

IP Power ATS 9820 PRO

User Manual



Version: 0.9 (Under development)
Date Released: August. 2026

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

Notice: This manual is currently under development. The official version will be released at a later date, and we will notify you once it becomes available. If you have any questions, please feel free to contact us.

IMPORTANT NOTICE

1. ATS 9820 PRO 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.
3. Do not shake the ATS 9820 PRO in any fashion.
4. Please contact the dealer If ATS 9820 PRO is not working properly.

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International Inc.

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1.Introduction

ATS 9820 PRO is a 8 ports new the Power Distribution Unit (PDU) with **Automatic Transfer Switch (ATS)** for Redundant power protection and Remote PowerControl (RPC) system which add "Active Spike Filter Design" in the hardware design and make the system with higher grade stability.

ATS 9820 PRO has the Earthquake event management to provides reliable operation during emergency and disaster scenarios. It can prevent the electronic device electricity interrupt when the disaster happen. It also supports the Earthquake Early Warning (EEW) for power control. (EEW is region-restricted)

With embedded web server and HTTPS protection, ATS 9820 PRO RPO supports higher grade security as working on Internet. User can control power easily and more safely through the web browser in most OS like Windows / iOS / Android system, like Edge, Google Chrome, Safari and so on. There are App for **Android / iOS system** name "IP Power" for user to control the outlet power.

Besides individual power control, user can also check the **current** of each port, **voltage** and ATS 9820 PRO's internal **temperature**, LOG information & send LOG to assign IP(Syslog). There is a E ink display show the IP and the other Voltage /Current /Temperature information.

As support **SSL & SNMP**, user can use public email like Gmail / Hotmail / Yahoo Mail to get the email as the ON/OFF status changed.

ATS 9820 PRO 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 ATS 9820 PRO (SYSLOG).

For system integrator, there are several popular developing tolls like HTTP/CGI command, SSH, **SNMP**

The various applications of the ATS 9820 PRO includes:

Redundant Protection, Multidevice control, Surge Protection Power Measurement, Temperature Detection, Mail notification, External extension support, Mobile App remote control...etc

User Friendly. Convenience & Powerful,



2.Product Information

2.1 Features

1. 8 ports Remote power controller for power On, Off and Reboot
2. Add " **Active Spike Filter** " Design for device higher stabilities.
3. **2 power inputs** support **Redundant power** with **Automatic Transfer Switch (ATS)**.
***ATS (Automatic Transfer Switch):** Seamlessly switches to an external backup power source when the primary power supply fails. The power switch time in **below 16 ms** as power switching
4. **Dual Ethernet Redundancy:** Auto-failover between two network ports guarantees uninterrupted remote management.
5. **Earthquake management-** The ATS 9820 PRO PDU has the earthquake management setting to helps organizations respond quickly to disaster situations. It can receive earthquake alerts in advance, allowing proactive power management and customer notifications within the warning period. It also supports the **Earthquake Early Warning (EEW)** for power control.
*** EEW is region-restricted. For any questions, please contact us.**
6. Web Server built-in design, directly control by web browser in PC & Smartphone (WIN, Android & iOS), like Edge, Google Chrome, Safari.
7. **Multidevice control:** User can control the other PDU device through WAN and LAN.
8. **E-Ink Display Panel:** Equipped with an E-Ink panel that displays device information, control status, and earthquake alerts.
9. 2x Power fuse protection with breaker reset button
10. Support **HTTPS**, **SSL**, **TCP/ IP**, **DHCP**, **DDNS**, **SMTP**, **SSH** and **SNMP V1 V2 V3**
11. **SYSLOG** : Support Log function & send to assign IP address
12. Time Schedule - can pre-set a suitable time to turn power on / off automatically.
13. **Auto Ping** for network control & segment management automatically
14. **Back Up** for quick setup for multiple devices.
15. Support **mDNS connection**, user can login ATS 9820 PRO without using its IP address.
16. Support public e-mail -- @gmail.com , @yahoo.com , @hotmail. com.....etc.
17. **MP3 Voice notification** support for Power on, I/O control, earthquake event management and sensor(temperature, voltage, current)
18. 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 function (Cross Network Technology)- allows user eliminate set up work on any Router without port forwarding, simply Plug & Control through App / IPC software
19. Support accessory for 1U mounting in a 19" rack.
20. **USB Port x2 - To get the information of external UPS device and QR Barcode Scanner.**
*** User also can plug the DO module which support USB connection**
(1 port USB 2.0, 1 port USB for electricity charge)
21. 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



Specification

- Power input: 100A~240VAC C20 in, 20A
- Maximum of Total loading: 15A / 240VAC, 20A / 100VAC
- Dimensions: 450 x 170 x 45 mm (L x W x H)
- Weight: 1.4 kg
- Enclosure – Metal case in black color
- Operating **Temperature**: 0~45 °C / 32~113 °F

2.2 Package Contents

- ATS 9820 PRO
- Terminal block connector x 2
- Mount Ear x 2



↑
Ear rack

↑
Ear rack

- Quick installation & brown box

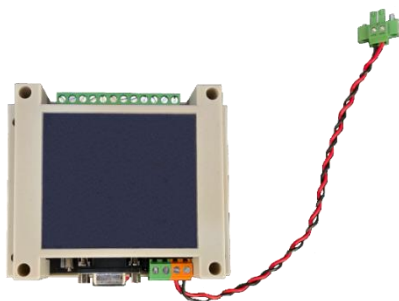
2.3 Minimum System Requirements

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

* Accessories: (Optional)

4 DO module with USB-RS232 cable

A 4 do module which support the ATS 9820 PRO's DC 12V x 1 (Terminal). Need to plug DC 12V and ATS 9820 PRO USB at the same time



2.4 Interface Description

Outlook:

Front View:

	
Front : From left to right side	
LED (status)	Display the LED lights as ON (light Green) or OFF (dark green)
Power LED and buttons(L) Output 1~4	In the left of four ports(1~4) LED lights and buttons
ATS mod label	Please refer to P.11 for the description of this label.
Ethernet	LAN 10/100 Mbps network for Internet x2 -Main port: Net 1, -Sub port: Net 2 ATS 9820 PRO supporting multi-network redundancy. Each port can be connected to a different router. If one network experiences an interruption or failure, the system will automatically switch to the other network, ensuring uninterrupted connectivity and stable operation of the ATS 9820 PRO
Reboot and Reset button	Reboot: A button to reboot the ATS 9820 PRO
P.S: Please use a tiny pin press the reset / reboot button.	Reset : Please keep pressing the button for 5~7 seconds and then release. You will hear 3 short beep sound which show the reset successfully. After reset, all the settings, like IP, password and so on, will be back to Default.
USB port	USB port x 2 Net 1 USB: Connect for external UPS to get power information and the QR barcode scanner for scanning QR code. * User also can plug the DO module which support USB Connection. (For optional accessory) Net 2 USB: Provide power to charge the electronic devices
Power LED and buttons(R) Output 5~8	In the right of four ports(5~8) LED lights and buttons
ATS Mod LED & button	1 button for ATS main/secondary power switch and six LED lights. Six LED lights: For a description of the six LED lights works, please refer to P.10 and ATS mod label P.11
DI & PWR label	Please refer to Page 11 for the description of this label.
PWR	For DC 12V output
DI	2 DI port for dry contact on/off control
E ink display	Show the IP address, Temperature, Voltage and current of each port, QR code for login, login IP list, CGI command log.

Rear View:



ATS 9820 PRO-T



ATS 9820 PRO-S

From Left side to Right side

Power Inlet x2 :

100~240 VAC & 50~60HZ , IEC320 C20.

Breaker Reset x2 :

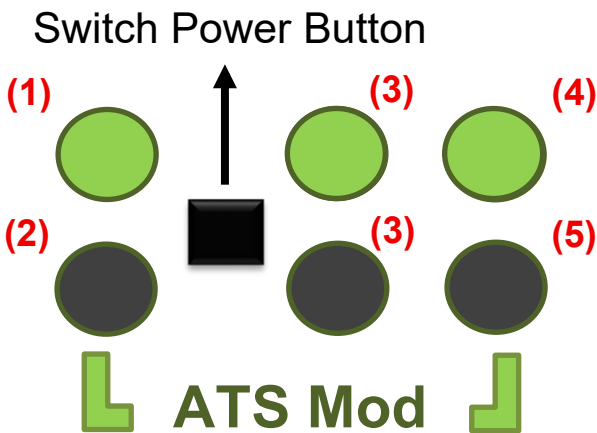
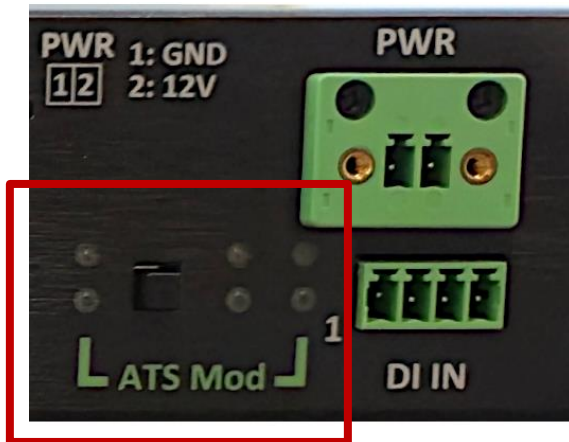
This is Fuse protection to prevent electrical surges from damaging the unit. The ATS 9820 PRO comes with two fuse with two breaker reset in the unit.

8 Outputs:

ATS 9820 PRO-S: IEC 320 C13.
The Maximum current of each outlet is **10A / 240VAC** .

ATS 9820 PRO-T: NEMA 5-15.
The Maximum current of each outlet is **15A / 100VAC**

ATS Mod LED lights description:

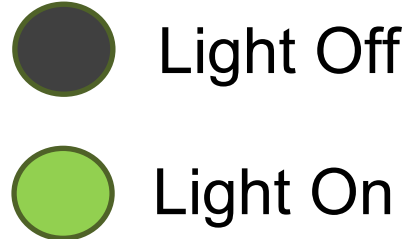


Example pic: If you only connect one power cable in Main or Secondary, it only display one row in Light on status.

(1)Main / (2)Secondary Power LED Indicator:
When the power source is switched, the currently lit Power LED turns off and the LED for the new power source turns on.

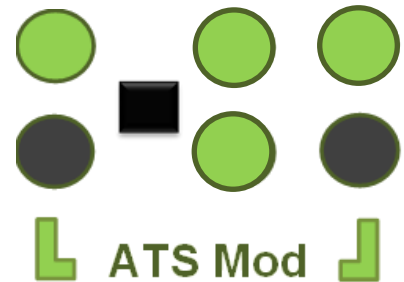
(4)Main / (5)Secondary Power Switching LED:
When the Switch Power button is pressed, the switching LED moves to the other power source, indicating that power switching is in progress. Once the switch is completed successfully, the corresponding Main Power LED (1) or Secondary Power LED (2) will light up in the same position.

(3)Main/Secondary Power input LED:
This LED lights up when the corresponding power input is connected and supplying power.

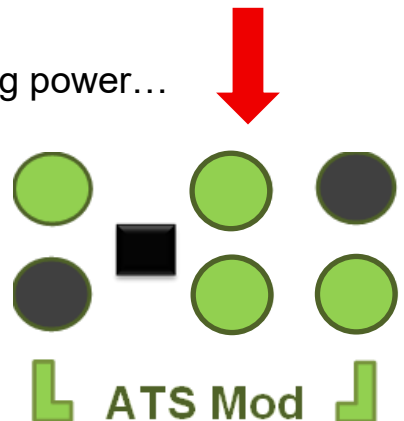


Switch Example:

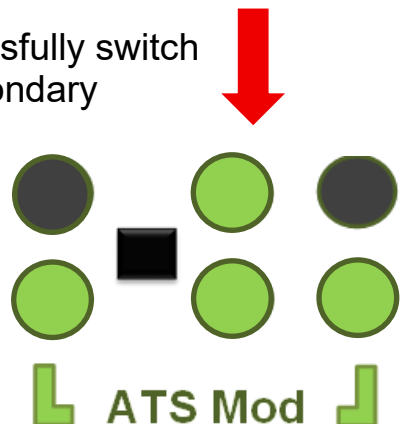
1. Main Power Status



2. Switching power...

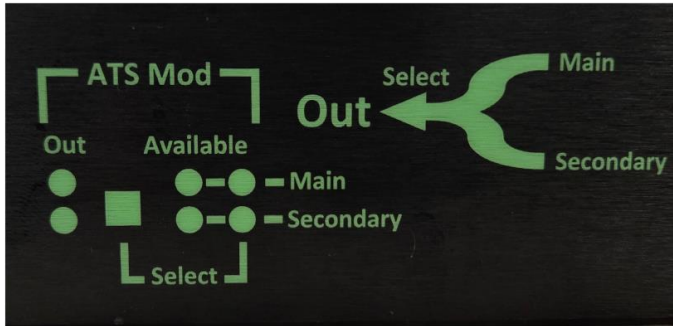


3. Successfully switch to Secondary

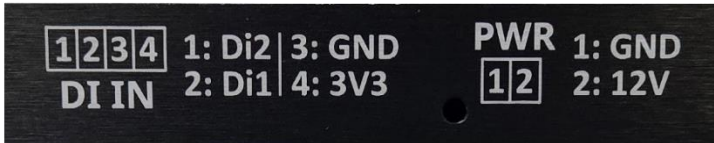


ATS 9820 PRO Interface instruction label:

ATS Mod label:



DI IN & PWR label:



This label is designed to provide a quick overview of the ATS 9820 PRO interface, including:

- ATS operating icon
- ATS Mod LED indicator locations
- PWR(DC 12V terminal) location
- DI IN terminal location

The label will be attached to the front of the device, as shown in the figure below.



