IP Power 9850XX
User Manual

Version: 1.03
Firmware Version: 1.29_710
Date Released: August 2022

Warning: Any changes made to this equipment without permission may cause damages to the device!

IMPORTANT NOTICE

1. IP Power 9850XX was designed for indoor use, we carry no responsibility for possible damages caused by outdoor use, especially in the rain.
2. Please use the power adapter provided by the dealer, we carry no responsibility for the possible damage from using power adapters not provided by us.
4. Do not shake the IP Power 9850XX in any fashion
5. Please contact the dealer If IP Power 9850XX is not working properly.

Table of Content

Welcome
1.Introduction

IP Power 9850XX is a new generation of the Power Distribution Unit (PDU) & Remote Power Control (RPC) system.

With embedded web server and **HTTPS** protection , 9850XX supports higher grade security as working on Internet. User can control power easily and more safely through the web browser in Windows , Android or iOS system , like Internet Explorer (IE) , Google Chrome , Safari web browser or control through APP in Android or in iOS system .

With 4 buttons on device top, it allows user to direct control manually to each port ON/OFF with fingertip without web browser / APP , also allows remote control power on/off up to **4 separate** devices via network .

As support **SSL & SNMP,** user can use public email like Gmail / Hotmail / Yahoo Mail to get the email as the ON/OFF status changed . User can also **control** by **e-mail** without doing port forwarding / port mapping and search the other IP Device in webpage directly and quick **.**

9850XX supports **Auto Ping , Time Scheduler** which is more suitable for factory / commercial / office / home automation . User can get the device status in LOG information or in remote IP address which sent to get LOG message from 9850 (SYSLOG) . .

UPNP **
For system integrator, there are several popular developing tolls like HTTP/CGI command , **SSH/Telnet , SNMP** , Modbus TCP/IP & BACnet TCP/IP .

The various applications of the 9850XX includes:
Power Management, Server Management, Internet Controllable Timer,
System Integration, Remote Power Control in Remote locations   etc.

User Friendly . Convenience & Powerful ,

* MQTT 1.3.1 Cloud IoT protocol - supports
Cloud IoT Server of Microsoft AZURE   , Google Cloud IoT & Amazon AWS IoT

** UPNP -- No need to do " port forwarding " from router , simply enter webpage via Wan
 (user's router need to support UPNP)

2.Product Information

2.1 Features :

1. 4 port Remote power controller for power On, Off and Reboot.

2. Web Server built-in design, directly control by web browser in Windows , **Android or iOS** system like Internet Explore (IE) , Google Chrome and so on .

3. **4 Buttons Control** : Direct manual hardware control each outlet without working on Web browser .

4. Support **HTTPS ,** SSL , TCP/ IP , DHCP, DDNS , SMTP , **SSH/Telnet** , **SNMP** , Modbus/TCP and BACnet/IP.

5. Power Surge protection & FUSE embedded in

6. **SYSLOG** : Support Log function & send to assign IP address

7. Time Schedule - can pre-set a suitable time to turn power on / off automatically.

8. **Auto Ping** for network control & segment management automatically

9. High grade components for long stability and performance

10. **Back Up** for quick setup for multiple devices like Time Schedule, Network Setting.

11. Support public e-mail -- @gmail.com , @yahoo.com , @hotmail. com...........etc.
    E-mail Control & Advice :
    - Receive e-mail with IPs device boot up.
    - **POP3 Control–**Control each outlet ON/OFF via E-mail**.** No need to do Port Forwarding .

12. Specific software developed by Aviosys and provided free of charge :
    - SDK Available : HTTP Command
    - Windows software " IP Power Center " : Control Multiple Aviosys IP Power devices
    in one software
    - CNT software (Cross Network Technology)- allows user eliminate set up work on
    any Router without port forwarding , simply Plug & Play .
    - Support MQTT protocol.

13. 7 models for different power plugs available

    - IP Power 9850-FR   - France (NF C61-31)
    - IP Power 9850-UK - United Kingdom (BS1363)
    - IP Power 9850-GE - German (Schuko)
    - IP Power 9850-AU – Australia (AS/NZS 3112)
    - IP Power 9850-US - USA (NEMA5-15R)
    - IP Power 9850-SW - Switzerland (SEV 1011)
    - IP Power 9850-DK - Demark (Type D)

15. Support APP for Android or iOS system :

- **Android APP   --** name "IP Power " free download in Google Play .

- **iOS APP** -- name "IPPOWER+ " free download in Apple App Store
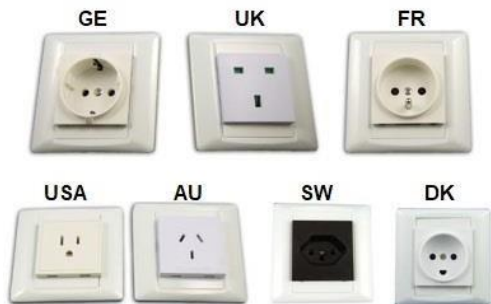
2.2 Specification

- Power input : 15A / 90-120VAC , 10A / 210-240VAC , 50-60Hz.
- Maximum loading of each output: **10Amp**
- Maximum of Total loading : **10Amp**
- Fuse protection : **10Amp**
- Dimensions: 220 x 128 x 58 mm (L x W x H)
- Weight: 990g
- Enclosure – Metal case in deep Gray color
- Operation **Temperature** : -10 ～ 60 ℃ or 14 ~104(℉)

2.3 Minimum System Requirements

- Network & Web Browser & Internet Connection
- Ethernet Cable & Power Cord

2.4 Package Contents

9850XX Unit x 1	
Guide for online CD direction : include software QI and manual	

2.5 Interface Description

Outlook

The above picture are model 9850AU /   9850FR

The above picture are model 9850GE   9850UK

Buttons Control	There are 4 buttons . As outlet turn ON , the buttons light will be ON RESET function ： Please keep pressing the two buttons #1 and #2 for 7 seconds and then release .Then you will hear a long beep sound and 3 short beep sound which show the reset Successfully . After reset , all the settings will be back to Default .
4 Outlets	There are 5 models - 9850FR (NF C61-31) - 9850UK (BS1363) - 9850GE (Schuko) - 9850AU (AS/NZS 3112) - 9850US (NEMA5-15R)
Power input	In this socket, there is power input and Fuse socket . ● The input power sends power to the 9850XX. ● **Fuse** : To prevent electrical surges from damaging the unit. The 9850XX comes with one spare fuse in the unit. **Fuse TYPE**：U/C GFE 10A 250V (PF)

Power Switch:	The Power switch turns on the input power.
Network: LAN	LAN 10/100 Mbps network

Fuse replacement

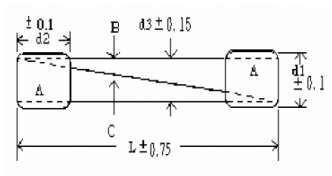1.) The fuse is located between the power switch and the power input plugs.
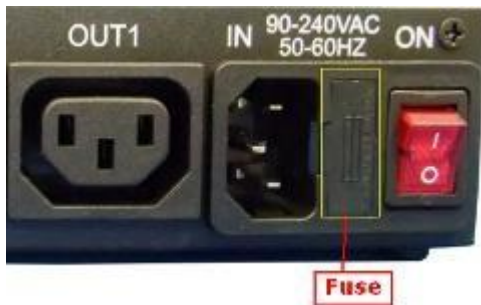
2.) Carefully remove the fuse holder with a flat screwdriver.

3.) The fuse can be purchased from electronic shops.

Specification : U/C GFE 10A 250V (PF)

3. Setting up your device

3.1 Before Starting

*Before setting up the device make sure of the following:

1.) All the package contents are all included if anything is missing please contact the dealerwhere the device was purchased from.

2.) Check the power input cable is working correctly.

3.) Check all cables to make sure there are no problems with it.

3.2 Hardware Connection

Before hardware connection, please make sure that there is no more than 2 network card (include dynamic network card) . If there are more than two networkcard in your PC. You may not get the IP address of 9850XX

The default setting for 9850XX to get IP is DHCP mode - get IP form Router. If user do not use router and connect the 9850XX to your PC directly or connect to HUB which have no DHCP function , the connection sequence of network cable and power cord are different . Please referfollowing procedure :

A. 9850XX ------- Router ------- PC (with Web browser)

1.) Connect the Ethernet cable (RJ45) to the 9850XX to your local area

network.

2.) Then connect the power cable into the power input port of the 9850XX.

3.) Connect the device that you would like to control to the output plug on the top of the

9850XX.

4.) Switching the power source to ON status, this switch is located at the rear of 9850XX.

5.) After power on for around 45 seconds, there is a short beep sound for 9850XX which
    means the system reboot successfully

B. 9850XX ------------ PC (with Web browser)

If you select to connect to PC directly , please connect the RJ45 cable to 9850XX after 1 minutesas power on of the 9850XX device . power hear the beep sound of 9850XX DO NOT connect theRJ45 as power ON

1.) Connect the power cable to 9850XX and press the power switch to ON

2.) After 9850XX power on for around 45 seconds , there is a short beep sound for 9850XXwhich means the system reboot successfully

3.) Then Connect the Ethernet cable (RJ45) to the 9850XX to your PC.

Notice : This is very important for this procedure . Please do not plug the network cable to 9850first under this connection . (without Router assignedthe IP to 9850)

6.) Execute the software IPEDIT.exe to get the IP as 192.168.1.169

7.) Please make sure the IP address of you PC is also 192.168.1.X / XX/XXX or you may notlog in the 9850XX webpage in 192.168.1.169

3.3 Software Installation

Please Go to www.aviosys.com/cd . The note with this online CD link comes with the package .

IP Power Software:

IP Edit (Required)
IP Power Center *(For multiple IP Power devices control purpose)

1.) Select the IP Power 9850XX
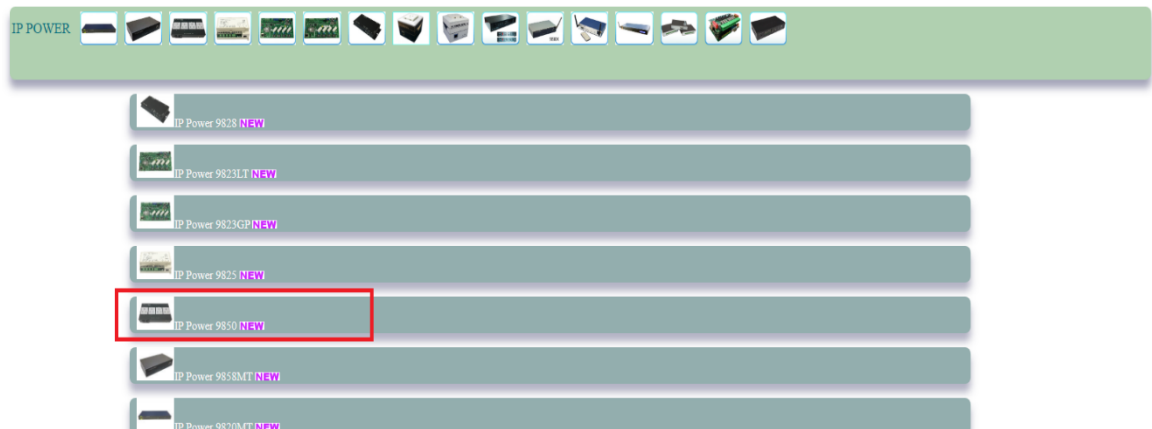
2.) All the available downloads for the 9850XX will be shown

3.) Download the required software – **IPEdit.exe -** by clicking on the download button.

