your wireless transmitter & receiver on poles to raise them above any obstructions. Besides, it's equally important to make sure that there is a direct line of sight between them.

Aim and Go

Transmission Angle of Wireless AP

The farther the distance, the greater the scope of coverage.
The smaller the angle, the farther the transmission distance.

Benefits to using the NEW PROBE Wireless Communications Devices

Works with all RED|LINE IP Network Devices including;

- All RED|LINE IP Network fixed cameras -use local power to the camera
- All RED|LINE IP Network Motorized Cameras -use local power to the camera
- All RED|LINE IP Network PTZ Cameras -use local power to the camera

Works with all RED|LINE TVI Devices *locally attached to TVI recorder/encoder at the remote site. Includes;

- All RED|LINE TVI fixed cameras -use local power to the camera
- All RED|LINE TVI Motorized Cameras -use local power to the camera
- All RED|LINE TVI PTZ Cameras -use local power to the camera
- All RED|LINE TVI **4CH** Recorders* -use local power

Works with all BLUELINE IP Network Devices including;

- All BLUELINE IP Network fixed cameras -use local power to the camera -use local power to the camera
- All BLUE|LINE IP Network Motorized Cameras -use local power to the camera -use local power to the camera
- All BLUE|LINE IP Network PTZ Cameras -use local power to the camera -use local power to the camera

Works with all BLUE|LINE CVI Devices *locally attached to CVI recorder/encoder at the remote site. including;

- All BLUE|LINE CVI fixed cameras -use local power to the camera
- All BLUE|LINE CVI Motorized Cameras -use local power to the camera
- All BLUE|LINE CVI PTZ Cameras -use local power to the camera
- All BLUE|LINE CVI **4CH** Recorders* -use local power

Please contact us for more information about our solution. We can be reached at (631) 396-0800 *2