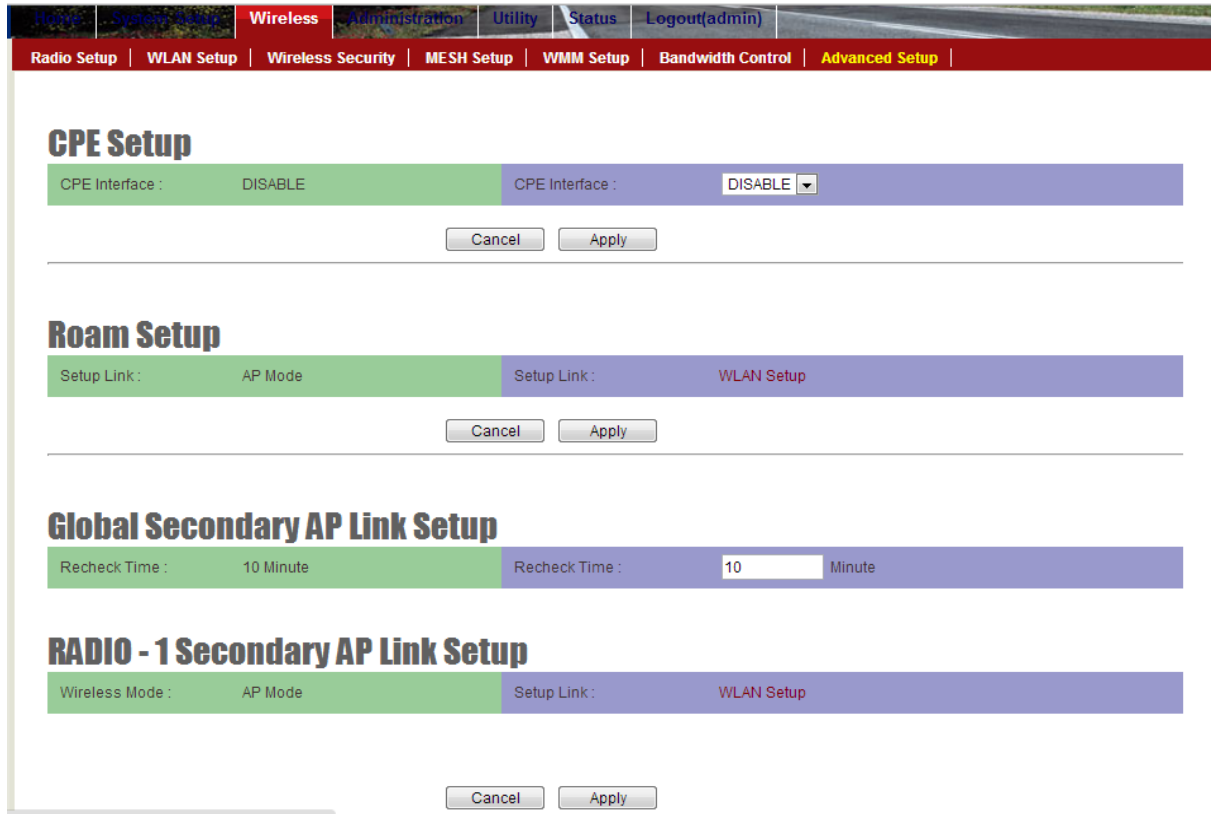




New Feature and Firmware of Wireless Device IOP-A003-V2_05 Explanation

3-6. Advanced Setup

Advanced Setup including: CPE Setup, Roam Setup, Global Secondary AP Link Setup, RADIO-X Secondary AP Link Setup and so on.

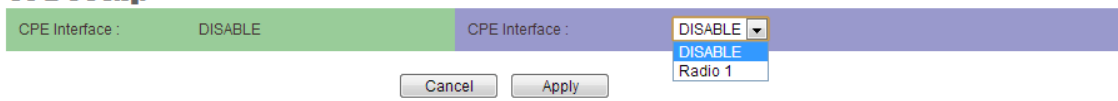


CPE Setup: Through the CPE Setup, Wireless station interface can connect with wireless AP of other brands, only work on Wireless Station mode can enable CPE setup features.