Then you can select to connect 9850XX.

3.3.1 LAN connect by IP Search software " IPEDIT "

IP Edit is a search tool designed to search, configure, or access the IP Power 9850XX from a local networked computer.

IP Power 9850XX Default Login / Password

Default IP: 192.168.1.168 (if there is no DHCP router assigned IP)
Default Login username : admin
Default Password: 12345678

1.) In the local devices section user will see user device show up if connection correctly.

Notice :
If can't see the IP in the area of Local Devices of IPEDIT.exe.
Please check the following situation

1. **Boot up successfully:** Please reboot the 9850XX and check if there are 1 short beep after 1 minutes. This beep means the device boot up successfully . If not , the device may have issue.

2. **Network card** :   Please check if there are morn that two network card – include wire / wireless / dynamic - in the PC which used IPEIT   software . IPEDIT only support single network PC , please disable the other network connection / functions.

3. **Anti Virus software / Firewall** : Please turn off the antivirus software firewall temporary.

4. **Power** : If there is no power go to 9850XX ,   please check the fuse part . There will be no power for 9850XX if the fuse buttons is pup up - not easy/flexible to press as it was – by over loading for long time , please press the fuse back and the power will go to 9850XX to boot up .

5. **Connection** : (1) Please make sure that the 9850XX is under same router with the PC used IPEDIT . It is fine to connect across multiple routers but it need to setup the MASK part which need some knowhow .
2.)   Select the 9850XX device and the device information will pop up on the right.
3.)   Check to see that the gateway IP and the IP Address (9850XX) match user current network.

If not, type in the correct information, then hit the submit button to save changes.

For example:
If user have the following information regarding the 9850XX and user network

User PC Network :
Computer IP Address: 192.168.1.122
Gateway: 192.168.**1**.1
Sub Net mask: 255.255.255.0
Port: 80

User 9850XX in IPEDIT :
9850XX IP Address: 192.168.100.34
Gateway: 192.168.**100**.1
Sub Net mask: 255.255.**0**.0
Port: 80

Since the IP Address of the 9850XX is : 192.168.100.34

User will need to make sure that the first 3 segments of user 9850XX IP Address
must match the first 3 segments of user gateway IP.

First 3 Segment of Gateway Address: 192.168.1.X
So user new IP Address for the 9850XX should be: 192.168.1.X
New Network Information

9850XX IP Address: 192.168.1.26
Gateway Address: 192.168.1.1
**Local Computer IP Address**: 192.168.1.122
Sub Net mask: 255.255.255.0
Port: 80

4.) Press the " Rescan " button to see if changes have been made.

5.) Double click on the device in the local device section and an IE web browser with the device login will pop up.

6.) Type in the default Login and IP Address to enter the device.

Default Login : admin   Default :   12345678

Notice :
 * User can click " REF " in IEPDIT to auto search proper IP setting for 9850XX.
It will take few minutes to show the suggest wizard.
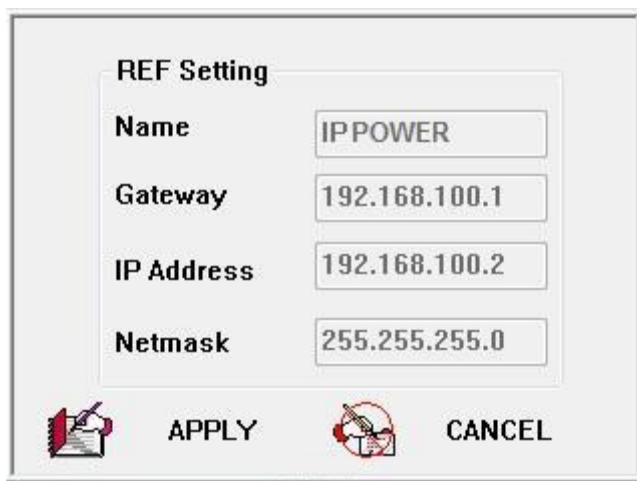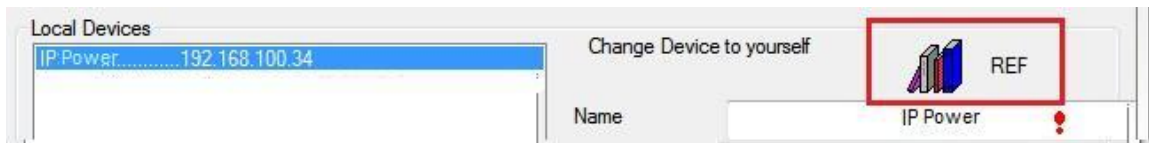
Please click " APPLY " as seeing the suggest wizard , click " yes " to ignore the remind message of IP being used and then type the Username and Password to change the IP setting.

Username : admin
Password : 12345678

Notice :
Segment : The first 9 digits of the IP Address .
EX: The IP of user PC is 192.168.100.122. If the " Local IP Address "   is 192.168.100. x   (X can the value of 1~252) , user PC can get into the webpage of 9850XX .

3.3.2 Internet Setup

To connect the IP Power 9850XX on Internet, there are two ways

● Setup Port Mapping / Port Forwarding in your router. Please check your Router owner's manual .

● Use our own software " IP Power Center " : Please refer to the "IP Power Center " manual in software section of www.aviosys.com/cd

3.3.3 Using IP Service

IP Service is a function which allows user to search for the device easily without having to remember long complicated IP address. Instead, if user know the device's name of user IP Power device and user can easily find IP Address with IP Service. **To log in the webpage of 9850XX on Internet , user still need to do the "Port Forwarding " in own router.**

Before using "IP Service " , please change the device name of user 9850XX to avoid similar name in Host Server.
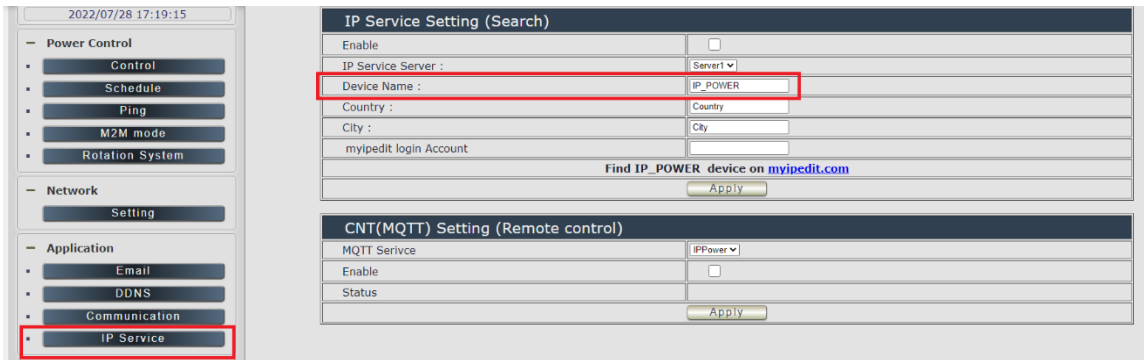
1.) Open IP Edit and select the server that user's 9850XX is designated to.

2.) Hit the Green Connect button on the top of IP Edit.
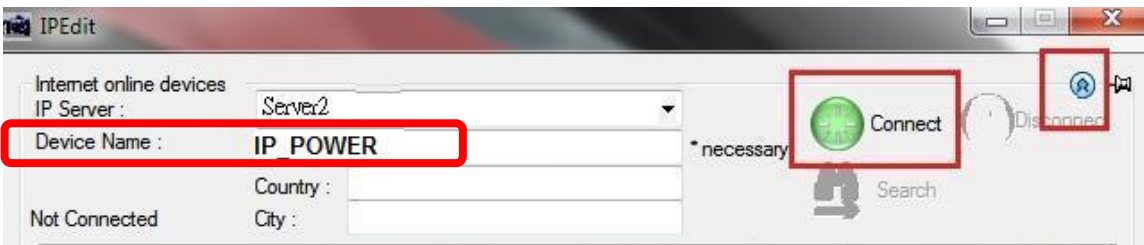
3.) Then type in the 9850XX Name that user have selected for the device and press the Search button.

4.) Find user device and double click on the screen and a IE window will pop up connecting to user device.
     User device must be Port Forwarded for the login screen to appear.

EX: The 9850XX device name as IP_POWER , and user can search the device easily :
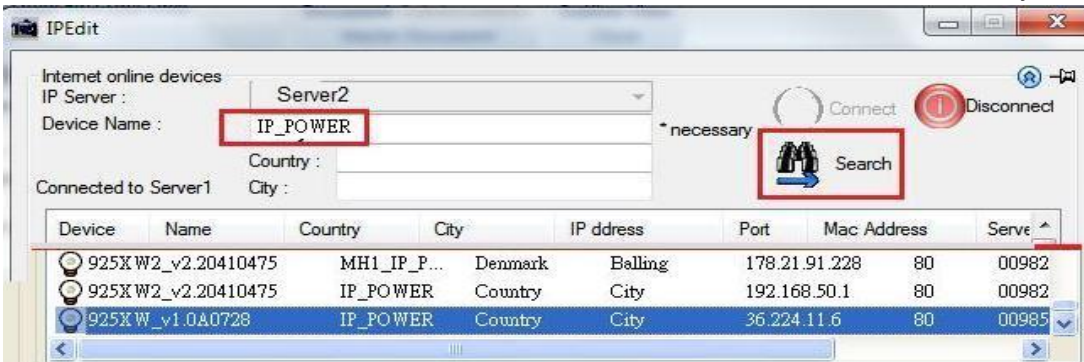
5.) After user have connected to user device, type in the Login and Password for user device

4.Web Interface

Once the 9850XX has been setup correctly, log into the device.

The default Username and Password for the 9850XX

Username: admin
Password: 12345678

The Control Console

The Right side Menu of the Web Interface control the functionality and setup of the IP Power 9850XX.

The IP Power 9850XX Console consists of six main sections which will be explained in details below.

Top Column : Device name & Column Display (for smart phone application) & Time Information

Power Control :   Controls , Schedule, Ping, M2M mode, Rotation mode

Network :   Setting

Application : Email , DDNS, Communication & IP Service
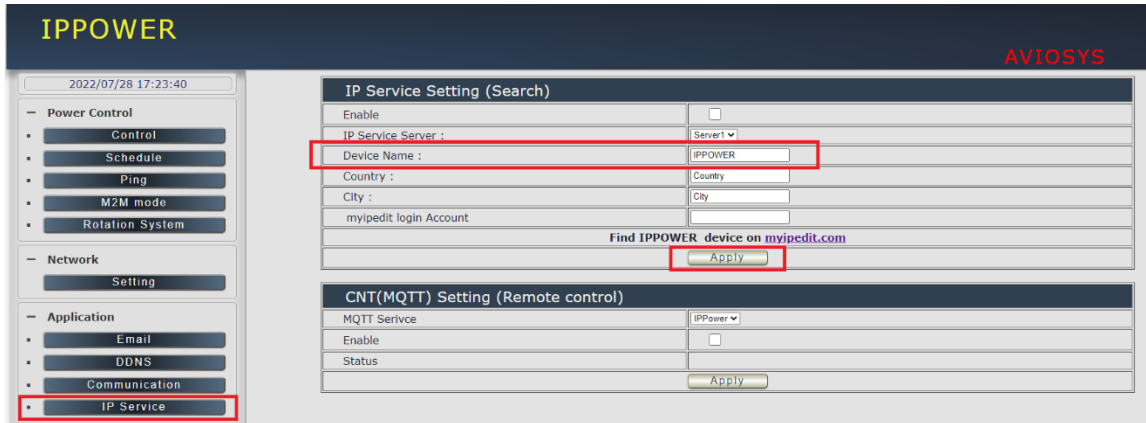
System : Management, Information, SysLog & Firmware

Logout

4.1 Top Column

4.1.1 Device name

This section show the device name . You can change the device name here : Application → IP Service → Device name Change name " IP POWER 9850XX " as "Enjoy 9850XX "

Notice : Please do not use symbol like !@#$%^&*()_+ as the character of the device name .