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 dealer where 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 Change settings

Before you change the settings in ATS 9820 PRO, please read this how the saving settings works in ATS 9820 PRO.

For example:

In the network-interface webpage, we can see this image that settings didn't change before adjustment. In the right-down corner, you can see three icon: Save & apply, Save and Reset.

interface

lan(NET1) Protocol: Static address RX: 2.67 MB (17429 Pkts.) TX: 3.35 MB (5113 Pkts.)
Uptime: 0h 31m 34s
MAC: 00:76:A8:00:02:A8
IPv4: 10.33.122.149/24
IPv6: fd7e:94a9:4bec::1/64
Gateway: 10.33.122.1

wan(NET2) Protocol: DHCP client RX: 0 B (0 Pkts.) TX: 218.86 KB (650 Pkts.)
MAC: 00:76:A8:00:02:AA
IPv4: N/A
IPv6: fe80::276:a8ff:fe00:2aa/ffff:ffff:ffff:ffff:
Gateway: N/A

Add new interface...

Save & Apply Save Reset

Save & Apply: Save and apply your device settings.

Save: Save only, the device will remain your adjustment, but won't apply the settings.

Reset: Recover the settings before you click " save & apply " or " save " new changes.

* If you want to change the setting once and for all, then click **Save & Apply**, the changes setting will apply immediately. But if you want to save the setting but don't want apply immediately, click the **save bottom**.

Save:

If you want to change the settings, only click the save bottom, it will happen like this. Not only the setting section changed but also can see the unsaved change in the right top. This means you didn't finish your setting, and the system help you save the setting if you want to apply it.

2026/07/30 09:44:31 (UTC)

Refreshing

Unsaved Changes: 6

interface

lan(NET1)
br-lan

Protocol: Static address **RX:** 3.58 MB (23031 Pkts.) **TX:** 4.44 MB (6614 Pkts.)
Uptime: 0h 40m 40s
MAC: 00:76:A8:00:02:A8
IPv4: 10.33.122.149/24
IPv6: fd7e:94a9:4bec::1/64
Gateway: 10.33.122.1

Edit

wan(NET2)
Alias of "lan"

Protocol: Alias Interface (DHCPv6 client)
Interface has 6 pending changes

Edit Delete

Add new interface...

Save & Apply Save Reset

Click the Unsaved changes you will see the small screen shows " Configuration / Changes ". It show the section you have added, changed or removed, the changes based on different colors to show how many section you want apply.

If you don't want " Save & Apply " the settings, click the " revert ", the settings will turn back to the original settings before saving.

Power Control

Network

Interfaces

interface

lan(NET1)

Protocol: Static address **RX:** 3.73 MB (24437 Pkts.) **TX:** 4.59 MB (7133 Pkts.)
Uptime: 0h 43m 31s

Configuration / Changes

Legend:

Section added

Section removed

Option changed

Option removed

/etc/config/dhcp

uci del dhcp.wan.ra

uci del dhcp.wan.dhcpv6

/etc/config/network

uci del network.wan.metric

uci del network.wan.ip6assign

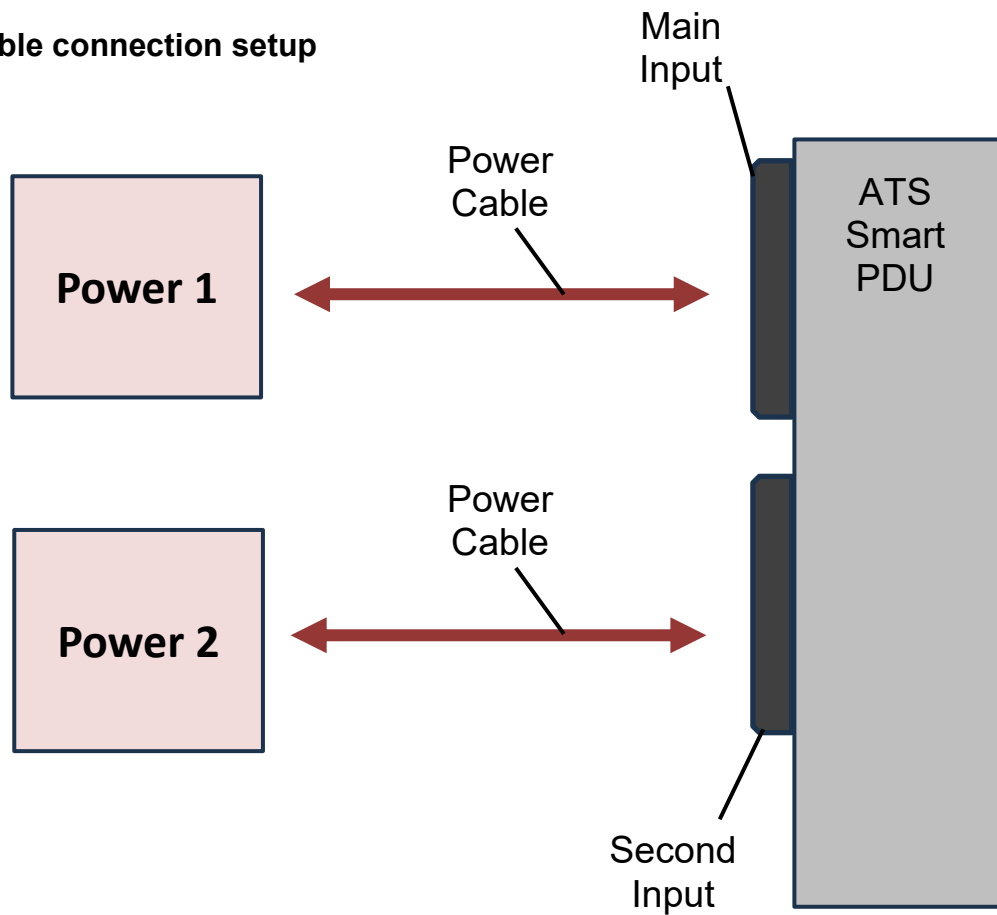
uci set network.wan.proto='dhcpv6'

uci set network.wan.device='@lan'

Close Save & Apply Revert

3.3 Hardware Connection

3.3.1 Cable connection setup

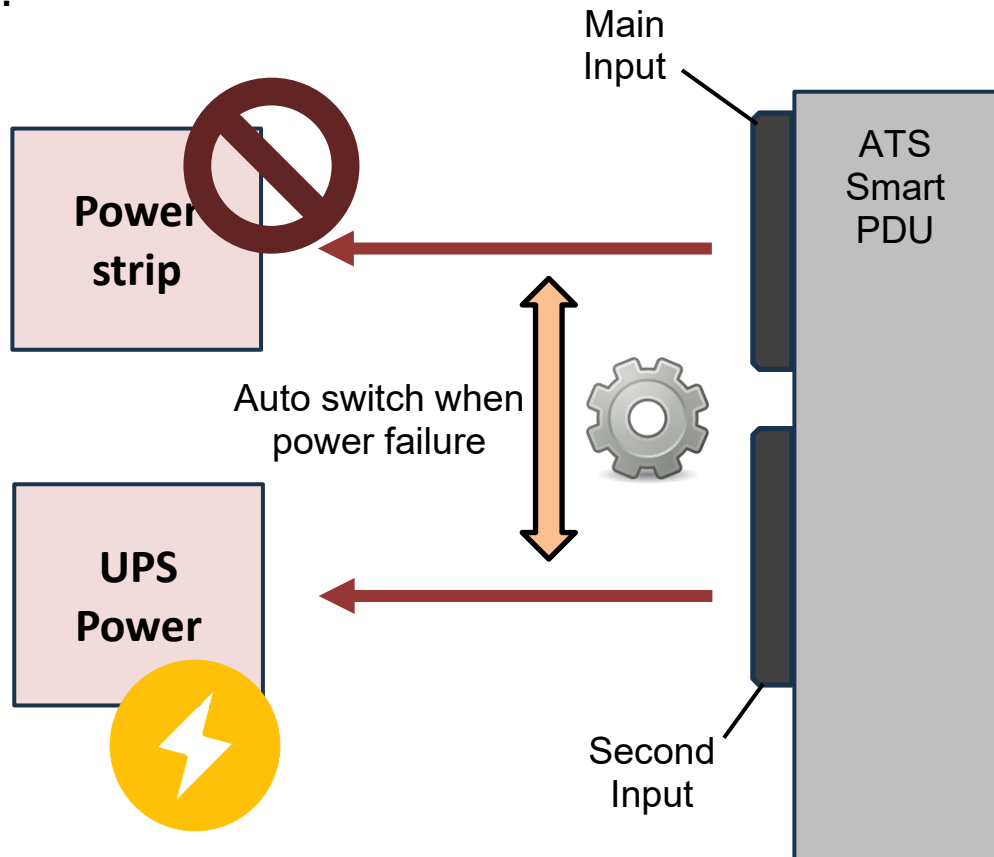


Input connections
From power or UPS output

Output connections to equipment

*** How ATS work in ATS 9820 PRO**

Example:



Assume Power 1 is Power strip, Power 2 is UPS power.

- When the main power source is lost, the ATS automatically transfers the load to the UPS within a very short time. The UPS then seamlessly provides power to the ATS PDU, ensuring uninterrupted operation.

3.3.2 Internet Connection setup

There are two network connection in ATS 9820 PRO:



Net1: Static IP (192.168.1.168)

Net2: DHCP (Assigned the IP by users router automatically)

There are two ways to connect the ATS 9820 PRO, please refer to the following procedure:

- (1) Router connection: ATS 9820 PRO → Router → PC ➡ Suggest to connect NET 2
- (2) Pc connection: ATS 9820 PRO → PC ➡ Suggest to Connect NET 1
(Need to assigned the IP address to the PC)

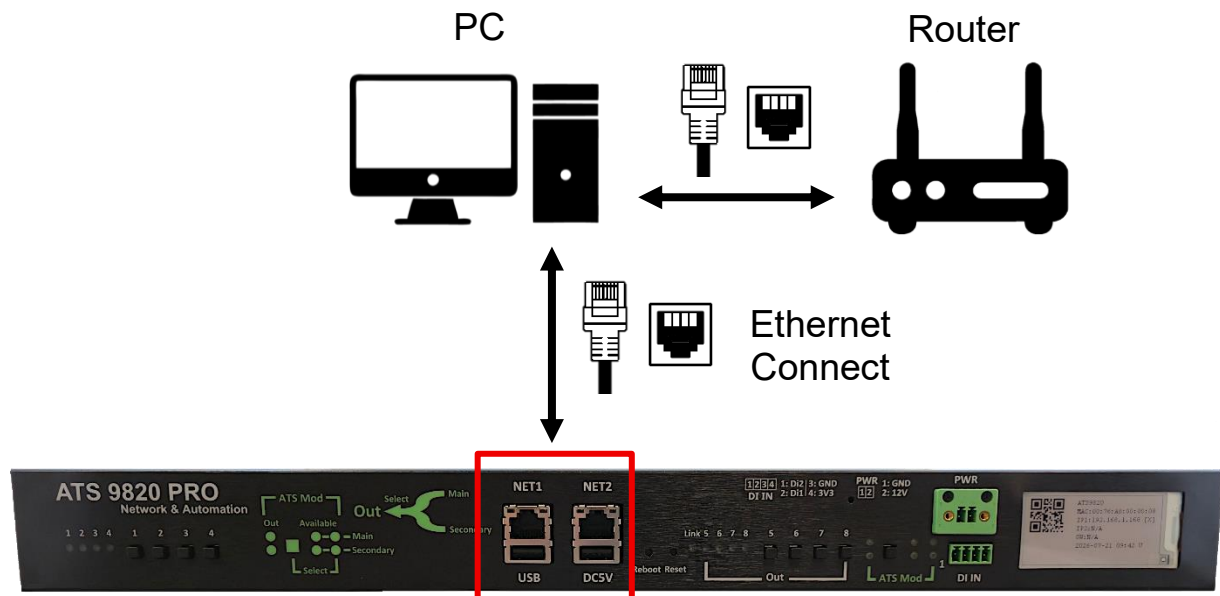
ATS 9820 PRO does not require a specific network connection sequence. Please select either one in the beginning / the appropriate network connection method according to your actual network environment.

