TOZNNIR®

WIRELESS AP

WIRELESS CCTV APPLICATION

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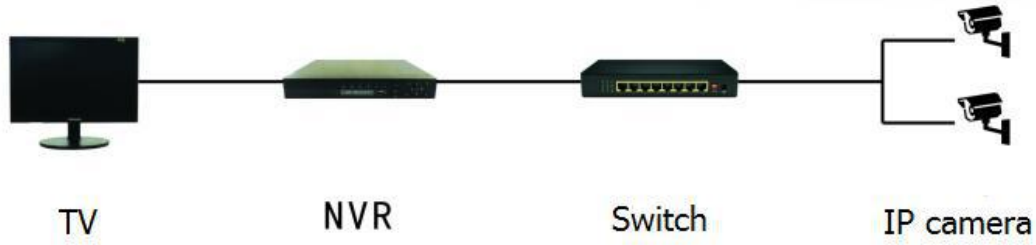
TOSNNIR®
WIRELESS AP
Knowledge

Wired or Wireless Installation?

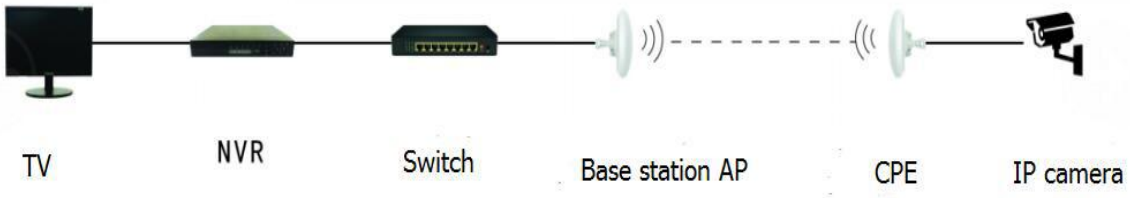
There are two types of CCTV Installation

Wired CCTV Installation：



Wired installation is commonly used of CCTV installer mostly if they have a project for Analog Type Camera and sometimes for IP Camera. They use some Cables like Coaxial and UTP Cable.

Wireless CCTV Installation：



Wireless installation is much effective for long distance video transmission using AP antenna. And also it can save more time, materials / labor cost, and it can save money for the clients.

What is Wireless AP and CPE?

AP (Sender)is Master that send data to Slave or CPE. This is Computer end or NVR End Devices

CPE (receiver)is slave that receive data from AP . This is Camera end Devices

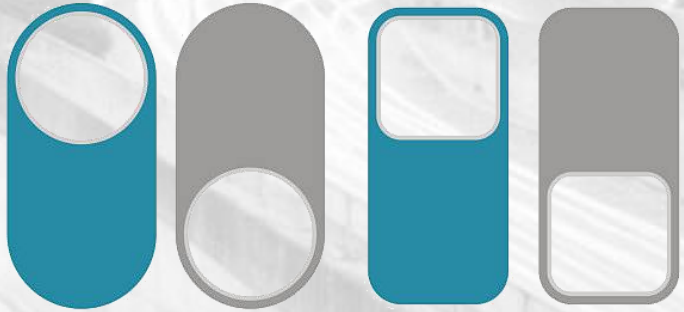
Point A
(AP Antenna)

Point B
(CPE Antenna)

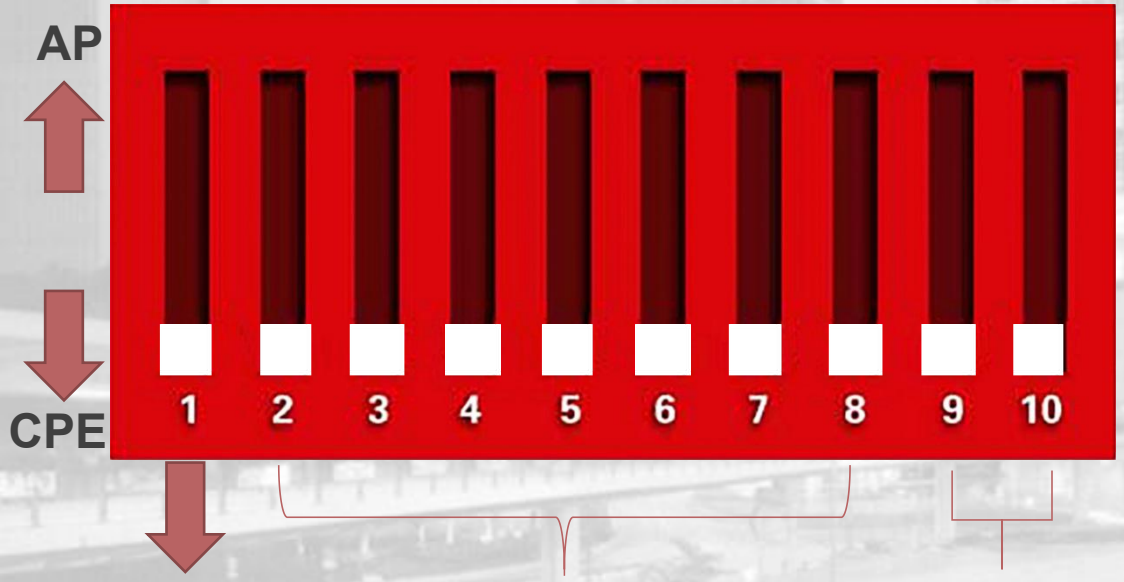
Why choose DIP?

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

DIPs are specialized for CCTV Video Transmission compare to other AP brands that applicable for NETWORK Transmission only, DIPs can transmit from Short Distance up to Long Distance Video Transmission.



How the DIP Switch Works?



Button 1 changes the mode of the device.

UP is access point (AP/SENDER) mode for using with your NVR and PC, etc..

DOWN is for CPE(RECEIVIER) using with your cameras.

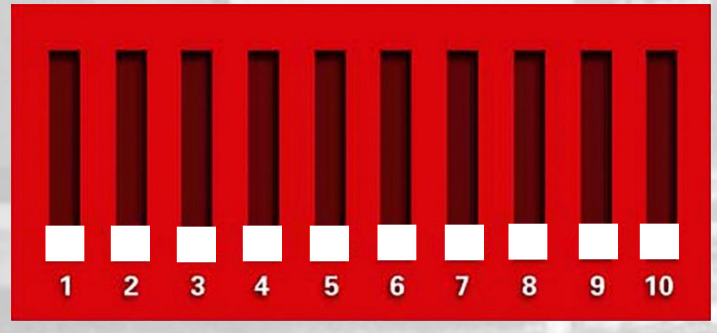
Button 2 to 8 are for matching AP and CPE together. Different combinations corresponds to different SSIDs and different segments.