After apply the change , please click " Refresh " of the webpage to get the display update .

- 16 -
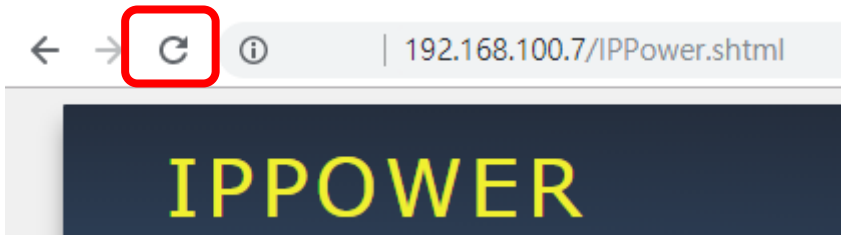
4.1.2 Column Display :

For tablet user to control 9850XX easily , user can select to show or to hide the left control section by pressing the blue area near device name for Smartphone control :

- With left control section :

Without left control section:
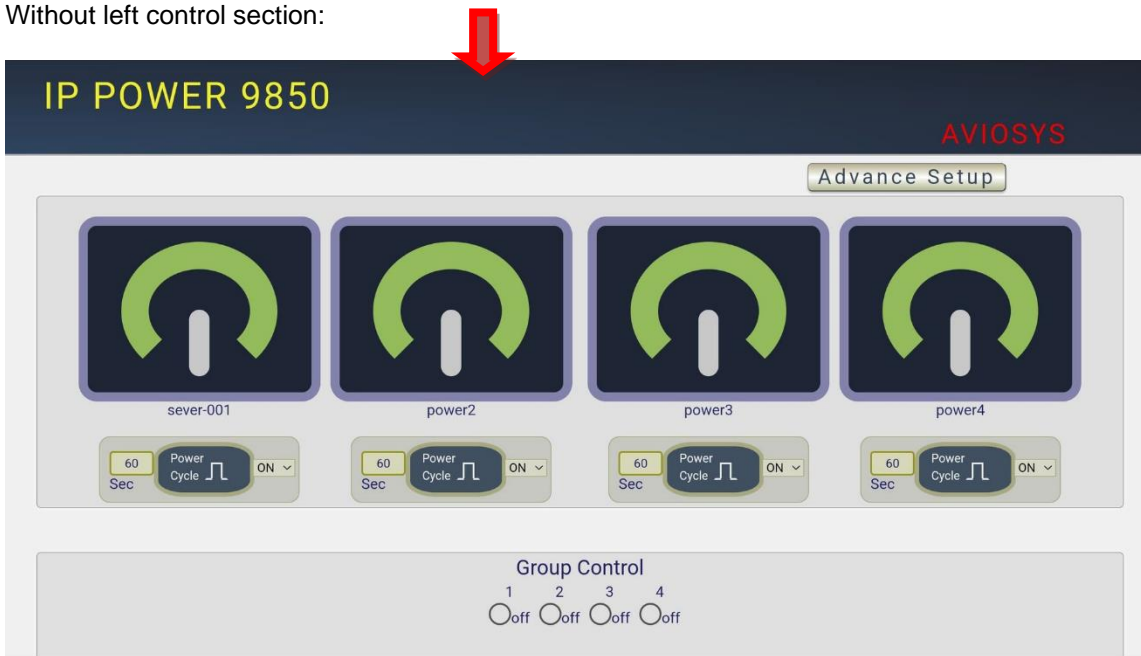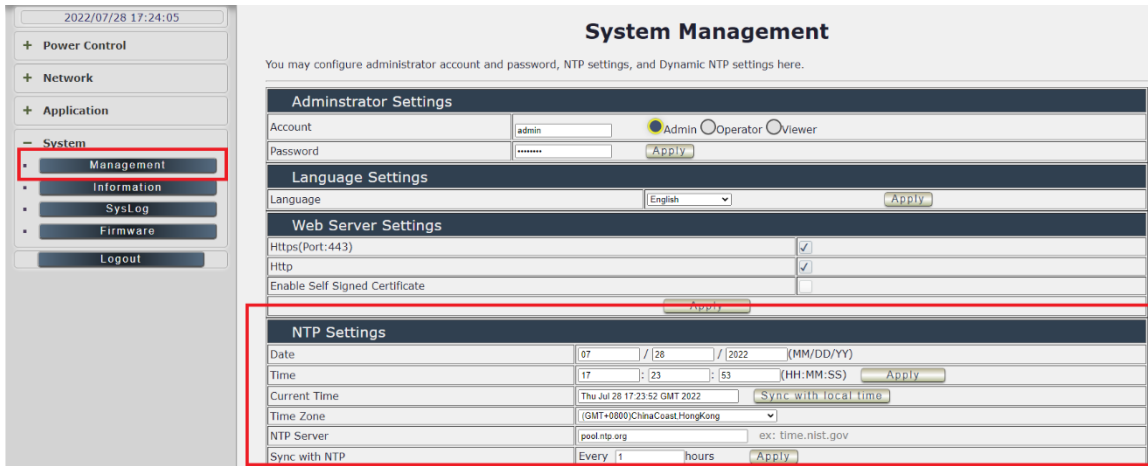
4.1.3 Time

In this section, it shows Time at Year – Month – Date   Hours : Minutes : Seconds .

To setup the Time , Please go to " System → Management → NTP Settings " , please press "Apply" to save the new setting . There are 3 time sync situation:

Time - Manual setting , Current time - sync with Local PC or NTP Server

1. Time - Manual setting : fill the assigned time and then click "Apply " in time section
2. Current time - sync with the local PC log into 9850XX .
3. NTP Server   - sync with the assigned sever and can setup the times for sync

Notice: As using NTP server, as webpage time count will be slower than the device time, please refresh the webpage or use the telnet command " to confirm the device time.

4.2 Power Control

The IO Control Section allows you to directly / automatically control the outlets of the 9850XX as well as schedule Daily, Weekly, and Monthly power cycles.

There are 5 sections: Control, Schedule , Ping , M2M mode , Rotation System
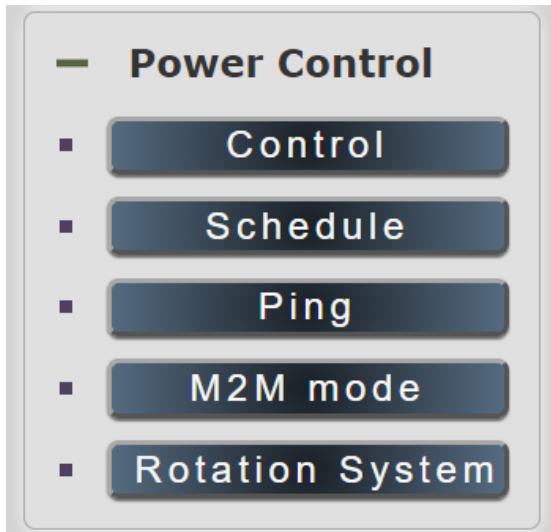
4.2.1 Control

There are 2 setting pages in this Section. One is " Power Control " and another one is "Advance Setup "

A. Power Control :
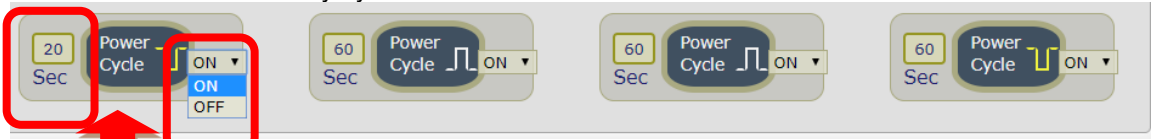
User can do the following 3 basic operation in this page :

1. Manually Control : Each port ON or OFF directly by pressing the button.

For example : The following pictures means that Power #1 & #4 is ON , Power #2 & #3 is OFF

2 Power Cycle : Manually Control the relay delay some times to turn ON or OFF .
The relay cycle time can be set from 1 to 9999 seconds
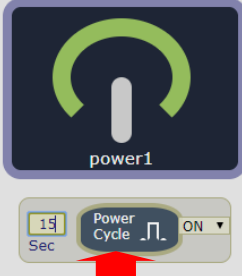
- As ON, Select OFF and press "Power cycle " then the outlet status is ON → OFF.
- As ON, Select ON and press "Power cycle " then the outlet status is ON → OFF → ON.
- As OFF, Select ON and press "Power cycle " then the outlet status is OFF→ ON.
- As OFF, Select OFF and press "Power cycle " then the outlet status is OFF→ON →OFF

User can setup the time and the final status in power cycle as ON / OFF

For example : (sec = seconds)

	Original Outlet as " ON " , select final status as " OFF " & fill 3 sec . After press " power cycle " button, the outlet will be ON for 3 seconds and then turn OFF . ON (3 sec) →OFF
	Original Outlet as " OFF " , select final status as " OFF " & fill 15 sec . After press " power cycle " button, the outlet will turn ON for 8 seconds andthen turn OFF . OFF → ON (15 sec) → OFF
	Original Outlet as " OFF " , select final status as " ON " & fill 15sec . After press " power cycle " button, the outlet will turn OFF for 15 seconds and then turn ON . OFF (15 sec) → ON
	Original Outlet as " ON " , select final status as " ON " & fill 10sec . After press " power cycle " button, the outlet will turn OFF for 10 seconds and then turn ON . ON -- > OFF (10 sec) → ON

3   Group Setting : User can control more than one outlet by press the right side "Apply " button . For safety concern , each port of 9850XX will turn ON or OFF one after one .
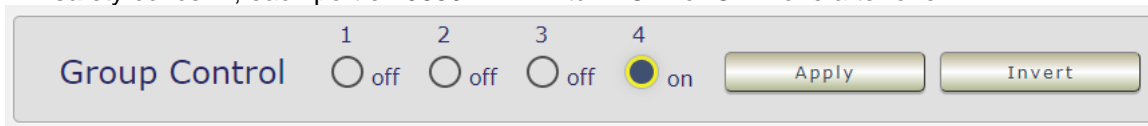
● Apply : Setup the ON/OFF by the buttons status .

● Inverter : Change the outlet status from ON to OFF ,or form OFF to ON by one button contorl.

