# WIRELESS AP | DIP FUNCTION

PROBE

DIP Function

Simple dial-up wireless AP. No need computer for operation, no technical settings, no need professional guidance. Easy dial to achieve wireless communications.

DIPs are specialized for CCTV Video Transmission compare to other AP brands which mainly design for NETWORK transmission. DIPs can transmit video data from 1km to 6km, meeting most of the CCTV transmission range.
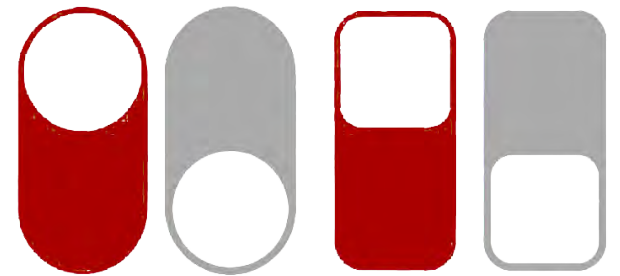
How the DIP Switch Works?
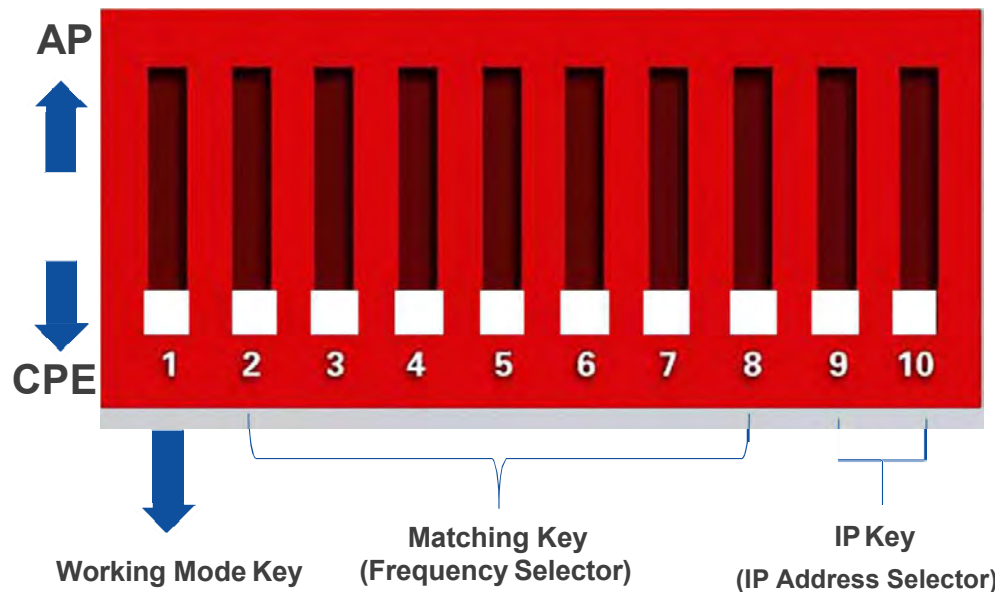
Button 1 changes the mode of the device.
UP is access point (AP) mode for using with your recorder, PC, etc..
DOWN is for using with your cameras.