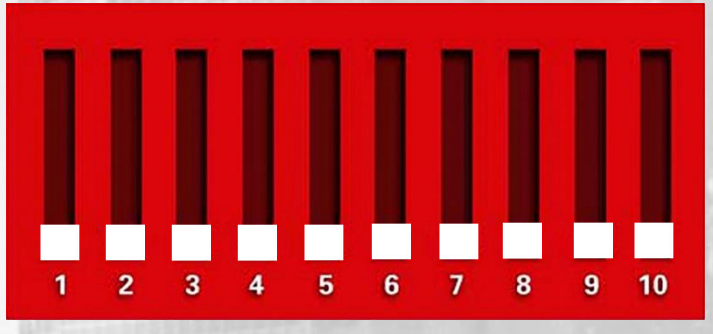
Button 9 &10 are for point to multi-point functionality. To use up to 4 cameras with one recorder, different orders of button 9 &10 stand for different CPE.

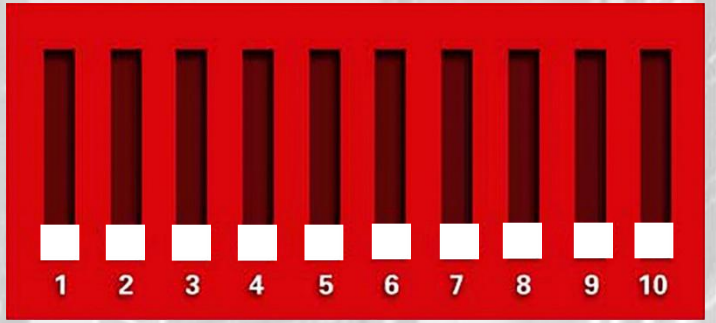
Each DIP AP(master) can be connected up to 4 DIP CPE(slave) only

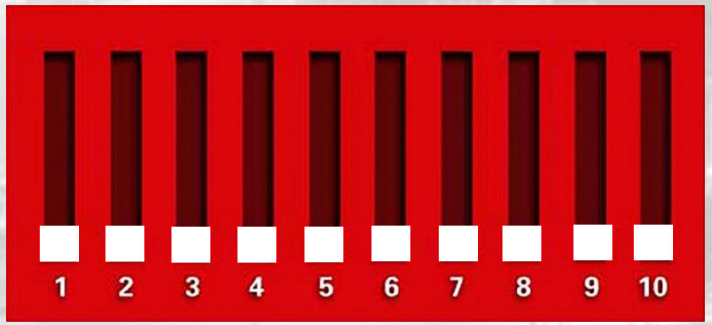
Sample DIP Setup of DIP1526-H

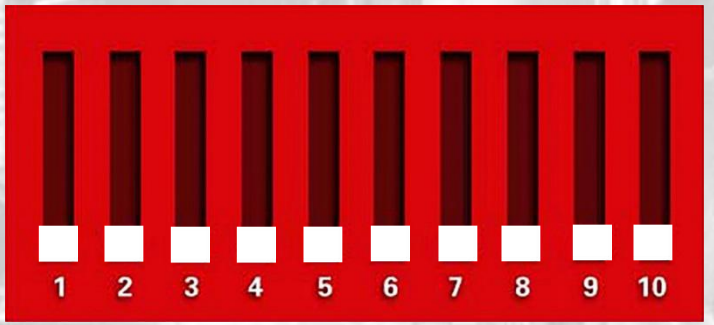
Access Point











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?

Bandwidth of camera:

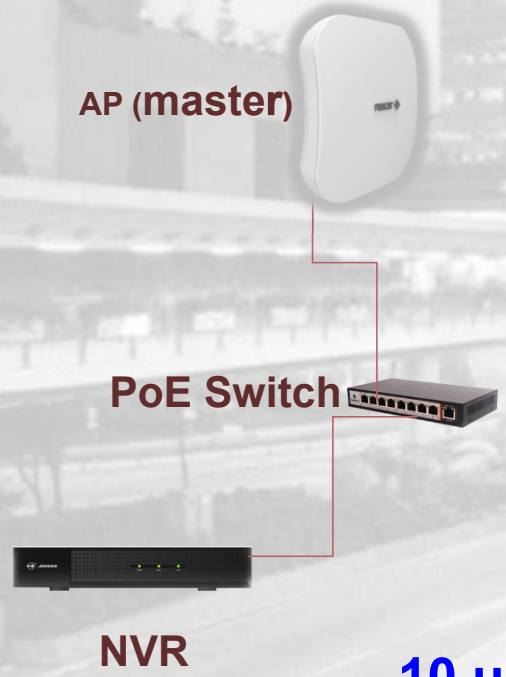
H.264 Video Compression		H.265 Video Compression	
IP Camera	Bandwidth	IP Camera	Bandwidth
720P	1 - 3Mbps	1080P	1 - 4Mbps
960P	2 - 5Mbps	2K Res.	2 - 7Mbps
1080P	3 - 8Mbps	4K Res.	6 - 18Mbps