B. Advance Setup :

In this page, user can setup Name of each port , Notification , Power interval, WOL&SOL Trigger Relay, Shutdown On LAN Settings , Wake On Lan Settings

B.1 Name of each port

User can name each power by click the name above the power button . The number of character is max. **12** characters and Please change the name in English only and do not use symbol like !@#$%^&*()_+

Note : Please change the name in English only and do not use symbol like !@#$%^&*()_+

Example : Change the outlet #1 from " power1 " to "   server-001 "
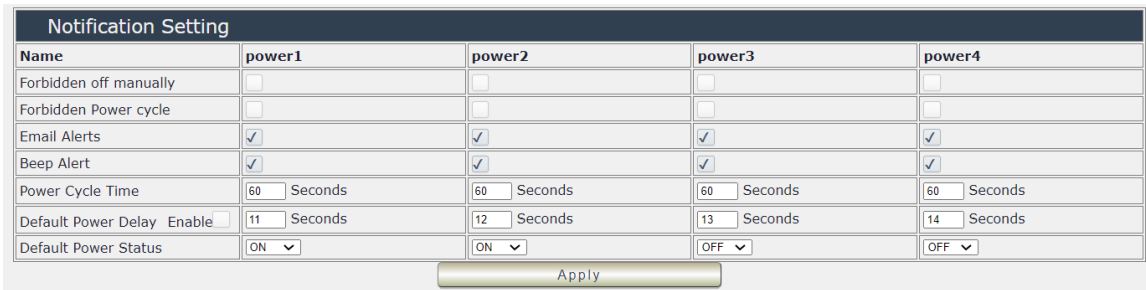
After click confirm , the page will go to " power control " page to show the update name.

B.2 Notification setting

 User can do several notification here .

Notification Setting				
Name	power1	power2	power3	power4
Forbidden off manually	☐	☐	☐	☐
Forbidden Power cycle	☐	☐	☐	☐
Email Alerts	☑	☑	☑	☑
Beep Alert	☑	☑	☑	☑
Power Cycle Time	60 Seconds	60 Seconds	60 Seconds	60 Seconds
Default Power Delay Enable ☐	11 Seconds	12 Seconds	13 Seconds	14 Seconds
Default Power Status	ON ▾	ON ▾	OFF ▾	OFF ▾
	Apply			

● Forbidden off manually : Select by port will disable the power control in webpage . The disable is for the control in webpage only .The control through HTTP command is still working .

For Example : Select the control in webpage of power 1 & power4 for be disable

Notification Setting				
Name	power1	power2	power3	power4
Forbidden off manually	☑	☐	☐	☑

Then the page will be as following :

- 23 -

- Forbidden power cycle: Select by port will disable the power cycle control in webpage.
  The disable is for the control in webpage only .The control through HTTP command is still working.

For Example : Select the power cycle control in webpage of power 1 & power 2 for be disable

- Email Alerts :

Use can enable /disable the e-mail alarm here .The e-mail alarm section allows 9850XX to notify user by following situation :
  - Receive E-mail with IP information & MAC Address as 9850XX device boot up.
  - Receive E-mail as ON/OFF status change in each output .
  To get E-mail about of power status , please go to " Application → E-mail.

- Beep Alarm Setting:
  User can setup the operation beep (short time beep) sound here.

● Default Power Status : The control section allow user to set the power status on ON or OFF or LAST when the device get power rebooted . As select "Last " , the output will be at the same status ON / OFF before the device power turn off . To save the setting here , please click "Apply " button .

Notification Setting				
Name	power1	power2	power3	power4
Forbidden off manually	☐	☐	☐	☐
Forbidden Power cycle	☐	☐	☐	☐
Email Alerts	☐	☐	☐	☐
Beep Alert	☐	☐	✓	✓
Default Power Status	LAST ▼	LAST ▼	LAST ▼	LAST ▼
	OFF / ON / LAST	Apply		

B.3 Power Interval: It's the delay function which works on the ON/Off buttons for the manual control at the interface of the webpage. User can delay the action time as press the control button in webpage.

Power interval	
Enable	Interval time(1~5sec)
☐	3 Sec
Apply	

B.4 WOL&SOL: Trigger Relay: When you enable the WOL function, turn the Trigger Relay on will connect the WOL and SOL function.

WOL & SOL trigger Relay
OFF ▼
Apply

B.5 Shutdown On Lan Settings :

Shutdown On Lan Settings				
Name	power1	power2	power3	power4
Delay Time	60 Seconds	60 Seconds	60 Seconds	60 Seconds
Apply				

9850XX can be used to safely turn off the **WINDOWS or LINUX** system through Network. With this feature you can remotely shutdown any system which that is connected to the IP Power 9850XX through normal Windows / LINUX shut down procedure. Before operating the software shutdown function it is essential to install our software.

If you are requiring to use this function, please contact with the seller, and will provide the file to install. File name: Shutdown_On_LAN

NOTE :   The delay time setup in this section is for " Shutdown ON LAN " procedure . Not for outlet ON/OFF function

B.6 Wake on Lan settings :

This is a application for PC / Server / Main board which had been enable the " WAKE ON LAN " function in own setting . User need to know the MAC address of the PC /Server to do the wake up on LAN function .

4.2.2 Schedule

In this section , user can see the setting schedule list first up to 29 rules . To setup each schedule , please press " Schedule Setting " , then user can get the " Schedule List " page as following :

Please click the button to switch between " Schedule Setting " & " Schedule list " :
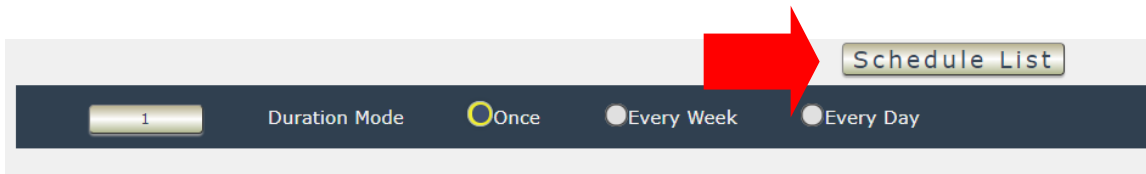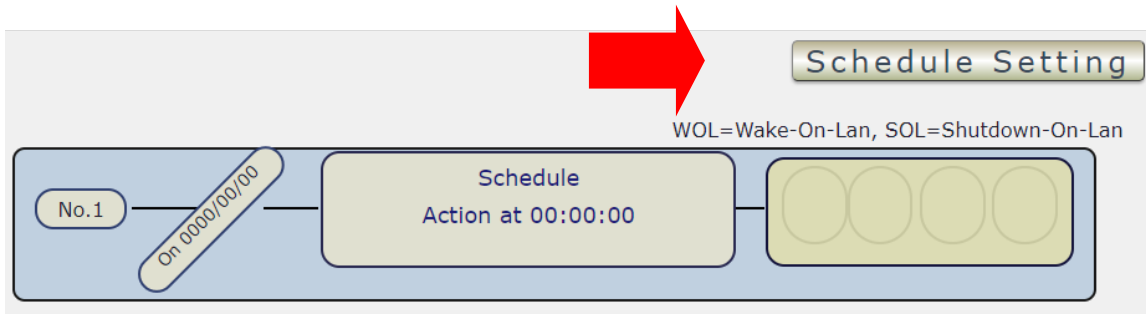
The schedule allows you to control the power outlet or turn ON / OFF/ RESET at assigned time

-       Adding a Scheduled Event

1.   Select the Action Duration :

        There are 3 setting - Once , Every Day . Every Week

2.   Select a Specific Date Range where the device will repeat the desired actions during the time specified.

3. Select the Time Period.

4. Choose the Action :   Enable power # by clicking in the small square to mark " v " , and select one from the power action of OFF/ON/RESET as you need.
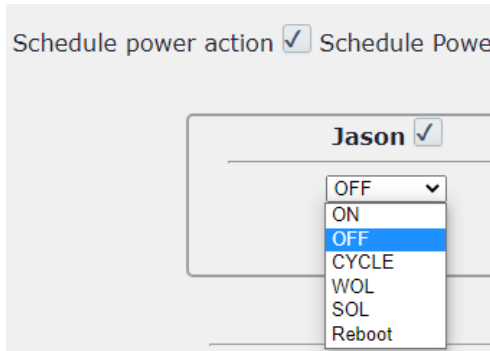
Once the scheduler has been Set Up , hit the " ADD No.:X Power Schedule " button and you will see your setting located on the button of the Action section .
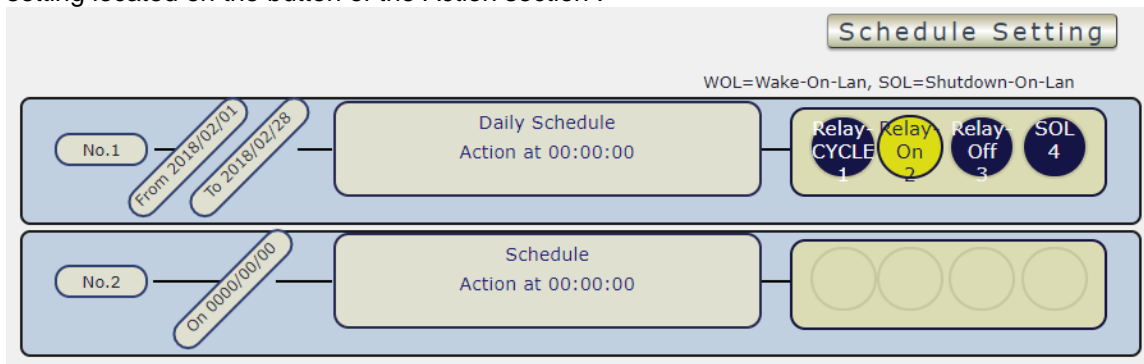
-    **Apply / Edit a Schedule Event :**
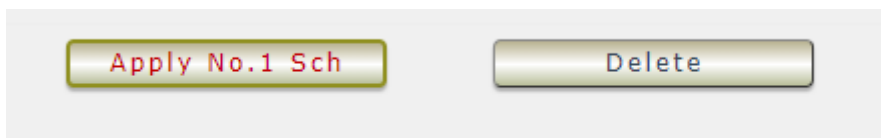
Please select the Rule you want to edit in Scheduler Table. , Change the setting like Duration , Date , Time and Action. Then Press "Apply Np. X Sch " button to confirm the setting and you will see the page refresh and new setting display in Scheduler list

-    **Delete - C**lick " Delete " button to remove a rule from the list .

Rotation Start/Stop:
In the function of the Power Rotation. User can setup a certain time to do this Power Rotation.
User can set up a time to start the rotation but need to set another time to stop the rotation

Rotation Start :

Rotation Stop:

4.2.3 Ping

The Ping function allows the device to Ping an IP Address automatically to act as a watchdog to make sure the device getting Ping and working properly. Please Click the button to switch between " Ping Setting " & " Ping List " . User can hide the setting section by press " Ping List "
There are 4 rules for Ping only, each rule can setup 1~4 outlets.