* For information about network behavior after a power loss while both network ports are connected, please refer to **FAQ Q5 on P.98**

Please refer to the following procedure:

A. ATS 9820 PRO----- Router ----- PC (with Web browser)

- 1.) Connect with the Ethernet cable (RJ45) to the ATS 9820 PRO “NET1 or NET2” to your local area network(Router).
- 2.) Then connect the power cable into the power input of the ATS 9820 PRO.
- 3.) Switching the power switch to ON status, this switch is located at the rear of ATS 9820 PRO.
- 4.) After power on for around **45** seconds, there is a short beep sound for ATS 9820 PRO which means the system startup successfully
- 5.) Go to page #17 for software installation guide – use IPEDIT to log in the webpage of ATS 9820 PRO



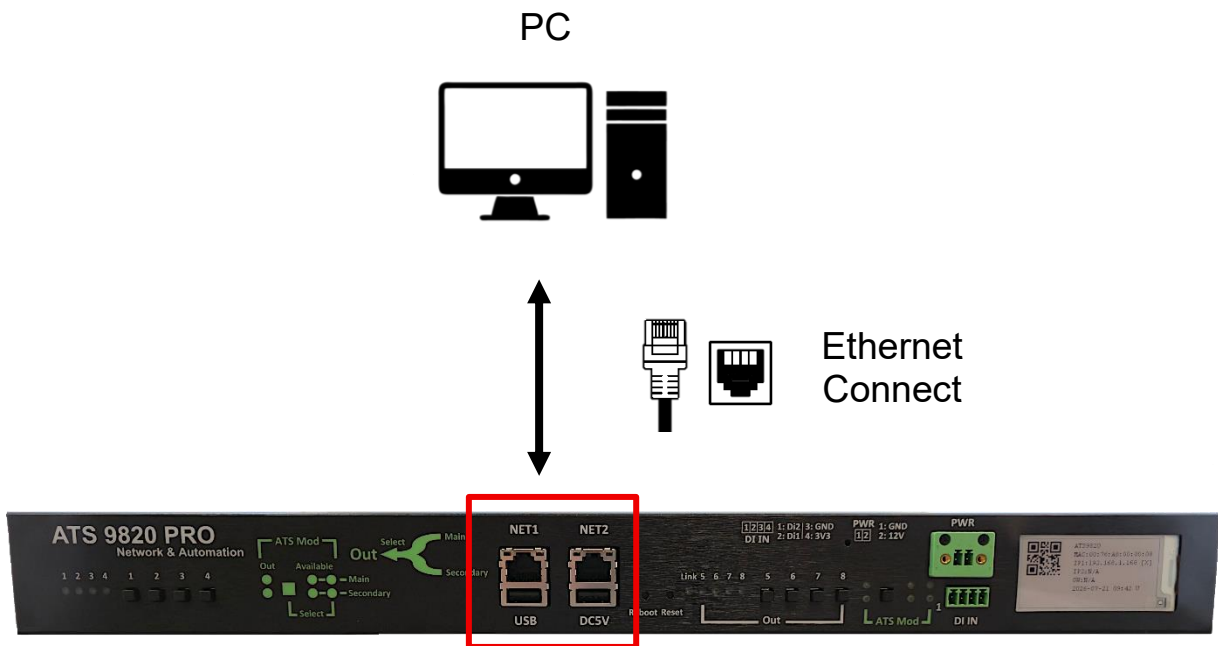
B. ATS 9820 PRO ----- PC (with Web browser) or HUB

Default IP: **192.168.1.168** (Static IP)

Default Login username: root

Default Password: 12345678

- 1.) Connect the power cable to ATS 9820 PRO and press the power switch to ON
- 2.) After ATS 9820 PRO power on for around 45 seconds, there is a short beep sound for ATS 9820 PRO which means the system reboot successfully.
- 3.) Then Connect the Ethernet cable (RJ45) to the ATS 9820 PRO to your PC.
- 4.) Execute the software IPEDIT.exe to get the IP as **192.168.1.168**
- 5.) Please make sure the IP address of you PC is also 192.168.1.X / XX/XXX or you may not log in the ATS 9820 PRO webpage in 192.168.1.168



3.4 Software Installation

Please go to our webpage www.aviosys.com/cd to get the software and manual of your product.

Under windows system, we offer two software:

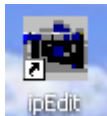
1. IP Edit **1.2.8.4** (Require to search IP address)
*** Please make sure you download the IPEdit version is 1.2.8.4, in order to scanning the Network 2 IP, update or download to Ver.1.2.8.4 is necessary.**
2. IP Power Center (For multiple IP Power devices control purpose)



- 1.) Select the IP Power ATS 9820 PRO in IP Power section

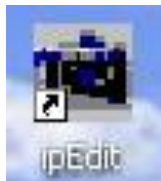


- 2.) All the available downloads for the ATS 9820 PRO will be shown
- 3) Download the required software – **IPEdit.exe** - by clicking on the download button.



Then you can select to connect ATS 9820 PRO.

3.4.1 LAN connect by IP search software “ **IPEDIT** ”



IP Edit is a search tool designed to search, configure, or access the IP Power ATS 9820 PRO from a localnetwork computer.

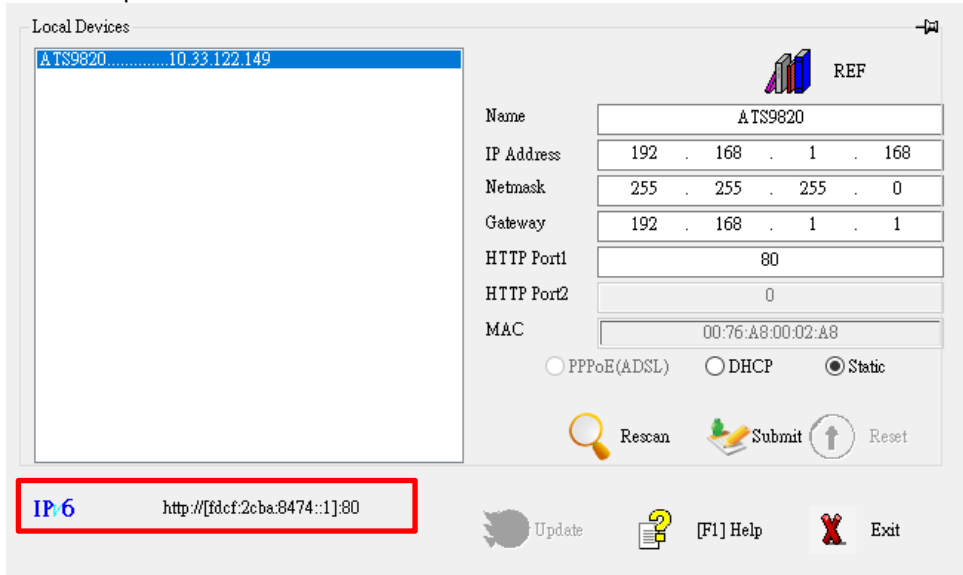
IP Power ATS 9820 PRO Default Login / Password

Default IP: 192.168.1.168 (Static IP)
Default Login username : root
Default Password: 12345678

Please use our IP Search tool "IPEDIT.exe" to get the IP address of ATS 9820 PRO.

1.) In the local devices section user will see user device shows up if connection is correct.

For example:



The default IP of ATS 9820 PRO is 192.168.1.168.

- **Red rectangle** show the **IPv6** address of ATS 9820 PRO, if you want to login through IPv6, just click the IP in the red rectangle.

To log in to the ATS 9820 PRO directly, please make sure the IP address of you PC is also the same segment as the ATS 9820 PRO, like 192.168.1.XXX (XXX = 1~254) or you may not log in the ATS 9820 PRO webpage as different segment.

User can change the FIX IP mode to DHCP mode through our IP search tool "IPEDIT" or through the ATS 9820 PRO webpage as log in. As change to DHCP mode, ATS 9820 PRO will get the IP address from user's router.

The way to use IPEDIT to change ATS 9820 PRO as DHCP is as following :

- Step 1 : Select the ATS 9820 PRO IP show in the IPEDIT. make sure your device is connect the one you want to modify, check the Mac address. You can check the Mac in the bottom of device.
- Step 2: Select DHCP icon and click " Submit " then it will ask to type the username and password.
Please fill admin & 12345678 and click OK / setup.
- Step 3: Wait for one minute for ATS 9820 PRO reboot up and click the rescan button in IPEDIT to get the new IP address which is assigned from your DHCP router. Then you can also find the ATS 9820 PRO show DHCP in IPEDIT tool.

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 ATS 9820 PRO 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. **Anti Virus software / Firewall:** Please turn off the antivirus software firewall temporary.
3. **Connection:** Please make sure that the ATS 9820 PRO 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.

Notice :

Segment : The first 9 digits of the IP Address .

EX: The IP of user PC is 192.168.1.122. If the “ Local IP Address “ at Wi-Fi Info is 192.168.1.XXX (XXX can the value of 1~254) , user PC can get into the webpage of ATS 9820 PRO.

3.4.2 Internet Setup

To connect the IP Power ATS 9820 PRO on Internet, there are three 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
- Use mDNS connection through your ATS 9820 PRO MAC address to login. Please refer to 3.4.4.

3.4.3 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's IPPower device and user can easily find IP Address with IP Service. **To log in the webpage of ATS 9820 PRO on Internet, user still need to do the "Port Forwarding" in own router.**

Before using "IP Service ", please change the device name of user ATS 9820 PRO to avoid similarname in Host Server.

ATS9820PRO 2026/07/16 10:03:39 (UTC)

Power Control
Network
System
Application
Earthquake
IPService
Watchcat
Wake on LAN
Network UPS
Tools
SNMP
Logout

IPPower Warranty Registration(Click)
Aviosys Inc. - 1-Year Limited Warranty
Unregistered

IP Service Setting (Search)

Enable ☐

IP Service Server: Server1

Device Name: ATS9820PRO

Country:

City:

Find ATS9820PRO device on myipedit.com

Save & Apply

1.) Open IP Edit and select the server that user's ATS 9820 PRO is designated to.

2.) Hit the Green Connect button on the top of IP Edit.

IPEdit with DHCP Server

Internet online devices
IP Server: myipedit.com

Device Name: ATS9820

Country:

City:

Not Connected

Connect Disconnect

3.) Then type in the ATS 9820 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 ATS 9820 device name as **ATS9820PRO**, and user can search the device easily :

IPEdit with DHCP Server

Internet online devices
IP Server: myipedit.com

Device Name: ATS9820

Country:

City:

Connected to

Connect Disconnect

Device	Name	Country	City	IP address	Port	Mac Address
v2.00_2026_...	ATS9820PRO			61.228.153.30	80	0076A80002A8

5.) After user has connected to user device, type in the Login and Password for user device

3.4.4 mDNS connection

You can log in to your ATS 9820 PRO without using its IP address. With mDNS support, you only need to type: “ ats9820.local ” to access the ATS 9820 PRO web UI.

Please locate your MAC address, which is on the side of your device.
Or find the MAC address in “**System** → **information**”
Use the last two digits of the ATS 9820 PRO MAC address to connect.

To find your mDNS, please move to **P.64(4.5.2)** first, and follow the instructions below

1. Only one ATS 9820 PRO connected to the PC

(1-1) Open any web browser (recommend Chrome, Edge).

(1-2) In the address bar, type “ (device name).local ” and press Enter.

E.g.: Your device name: ATS9820PRO. Type: ATS9820PRO.local

2. Multiple ATS 9820 PRO or others ATS 9820 PRO devices connect in the same PC.

(2-1) Find your device's MAC address, which is located on the side of your device.

MAC example: 0076A8000980

(2-2) Open any web browser (recommend Chrome, Edge)

(2-3) In the address bar, type “ ippowerXX.local ”, where XX is the last two digits of your ATS 9820 PRO MAC address.

Example: If the MAC address is 0076A8000980, type “ ippowera8.local ”

After typing the address in your browser's address bar, press enter. You will see the login screen. Indicating that you have successfully connected to your ATS 9820 PRO.

4. Web Interface

4.1 Connect to your device

Once the ATS 9820 PRO has been setup correctly, log into the device.