Bandwidth of Wireless devices

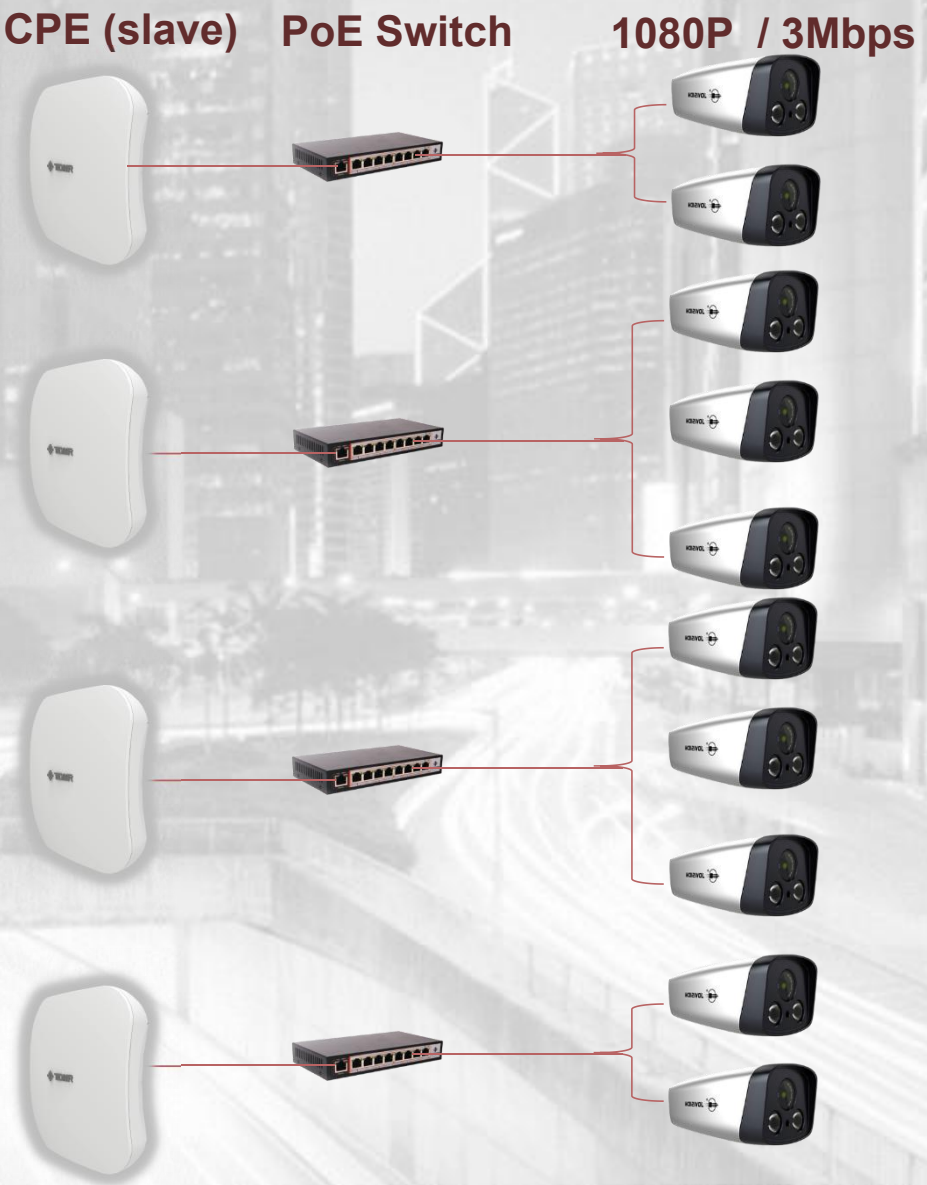
Frequency	Transmission Speed	Model	Transmission Distance	Total Bandwidth
5.8 GHz	150Mbps	DIP1520	≤1km	20-60M
		DIP1526-H	≤3km	30-60M
5.8GHz	300Mbps	DIP3526-H	≤5km	40-60M
		TX23-3516K Upcoming	≤10km	50-150M

How many IP Cameras you can transmit?

DIP1526-H / 5.8Ghz / 150Mbps speed
Maximum Bandwidth: 50M
(save 30% value for camera bandwidth fluctuation)



10 units IPC x 3Mbps = 30Mbps



Frequency：2.4GHz&5.8GHz range of Frequency

2.4GHz：2.3-2.9GHz

5.8GHz：4.9-6.1GHz

All Todaair 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

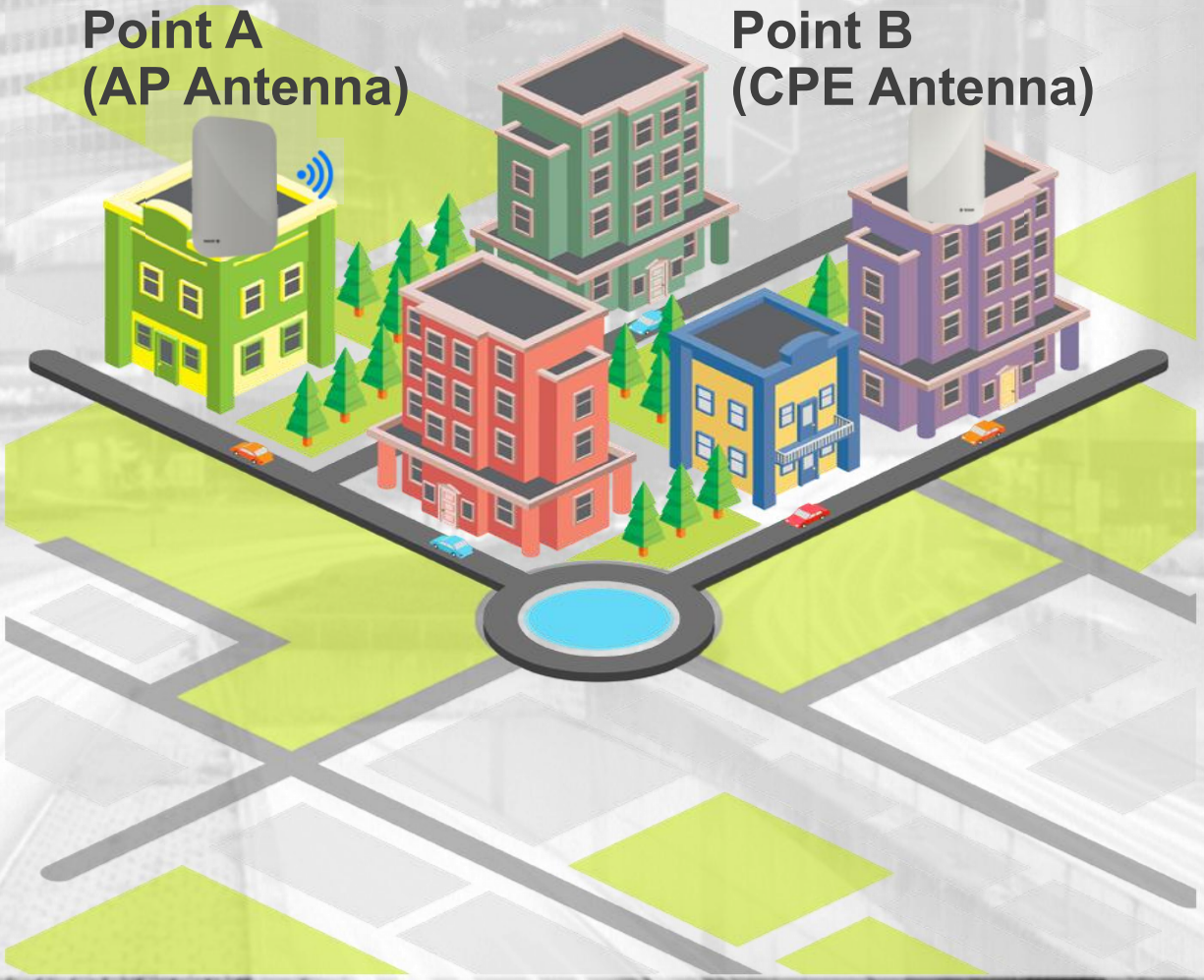
Wireless Transmission Mode

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

Point-to-Point Transmission (PTP)

For example PTP Transmission

-Two units of Wireless AP work as Fiber
Cable or Network Cable.
-To the device which has Network port can
be used for Wireless Transmission.