Reminds: Because of APM-102R(H) and APM-103R(H) belongs to multiple RF modules, If it setup two or three CPE mode at the same time, It would be involved the issue of ring loop, so in the multiple RF modules, it has only one RF module can be setup CPE mode.

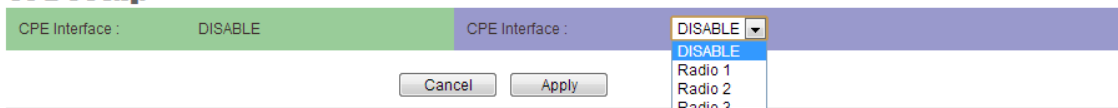
One wireless RF module of APM-101, It can be start CPE mode directly when setting the Wireless Station mode.

CPE Setup



Multiple RF module of APM-102 & APM-103, it can only choose one of the RF module, Setting Wireless Station mode, then start the CPE setup.

CPE Setup





Roam Setup: When wireless module set to the Wireless Station mode and needs to low speed handover by roaming in some wireless AP in different signal coverage environment. You can enable the Roam Setup, it can support low speed transmission 50-100 Km/h speed and handover roaming at 50-100ms in between APs.

Roam Setup

Roam :	Enable	Roam :	Off <input type="radio"/> On <input checked="" type="radio"/>
Channel :	1 CH - 2412MHz	Channel :	1 CH - 2412MHz
Roam Channel_1 :	(2422MHz)	Roam Channel_1 :	3 CH - 2422MHz
Roam Channel_2 :	(2432MHz)	Roam Channel_2 :	5 CH - 2432MHz
Roam Channel_3 :	(2442MHz)	Roam Channel_3 :	7 CH - 2442MHz

Start the low-speed roaming setting (Roam): Select On to open roaming setup (Roam).

Setting channel of client side (Channel): This channel based on the Wireless/Radio/Wireless Station mode, set to the same channel shown here automatically. If you change the channel of this page , equivalent to (Radio/Wireless Station/Channel) channel changed.

When the wireless device setup to AP mode. Show as the following figure: Representative AP mode is unable to use the roaming mode.