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

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

Sample DIP Setup of PB-H1526

Access Point
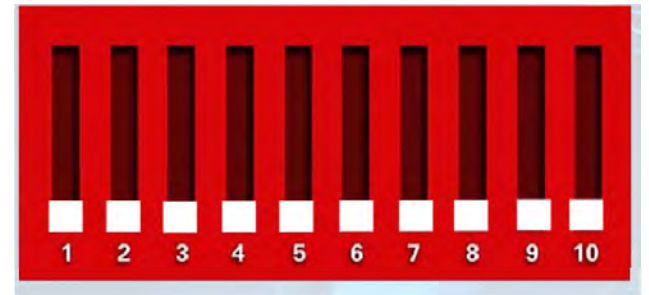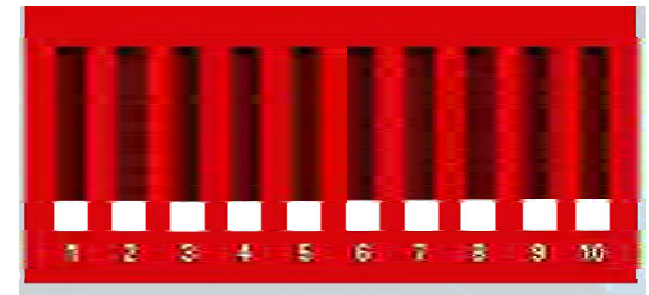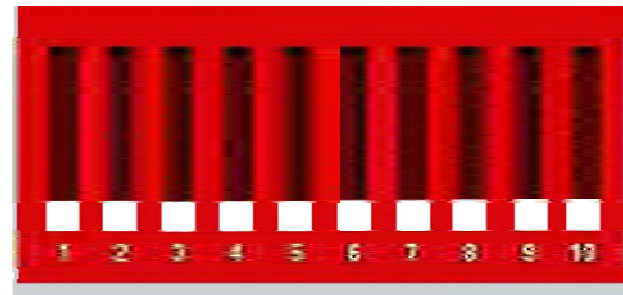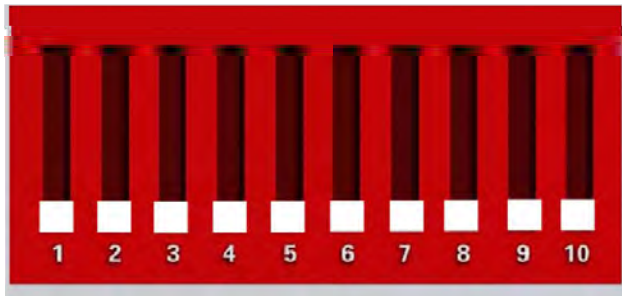
1. Setup the Working Mode of all APs.
2. Set the Frequency of AP (master).
3. Follow the Frequency Pattern of AP (master) in CPE (slave).
4. Set the IP Keys of AP (master) and CPE (slave).
5. Follow the procedure in other AP (master) & CPE (slave) but in different Frequency Pattern.

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	≤1km	20-60M
5.8GHz	300Mbps	PB-AP300-5	≤5km	40-62M

How many IP Cameras you can transmit?

Bandwidth of camera:

H.264 Video Compression			H.265 Video Compression		
IP Camera	Megapixel	Bandwidth	IP Camera	Megapixel	Bandwidth
720P	0.92	1 - 3Mbps	1080P	2.07	1 - 4Mbps
960P	1.23	2 - 5Mbps	2K Res.	3.69	2 - 7Mbps
1080P	2.12	3 - 8Mbps	4K Res.	8.85	6 - 18Mbps
2K Res.	3.69	5 - 15Mbps			
4K Res.	8.85	11 - 35Mbps			

How many IP Cameras you can transmit?

CPE (slave)   **PoE Switch**   **1080P / 3Mbp s**

PB-AP300-5 / 5.8Ghz / 150Mbps speed

Bandwidth: 50M in 2KM
(save 30% value for camera bandwidth fluctuation)

AP (master)