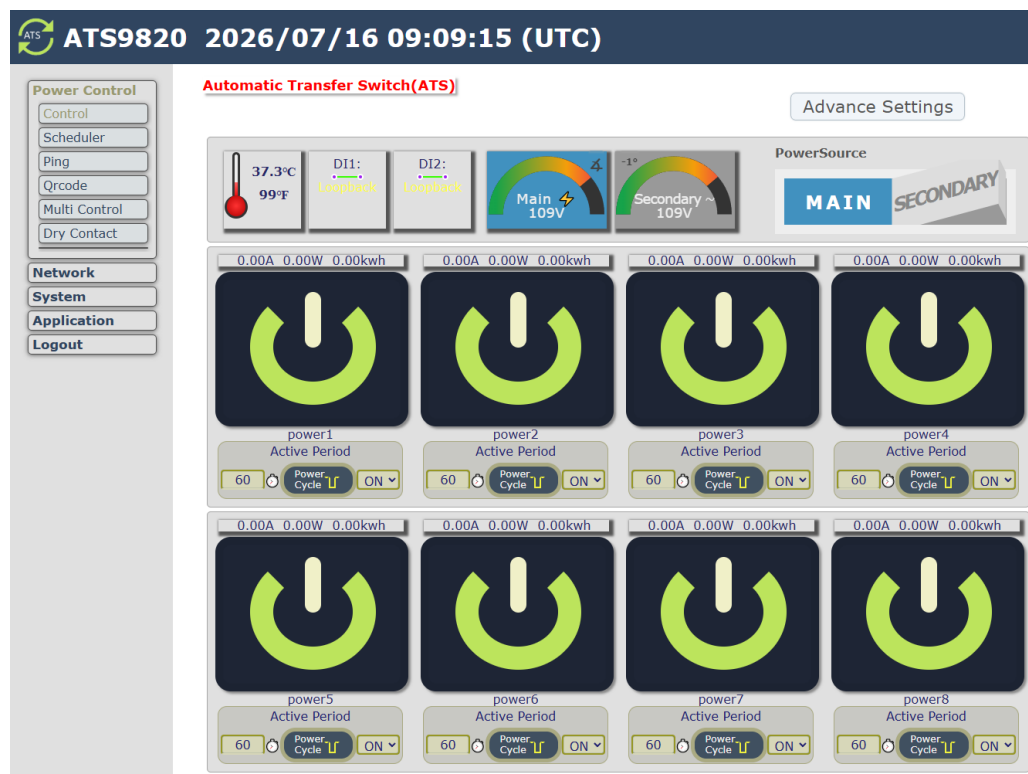
The default Username and Password for the ATS 9820 PRO

Username : root

Password : 12345678

The Control Console

The right side Menu of the Web Interface for controlling the functionality and setup of the IPPower ATS 9820 PRO.



The IP Power ATS 9820 PRO Console consists of six main sections which will be explained in details below.

- **Top Column:** Time information and Device name
- **Information:** Temperature, two input current(main and second input), 8 ports Current Amp Usage, AC usage and Energy usage.
- **Power Control :** Control, Scheduler, Ping, Qrcode, Multi Control, Dry Contact
- **Network:** Interfaces, 802.1x Client, Firewall, Web port
- **System:** Management, Information, E-mail, System Log, Backup / Flash firmware, Reboot
- **Application:** Earthquake, IPService, Watchcat, Wake on Lan, Network UPS tools, SNMP
- **Logout**

4.2 Top Column

4.2.1 Device name

This section show the device name. You can change the device name here: Application → IP Service → Device name Change name “ATS 9820 PRO” as “Enjoy ATS 9820 PRO ”

Power Control
Network
System
Application
Earthquake
IPService
Watchcat
Wake on LAN
Network UPS
Tools
SNMP
Logout

IPPower Warranty Registration(Click)
Aviosys Inc. – 1-Year Limited Warranty
Network unavailable

IP Service Setting (Search)

Enable ☐

IP Service Server Server1

Device Name: ATS9820

Country Country

City City

Find ATS9820 device on myipedit.com

Save & Apply

CNT(MQTT) Setting (Remote control)

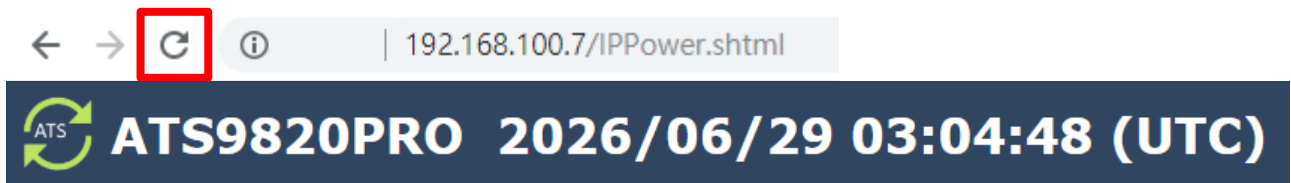
MQTT Service IPPower

Enable ☐

Status

Save & Apply

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 .

4.2.2 Date and Time

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



To setup the Time, Please go to “ System → Management → System (Time & Language) → General Settings ”,

In Sync section, user can select the time to sync with local PC browser or with assigned NTP server, please press “ Save & Apply ” to save the new setting.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

[General Settings](#) [Time Synchronization](#) [Language](#)

Local Time	2023-06-19 10:59:08	Sync with browser	Sync with NTP-Server
	2023-06-19 10:59:01	Set time manual	
Timezone	Asia/Taipei		

[Save & Apply](#) [Save](#) [Reset](#)

1. SYNC:

- (1) With browser: Sync with the browser log into ATS 9820 PRO.
- (2) With NTP Server: - sync with the assigned sever and can setup the times for sync.
Move to the “ Time Synchronization ”, and click the enable NTP client.

2.Timezone: You can choose UTC or other country/region timezone.

To use the time to sync with NTP server, please setup the NTP server in Time Synchronization

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

[General Settings](#) [Time Synchronization](#) [Language](#)

Enable NTP client	☒
Use DHCP advertised servers	☒
NTP server candidates	0.openwrt.pool.ntp.org - 1.openwrt.pool.ntp.org - 2.openwrt.pool.ntp.org - 3.openwrt.pool.ntp.org - +

[Save & Apply](#) [Save](#) [Reset](#)

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

```
login as: root
root@10.33.122.149's password:

BusyBox v1.35.0 (2026-01-13 03:11:10 UTC) built-in shell (ash)

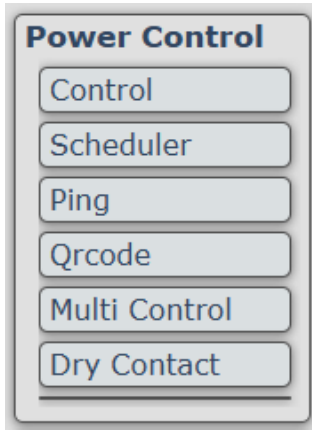
_ _ _ _ . - - - . - - - . | _ _ _ | . - - - . - - - .
| | | | | _ | _ | _ || | | | | _ _ || | _ |
_| |_| | _ | _ | _ || | _ _ | | _ _ || |_|
    |_|   |_|

-----
Enter 'ioctrl -h' for a list of built-in commands.
-----
root@ATS9820:~# date
Fri Jul 17 02:31:45 GMT 2026
root@ATS9820:~#
```

4.3 Power Control

The IO Control Section allows you to directly / automatically control the outlets of the ATS 9820 PRO as well as schedule Once, Daily, Weekly, and power cycles.

There are 6 sections: Control, Schedule, Ping, QR code, Multi Control and Dry Contact



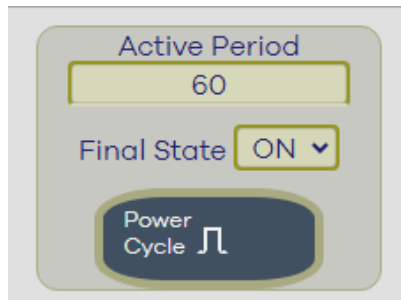
4.3.1 Control

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

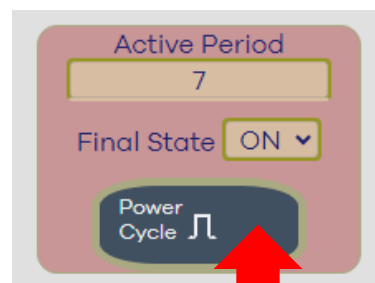
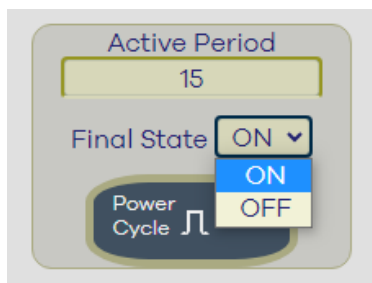
A. Power Control :

User can do the following 3 basic operation in this page :

1. Manual control: each port ON or OFF directly by pressing the power sign.
2. Power Cycle control: Manually Control the relay delay to turn ON / OFF.
The relay cycle time can be set from 1 to 9999 seconds



User can set up the time and the final status in power cycle as ON / OFF.



For example : (sec = seconds)

- Original Outlet as “ OFF “ , select final status as “ ON “ & fill 15 sec :
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 10 sec :
After press power cycle button, the outlet will turn OFF for 10 seconds and then turn ON .

ON → OFF (10 sec) → ON

- Original Outlet as “ OFF “ , select final status as “ OFF “ & fill 8 sec :After
press power cycle button, the outlet will turn ON for 8 seconds and then
turn OFF .

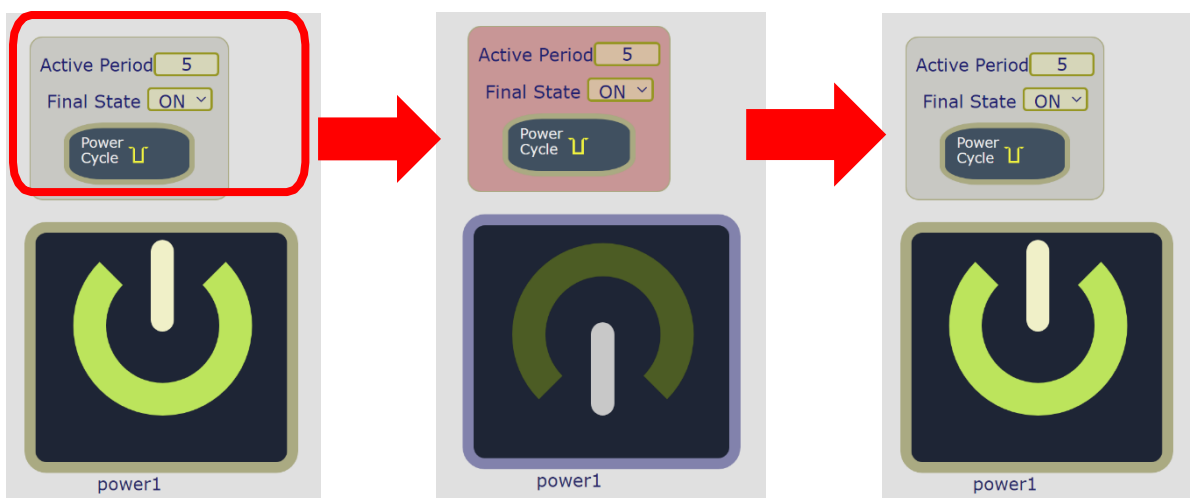
OFF → ON (8 sec) → OFF

- Original Outlet as “ ON “ , select final status as “ OFF “ & fill 5 sec :

After press power cycle button, the outlet will be ON for 5 seconds and then turn OFF .

ON (5 sec) → OFF

The following 3 pictures shows that after press the power cycle with 5 seconds setting, the outlet “ Power1 “ will turn off for 5 seconds , then turn ON later. The power cycle action will execute after press the “ Power Cycle ” button.