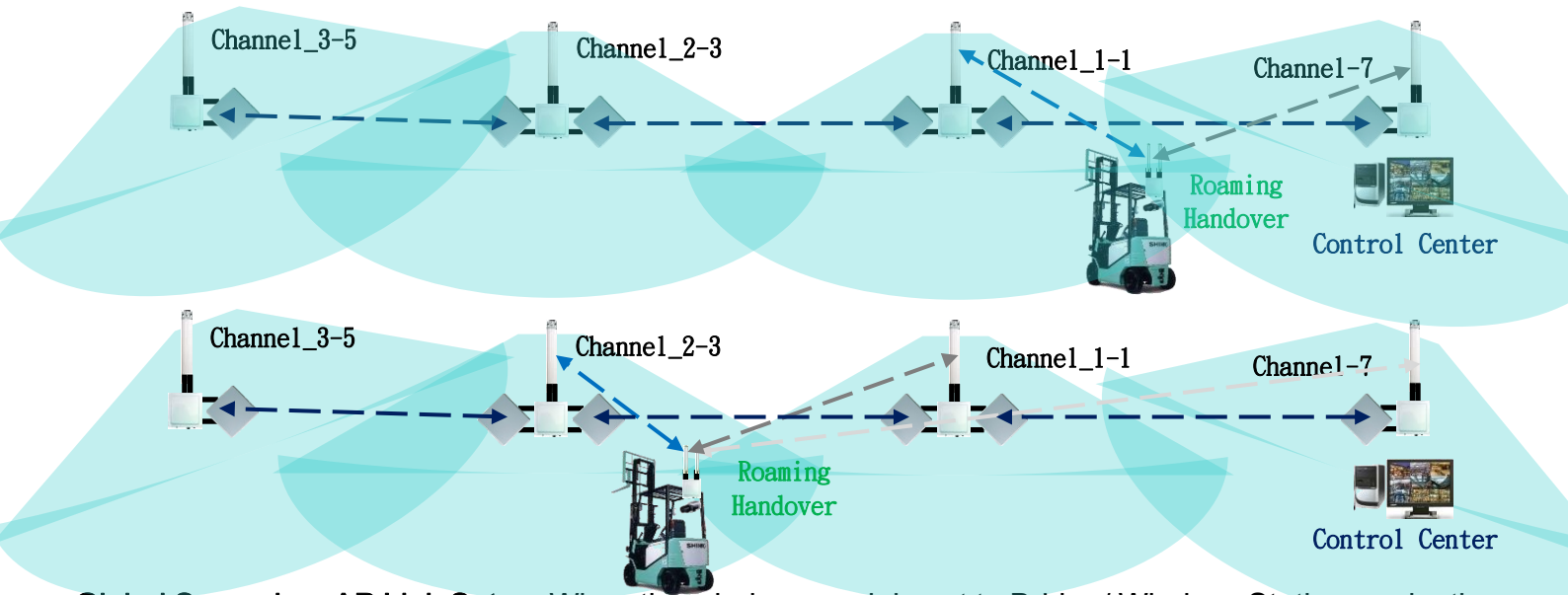
Roam Setup

Setup Link :	AP Mode	Setup Link :	WLAN Setup
--------------	---------	--------------	------------

Roam Channel_1 Setup: According to your wireless system channel here, coverage channels of wireless AP. Select one coverage channel setting as Roam Channel_1. When the wireless station link original AP and find sensitivity come to bad, the wireless station will search by Roam Channel_1 setting channel and prepare to handover from original AP to Roam Channel_1 of AP by roaming.

Roam Channel_2 Setup: According to your wireless system channel here, coverage channels of wireless AP. Select one coverage channel setting as Roam Channel_2. When the wireless station link Roam Channel_1 AP and find sensitivity come to bad, the wireless station will search by Roam Channel_2 setting channel and prepare to handover from Roam Channel_1 AP to Roam Channel_2 of AP by roaming.

Roam Channel_3 Setup: According to your wireless system channel here, coverage channels of wireless AP. Select one coverage channel setting as Roam Channel_3. When the wireless station link Roam Channel_2 AP and find sensitivity come to bad, the wireless station will search by Roam Channel_3 setting channel and prepare to handover from Roam Channel_2 AP to Roam Channel_3 of AP by roaming.



Global Secondary AP Link Setup: When the wireless module set to Bridge/ Wireless Station mode, the originally connected wireless AP fails or the link to be interrupt or the signal is interfered from another radio. If you have a secondary wireless connection settings (Global Secondary AP Link Setup), the Wireless Station will auto recheck the connection according to the setting Recheck Time, Make a communication with wireless AP and connection request by another second, third or fourth wireless AP.

The default of Recheck time is 10 minutes. Set by the wireless system can base on the application requirements and special needs of the system environment. Adjust the connection of Recheck Time.

Global Secondary AP Link Setup

Recheck Time :	10 Minute	Recheck Time :	10	Minute
----------------	-----------	----------------	----	--------

RADIO - 1 Secondary AP Link Setup

Secondary link :	Disable	Secondary link :	Off <input type="radio"/> On <input checked="" type="radio"/>
		Wireless Band :	802.11na HT40 Plus
		Channel :	Auto
		Link 1 :	SSID_1 : HOPS_33AP_ Channel_1 : Null
		Link 2 :	SSID_2 : Channel_2 : Null
		Link 3 :	SSID_3 : Channel_3 : Null

RADIO - 2 Secondary AP Link Setup

Secondary link :	Disable	Secondary link :	Off <input type="radio"/> On <input checked="" type="radio"/>
		Wireless Band :	802.11ng HT40 Plus
		Channel :	6 CH - 2437MHz
		Link 1 :	SSID_1 : Channel_1 : Null
		Link 2 :	SSID_2 : Channel_2 : Null
		Link 3 :	SSID_3 : Channel_3 : Null

RADIO - 3 Secondary AP Link Setup

Wireless Mode :	AP Mode	Setup Link :	WLAN Setup
-----------------	---------	--------------	------------

Cancel Apply



For the wireless system multiple hops weakness, when the equipment of one hop point fault, it will leads the wireless backbone comprehensive outages. The function of Global Secondary AP Link Setup proposed specifically backhaul backup solution and tries to solve this weakness problem.