PoE Switch

NVR

10 units IPC x 3Mbps = 30Mbps
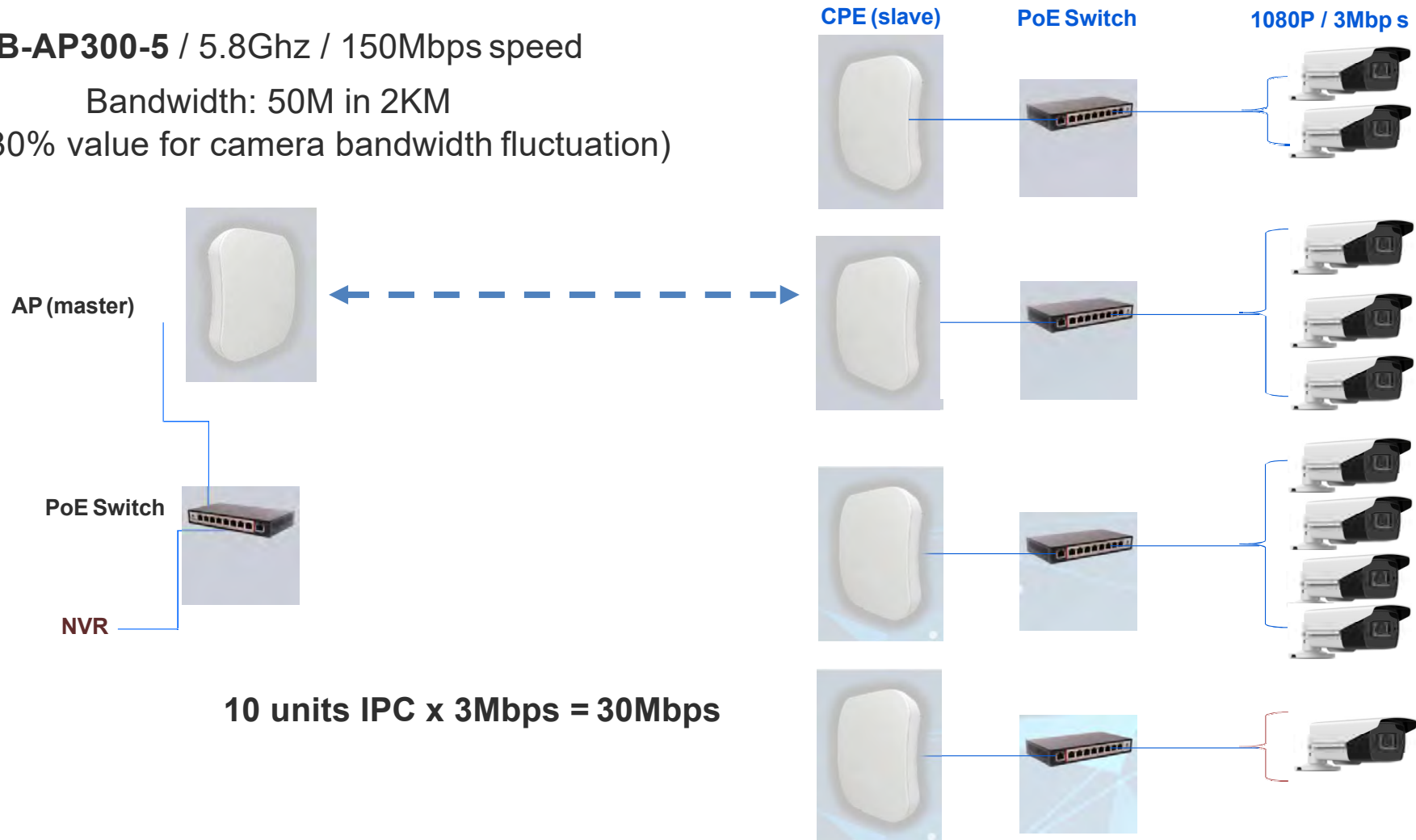
Frequency: 2.4GHz & 5.8GHz Range

2.4GHz：2.3-2.9GHz

5.8GHz：4.9-6.1GHz

All products support the extension of the bridge standard channel (spread spectrum), which can reduce the interference to the equipment if have more channel.

2.4GHZ	5.8GHz
2.372G	4.96G
2.377G	4.98G
2.382G	5.0G
2.387G	5.02G
2.392G	5.04G
2.397G	5.06G
2.402G	5.08G
2.412G	5.10G
2.417G	5.12G
2.422G	5.14G
2.427G	5.16G
2.432G	5.18G
2.437G	5.2G
2.442G	5.22G
2.447G	5.24G
2.452G	5.745G

| 2.4GHz	5.8GHz
2.457G	5.765G
2.462G	5.785G
2.467G	5.805G
2.472G	5.825G
2.492G	5.845G
2.512G	5.865G
2.532G	5.885G
2.367G	5.905G
2.362G	5.925G
2.357G	5.945G
2.352G	5.965G
2.382G	5.985G
2.392G	6.005G
2.397G	6.025G
2.512G	6.045G
2.532G	6.065G

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 A (AP Antenna)