- **Ping List Page :**

- **Ping Setting Page :**
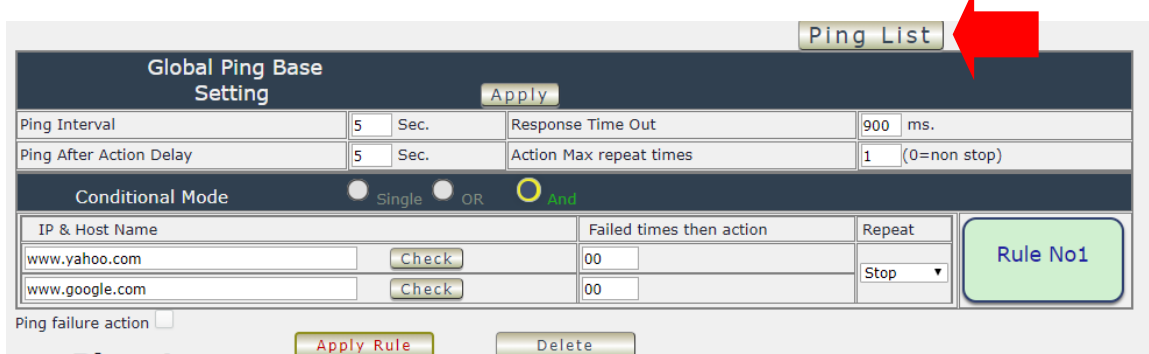
There are 3 sections of the setting area :

1. Setting Rule Numbers :

User can click to select different rules numbers at the right side button " Rule No: X " as following pictures .
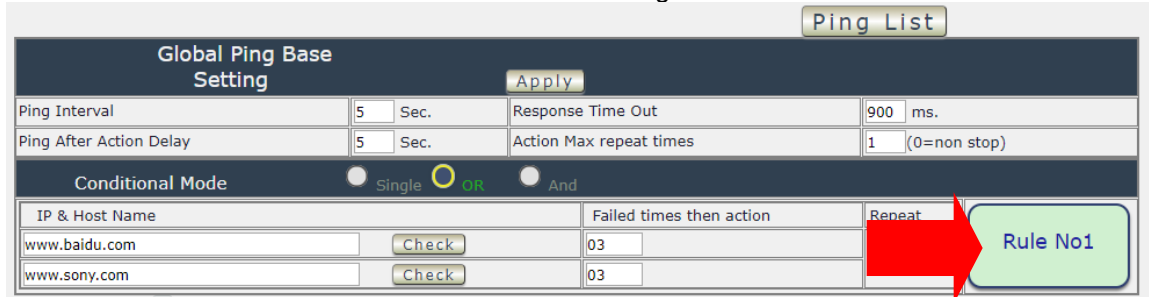
2. Ping Base Setting :

- Ping Interval : The number of seconds (Sec.) between each ping .
- Respond Time Out : The number of milliseconds (= ms.) of the device will wait for a response from the Pinged device if no ping is detected within this time it will be considered a Ping failure.

- Ping After Action Delay : After ping finished , do the action after setting seconds (Sec.)
- Action Max. repeat times： Set the times to execute the Ping Failure action
  Set 0 means action non stop - Keep action & no limit times.

As setting finished , please click " Apply " to save the setting in this area , the webpage will refresh and user can see the final setting result. Ten different set up rules for different port .

3. Other Setting :

The setting here is for each rule.

- Logic Mode ：

  User can select the action activate by one / two IP Host failure or either one fail
  - Single : Execute Action by one IP Host failure .
  - OR   : Execute Action by either one IP Host failure as setting 2 pcs IP Host
  - And   : Execute Action by both IP Host failure as setting 2 pcs IP Host

Single : 9850XX will Ping one IP address. As the IP fail times reach to the setting times .
  Action (ON/OFF/RESET) will be activated .

- 31 -

OR ： 9850XX will Ping 2 IP address. Either one IP fail times reach to the setting times.
Action (ON/OFF/RESET) will be activated .

AND ： 9850XX will Ping 2 IP address. Both IP fail reach to the setting times.
Action (ON/OFF/RESET) will be activated.
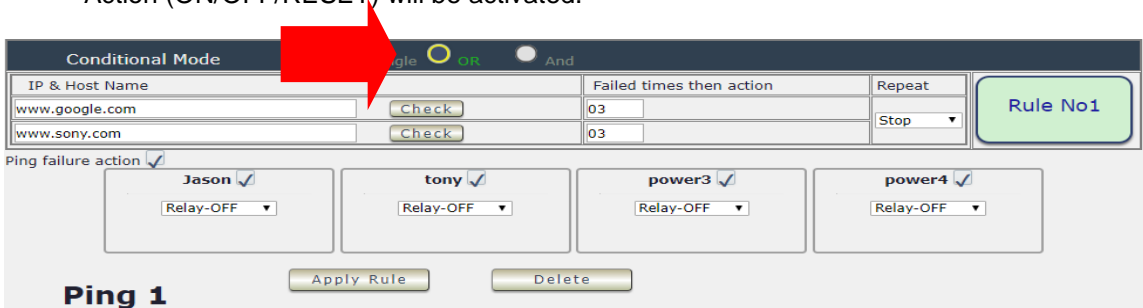
- IP & Host Name : Input the IP Address (ex: 122.116.123.138) or Host - web address
  (ex: www.google.com) user would like to Ping.
  User can use the " **ping test** " button to check the address valid or not

- Failed times then action ： Setup the ping failure times for 9850XX to execute the setup ON/OFF / Reset action of setting .

- Repeat ： After the ON/OFF/Reset action , user can setup the Ping action to keep ping (Continue) or to Stop Ping (Stop) .

- Enable Ping function ： In the selected Rules number , please select the outlet number power to activate as ping fails and then press " Apply Rule Action " button to confirm the setting .

- Ping failure action :
  When the number of Ping Failures times have been reached. The device can be set to " ON , OFF or Reset " function

  Reset: Can set up the time gap from OFF to ON. The " Sec " section is for action as Reset only.
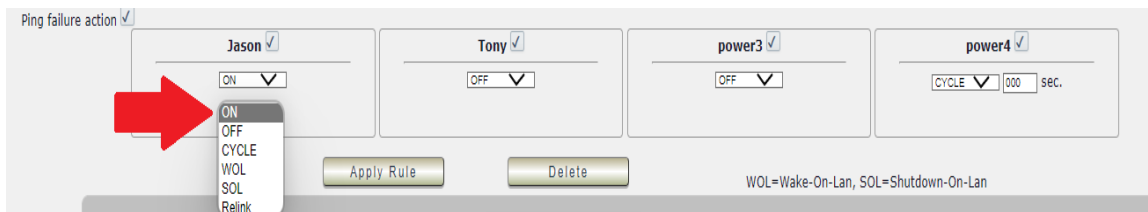
- ON
- OFF
- Cycle: It means outlets turn OFF to ON
- WOL: Wake On Lan
- SOL: Shutdown On Lan
- Relink: It means to reconnect the network. If the setting is DHCP, 9850XX may get a new IP address as reconnect to the router.
  ＞P.S: If the network connection is not stable or change it's IP on internet frequently, we suggest to enable this function to Ping the 4G router. 9850XX will relink the network as there is no ping reply from the network.
The setting times range is 1 to 999 sec.
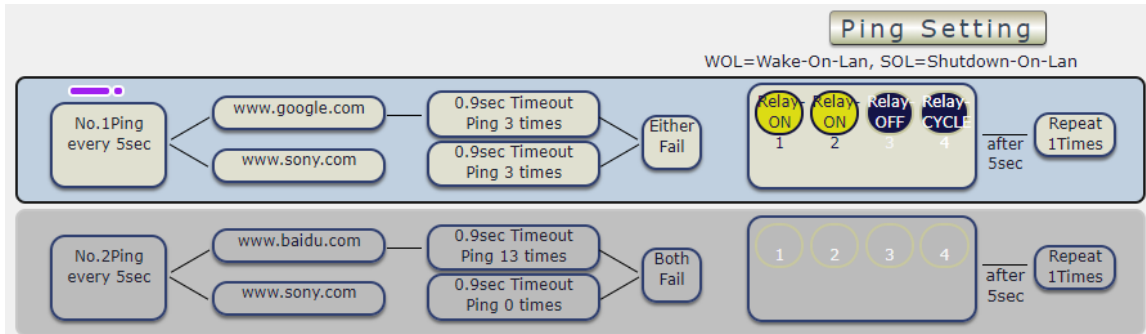
Select the number of Ping Failures that user prefer to do before the action is activated.

EX: Result of setting

4.2.4 M2M mode

● This is a function to control another 9850XX automatically. There are two directions : Control in LAN or Control through Internet – MQTT

1.M2M- Local (LAN):
In this function , device B is a SLAVE device . User need to select enable , filled the IP address and login information of the HOST / Master device.
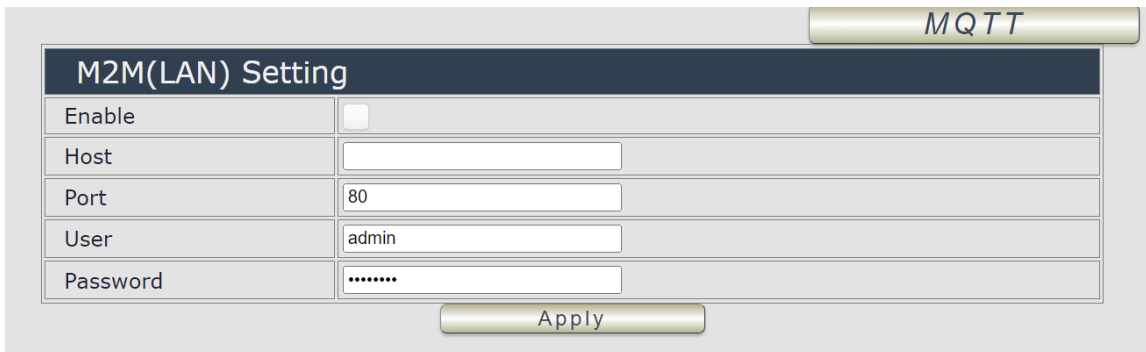
● For example :
One 9850XX name device A (IP : 10.33.122.50) , another 9850XX name device B (10.33.122.28) .
- In the webpage of device B , we enable the function , set up the IP and the login username and password of device A (as HOST).
- As we setup the outlet # 1 of device A as ON , then the outlet #1 of device B will turn ON.
- As we setup the outlet # 2 of device A as OFF , then the outlet #2 of device B will turn OFF too.

● Before you setting M2M. please open two device webpage and enable the setting at the same time, if you only setting device A to enable M2M, device B won't follow device A action until both device have set M2M enable.

Notice : User can set device A to control B and also device B to control A , then the two devices will be auto control of each other .
2.M2M-MQTT (Internet) :

- To use this function , user need to enable the CNT(MQTT) function (register to Aviosys MQTT HOST). In this function , device B is a MASTER device . User need to select enable, filled the MAC address and login information of the SLAVE device .

- Before setting the MQTT, click the the IP service in Application, and you will see the " CNT(MQTT) Setting (Remote control) ", follow the red button to click the enable function, then choose the IPPower option in MQTT Service. After the setting, click the apply and the MQTT function will be enable.

Notice: All the IP device want to connect each other through MQTT must get this procedure.

- Setting the MQTT:

- Click the button in MQTT M2M Enable.
- In Controlled Device Setting, type the Device MAC you want to connect with. We recommand not to change the user and password in the first, then click apply, the other device connect the device you are setting.

- For example : one 9850XX name device A (MAC : 007623000310) , another 9850XX name device B (MAC : 007650002DF8, IP - 10.33.122.28)
- In the webpage of device B , we enable the function , set up the IP and the login username and password of device A (as SLAVE) .
- As we setup the outlet # 1 of device B as ON , then the outlet #1 of device A will turn ON too
- As we setup the outlet # 2 of device B as OFF , then the outlet #2 of device A will turn OFF too

Notice : 1. User can set device A to control B and also device B to control A , then the two devices will be auto control of each other .

4.2.5 Rotation system

- It is a inquire function by specific application, for those who want to test with their system, and need such function to check their device status.

- Enable : Enable the rotation function
- On Period minute (from 1 up to 999999999999 minutes)
- Interval: minute (from 1 up to 999999999999 minutes)

As user set : enable , on period as 1 min and interval as 2 min ,

The 4 outlets will work automatically as following sequence:
The Outlet #1 turn ON for 1 min only and then turn off for 2 min , then
the Outlet #2 turn ON for 1 min only and then turn off for 2 min , then
the Outlet #3 turn ON for 1 min only and then turn off for 2 min , then
the Outlet #4 turn ON for 1 min only and then turn off for 2 min , then back to outlet 1 (the first line action) .
The above action sequence will keep rotation at outlet 1 2 3 4.