Every Wireless Station of wireless modules is running independently. According to the direction of transfer and scanning environmental by Site Survey. Then set the priority AP of the scan results. Setting the SSID and Channel in the system.

When the wireless module setup to AP mode. The system will only show the WLAN Setup and could not set Global Secondary Link Setup feature.

RADIO - 3 Secondary AP Link Setup

Wireless Mode : AP Mode	Setup Link : WLAN Setup
-------------------------	-------------------------

The second Wireless AP connecting setup of wireless module (RADIO-1 Secondary AP Link Setup): When wireless module is set to Bridge/Wireless Station mode, can enable RADIO-1 Secondary AP Link Setup features and configure Link1 ~ Link3 SSID & Channel to be backhaul backup link AP, make the wireless backhaul system has backup mechanism. It is special design for Multiple Hops backhaul system to have backhaul backup transmissions solution.

RADIO - 1 Secondary AP Link Setup

Secondary link : Disable	Secondary link : Off <input type="radio"/> On <input checked="" type="radio"/>
	Wireless Band : 802.11ng HT40 Plus
	Channel : Auto
Link 1 :	SSID_1 : TESTAP1 Channel_1 : Null
Link 2 :	SSID_2 : TESTAP2 Channel_2 : 3 CH - 2422MHz
Link 3 :	SSID_3 : TESTAP3 Channel_3 : 6 CH - 2437MHz

Secondary link Setup: Select On or Off.

Wireless Band Setup : This Wireless Band based on the Wireless/Radio/Wireless Station mode, set to the same channel shown here automatically. If you change the Wireless Band of this page , equivalent to (Radio/Wireless Station/Wireless Band) Wireless Band changed.

Client side Channel settings (Channel): This channel based on the Wireless/Radio/Wireless Station mode, set to the same channel shown here automatically. If you change the channel of this page , equivalent to (Radio/Wireless Station/Channel) channel changed.



The first order of AP (Link1): Here is the first priority order AP's SSID and Channel_1 setup. When the Wireless Station connect to original AP, but the signal fails or the link to be interrupt or the signal is interfered from another radio, Wireless Station will follow your connection first order setting (Link1), try to searching and communication and then connect Link1 AP.

When Wireless Station had connected to first order AP (Link1). Even the original wireless AP has resumed running and the signal is good, the Wireless Station connected to the first order's AP still does not exchange to the original wireless AP. It must wait for the first order AP (Link1) wireless signal interruption again. The Wireless Station will try to connect to the original AP.

The second order of AP (Link2): Here is the second priority order AP's SSID and Channel_2 setup. When the Wireless Station connect to first order AP (Link1), but the signal fails or the link to be interrupt or the signal is interfered from another radio, Wireless Station will follow your connection second order setting (Link2), try to searching and communication and then connect Link2 AP.