Point B (CPE Antenna)
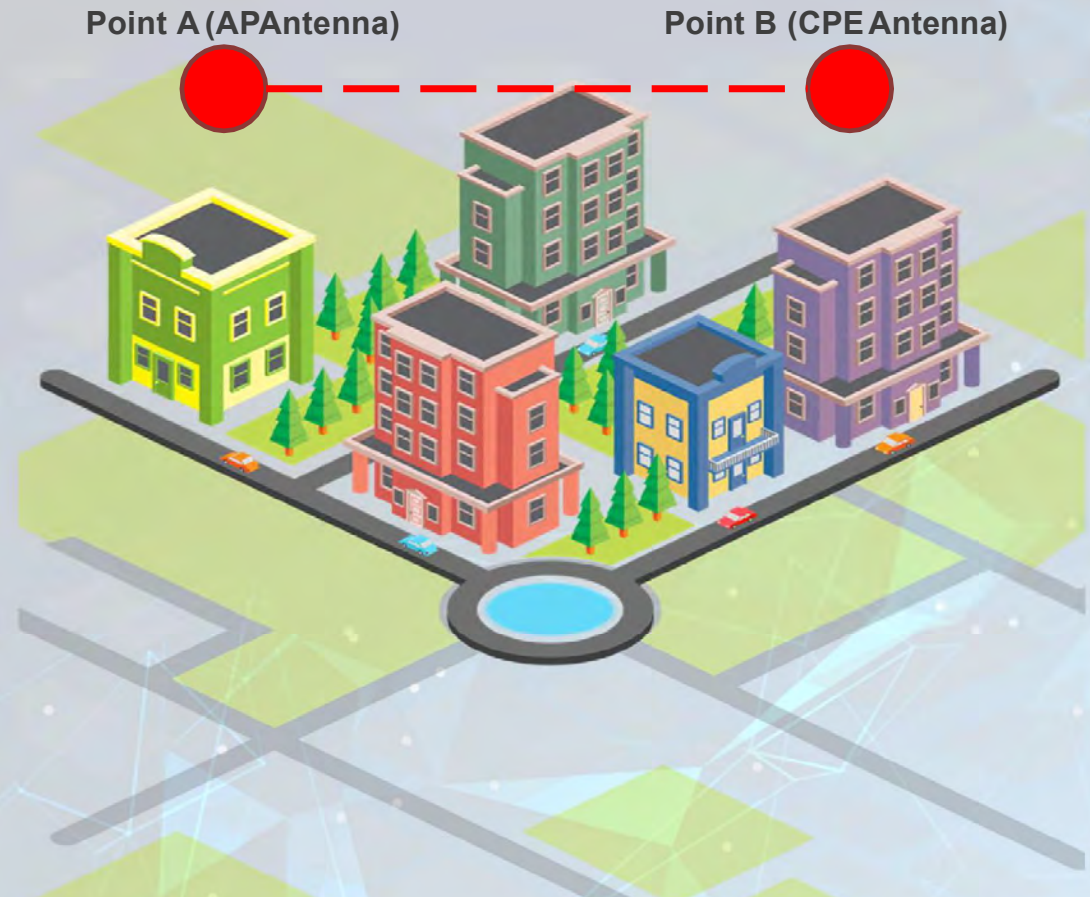
Wireless Transmission Mode