4.3 Network

There are 3 sections in this port: LAN Network, DNS setting and Port setting

LAN Network Settings :

The network status is connected by ether cable with RJ45 connector. There are 2 network connection way : Static IP / DHCP
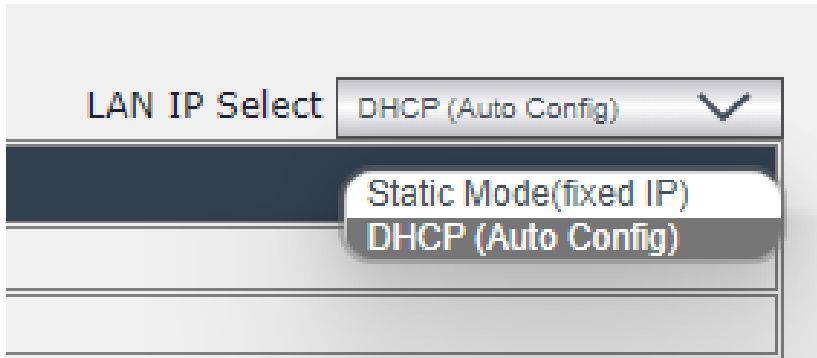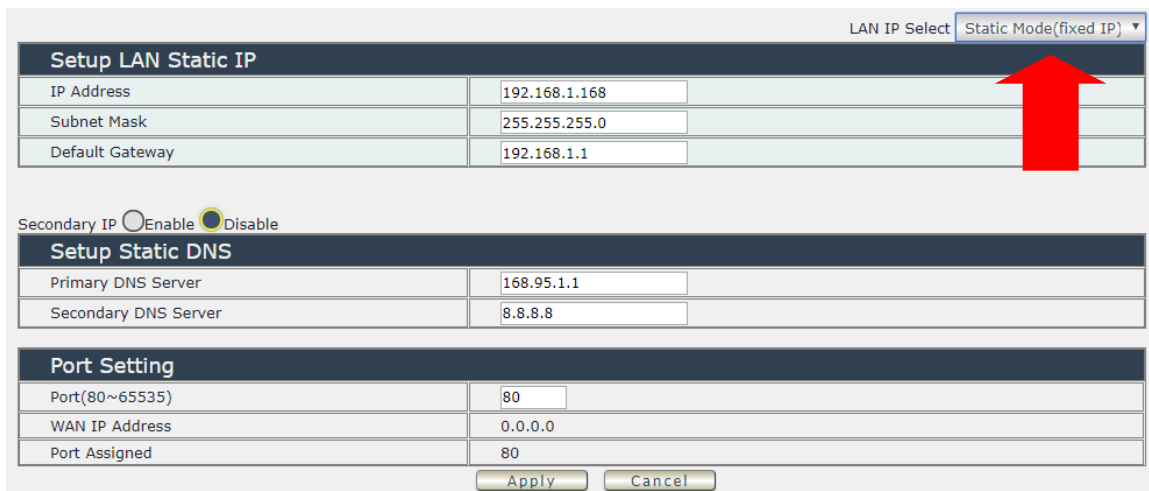
A. STATIC (fixed IP)

Setup IP address , DNS and Port manually. This allows the 9850XX to obtain an IP Address automatically from user`s server connected to Internet. Recommended for users who need to control through Internet.

Please do fill up the correct gateway / port for login from Internet .

Please do fill up the correct DNS server for sending / receiving email (alarm) .

Secondary IP:

This function like a " backdoor ". If the user forget the IP address, they can log in through this IP as it enable.

Secondary IP ◯Enable ⦿Disable	
Get DNS from DHCP Server	
Primary DNS Server	168.95.1.1
Secondary DNS Server	8.8.8.8

Port Setting	
Port(80~65535)	80
WAN IP Address	0.0.0.0
Port Assigned	80

Apply

B. DHCP Mode
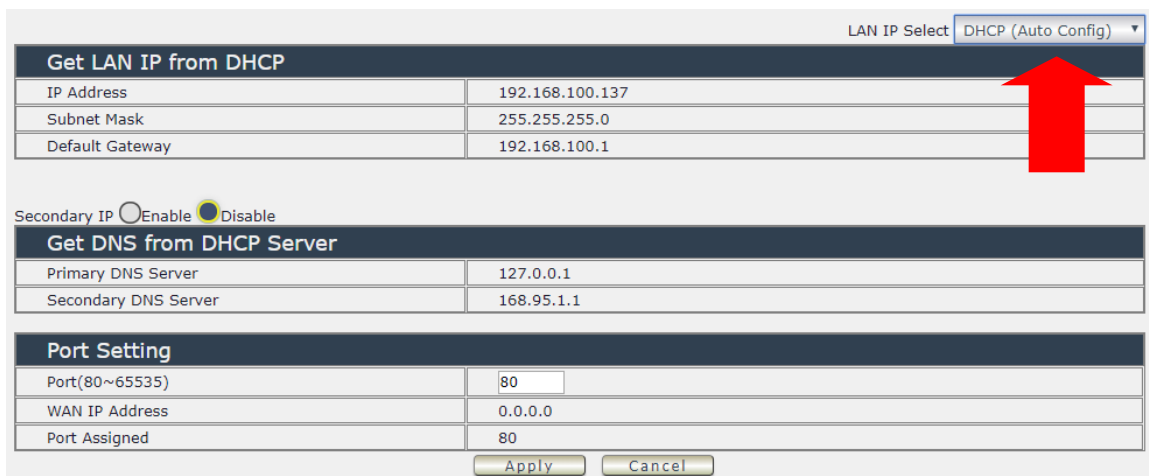
Obtain IP address via DHCP mode . setup the DNS and port

This allows the 9850XX to obtain an IP Address automatically from user`s server connected to Internet. Recommended for non- advance users.
User can only revise the Host Name under DHCP mode. This is also the default setting for fast LAN connection solution.

As the IP from DHCP Service of user`s router will be changed by router . 9850XX  will remember  last IP of 9850XX assigned by user`s router in "Last DHCP state " for information.

Please do fill up the correct gateway / port for login from Internet .

Please do fill up the correct DNS server for sending / receiving email (alarm) .

	LAN IP Select	DHCP (Auto Config) ▼
Get LAN IP from DHCP		
IP Address	192.168.100.137	
Subnet Mask	255.255.255.0	
Default Gateway	192.168.100.1	

Secondary IP ◯Enable ⦿Disable

Get DNS from DHCP Server	
Primary DNS Server	127.0.0.1
Secondary DNS Server	168.95.1.1

Port Setting	
Port(80~65535)	80
WAN IP Address	0.0.0.0
Port Assigned	80

Apply   Cancel

C. PPTP

Enable your PPTP first, and setting your IP address, User name password, then click the apply to activate the PPTP mode

VPN Type select	PPTP	
PPTP Mode		
PPTP	○ Enable ● Disable	
Pptp Server IP Address	pptp_server	
User Name	pptp_user	
Password	••••••••••	
VPN IP Address	0.0.0.0	
	Apply	

D. UPNP

With UPNP function, user can log in webpage through Internet without setting Port forwarding / port mapping in your router. No matter use " FIX IP " or " DHCP" , user can enable this UPNP function.

Notice : It support to pass through one router and may not work as 9850XX under multiple routers.

LAN IP Select	UPNP	
Port Setting		
Port(80~65535)	80	
WAN IP Address	0.0.0.0	
Port Assigned	80	
	Apply Cancel	
UPNP		
Enable	☐	
Port	44615 (81~65535)	
	Apply	

Please do fill up the correct gateway / port for login from Internet .
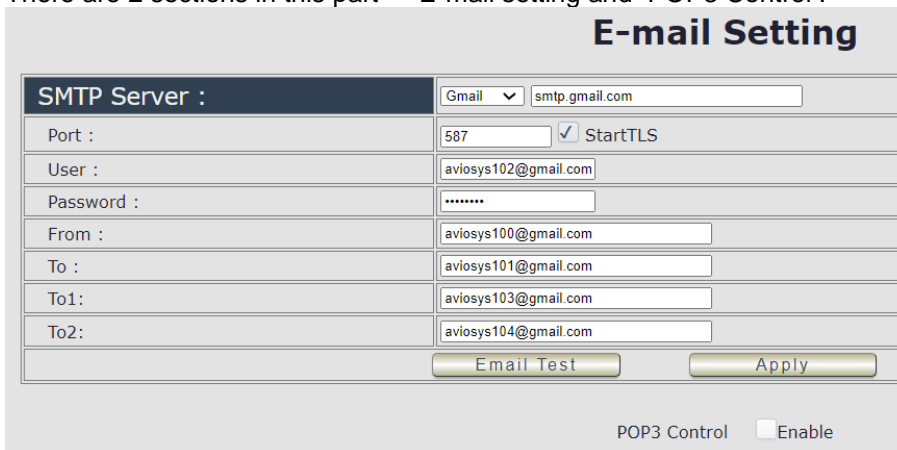
Please do fill up the correct DNS server for sending / receiving email (alarm) .

4.4 Application Settings
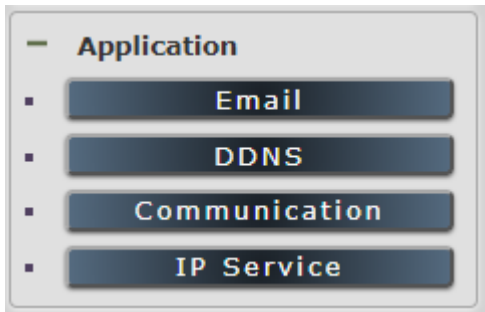
4.4.1 Email

There are 2 sections in this part -- E-mail setting and POP3 Control :

● Email Setting :

User can get e-mail advice as one of the following situation happen :

- Receive E-mail with IP information & MAC Address as 9850XX device boot up.
- Receive E-mail as ON/OFF status change in each output .

**Notice : To send out the e-mail successfully , please double check the setting of user DNS .
 (Network → DNS setting)**

The 9850XX allows user to send from public e-mail account , such as
 @gmail or @hotmail or @yahoo.com
● **SMTP Server**: This is the mail server of sender .

If user select @gmail or @hotmail account as SMTP Server , 9850XX will fill the SSL & Port automatically

- **Port :** This is the port of SMTP Server. Most common port to send out e-mail is port 25
- **Start TLS :** It depends on the inquire of the email server to enable or disable this inquire .

As use Gmail account , please enable this function .

- **User** : Login for the e-mail address . Ex: 9850XX@gmail.com
- **Password**: Password for the e-mail address. EX : 12345678
- **From :** Mail sender address to send the E-Mail out . Ex.: 9850XX@gmail.com
- **To** : Mail receiver address to get the E-Mail in   Ex.: 9223@hotmail.com

- E-mail test : Can help to check if the e-mail setting works.

- Apply : To store the setting in this section .