B. Advance Setting :

User can do the following advance configuration in this page :

➤ Port Name setting:

User can name each power by click the name in the right “Outlet name” of 8 power buttons
The number of character is max. 12 characters and Please change the name in English only and do not use symbol like !@#\$%^&*()_+

Automatic Transfer Switch(ATS)

Control

E Ink Display Setting
ROTATE

Voice Setting
Enable ☒ Language: English Volume: Large

Outlet Basic Settings

Name	1.power1	2.power2	3.power3	4.power4
Web Control Disable	☐	☐	☐	☐
Power Cycle Disable	☐	☐	☐	☐
Email Notification	☐	☐	☐	☐
Beep	☐	☐	☐	☐
Power Cycle Time	60 sec	60 sec	60 sec	60 sec

Name	5.power5	6.power6	7.power7	8.power8
Web Control Disable	☐	☐	☐	☐
Power Cycle Disable	☐	☐	☐	☐
Email Notification	☐	☐	☐	☐
Beep	☐	☐	☐	☐
Power Cycle Time	60 sec	60 sec	60 sec	60 sec

Wake On Lan Settings

MAC1:	00:00:00:00:00:00	MAC2:	00:00:00:00:00:00	MAC3:	00:00:00:00:00:00	MAC4:	00:00:00:00:00:00
MAC5:	00:00:00:00:00:00	MAC6:	00:00:00:00:00:00	MAC7:	00:00:00:00:00:00	MAC8:	00:00:00:00:00:00

Power / ATS Settings

Default Power Status	Power1 LAST LAST	Power2 LAST LAST	Power3 LAST LAST	Power4 LAST LAST
Front Panel Toggle (ATS)	Toggle Toggle	Toggle Toggle	Toggle Toggle	Toggle Toggle
ATS Re-transfer Switching	Main	Email:	☐	☐

Sensor Trigger Settings

Temperature: Range: 0~60°C (32~140°F) Alarm Low: 0.0 High: 60.0	☐	Power1 None None	Power2 None None	Power3 None None	Power4 None None
Main: Range: 90~260V Alarm Low: 90 High: 260	☐	None None	None None	None None	None None
Secondary: Range: 90~260V Alarm Low: 90 High: 260	☐	None None	None None	None None	None None
Digit Input 1 None	☐	None None	None None	None None	None None
Digit Input 2 None	☐	None None	None None	None None	None None
Current: Power on Range: 15 Amp Trigger Power OFF	☐ Low 0 ☐ High 8 ☐ Low 0 ☐ High 8	☐ Low 0 ☐ High 8 ☐ Low 0 ☐ High 8	☐ Low 0 ☐ High 8 ☐ Low 0 ☐ High 8	☐ Low 0 ☐ High 8 ☐ Low 0 ☐ High 8	☐ Low 0 ☐ High 8 ☐ Low 0 ☐ High 8

E ink Display Setting:

- A. QR code & info B. Current/Volt/Temperature
- C. Login IP D. Rotate: Cyclic display switching on the E-Ink monitor

Voice Setting:

- A. Enable or disable the Voice notification
- B. Language: Chinese or English
- C. Volume: Large, Medium, Small

(1) Outlet basic setting:

Outlet Basic Settings				
Name	1 power1	2 power2	3 power3	4 power4
Web Control Disable	☐	☐	☐	☐
Power Cycle Disable	☐	☐	☐	☐
Email Notification	☐	☐	☐	☐
 Beep	☐	☐	☐	☐
Power Cycle Time	60 sec	60 sec	60 sec	60 sec

- Web Control Disable :

Stop to control ON/OFF in the webpage manually.

ATS 9820 PRO will follow control by HTTP/CGI command or by Schedule setting.

- Power cycle Disable :

Stop to “power cycle” control in the webpage manually. ATS 9820 PRO will follow control by HTTP/CGI command or by Schedule setting.

- E-mail Notification :

User can enable /disable the e-mail alarm here. Please refer the page 64 to setup the email information in “System “ → Email.

The e-mail alarm section allows ATS 9820 PRO to notify user by following situation :

- Receive E-mail with IP information & MAC Address as ATS 9820 PRO device boot up.
- Receive E-mail as ON/OFF status change in output.

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

- Power Cycle Time: Setting your own power cycle timing.

(2) 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.

Wake On Lan Settings			
MAC1: 00:00:00:00:00:00	MAC2: 00:00:00:00:00:00	MAC3: 00:00:00:00:00:00	MAC4: 00:00:00:00:00:00
MAC5: 00:00:00:00:00:00	MAC6: 00:00:00:00:00:00	MAC7: 00:00:00:00:00:00	MAC8: 00:00:00:00:00:00

(3) Power / ATS setting:

Power / ATS Settings				
Default Power Status	Power1 LAST LAST	Power2 LAST LAST	Power3 LAST LAST	Power4 LAST LAST
Front Panel Toggle (ATS)	Toggle Toggle	Toggle Toggle	Toggle Toggle	Toggle Toggle
ATS Re-transfer Switching	Main	Email:	☐	

- Default Power:

Status mode: The control section allow user to set the power status in: ON or OFF or LAST when the device power Rebooted. The output will be same status as choose LAST before the device power turn off. To save the setting here, please click “Apply” button.

Delay mode: on/off options only.

Front Pannel button toggle (ATS): Enable the power output button or disable the power button

ATS Re-transfer Switching: Enable or disable the main or secondary power Re-transfer Switching. The Options: Main, Secondary, none

E-mail notification: Enable / disable,  Beeper alert: Enable / disable

(4) Sensor trigger setting:

- Temperature Alarm Setting: to enable the protection as over temperature and setup the maximum value of temperature. The range is at 0 ~ 50 °C / 32 ~ 140 °F.
As over the setting value, ATS 9820 PRO will keep beeping for several times and then do the setting ON/OFF/None by user.

Temperature: Range: 0~60°C (32~140°F)					
Alarm		Power1	Power2	Power3	Power4
Low: 0.0		None	None	None	None
High: 60.0		None	None	None	None

- Voltage Alarm Setting : To set up the maximum value of current limit.
The range is at 90~260 VAC. As over the setting value, ATS 9820 PRO will keep beeping for several times and then do the setting ON/OFF/None by user.

Main: Range: 90~260V					
Alarm					
Low: 90		None	None	None	None
High: 260		None	None	None	None

Secondary: Range: 90~260V					
Alarm					
Low: 90		None	None	None	None
High: 260		None	None	None	None

- Digital Input: To set up the default power setting.

Digit Input 1					
None		None	None	None	None
		None	None	None	None

Digit Input 2					
None		None	None	None	None
		None	None	None	None

- Current: Alarm Setting: To enable the protection as over current and setup the maximum value. The range of each outlet is 1~15 amp. As over the setting value, ATS 9820 PRO will keep beeping for several times and then turn OFF the power output automatically.

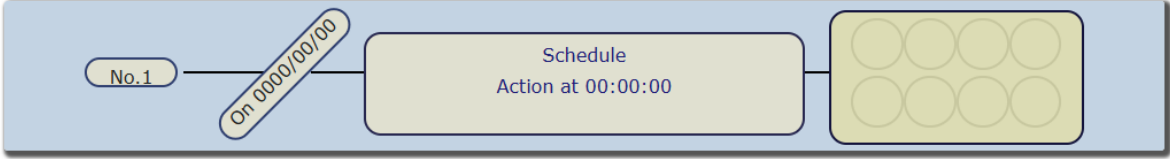
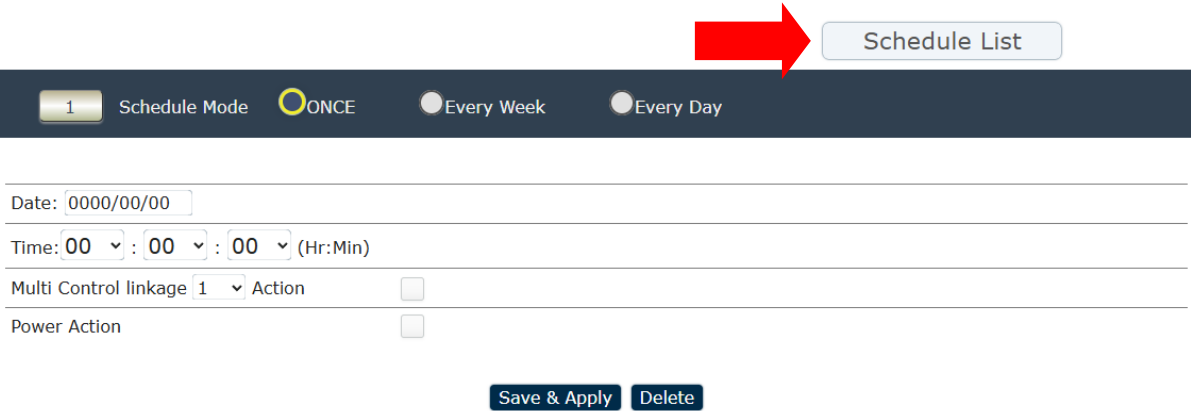
* Vital: When power range reach 15 Amp/110V, 10A/220V, trigger will force power off.

Current: Power on Range: 15 Amp	☐ Low 0	☐ Low 0	☐ Low 0	☐ Low 0
Trigger Power OFF	High 8	High 8	High 8	High 8
	☐ Low 0	☐ Low 0	☐ Low 0	☐ Low 0
	High 8	High 8	High 8	High 8

4.3.2 Scheduler

In this section, user can see the setting schedule list first up to 30 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 ” :

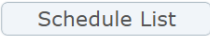
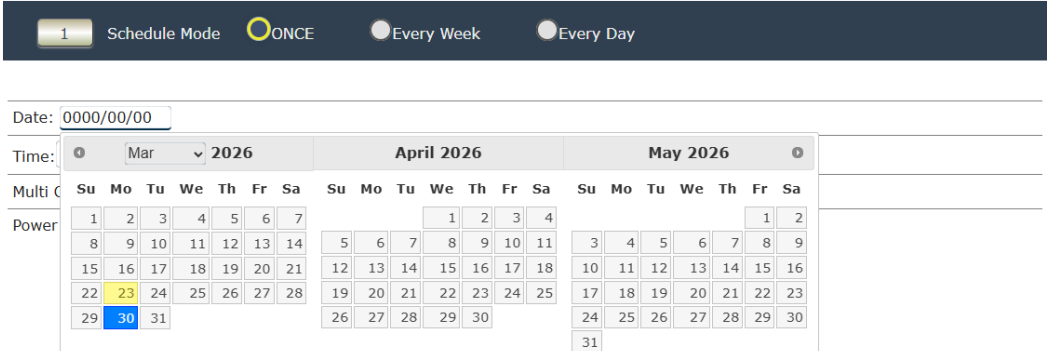
The schedule allows you to control the power outlet turn ON, OFF, Cycle or Reboot at the assigned time user arrange in schedule

- Adding a Scheduled Event

1. Select the Action Duration :

There are 3 setting – Once, Every Week, Every Day

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 Power Action : Enable power # by clicking in the small square to mark “ v ” , and select one from the power action of OFF/ON/cycle/reboot as you need.

Once the scheduler has been Set Up, click the “ Save ” button and you will see your setting located on the bottom 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 “ Save ” button to confirm the setting and you will see the page refresh and new setting display in Scheduler list

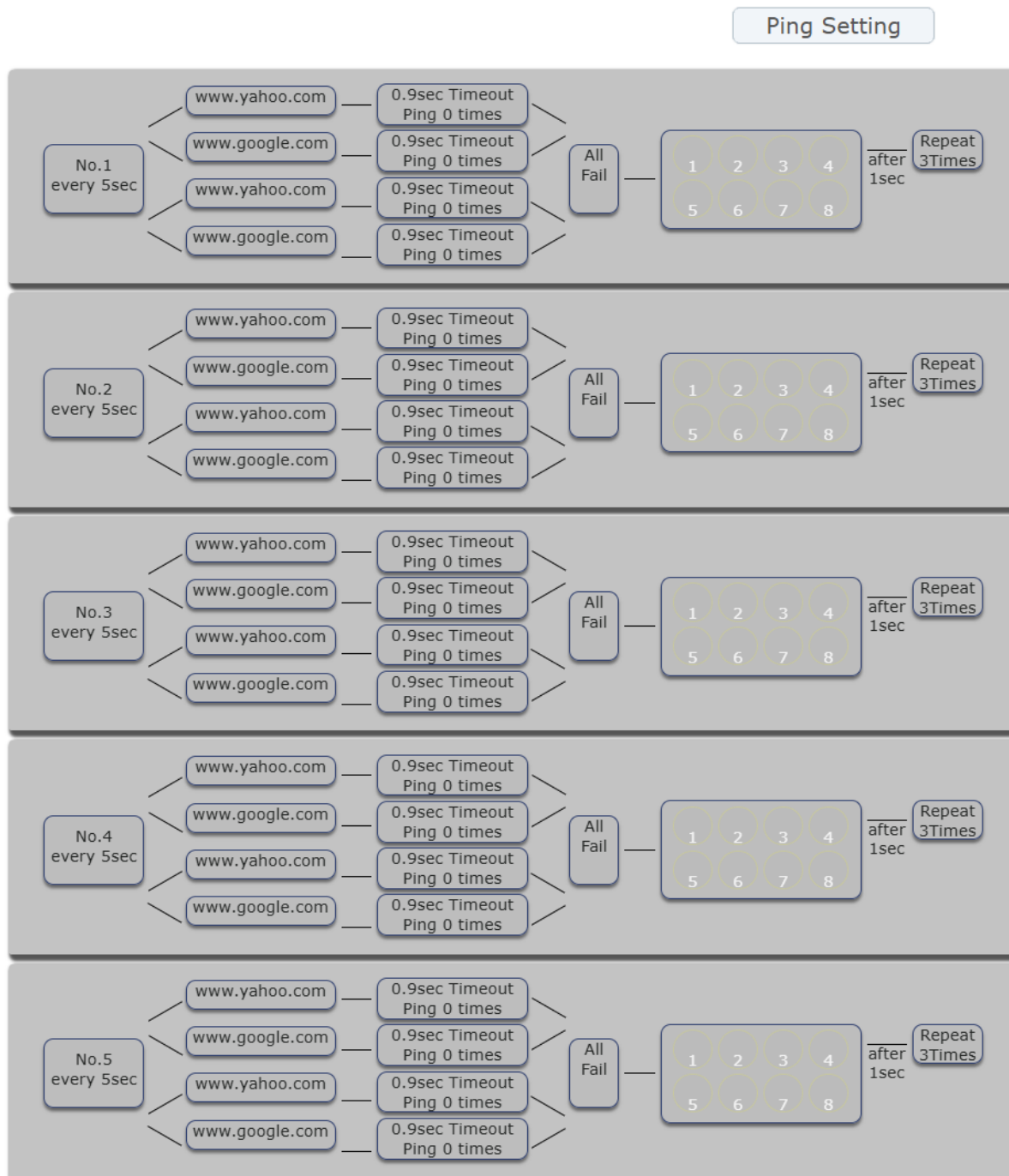
- **Delete - Click “ Delete ” button** to remove a rule from the list .