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
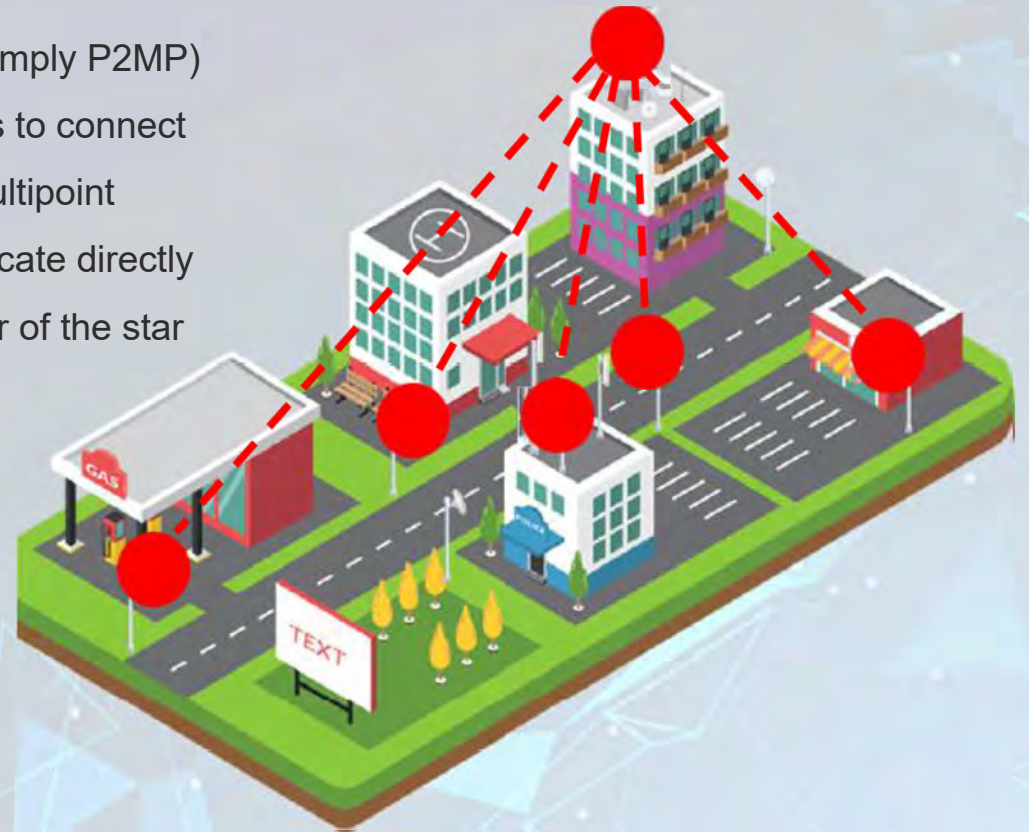
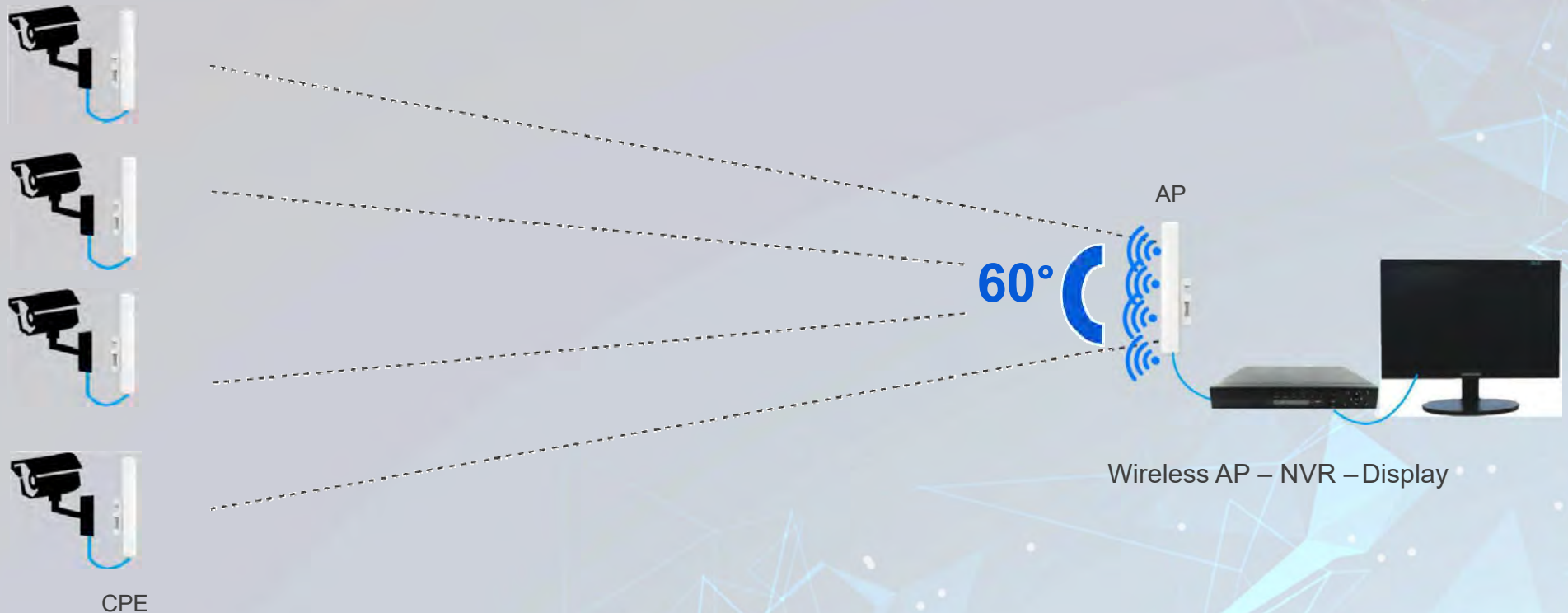# Wireless Transmission Mode