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

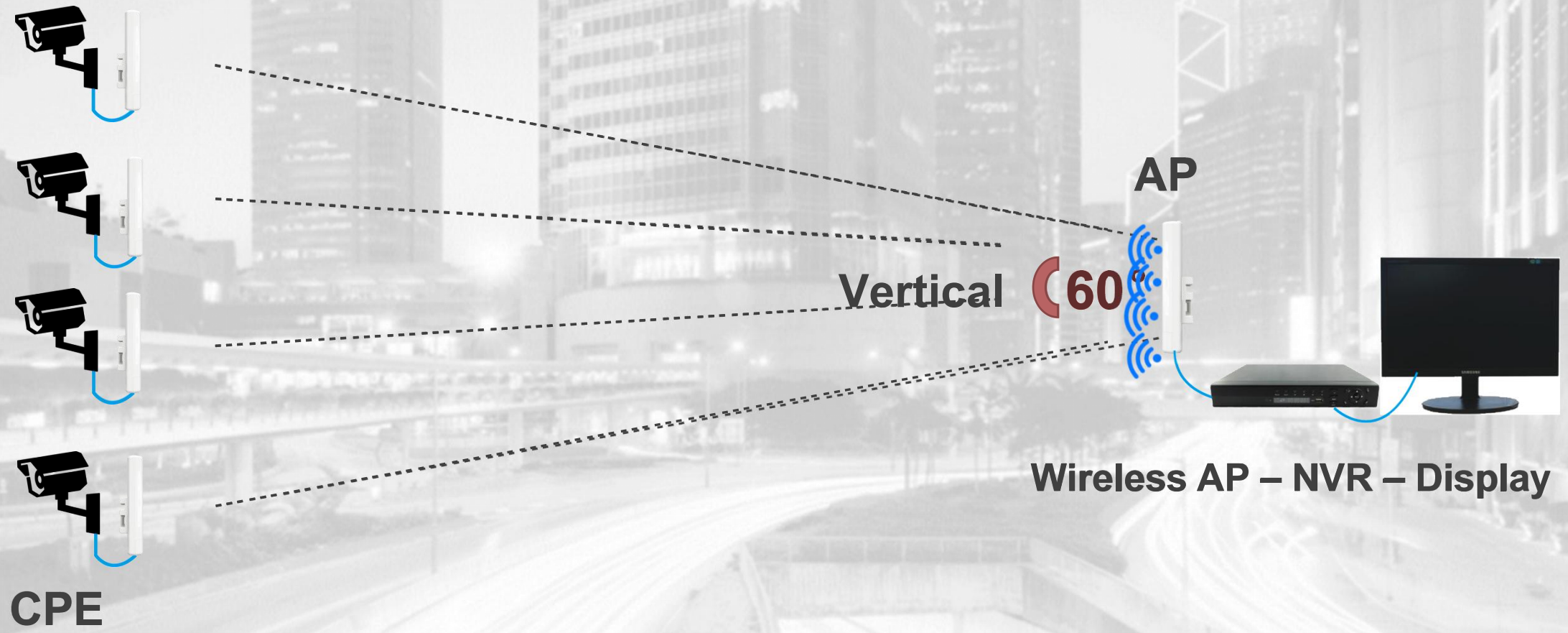
Wireless Transmission Mode

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

The transmission angle of wireless AP



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

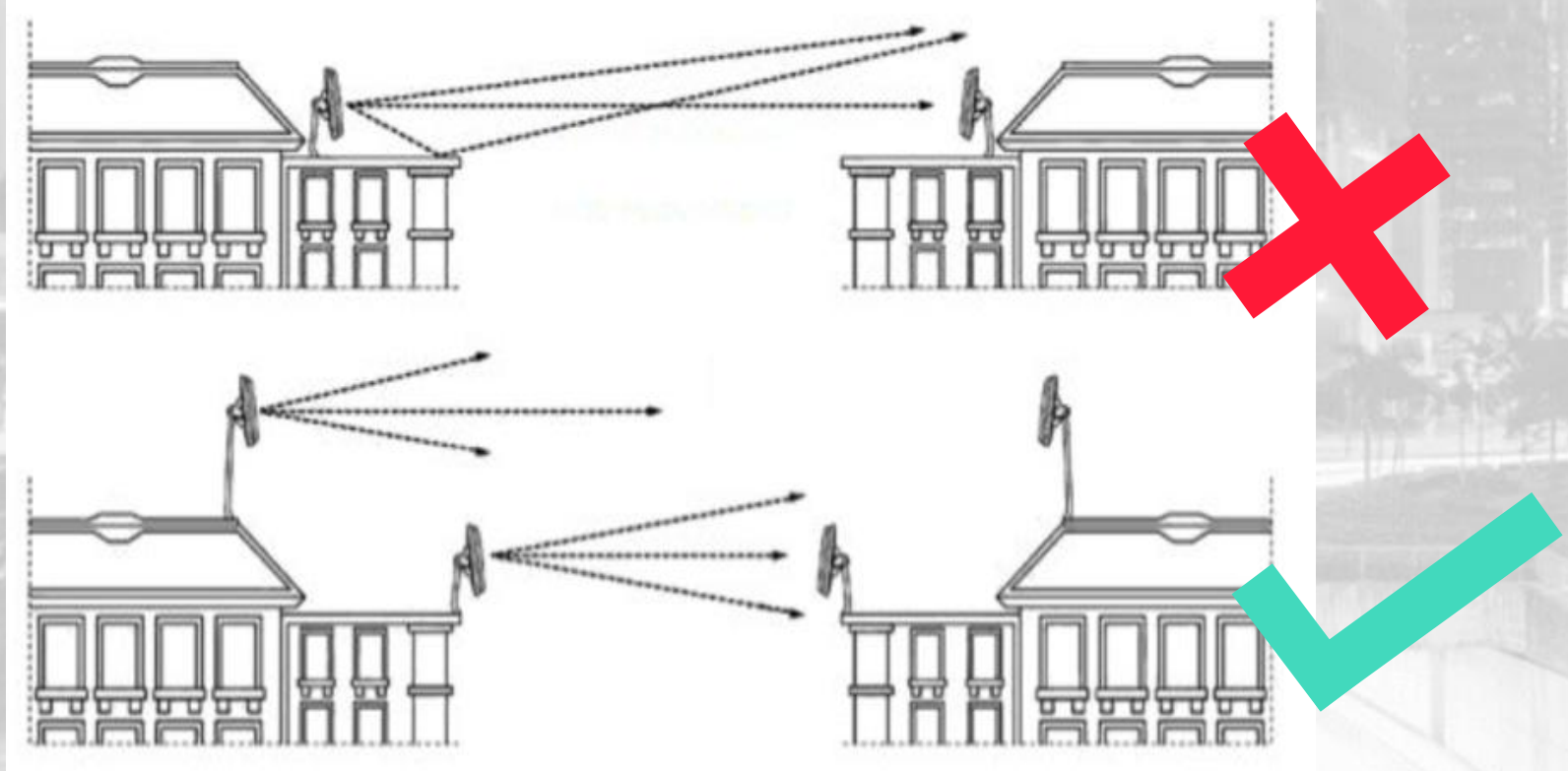
Wireless Access Point Installation