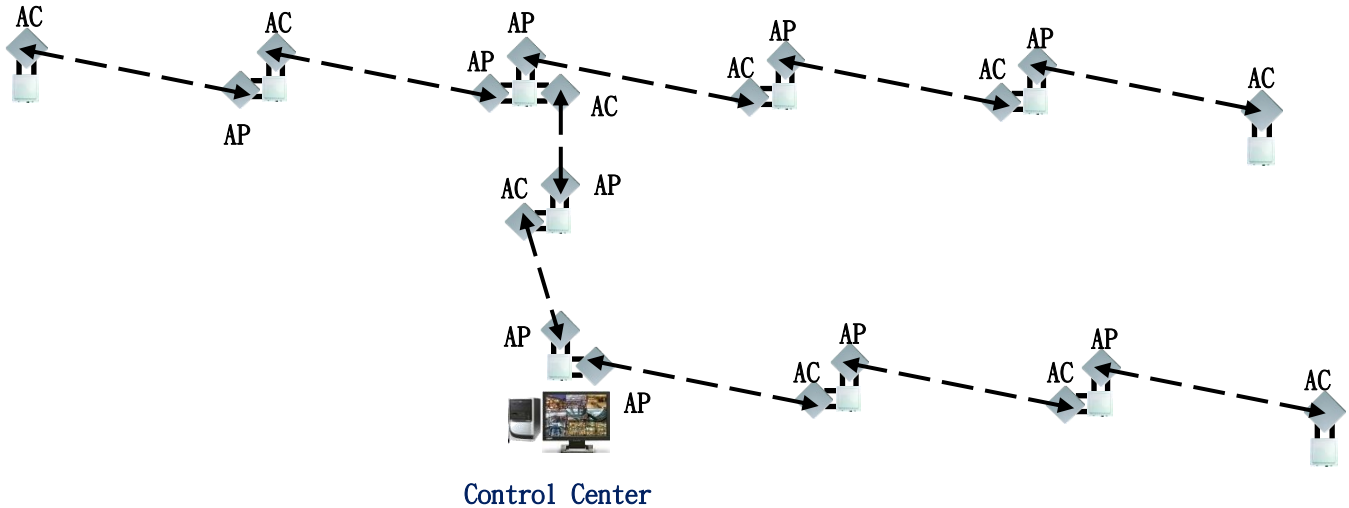
When Wireless Station had connected to second order AP (Link2). Even the original wireless AP or the first order AP (Link1) has resumed running and the signal is good, the Wireless Station connected to the second order's AP still does not exchange to the original wireless AP. It must wait for the second order AP (Link2) wireless signal interruption again. The Wireless Station will try to connect to the original AP or the first order AP (Link1).

The third order of AP (Link3): Here is the third priority order AP's SSID and Channel_3 setup. When the Wireless Station connect to second order AP (Link2), but the signal fails or the link to be interrupt or the signal is interfered from another radio, Wireless Station will follow your connection third order setting (Link3), try to searching and communication and then connect Link3 AP.

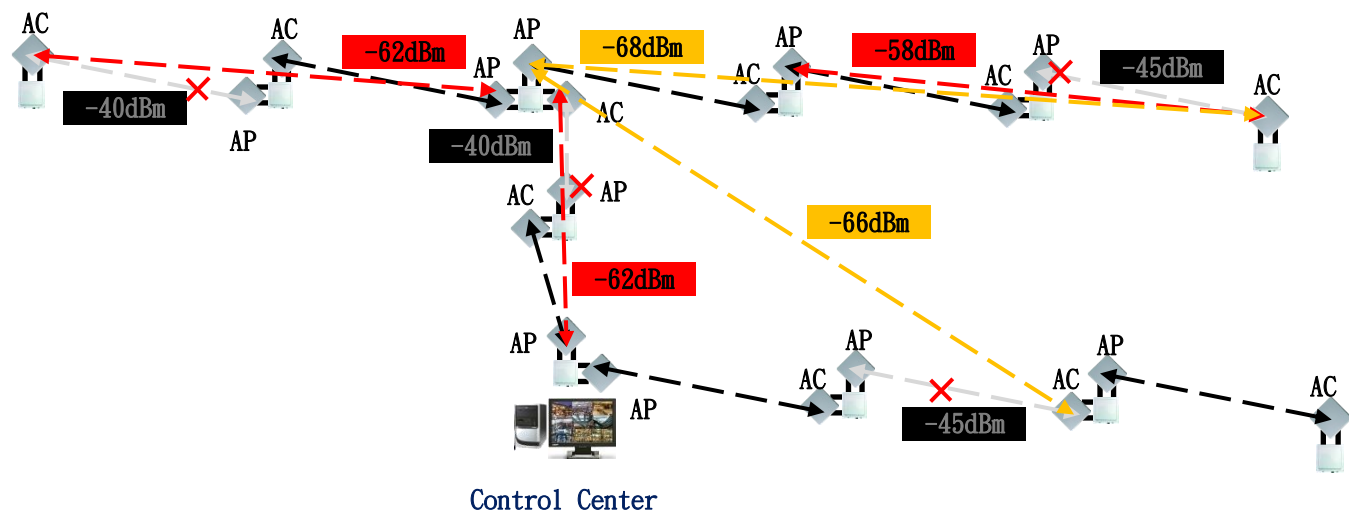
When Wireless Station had connected to third order AP (Link3). Even the original wireless AP or the first order AP (Link1) or the second order AP (Link2) has resumed running and the signal is good, the Wireless Station connected to the third order's AP still does not exchange to the original wireless AP. It must wait for the third order AP (Link3) wireless signal interruption again. The Wireless Station will try to connect to the original AP or the first order AP (Link1) or the second order AP (Link2).