Repeater / Access Point Mode

- A **wireless repeater** (also called **wireless range extender**) takes an existing signal from a wireless access point and rebroadcasts it to create a second network. When two or more hosts have to be connected with one and the distance is too long for a direct connection to be established, a wireless repeater is used to bridge the gap.
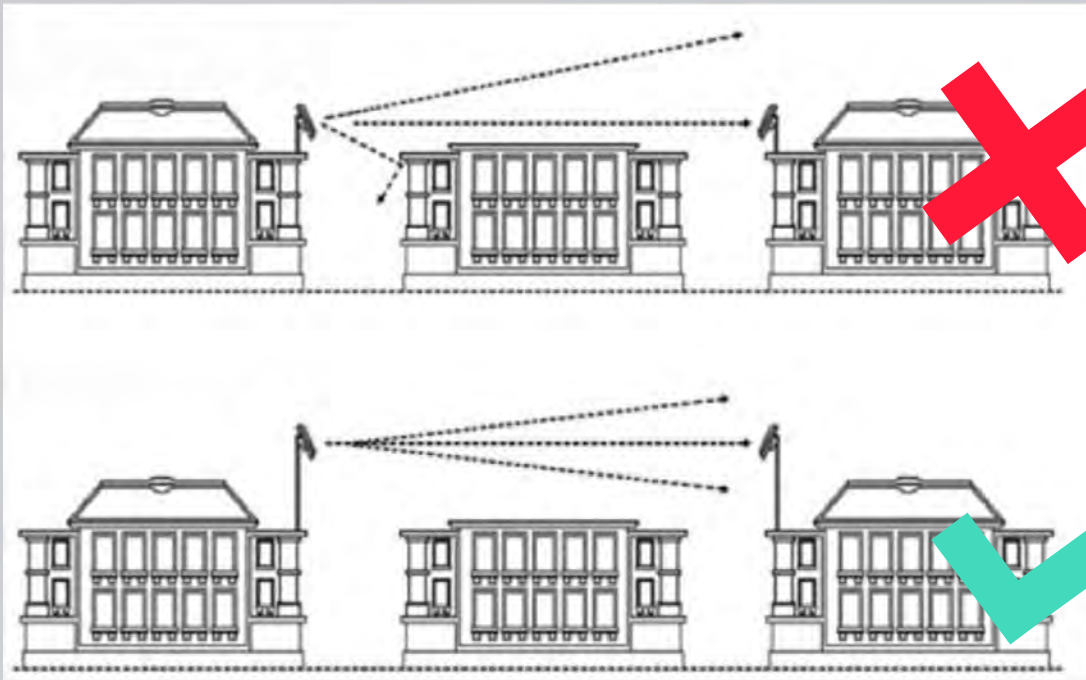
For example PTMP Transmission

Transmission Angle of Wireless AP
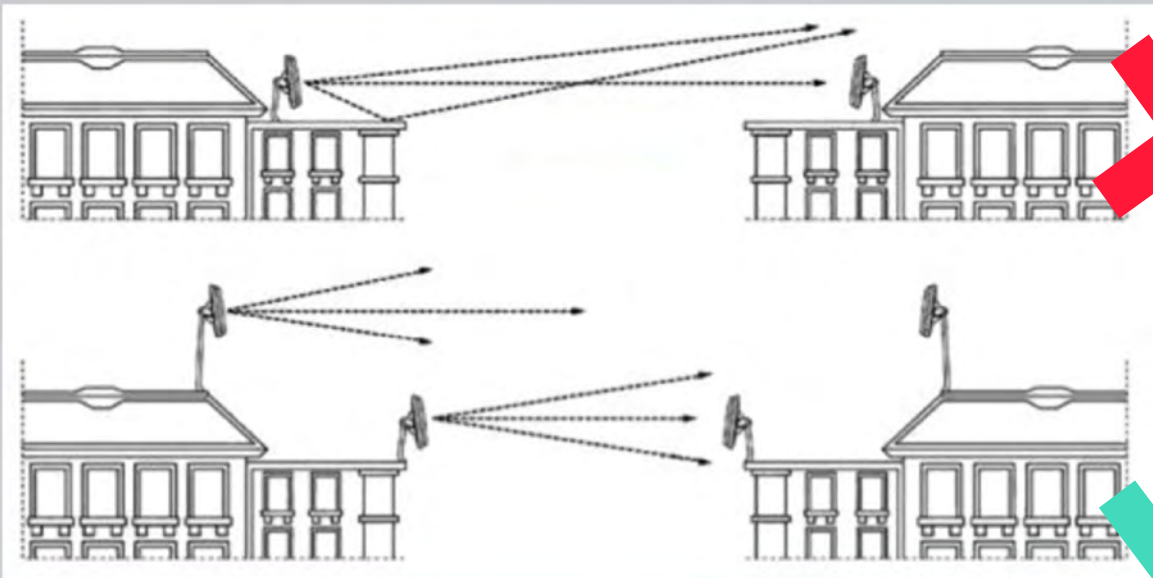
Wireless Access Point Installation