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

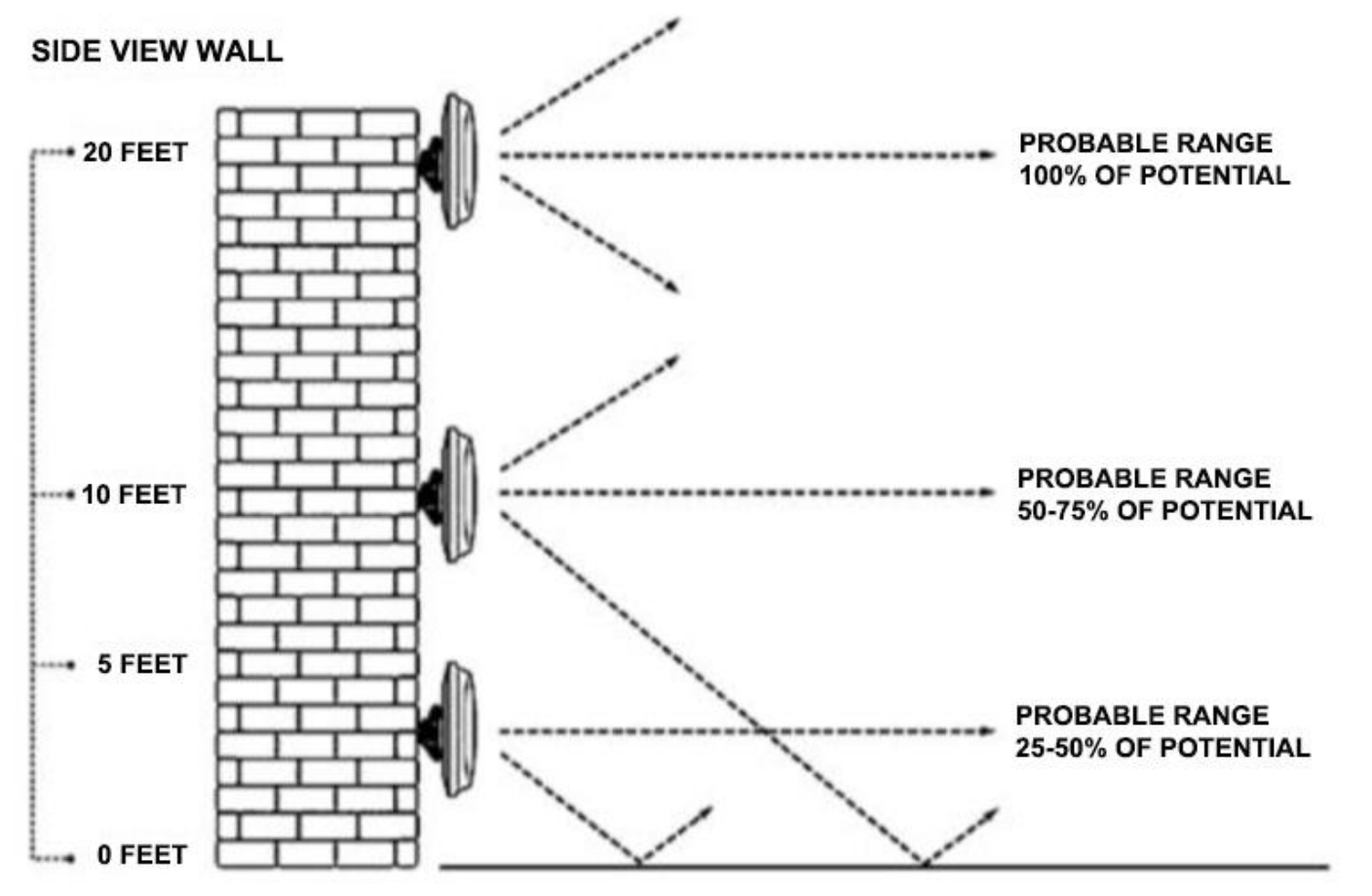
The above installation image illustrates that it is important to mount your wireless transmitter & receiver on poles to raise them above any obstructions. Besides, it's equally important to make sure that there is a direct line of sight between them.

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.