■ Wireless Multiple-Hops and Backhaul System Diagram



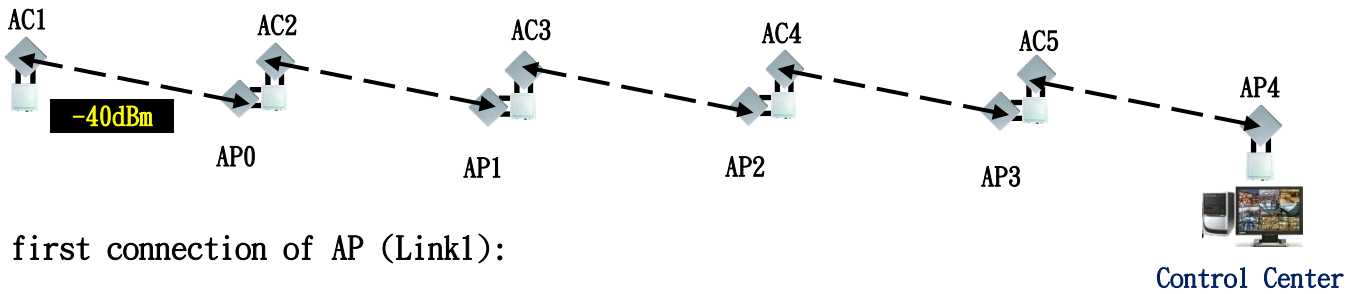
■ Includes 『The secondary wireless connectivity』 Multiple Hops and Backhaul System Diagram



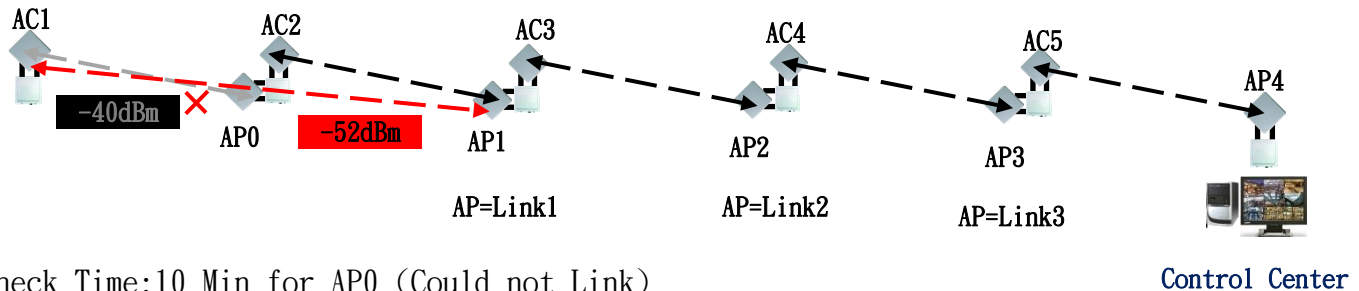
Every Wireless Station of wireless modules is running independently. According to the direction of transfer and scanning environmental by Site Survey. Then based on the scan results and set priority AP to connect. Due to failure or signal covered when connecting with AP, the Wireless Station will based on pre-set priorities for the AP's SSID and Cannel searching, communication, connection.