4.3.3 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 8 rules for Ping.

- **Ping List Page :**

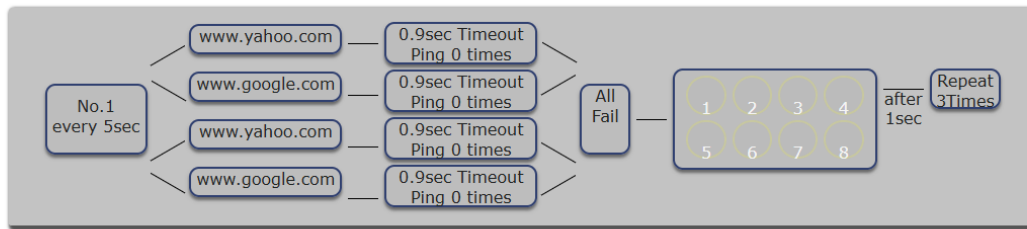


- Ping Setting Page :

[Ping List](#)

Global Ping Base Setting			
Ping Interval:	5 Sec.	Response Time Out:	900 ms.
Ping After Action Delay	1 Sec.	Action Max repeat Times:	3 (0=non stop)
Save & Apply			

Logic Mode: ☐ Single ☐ OR ☒ And			
IP & Host Name	Failed times	Repeat	
www.yahoo.com Check	00	Stop	Rule No1
www.google.com Check			
www.yahoo.com Check			
www.google.com Check			
Multi Control linkage 1 Action ☐			
Ping failure action ☐			
Save & Apply Delete			



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.

[Ping List](#)

Global Ping Base Setting			
Ping Interval:	5 Sec.	Response Time Out:	900 ms.
Ping After Action Delay	1 Sec.	Action Max repeat Times:	3 (0=non stop)
Save & Apply			

Logic Mode: ☐ Single ☐ OR ☒ And			
IP & Host Name	Failed times	Repeat	
www.yahoo.com Check	00	Stop	Rule No1
www.google.com Check			
www.yahoo.com Check			
www.google.com Check			
Multi Control linkage 1 Action ☐			
Ping failure action ☐			
Save & Apply Delete			

2. Ping Set:

[Ping List](#)

Global Ping Base Setting			
Ping Interval:	5 Sec.	Response Time Out:	900 ms.
Ping After Action Delay	1 Sec.	Action Max repeat Times:	3 (0=non stop)

[Save & Apply](#)

- Ping Interval : The number of seconds (Sec., 1~9999) between each ping .
- Response Time out : The number of milliseconds (ms. ,1~9999) 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: Setup the times of Action after Ping Failure.
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. Ping logic :

The setting here is for each rule.

Logic Mode: ☐ Single ☐ OR ☒ And

IP & Host Name	Failed times	Repeat
www.yahoo.com Check	00	Stop
www.google.com Check		
www.yahoo.com Check		
www.google.com Check		

[Rule No1](#)

Multi Control linkage Action ☐

Ping failure action ☐

[Save & Apply](#) [Delete](#)

➤ Ping logic:

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 4 IP Host
- And : Execute Action by both IP Host failure as setting 4 IP Host

Single : ATS 9820 PRO will Ping one IP address. As the IP fail times reach to the setting times. Action (ON/OFF/RESET) will be activated.

OR : ATS 9820 PRO will Ping 4 IP address. Either one IP fail times reach to the setting times.
Action (ON/OFF/RESET) will be activated.

And : ATS 9820 PRO will Ping 4 IP address. Both IP fail reach to the setting times.
Action (ON/OFF/RESET) will be activated.

Logic Mode: ☐ Single ☐ OR ☒ And

IP & Host Name	Failed times	Repeat
www.yahoo.com	00	Stop
www.google.com		
www.yahoo.com		
www.google.com		

Action ☐

Save Delete

- 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” bottom to check the address valid or not

- Failed times : Setup the times as get ping failure for ATS 9820 PRO to execute the setup ON/OFF / Reset action of setting. ping one time and (range 00~99)
- 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 “ Save “ button to confirm the setting.

Multi Control linkage 1 Action ☐

Ping failure action ☒

power1 ☒ OFF ON OFF CYCLE

power2 ☐ power3 ☐ power4 ☐

Save & Apply Delete

- Multi Control linkage: Link with your Multi Control group (1~8) setting and sync the PING setting. Click the location icon to enable the function. (please refer to 4.3.5)

- Action :

When the number of Ping Failures times have been reached. The device can be set to “ ON , OFF or Reset ” function.

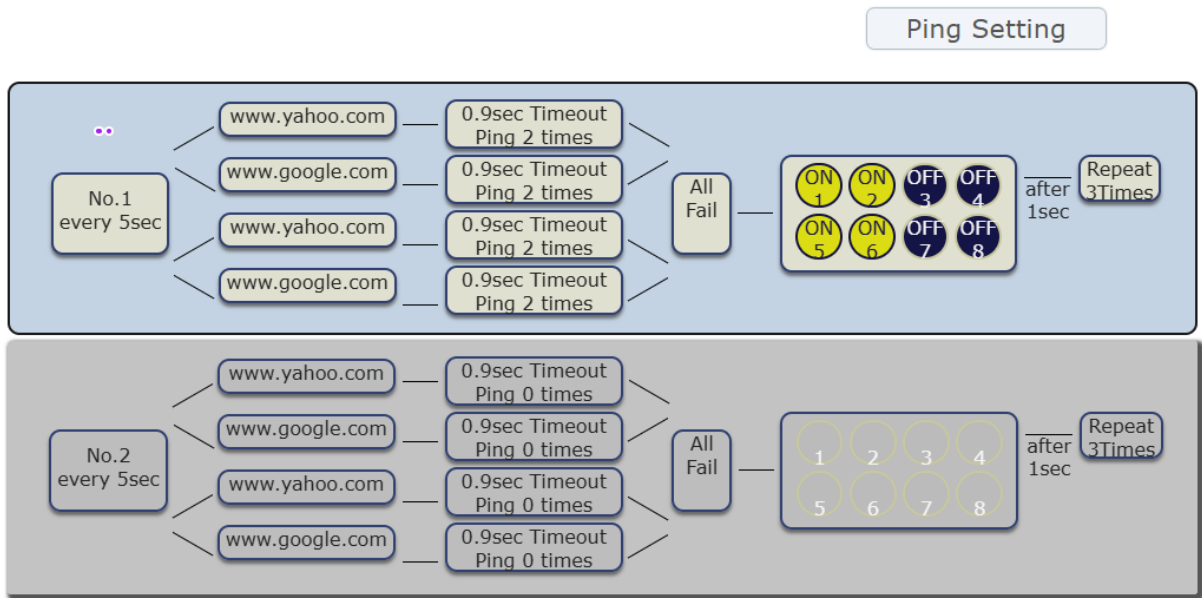
Reset: Can set up the time gap from OFF to ON. The “ Sec ” section is for action as Reset only.

- ON
- OFF
- Cycle: It means outlets turn OFF to ON

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



4.3.4 QR code

The QR code function operates by using the QR code icon within the device to perform I/O actions, linking to execute actions on scanner ATS 9820 PRO through scanning.

Port1 ON	Counter	Port2 ON
	0	
Port3 ON		Port4 ON
		
Port5 ON		Port6 ON
		
Port7 ON		Port8 ON
		

USB Scanner

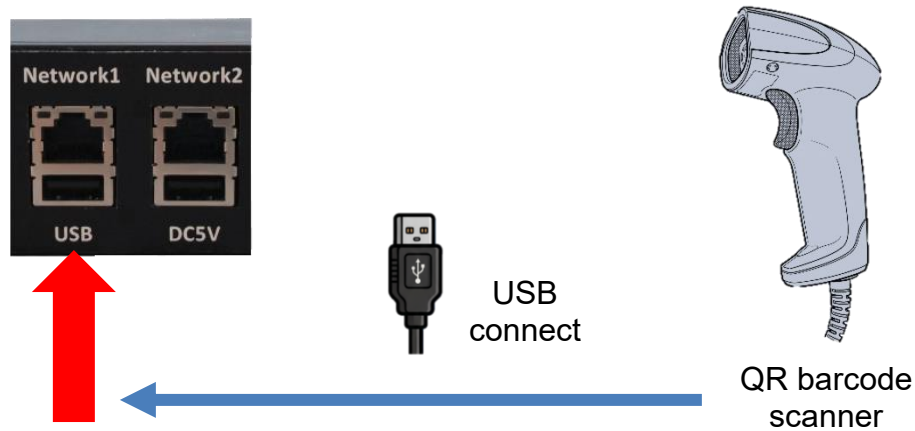
Statusdisconnect

Clear

What you need to prepare?

1. A network cable, recommend to use the “thin” cable.(Depend on your install environment)
2. A QR Barcode Scanner for PC (USB)

Connect to your ATS 9820 PRO, and plug your QR Barcode Scanner as the red arrow shown.

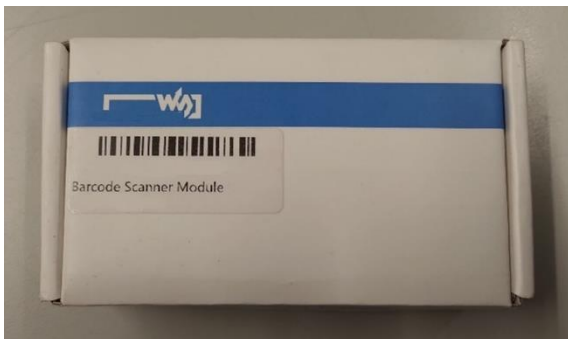


Except QR code, general code scanning can also be applied to the ATS 9820 PRO, but you must first input the settings on the code scanning interface in order to control IO.

Every time you scan the QR code or other code, the “Counter” will count how many you scan it, you can reset to zero by click the apply.

For example:

This is the box with the code and barcode.



When you scan the barcode in the box, you can see the code in the webpage, it shows the number as same as the scanner bar shown. But it won't execute the device operating, you must input the code from the ATS 9820 PRO's manual provide, you can see one of the code in the on/off picture below.

Port1 ON	Counter	Port2 OFF
	3	
Port3 ON	Port4 ON	
		

USB Scanner

Statusconnect

Clear

T-20170822002-001

Scanning on and off QR code will trigger the IO control, the QR code and words will change. and will show their command code below.

* The QR code and on/off words will change it's image **in 5 seconds** for each scan.



For example:

I/O control On code:

Port1 OFF 	Counter 1	Port2 OFF 
Port3 ON 		Port4 ON 

USB Scanner

Status

connect

Clear

cmd=setpower+p61=1

I/O control Off code:

Port1 ON 	Counter 2	Port2 OFF 
Port3 ON 		Port4 ON 

USB Scanner

Status

connect

Clear

cmd=setpower+p61=0

4.3.5 Multi Control

This function provide the user can control other IP Power device in remote.
It's available for LAN and CNT(WAN) control

Lan:

Power Control

Control

Scheduler

Ping

Qrcode

Multi Control

Dry Contact

Network

System

Application

Logout

LAN CNT

Search

Device Group1

+

+

+

+

CNT:

Power Control

Control

Scheduler

Ping

Qrcode

Multi Control

Dry Contact

Network

System

Application

Logout

LAN CNT

Search

Device Group1

+

+

+

+

Settings: To start setting the “Rule”, click an icon of “+” icon.

LAN CNT

Rule1

+

+

+

+

+

Rule 1 Device 0

Name:

IP Address:

User:

Password:

Power Action

Outlet1

Outlet2

Outlet3

Outlet4

Outlet5

Outlet6

Outlet7

Outlet8

Save & Apply Delete

➤ Rule:

Device: Maximum set 4 rules.