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.

Wireless Access Point Installation

When positioning your wireless transmitter and/or receiver units on roof-tops, provide a clear line-of-sight and avoid the possibility of signal multi-pathing by raising them on poles or locating them on the edge of the roofs.

Wireless Access Point Installation
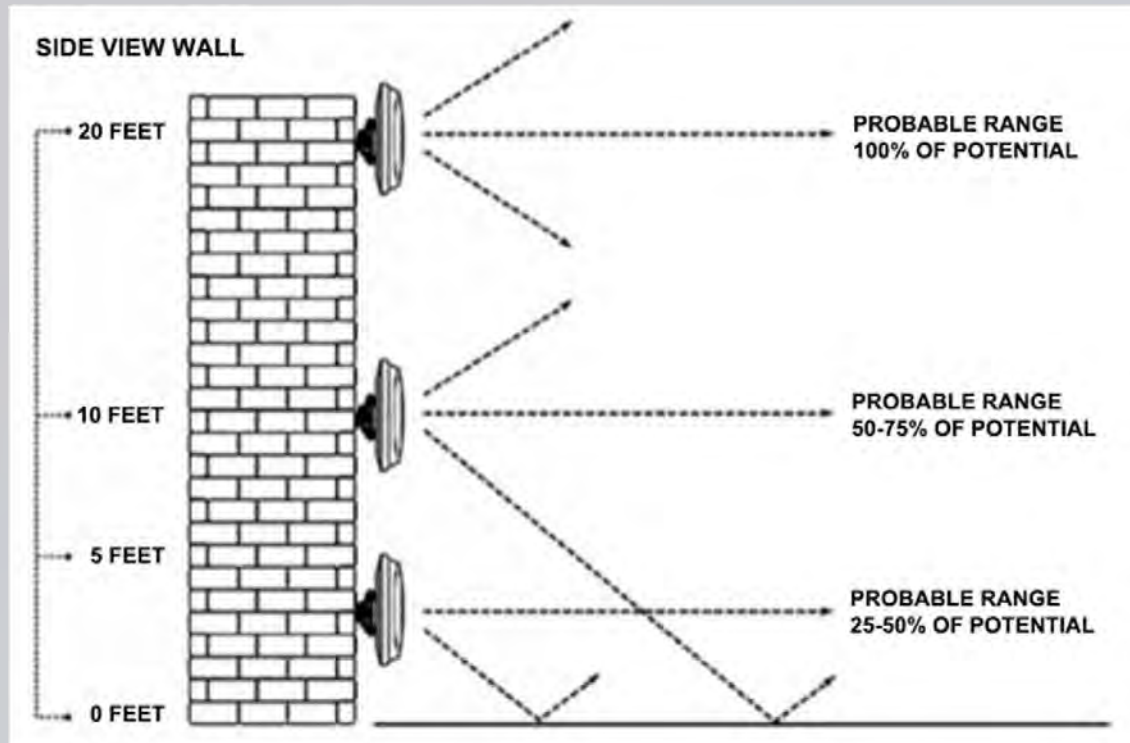
The ground plane can cause multi-path issues and can signaificantly affect the range of your wireless transmission.

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Mounted Examples

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Thank you !