■ 『The secondary wireless connectivity』 Successive multiple-hops and wireless backbone backup.



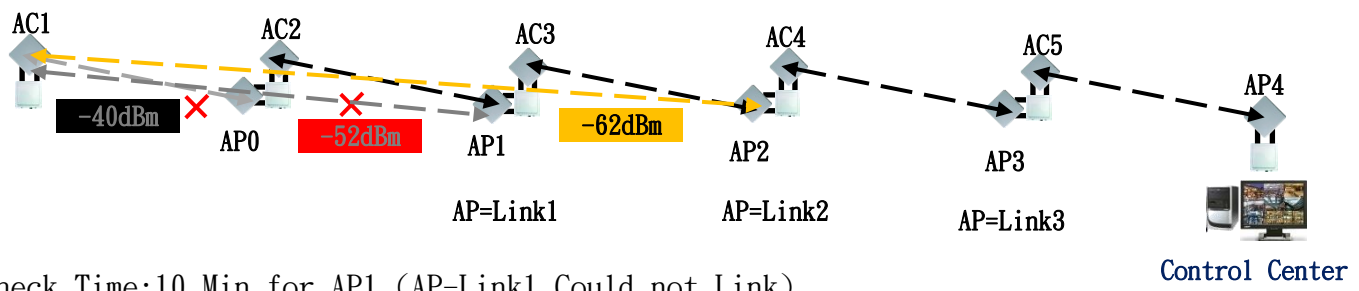
The first connection of AP (Link1):



Recheck Time:10 Min for AP0 (Could not Link)

→Recheck Time:10 Min for AP1 (AP-Link1 Link OK)

The second connection of AP (Link2):

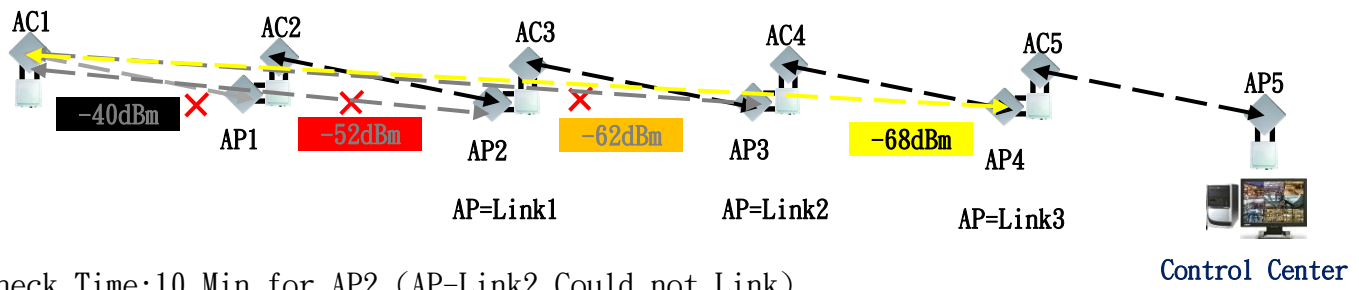


Recheck Time:10 Min for AP1 (AP-Link1 Could not Link)

→Recheck Time:10 Min for AP0 (Recheck Could not Link)

→Recheck Time:10 Min for AP2 (AP-Link2 Link OK)

The third connection of AP (Link3):



Recheck Time:10 Min for AP2 (AP-Link2 Could not Link)

→Recheck Time:10 Min for AP0 (Recheck Could not Link)

→Recheck Time:10 Min for AP1 (AP-Link1 Could not Link)

→Recheck Time:10 Min for AP3 (AP-Link3 Link OK)

IOP-A003-V2_05 Download the new firmware:

http://www.io-power.com.cn/io-power%20web%20ftp/FW/IOP-A003-V2_05.img