Specification and Application

Content

01 SunTop Series

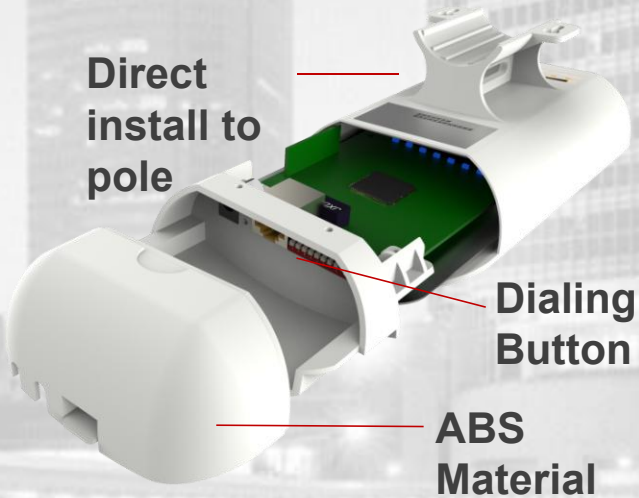
02 SunPro Series

03 Switch

04 Sunwing Series

Wireless Transmission-SunTop, SunPro Series

DIP205-H Special Use In Villa, Factory, Store, etc



Non-Setting

Auto-Configure

Anti-Interference

Waterproof & Dustproof

Power	Transmission Rate	CPU	Amplifier IC	DRAM
23dBm	150Mbps	AR9344	SiGe5012B	DDR 64M

Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	10dBi	1km	40-50M

DIP4530-H Special Use In Residential Area, Park, Community, etc

Non-Setting

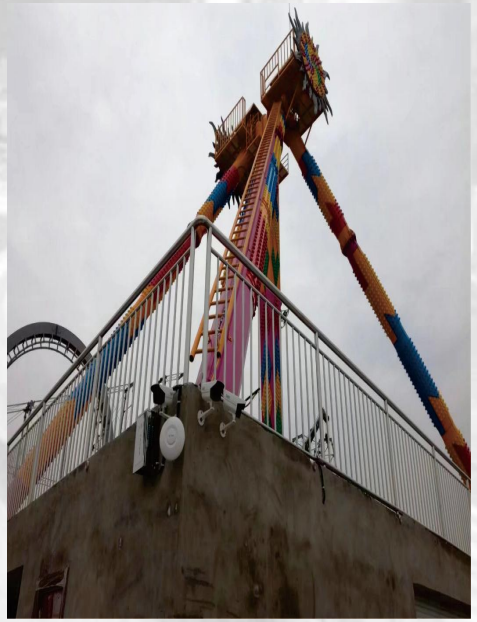
Auto-Configure

Anti-Interference

Waterproof & Dustproof

Power	Transmission Rate	CPU	Amplifier IC	DRAM
23dBm	450Mbps	AR9344+ QCA9882	SKY85735	DDR 64M

Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	14dBi	1km	40-50M



DIP1526-H Special Use In Elevator, Factory, etc

Non-Setting

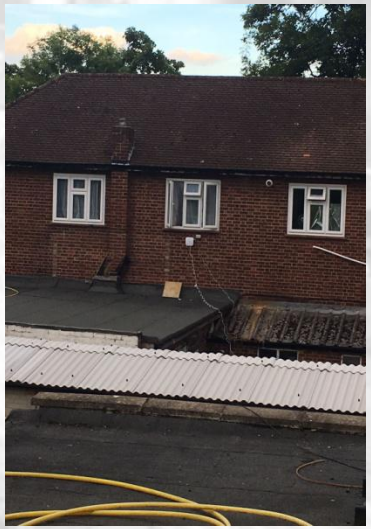
Auto-Configure

Anti-Interference

Waterproof & Dustproof

Power	Transmission Rate	CPU	Amplifier IC	DRAM
25dBm	150Mbps	AR9344	SiGe5012B	DDR 64M

Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	12dBi	1-2KM	40-50M



DIP4526-H Special Use In Construction Site, Tower Cran, etc

Non-Setting

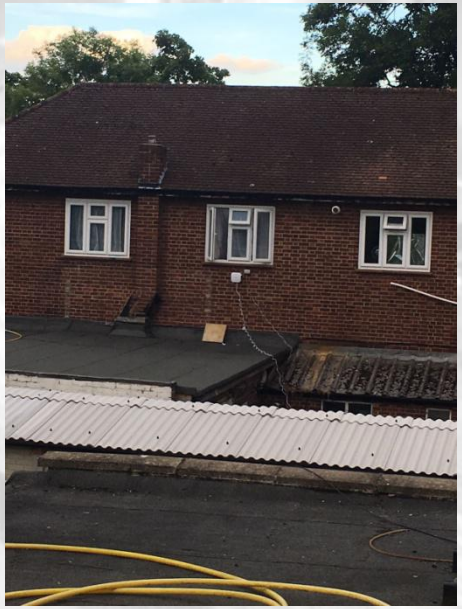
Auto-Configure

Anti-Interference

Waterproof & Dustproof

Power	Transmission Rate	CPU	Amplifier IC	DRAM
27dBm	450Mbps	AR9344+ QCA9882	SKY85735	DDR 64M

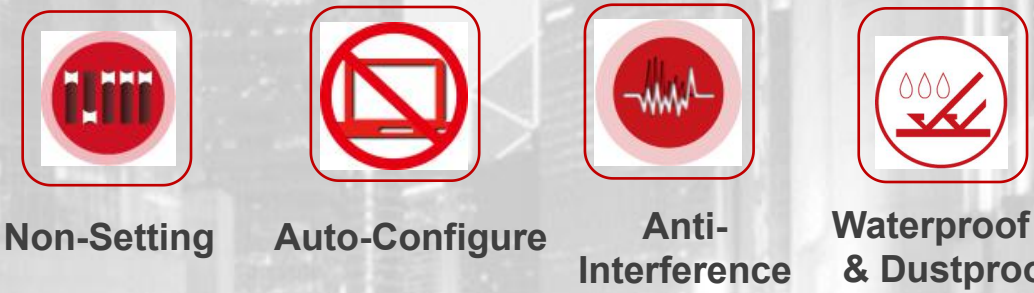
Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	16dBi	1-2KM	70-90M



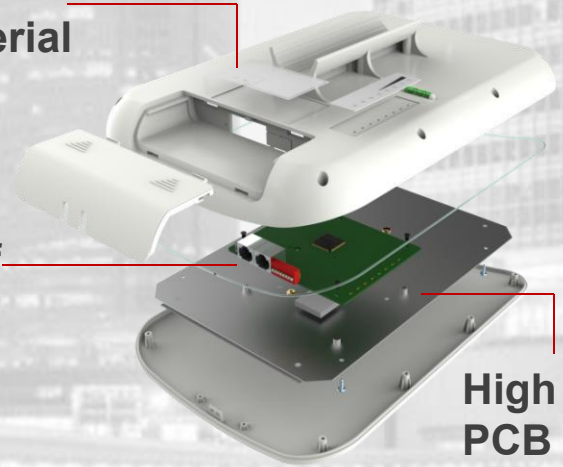
DIP9526K-H Special Use In School, Super Mall, etc

Power	Transmission Rate	CPU	Amplifier IC	DRAM
27dBm	900Mbps	AR9563	SKY85728	DDR 128M

Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	16dBi	3KM	90-300M



DIP1095-H Special Use In Tower, Villa, Tunnel, etc.