Name: You can name the device for your purpose, Ex: Test 1, Room 1, Office 1

IP Address(In Lan mode): You can type the IP address manually or click the search bottom, the device will automatically find the IP power in the same network regiment.

In LAN mode search:

IP Address:		Search
-------------	----------------------	---------------------------------------

After click the search, you can choose the device you want to configure.

Address:	00:32:58:f0:00:88 (10.33.122.19) 9658	Search
User:	00:32:58:fd:00:0f (10.33.122.23) 9658	

In CNT(WAN) mode search:

MAC: In CNT mode, we find the device through "MAC", each device mac is different.

There are two way to search the device, one is "Local Search", the other is "IPService Search".

Local Search:

	Local Search	
MAC:		Search

IPService Search: (To find other device in "IPService search", these device must enable the IP service.)

	IPService Search	
	IPPower	Search
MAC:		

User: The user name of the device you setting.

Password: The password of the device you setting.

Power Action:

To setting other IP Power device's outlet, click any outlet any setting the action(on, off, cycle), the number of outlet settings based on your model setting.

Example: ATS 9820 PRO(8 ports available), IP9658 (4 ports available)

Power Action

Outlet1	Outlet2	Outlet3	Outlet4
Outlet5	Outlet6	Outlet7	Outlet8

[Save & Apply](#) [Delete](#)

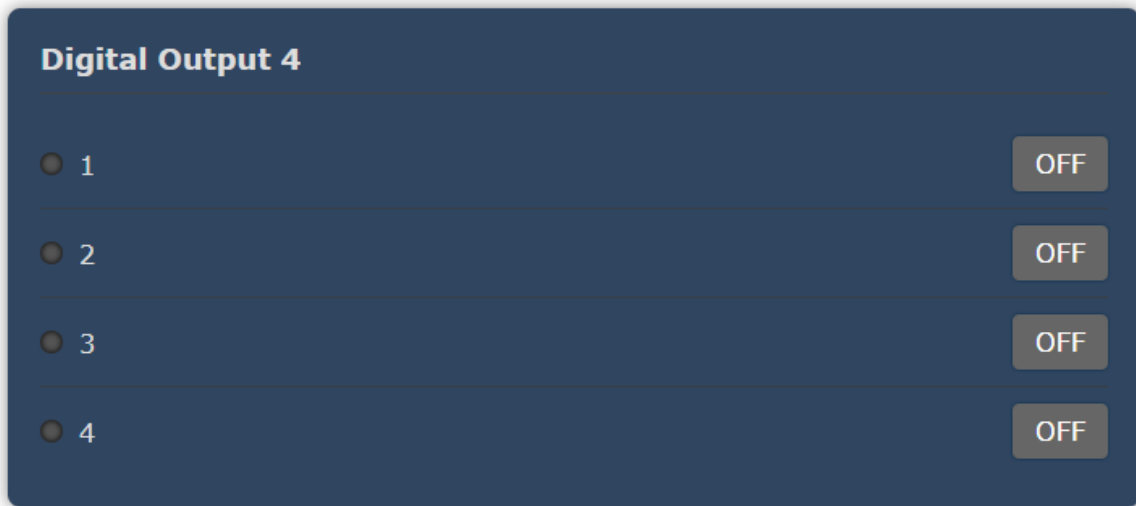
Power Action

Outlet1 ON ON OFF CYCLE	Outlet2 OFF	Outlet3 CYCLE 1 sec. ON	Outlet4 OFF
Outlet5	Outlet6	Outlet7	Outlet8

[Save & Apply](#) [Delete](#)

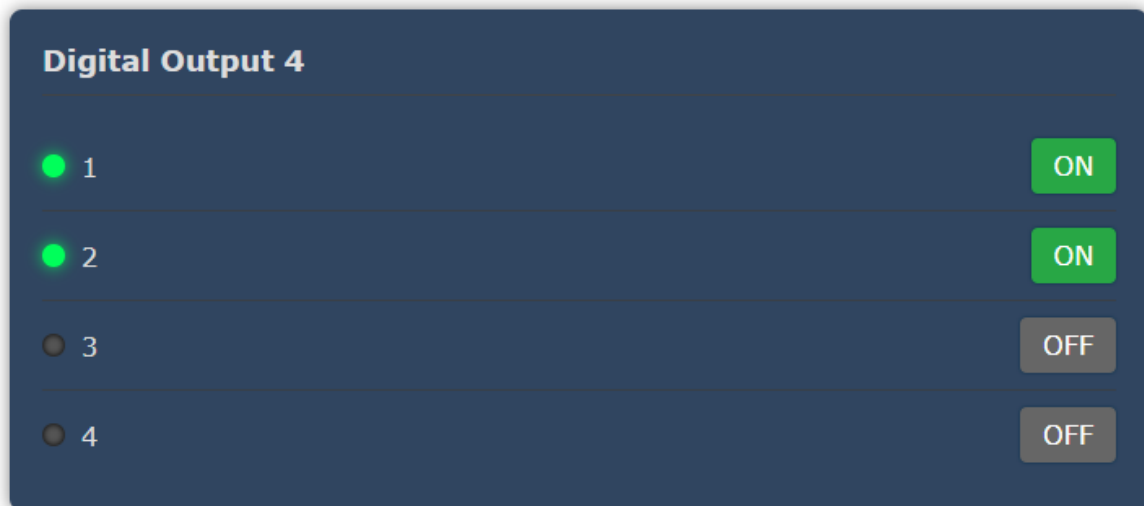
4.3.6 Dry Contact

This function allows user to control the DO on/off directly.

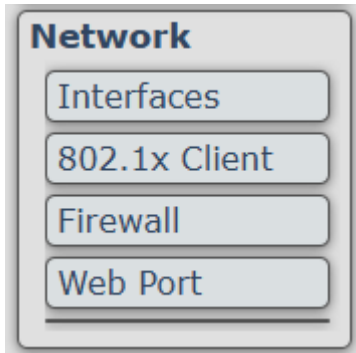


For example:

Choose the DO 1 and DO2 to turn on, click the “ off ” icon, it will activate turn on as green color. If you click again, it will turn off as grey color.



4.4 Network



LAN Network Settings

The network status is connected by ether cable with RJ45 connector. There are **3** ways to connect the network : By DHCP Client, DHCPv6 Client and Static address.

Protocol	DHCP client
Device	DHCP client
Bring up on boot	☐

4.4.1 Interfaces

The interface shows the basic information of device's network, to change the setting, click the “edit” bottom.

interface

lan(NET1) br-lan	Protocol: Static address RX: 3.08 MB (23947 Pkts.) TX: 7.82 MB (11089 Pkts.) Uptime: 0h 50m 22s MAC: 00:76:A8:00:02:A8 IPv4: 10.33.122.149/24 IPv6: fd88:86bb:2d95::1/64 Gateway: 10.33.122.1	Edit
wan(NET2) eth0.2	Protocol: DHCP client RX: 0 B (0 Pkts.) TX: 362.91 KB (1076 Pkts.) MAC: 00:76:A8:00:02:AA IPv4: N/A IPv6: fe80::276:a8ff:fe00:2aa/ffff:ffff:ffff:ffff:: Gateway: N/A	Edit Delete

Add new interface...

Save & Apply

Save

Reset

A. Static Mode (fixed IP)

Setup IP address, DNS and Port manually. This allows the ATS 9820 PRO 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).

Protocol: Static address

Interfaces >> lan

General Settings

Status

Device: br-lan
Uptime: 1d 22h 28m 29s
MAC: 00:76:56:00:43:21
RX: 154.26 MB (985318 Pkts.)
TX: 16.25 MB (90740 Pkts.)
IPv4: 10.33.122.43/24

Protocol: Static address

Device: br-lan

Bring up on boot: ☒

IPv4 address:

IPv4 netmask: unspecified

IPv4 gateway: 10.33.122.1 (lan)

IPv4 broadcast:

IPv6 address: Add IPv6 address...

IPv6 gateway:

IPv6 routed prefix:

Public prefix routed to this device for distribution to clients.

Use custom DNS servers:

Dismiss Save

B. DHCP Mode

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

This allows the ATS 9820 PRO 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. ATS 9820 PRO will remember last IP of ATS 9820 PRO assigned by user's router in "Last DHCP state" for information

When you switch the protocol to "DHCP Client", it will appears " Really switch protocol? " line, remember to click it.

Interfaces >> lan

Protocol: DHCPv6 client

General Settings

Status

Device: br-lan
Uptime: 1d 22h 33m 5s
MAC: 00:76:56:00:43:21
RX: 154.66 MB (987934 Pkts.)
TX: 16.54 MB (91582 Pkts.)
IPv4: 10.33.122.43/24

Protocol: DHCP client

Really switch protocol? ☒

Device: br-lan

Bring up on boot ☒

Request IPv6-address: try

Request IPv6-prefix of length: Automatic

Dismiss Save

After click the "Switch protocol", setting screen will show the new settings, remember to click save after you complete your settings.

Interfaces >> lan

Protocol: DHCP client

General Settings

Status

Device: br-lan
Uptime: 1d 22h 33m 35s
MAC: 00:76:56:00:43:21
RX: 154.71 MB (988207 Pkts.)
TX: 16.59 MB (91695 Pkts.)
IPv4: 10.33.122.43/24

Protocol: DHCP client

Really switch protocol? ☒

Device: br-lan

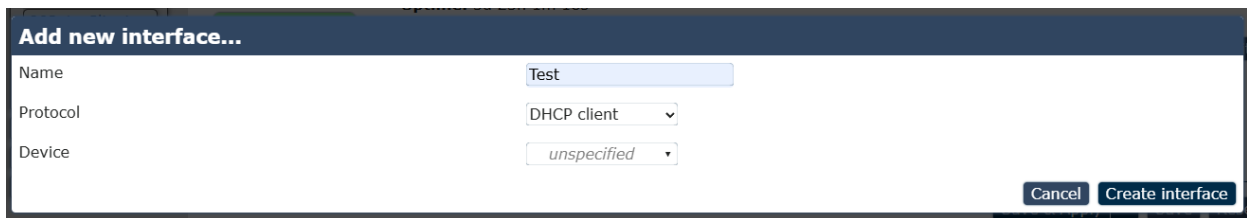
Bring up on boot ☒

Hostname to send when requesting DHCP: Send the hostname of this device

Dismiss Save

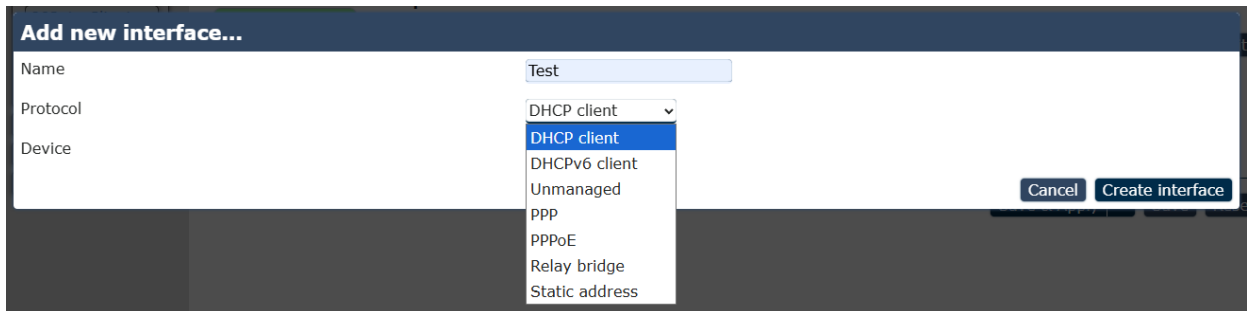
C. Add new interface:

When you click “Add new interface”, the setting screen will appear.



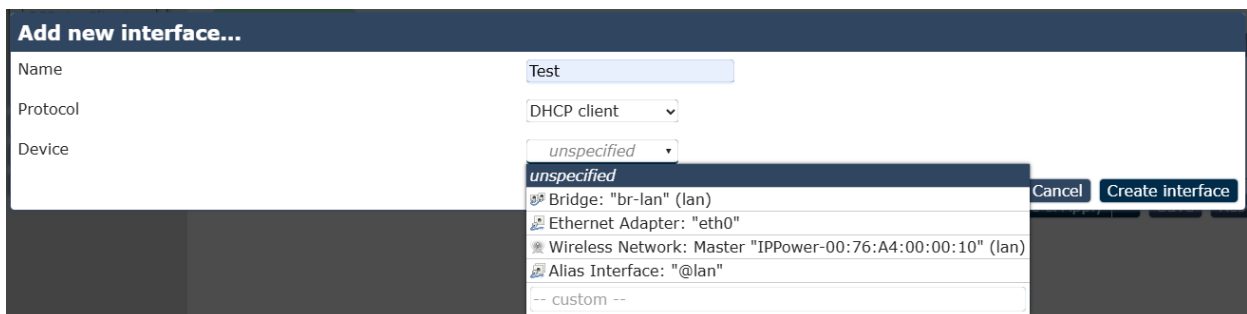
The screenshot shows the 'Add new interface...' configuration window. The 'Name' field is set to 'Test'. The 'Protocol' dropdown is set to 'DHCP client'. The 'Device' dropdown is set to 'unspecified'. At the bottom right, there are 'Cancel' and 'Create interface' buttons.