For example :

1. Get Email alarm as outlet changed :
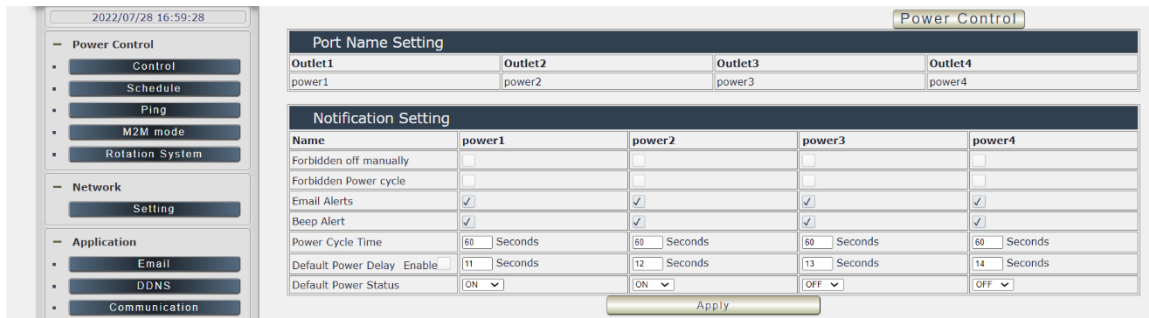
● **POP3 Control**

User can control each port turn ON or turn OFF by e-mail. The command format is limited .

Please enable the function first.

Settings Section :

To set up 9850XX be controlled by e-mail , user need to know the both **sender`s e-mail address  and receiver`s e-mail account Name and Password**.

- **POP3 Server**: This is receiver's mail server
- **From :** Sender's email address .   Ex.: aviosys@gmail.com
- **Port :** This is the port of POP3 Server.

If user select @gmail or @hotmail account as SMTP Server , 9850XX will fill the SSL & Port automatically.

- **User** : Username to login the receiver's e-mail   Ex.: aviosys1 or aviosys1@gmail.com
- **Password**: Password for the e-mail address. EX. : 12345678

- **Tag** : User can use any message for 9850XX to recognize this mail as 9850XX command mail .

EX.:
As type " Test " in TAG area, the command contents is as following:

IPPOWERCTRL:TAG=Test;POWER1=OFF;POWER2=OFF;POWER3=OFF;POWER4=OFF

- **Interval (minutes) :** The period of time between Send and Receive the command e-mail.

- **Mail Number** : For 9850XX to search as command mail in the number of your email receiver latest .
  EX. : setup 20 that 9850XX will check the latest 20pcs email in receivers mail box for the 9850XX command mail

- **CTRL format** : Control format by subject or by body (e-mail contents)

For example : Use Gmail as sender and receiver

- Sender`s e-mail : 123@gmail.com

- Username to log in sender`s @gmail : 123@gmail.com or abc@def.com

- Password to log in sender`s @gmail : 12345678

Command format & Example :

User can get the e-mail command contents in the section . And execute an e-mail as press "Submit " if user has e-mail setting in the PC as following :
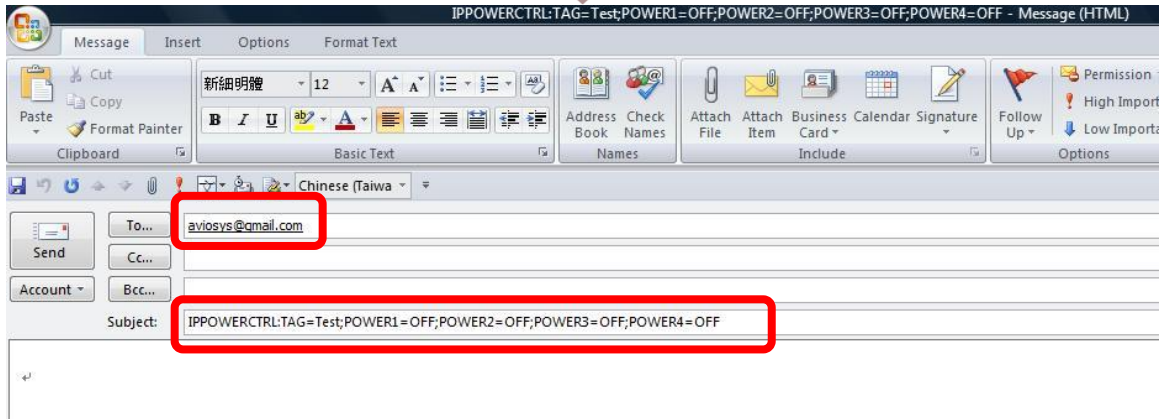
Command format :

IPPOWERCTRL:TAG=Test;POWER1=OFF;POWER2=OFF;POWER3=OFF;POWER4=OFF

There are 2 section of the command

1.   IPPOWERCTRL:TAG=Test

This is command part. Beside the tag message part（ like Test on above example) user can change in setting section , the other command must be **CAPITAL** and are fixed content .

2.   ;POWER1=OFF;POWER2=OFF;POWER3=OFF;POWER4=OFF

This is to set the outlet number (POWER1=) and action (ON/OFF) , user can only control 1~4 port ON/OFF by e-mail. Do each outlet command

EX.: Put " 14ON" in tag section and place the command as following :（ at subject or body depends one user's setting)   :

IPPOWERCTRL:TAG=14ON;POWER1=OFF;POWER4=ON

E-mail example :

● Execute e-mail command by " Subject "

● Execute e-mail command by " Body "

4.4.2 DDNS

The DDNS section allows user to setup the 9850XX with a DDNS server (i.e. www.dyndns.com). After the server has been setup correctly, enter the necessary information into the 9850XX DDNS settings.

 Note: The DNS server will have extra change as apply new account.

Account :   the Username / account name of DDNS account
Password: the Password   of DDNS account
Domain name: The DDNS name user apply.   Ex.: abc.dyndns.org

4.4.3 Communication

9850XX supports SNMP, Telnet , Modbus TCP and BACnet TCP

A.SNMP

This section is for development of system integrator who is familiar with   SNMP knowledge.
In community Authority , user can select " Read only" or "Read / Write"

Communication Setting:

SNMP:	
Enable	☐
SNMP version:	1,2c ▾
Community Authority :	N/A ▾
Community Name :	N/A Read Only Read/Write
Trap type :	
Host(192.168.1.1:162) :	192.168.1.1:162
Trap Community :	private
MIB file	IPPOWER-MIB.txt
Apply	

In " Trap " type ,user can select " v1 trap " , " v2c trap " or " v2c inform"

Communication Setting:

SNMP:	
Enable	☐
SNMP version:	1,2c ▾
Community Authority :	N/A ▾
Community Name :	private
Trap type :	N/A ▾
Host(192.168.1.1:162) :	N/A v1 trap v2c trap v2c inform
Trap Community :	
MIB file	IPPOWER-MIB.txt
Apply	

In MIB file section, user can get MIB information.

B. Telnet

In This section is for development of system integrator who is familiar with Telnet to enable /disable the

TELNET:	
Enable	✔
Apply	

Please enable the telnet function in "Application " → " Communication "


```
Telnet 192.168.1.18

IP login: admin
Password:
```



```
Telnet 192.168.1.18                                          _ □ ×
#
# ioctrl -h
**-----------------------------------------------------------------**
Usage: ioctrl
 [-h : --help ]........: display this help
 [-s : --setpower p6=0011 or p6x=1(x=1,2,3,4)].....: turn on/off ports on the d
evice
 [-p : --getpower ]..: get the on/off status of the device
 [-c : --current ].........: get the current value of the device
 [-t : --temp ]........: get the temperature value of the device
 [-v : --version ].....: display version information
-------------------------------------------------------------------
# ioctrl -s p6=1111
p61 ok,p62 ok,p63 ok,p64 ok,
# ioctrl -c
Current value: 0.000000, 0.000000, 0.000000, 0.000000
# ioctrl -t
Temperature value: 32.299999
# ioctrl -v
IO CONTROL Version: 1.0
Compilation Date....: May 14 2013
Compilation Time....: 10:44:47
# ioctrl -p
Power Status: 1, 1, 1, 1
#
```

Notice: The command " –C " & " -T " are for models 9820 & 9828 only.

C =Current . T =Temperature

C. Modbus TCP

Modbus: We supply the TCP models of ModBus control

D. BACnet TCP

In this section is for development of system integrator who is familiar with Telnet to enable / disable the function and to setup it`s port .

4.4.4. IP SERVICE

In this section , user can setup

A. IP Server & CNT (Cross Network Technology) ,
B. CNT (MQTT)

A. IP Service & CNT Setting :

The IP SERVICE allow 9850XX to be accessed easily on the internet by our IP Power Center or IP EDIT. With this feature anyone can find its device with no problems.

IP Service Server: Allows user can find user of 9850XX on the internet without having to remember long IP Addresses. Instead user can just remember the name of user device.

IP Service Setting (Search)	
Enable	☐
IP Service Server :	Server1 ▾
Device Name :	Server1 / Custom
Country :	Country
City :	City
myipedit login Account	
Find IP_POWER device on myipedit.com	
Apply	

- Enable : Enable or Disable this function by clicking the small box .
- IP Service Server : use our server or custom server .
- Device name , Country & City :

    User can search the 9850XX by Device name , Country or City.

This allows the device to be accessed easily on the Internet, user no longer have to Port Forwarding , user device to be able to use it. Only some devices are CNT compatible.

Please refer page #14 for the function of IP Server

B. CNT (MQTT) –

For developing only. 9850XX supports MQTT fucniton. Please contact with your distributor for the details if you would like to develop own system.

CNT(MQTT) Setting (Remote control)	
MQTT Serivce	IPPower ▾
Enable	
Status	
	Apply

Dropdown options: IPPower, Custom, Google, Azure, AWS
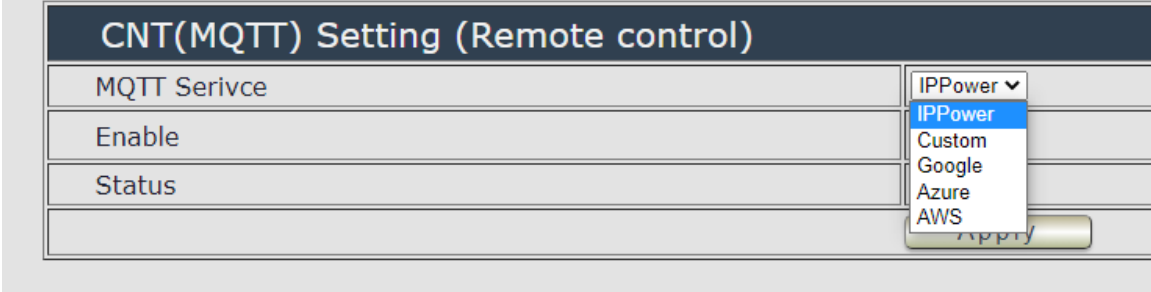
4.5 System Setting
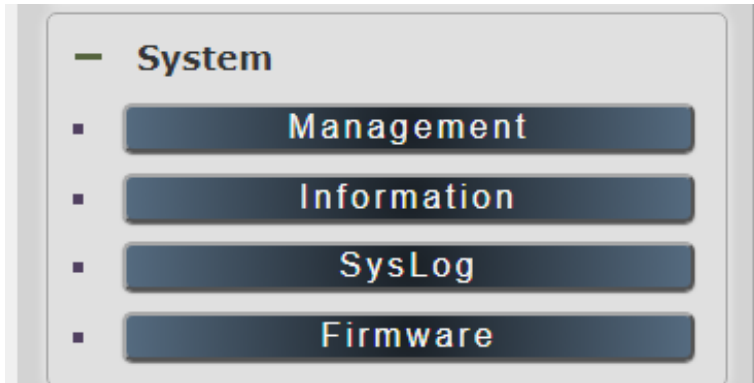
4.5.1 Management

In this section there are 6 settings: Administrator setting, Language Settings, Web server Setting, NTP settings, Import Configuration files and System Reset.

Administrator setting

In this section allows user to change password for 3 different authorization level. The account name and password can be changed, but each Authorities only support one Account name & one password.