Range

Low Power

Auto-
Configure

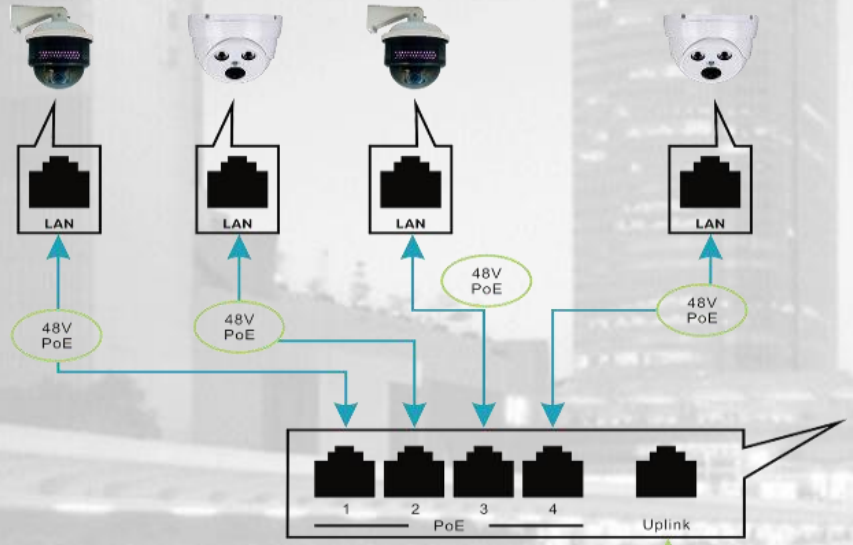
Waterproof &
Dustproof

Power	Transmission Rate	CPU	Amplifier IC	DRAM
27dBm	900Mbps	AR9344+ QCA9882	SiGe5012b	DDR64M

Frequency	Antenna Gain	Range	Bandwidth
5180~5240MHz/ 5745-5825MHz	18dBi	5KM	40-60M

Outdoor & Indoor PoE Switch

Outdoor PoE Switch -PoE29-RX548



POE29-RX548
4 * 10/100M PoE Port 1 * 10/100M UPLINK RJ45 Port
Power: AC 100-240V/DC 48V
Backplane Bandwidth: 1Gbps
MAC: 4K

- Special for Setting Up Medium Wireless Network
- Supply standard 48V power in 100 meters

Outdoor PoE Switch — PoE29-RX948

POE29-RX948
8 * 10/100M PoE Port 1 * 10/100M UPLINK RJ45 Port
Power: AC 100-240V
Backplane Bandwidth: 1Gbps
MAC: 4K

- **Special for Setting Up Medium Wireless Network**
- **Stand Strong Against Complex Environment Dedicated to Outdoor Data Transmission**
- **Innovative shuttered enclosure, achieving better cooling performance**
- **Easy wiring, flexible for outdoor project**

What kinds of information you need to know before you make the solution?

ONE — Visit the live site and take a Idea .

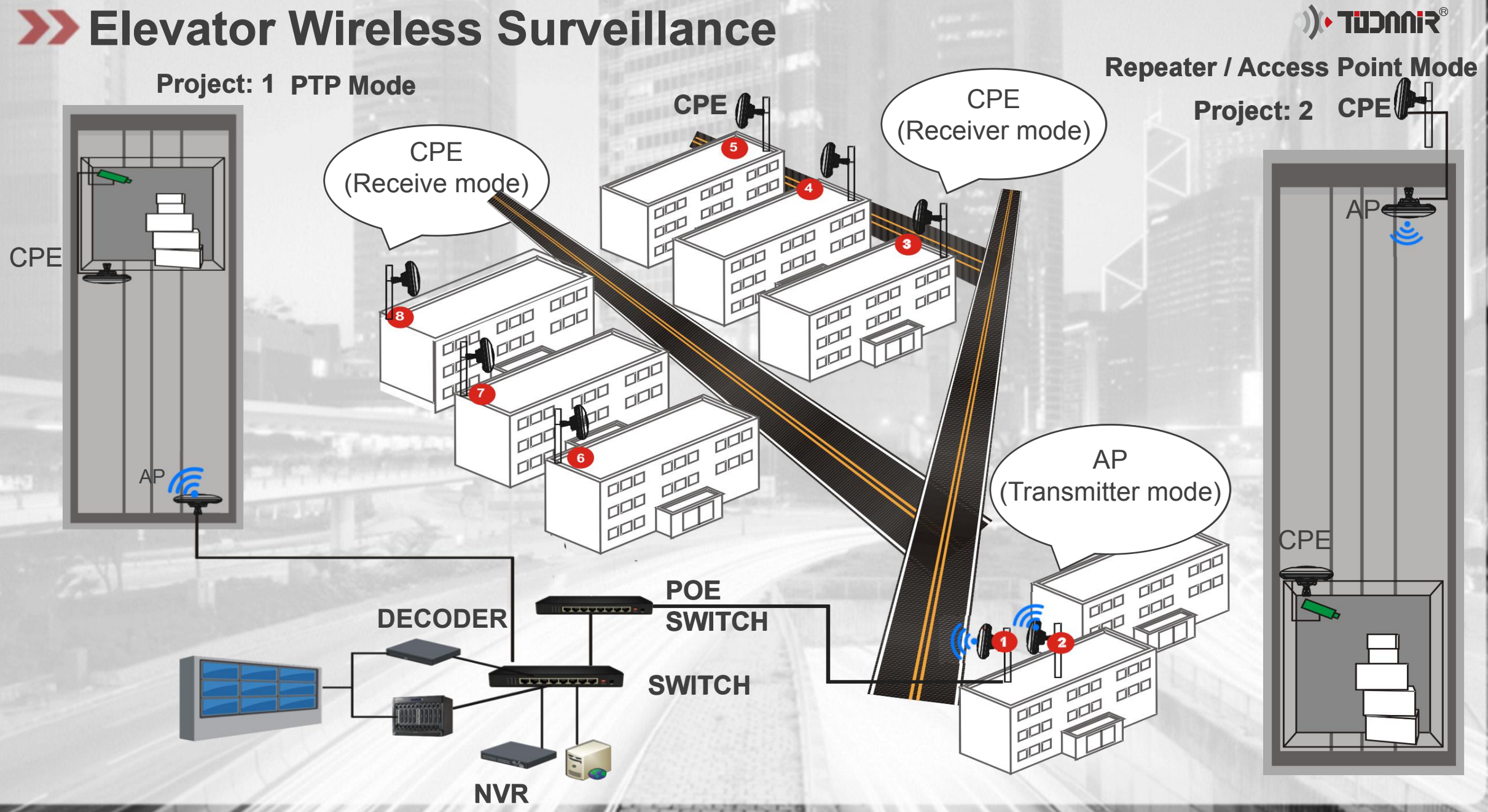
Two — Where is the control room?

Three — How much distance in b/w AP & CPE ?

Four — How many nos. of IP cameras? What about the pixels?

Five — What about LOS(line of sight), is it clear ?
Can client offer the drawing map of site ?

Elevator Wireless Surveillance

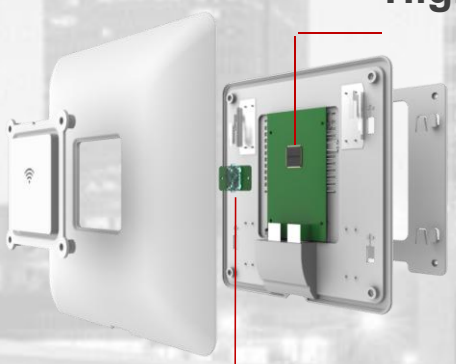


Wi-Fi Coverage Solutions-SunWing Series

Ceiling AP： IN3212YW-H (Cloud Platform)

Fashionable Design

High Quality CPU



Signal Indicator Light

Support More Users

Advertising Router

Remote Control

Intelligence Control

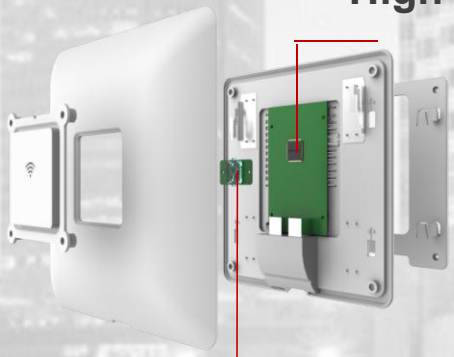
Power	Transmission Rate	CPU	DRAM	Amplifier IC
27dBm	300MBps	AR9531	DDR64M	SiGe2576L*2

Frequency	Antenna gain	Coverage Range	Support Users
2.4G&5.8G	5dBi*2	500㎡	50

Ceiling AP：IN1212YW-H (Cloud Platform)

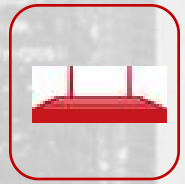
Fashionable Design

High Quality CPU



Signal Indicator Light

Support More Users



Advertising Router

Remote Control

Intelligenc e Control

Power	Transmission Rate	CPU	DRAM
27dBm	1200MBps	QCA9531+ QCA9882	DDR 128M

Frequency	Antenna Gain	Coverage Range	Support Users
2.4G&5.8G	5dBi*4	500㎡	50

TUDNNIR®
Wireless Sales
Trainning

The trend of the development of wireless monitoring market

-H.265, the new camera protocol, making the camera bandwidth by half, it means to carry more IP cameras and improve the wireless cost advantage virtually.

Government supports efforts to enhance the construction greatly improved in the safety city, most of the projects can not be resolved with wired, especially the transformation of the old city, an urgent in need of wired and wireless combined.

So many famous CCTV companies to get involved in the wireless market such as HIKVISION and DAHUA. They have also launched it and all agree that these products are of most potential high market in the near future, indicating that wireless technology to achieve the mature stage.

Customers already know wireless AP for CCTV application. It has been widely used in all kinds of field.

Competitor and Todaair

1.Most are white colors.
2.Need to fix the angle bracket and adjust it.
3.This shell we can be seen everywhere in the market.

COMPARISON

1.Fashionable design.
2.With 360 ° adjustable bracket, no need to purchase another angle bracket.
3.Unique shell, the best choice for the projects

Settings

Traditional complex setting by computer

Need to enter the computer settings and system managements around 5-6 minutes. Need to be supported by the technical person.

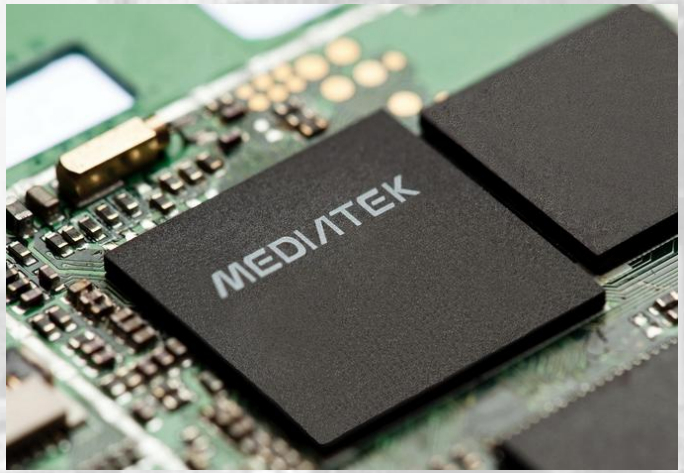
Non setting, buttons easily setting mode

No computer operation.
No technical settings.
No professional guidance.

Powerful and stable Qualcomm hardware

Realtek

The low and middle-end
Low power
Heating problem
Processing bottle-neck



MTK

The low and middle-end
Heating problem
High power consumption
Weak stability

Qualcomm

The middle-and high-end
Flexible performance
Strong stability

Is wireless stable?

The factors effecting the stability of WIRELESS

A. Technology is not mature, it was by the transformation from the router.

B. Uneven quality from online purchase of products.

C. Expertise is not enough, much more complex settings.

D. Wrong installation and debugging.

Successful Case

- **We bid the wireless construction projects twices from 2014, We are the Appointed wireless AP supplier for EVERGRANDE.**
- **http://www.evergrande.com/en/**

Thank you !

JIANGMEN TODAAIR ELECTRONIC CO.,LTD
ADD: F.6 Electronic Building NO.1 Guangdeli Street, PengJiang District, JiangMen City, GuangDong China 52900
Tel: +86 750 313 5725 E-mail：todaair@todaair.com