1. Administrator (Admin): The *Administrator* has the authority to create other users, remove users, and control the device. 9850XX will ask to log in again if change the Default Setting here.

2. Operator: The operator can only control the setting of " IO Control " section but can not see other page of 9850XX .

3.Viewer: The viewer can only see the " IO Control " section , but can not see other page of 9850XX.

Default Setting of the Authorities :

Authority	Account name	Password
Admin	Admin	12345678
Operator	user	User
Viewer	guest	Guest
Note	Please amend the password as number or English character from 1 to 8 characters. **Do not use special symbol like " " ；：～! @ # $ % ^ & * ( )**	

Please click "Apply " button after change the account name / password

Language Settings

There are 3 language option of 9850XX .The default langrage is English.
The other two languages are "Traditional Chinese " and " Simple Chinese " .

Web Server Settings
There are 3 options to setting Web server. (1) http (2) https (3) self-signed certificate
Http and Https are quite simple, just click on the icon to enable or disable it.

If you click the self-signed certificate, it will show two options of the certificate we provide,
Choose the certificate you want in one of the options.

NTP setting

In this section, user can setup the date , time , current time , time zone , NTP server and sync with NTP to get the time synchronization .

NTP Settings	
Date	01 / 23 / 2018 (MM/DD/YY)
Time	14 : 49 : 22 (HH:MM:SS) [Apply]
Current Time	Tue Jan 23 14:49:21 GMT 2018 [Sync with local time]
Time Zone	(GMT+0800)ChinaCoast,HongKong ▼
NTP Server	pool.ntp.org ex: time.nist.gov
Sync with NTP	Every 1 hours [Apply] [Cancel]

SYNC with NTP : User can setup the time gap (1~300 hours) for 9850XX to check the time with the NET server .

Import configuration file

To setup multiple with same setting , user can import the settings of other 9850XX from a " DAT " file which is exported form another 9850XX . By import this file to other 9850XX device and shorten the setup time .

Import configuration files	
Location	選擇檔案 未選擇任何檔案 [Import] [Cancel]

As press " Import ", there is caution message show as following :

Caution!!

The Import data file will replace current setting!!

1) Import file source must export from current firmware version 925xW_v1.0611 wrong version will cause device permanently corruption

2) When load completely,system will change the import file setting IP,Port,Wifi SSID,Name,Account,Password,mail..
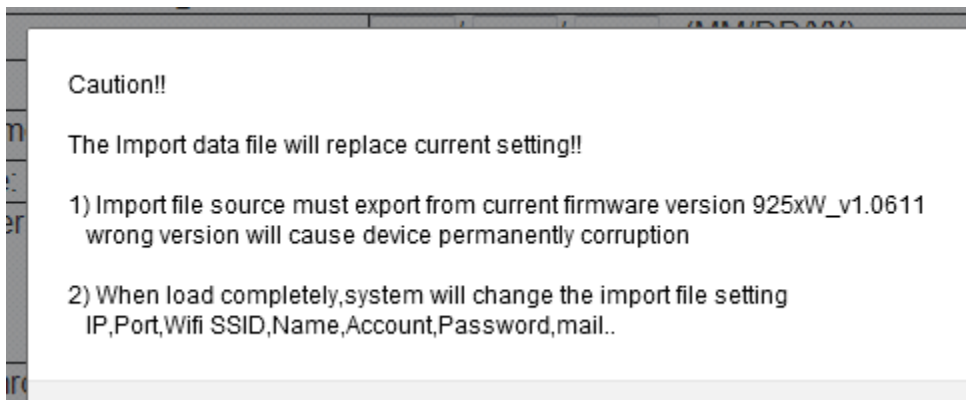
Before click " Ok " to import , please do read following notice :

● Do NOT import DAT file which is not export form 9850XX. The warranty will be invalided if any wrongdoing from " Import " .

● Please do Import the file in LAN / Ethernet . To avoid Import fail , please do not Import file via Internet

System rest

User can click one button to set back the setting to default or restart the 9850XX without device nearby user side.

Note : The factory default setting of 9850XX IP is assigned by DHCP. It will change the IP if load factory defaults .

System reset	
Export configuration file	Apply
Factory Reset	Apply
Reboot	Apply

- Export configuration file : Export the settings into DAT file for import
  to other 9850XX
- Factory Reset : set back to factory default .
- Reboot   : 9850XX device power reboot

4.5.2 System Information

User can get the system information here.

System Information

System			
System Up Time	0 days 0 hour 2 min 55 sec	MAC Address	00:76:58:00:4E:C0
Firmware Version	v1.29_710	Hardware Version	4.4.1.7
WAN			
WAN IP Address	0.0.0.0	Ethernet Port	80
Default Gateway	192.168.1.1	Internet Port	80
Primary DNS	168.95.1.1	Secondary DNS	8.8.8.8
LAN			
Connected Type		DHCP	
Local IP Address		192.168.1.168	
Local Netmask		255.255.255.0	
VPN			
IP Address		0.0.0.0	
Other Information			
SNMP		Disable	
ModBusTCP		Disable	
BacnetIP		Disable	
Telnet		Enable	
UPNP		Disable	
IPSERVICE(Search)		Disable	
CNT(Remote control)		Disable	
Rotation System		Disable	
Http		Enable	
PPTP		Disable	

4.5.3 System Log

In this section , user can get the 9850XX system operation information and send the information to assign Server IP address（not support name）. **The system information will be deleted after 9850XX device power reboot.**

Please click the IP and save by click " Apply "

4.5.4 Firmware

Please only use the file supply from Aviosys distributor or Aviosys .

There are two sections: Bootloader & Firmware

The firmware update function only support in LAN connection .
Before update, please DO READ THE HI-LITE MESSAGE BLOW:

Bootloader: This function is about to update hardware and control driver, it works with firmware but not change all the time.

It takes about 1 minute to upload   upgrade flash and be patient please. Caution! A corrupted image will hang up the system.

Upgrade Firmware

Upgrade selected firmware to obtain new functionality. Caution! A corrupted image will hang up the system.
It takes about 1 minute to upload & upgrade flash and be patient please.

Version: Old

Update Bootloader	
Location:	選擇檔案 未選擇任何檔案

Apply

Firmware	
Location	選擇檔案 未選擇任何檔案

Apply

To update the 9850XX, please follow the instruction below to prevent anything happens like **update incomplete** or **hardware disable** which may be caused by wrongdoing of updating:

1) Turn off all chat programs including (Skype, FB. QQ, AIM, Yahoo messenger ….etc.)
2) Check to make sure that all devices are turned on safely and powered
3) While updating do not turn off the power
4) Make sure that the cable is connected firmly
5) Do not interrupt the update process, the update must be completely finished .
6) Turn off, any Spyware or antivirus software which may conflict with the update.
7) Update firmware in the Local Area Network (LAN)
8) Support update under 32bit Web Browser (32 bit version only   ) like IE, Google Chrome,
   Do not use browser at 64 bit version
9) Please change the PORT as 80
10) **Reboot and Do the Hardware Reset** (keep pressing RESET button for 10secs) after update
    successfully.
11) **Clear the Cookies from the temporary file of PC** to avoid get the old webpage .

Please also update the notice in webpage before update:

5.Other ways to control

Besides web page control ,there are several ways to control the outlets : by   HTTPS/CGI command or by Telnet . 9850XX also support SNMP (MIB) , Modbus /TCP and BACnet /TCP .

Please check page #46 to check and enable the function .

5.1 CGI HTTP Commands

CGI Commands allow you to easily integrate the 9850XX with other systems and programs. Please read the instructions carefully on how to use the Http:// Commands

To use http:// Commands open up a web browser and type in the command that you would like to use.

1. User authorization .There are 3 formats :
   For example : IP address 192.168.1.18 ，Username : admin. Password : 12345678

  1.1 http://admin:12345678@192.168.1.18/set.cmd?cmd=getpower
  1.2 http://192.168.1.18/set.cmd?user=admin+pass=12345678+cmd=getpower
    The above 2 way also for HTTPS

2. Command
set.cmd?cmd=
All command do not separate capital / lower case , the connect symbol between commands can be "+" ，"&" and "?".

2.1 To get firmware version : getversion
 http://192.168.1.18/set.cmd?cmd=getversion

System return :   CGI Command : Data follows
                Version=9258W_N_v1.0.0.1

2.2 To get MACaddress：getmac
http://192.168.1.18/set.cmd?cmd=getmac

System return：   CGI Command : Data follows
                mac=00929000008F

2.3 To get the status of power on/ off： getpower
                        http://192.168.1.18/set.cmd?cmd=getpower

System return：
 CGI Command : Data follows
p61=0, p62=0, p63=0, p64=0
P61 to P64 means : POWER1 to POWER4

2.4 To set the power on / off ： setpower&p6x=0 or 1
p6x=0 means off，p6x=1means ON，x can be 1 to 4（ power1 to power 4)

Example : Turn on   POWER1 and POWER2 and turn off POWER3：
http://192.168.1.18/set.cmd?cmd=setpower&p61=1&p62=1&p63=0
System return： CGI Command : Data follows
p61=1,p62=1,p63=0

2.5   Setup power to reboot as RESET： setpowercycle& p6x=delayTime
X can be 1to 4（ power 1 to power 4） ，；dealyTime mean the time（ second) waiting for reset

For example :
http://192.168.1.18/set.cmd?cmd=setpowercycle &p61=5&p62=2&p63=4

System return： CGI Command : Data follows
                  p61 cycle ok,p62 cycle ok,p63 cycle ok

5.2 Telnet Control

Please enable the telnet function in "Application " → " Communication "

Or Check page #46 to check and enable the function .

Notice: The command " –C " & " -T " are for models 9820 & 9828 only .

C =Current . T =Temperature

6.FAQ :

Q1: Why can`t  I see the  9850XX`s IP address in IPEDIT.exe ?

Ans.: Please check the PC you use is under same LAN/ network / segment as 9850XX . Please
turn off some Anti-Virus / online chatting software .
If there are morn than 1 network card , include dynamic network card , please disable one and make sure the one you selected is
Under the same segment with IP9850XX.

Please refer the following possible parts for this 9850XX not been searched by IPEDIT

- Boot up successfully : Please reboot the 9850XX and check if there are 1 short beep after 3 seconds . This beep means the device boot up successfully . If not , the device may have issue.

- Network card :   Please check if there are morn that two network card – include wire / wireless / dynamic - in the PC which used IPEIT   software . IPEDIT only support single network PC , please disable the other network connection / functions.

- Anti Virus software / Firewall : Please turn off the antivirus software firewall temporary.

- Power : If there is no power go to 9850XX ,   please check the fuse part . There will be no power for 9258 if the fuse buttons is pup up - not easy/flexible to press as it was – by over loading for long time , please press the fuse back and the power will go to 9258 to boot up .

6. Connection : Please make sure that the 9850XX is under same router with the PC used IPEDIT . It is fine to connect across multiple routers but it need to setup the MASK part
which need some knowhow .

Q2 :   Why can`t I receive e-mail ?

Ans.: Please check the DNS and GATEWAY setting first (Check user router or ask user ISP
company) .There is a test button for checking the setting success or fail to send e-mail.

Q4: How can I reset to default:

Ans : Keep pressing the button of "RESET for 10 seconds at least

To reset to original manufacture settings : press the reset button with a sharpen pin for 10 seconds then RELEASE. There will be 3 beeps sound which means reset start and 9850XX will be rebooted itself -there is one beep after reboot) and most information go back to default setting (LAN IP).