Choose the internet protocol you wish to configure.



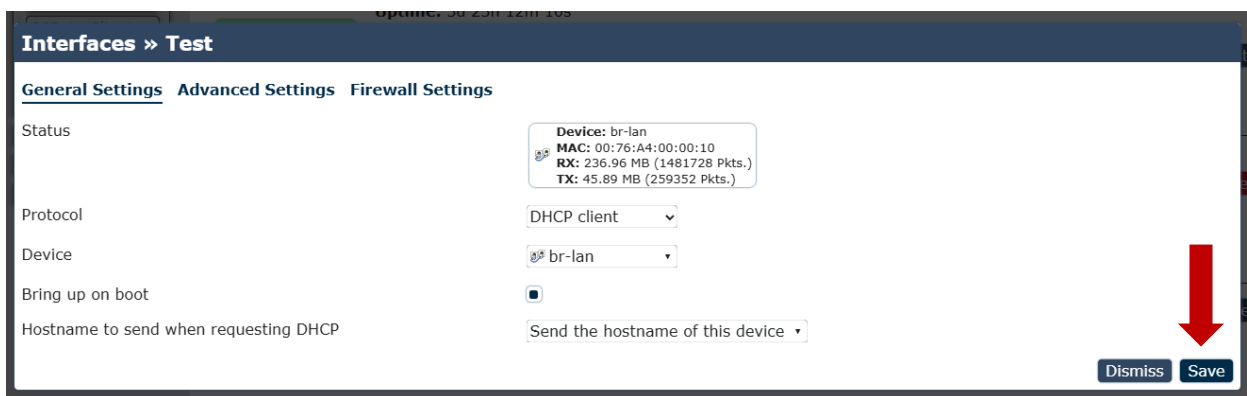
The screenshot shows the 'Add new interface...' configuration window with the 'Protocol' dropdown menu open. The menu lists several options: 'DHCP client' (highlighted), 'DHCPv6 client', 'Unmanaged', 'PPP', 'PPPoE', 'Relay bridge', and 'Static address'. The 'Name' field is 'Test' and the 'Device' field is 'unspecified'. 'Cancel' and 'Create interface' buttons are at the bottom right.

Choose the device(connection) you wish to configure.



The screenshot shows the 'Add new interface...' configuration window with the 'Device' dropdown menu open. The menu lists several options: 'unspecified', 'Bridge: "br-lan" (lan)', 'Ethernet Adapter: "eth0"', 'Wireless Network: Master "IPPower-00:76:A4:00:00:10" (lan)', 'Alias Interface: "@lan"', and '-- custom --'. The 'Name' field is 'Test' and the 'Protocol' field is 'DHCP client'. 'Cancel' and 'Create interface' buttons are at the bottom right.

After you click the “create interface”, it will move to final setting step, there are three settings that the user need to configure, depends on user needs to configure. Make sure to click the “**Save**” bottom after you finish the settings.



The screenshot shows the 'Interfaces >> Test' configuration page. The 'General Settings' tab is active. The 'Status' field shows details for the 'br-lan' device: MAC: 00:76:A4:00:00:10, RX: 236.96 MB (1481728 Pkts.), TX: 45.89 MB (259352 Pkts.). The 'Protocol' dropdown is set to 'DHCP client'. The 'Device' dropdown is set to 'br-lan'. The 'Bring up on boot' checkbox is checked. The 'Hostname to send when requesting DHCP' dropdown is set to 'Send the hostname of this device'. At the bottom right, there are 'Dismiss' and 'Save' buttons. A red arrow points to the 'Save' button.

Advanced Settings:

Interfaces » Test

General Settings **Advanced Settings** Firewall Settings

Force link

☐

Set interface properties regardless of the link carrier (If set, carrier sense events do not invoke hotplug handlers).

Use broadcast flag

☐

Required for certain ISPs, e.g. Charter with DOCSIS 3

Client ID to send when requesting DHCP

Vendor Class to send when requesting DHCP

Use default gateway

☒

If unchecked, no default route is configured

Use DNS servers advertised by peer

☒

If unchecked, the advertised DNS server addresses are ignored

DNS weight

The DNS server entries in the local resolv.conf are primarily sorted by the weight specified here

Use gateway metric

Override IPv4 routing table

Override IPv6 routing table

Delegate IPv6 prefixes

☒

Enable downstream delegation of IPv6 prefixes available on this interface

IPv6 assignment length

Assign a part of given length of every public IPv6-prefix to this interface

IPv6 assignment hint

Assign prefix parts using this hexadecimal subprefix ID for this interface.

IPv6 prefix filter

If set, downstream subnets are only allocated from the given IPv6 prefix classes.

IPv6 suffix

Optional. Allowed values: 'eui64', 'random', fixed value like '::1' or '::1:2'. When IPv6 prefix (like 'a:b:c:d::') is received from a delegating server, use the suffix (like '::1') to form the IPv6 address ('a:b:c:d::1') for the interface.

IPv6 preference

When delegating prefixes to multiple downstreams, interfaces with a higher preference value are considered first when allocating subnets.

Dismiss

Save

Firewall settings:

Interfaces » Test

General Settings **Advanced Settings** **Firewall Settings**

Create / Assign firewall-zone

Choose the firewall zone you want to assign to this interface. Select *unspecified* to remove the interface from the associated zone or fill out the *custom* field to define a new zone and attach the interface to it.

Add new interface...

Dismiss

Save

After you click the “save” bottom, the new interface will appears, but it doesn’t mean the settings is complete, You can see the “Unsaved Changes” in the top right, and the new interface display ”Interface has X pending changes ”, X represent how many settings you set in the interface.

To know how to change the settings, please refer to the **3.2 Change settings(P.12)**

ATS9820PRO 2026/07/16 10:03:39 (UTC) Refreshing Unsaved Changes: 4

Power Control

Network

Interfaces

802.1x Client

Firewall

Web Port

System

Application

Logout

interface

lan Protocol: Static address
Uptime: 3d 23h 25m 37s
MAC: 00:76:A4:00:00:10
RX: 237.82 MB (1488172 Pkts.)
TX: 46.54 MB (261096 Pkts.)
IPv4: 10.33.122.146/24
IPv6: fe80::276:a4ff:fe00:10/64
fd6b:3488:d069::1/64 Edit

Test Protocol: DHCP client
Interface has 4 pending changes Edit Delete

Add new interface...

Save & Apply Save Reset

After you complete setting, you can see your new interface has establish. You can edit the setting or delete at any time.

ATS9820PRO 2026/07/16 10:03:39 (UTC) Refreshing

Power Control

Network

Interfaces

802.1x Client

Firewall

Web Port

System

Application

Logout

interface

lan Protocol: Static address
Uptime: 3d 23h 56m 55s
MAC: 00:76:A4:00:00:10
RX: 239.73 MB (1501881 Pkts.)
TX: 48.01 MB (264283 Pkts.)
IPv4: 10.33.122.146/24
IPv6: fe80::276:a4ff:fe00:10/64
fd6b:3488:d069::1/64 Edit

Test Protocol: DHCP client
Interface has 0 pending changes Edit Delete

Add new interface...

Save & Apply Save Reset

4.4.2 802.1X Client

To configure IEEE 802.1X wired authentication, you may need to edit your interface protocol as DHCP client here.

802.1x Client

Configure IEEE 802.1x wired authentication, you may need to edit your interface protocol as *DHCP* client here

Enable	☐
Username	
Password	
Interfaces	br-lan
EAP	MD5

Enable: If you want to enable it, click the icon, if don't, do not click it.

Username: Edit your username

Password: Edit your password

Interfaces: currently only provides "br-lan"

EAP: MD5, MSCHPV2

After you finish the setting, remember to click the "save" to save it.

4.4.3 Firewall

The firewall creates zones over your network interfaces to control network traffic flow.

General Settings

Firewall - Zone Settings

The firewall creates zones over your network interfaces to control network traffic flow.

General Settings

Enable SYN-flood protection ☒

Drop invalid packets ☐

Input

Output

Forward

Routing/NAT Offloading

Experimental feature. Not fully compatible with QoS/SQM.

Software flow offloading ☐

Software based offloading for routing/NAT

Zones

Zone ⇒ Forwardings	Input	Output	Forward	Masquerading	
lan ⇒ wan	accept	accept	accept	☐	Edit Delete
wan ⇒ REJECT	accept	accept	accept	☒	Edit Delete

1. General Settings:

- (1) Enable SYN-flood protection: Activate the SYN-Flood protection.
- (2) Drop invalid packets: Enable or Disable
- (3) Input: Accept, reject or drop
- (4) Output: Accept, reject or drop
- (5) Forward: Accept, reject or drop

2. Routing / NAT Offloading: (Working in progress)

- Software flow offloading: Software based offloading for routing/NAT

Routing/NAT Offloading

Experimental feature. Not fully compatible with QoS/SQM.

Software flow offloading ☐

Software based offloading for routing/NAT

Hardware flow offloading: The function appears after the user enable the "Software flow offloading".

Routing/NAT Offloading

Experimental feature. Not fully compatible with QoS/SQM.

Software flow offloading

☒

Software based offloading for routing/NAT

Hardware flow offloading

☐

Requires hardware NAT support

3. Zones

Zones

Zone ⇒ Forwardings	Input	Output	Forward	Masquerading	
lan ⇒ wan	accept	accept	accept	☐	Edit Delete
wan ⇒ REJECT	accept	accept	accept	☒	Edit Delete
Add					
Save & Apply Save Reset					

Edit or Add: When you "add" your zones or need "edit" the zones, the following settings will appears:

(1) General settings (2) Advanced Settings (3) Conntrack Settings

(1) General settings:

Firewall - Zone Settings

General Settings Advanced Settings Conntrack Settings

This section defines common properties of "lan". The *input* and *output* options set the default policies for traffic entering and leaving this zone while the *forward* option describes the policy for forwarded traffic between different networks within the zone. *Covered networks* specifies which available networks are members of this zone.

Name	lan
Input	accept
Output	accept
Forward	accept
Masquerading	☐
MSS clamping	☐
Covered networks	lan: 80

The options below control the forwarding policies between this zone (lan) and other zones. *Destination zones* cover forwarded traffic **originating from lan**. *Source zones* match forwarded traffic from other zones **targeted at lan**. The forwarding rule is *unidirectional*, e.g. a forward from lan to wan does *not* imply a permission to forward from wan to lan as well.

Allow forward to <i>destination zones</i> :	wan wan: 80
Allow forward from <i>source zones</i> :	unspecified

[Dismiss](#) [Save](#)

(2) Advance settings

Firewall - Zone Settings

General Settings Advanced Settings Contrack Settings

The options below control the forwarding policies between this zone (lan) and other zones. *Destination zones* cover forwarded traffic **originating from lan**. *Source zones* match forwarded traffic from other zones **targeted at lan**. The forwarding rule is *unidirectional*, e.g. a forward from lan to wan does *not* imply a permission to forward from wan to lan as well.

Covered devices	unspecified	Use this option to classify zone traffic by raw, non-uci managed network devices.
Covered subnets	+	Use this option to classify zone traffic by source or destination subnet instead of networks or devices.
IPv6 Masquerading	☐	Enable network address and port translation IPv6 (NAT6 or NAPT6) for outbound traffic on this zone.
Restrict to address family	IPv4 and IPv6	
Restrict Masquerading to given source subnets	0.0.0.0/0 +	
Restrict Masquerading to given destination subnets	0.0.0.0/0 +	
Enable logging on this zone	☐	

Dismiss Save

(3) Contrack Settings

Firewall - Zone Settings

General Settings Advanced Settings Contrack Settings

Allow "invalid" traffic	☐	Do not install extra rules to reject forwarded traffic with contrack state <i>invalid</i> . This may be required for complex asymmetric route setups.
Automatic helper assignment	☒	Automatically assign contrack helpers based on traffic protocol and port

Dismiss Save

4.4.4 Webport

A lightweight single-threaded HTTP(S) server

General Settings:

Port

port setting

MAIN

General Settings

HTTP listeners (address:port)

0.0.0.0:80	-
:::80	-
	+

Bind to specific interface:port (by specifying interface address)

HTTPS listener (address:port)

0.0.0.0:443	-
:::443	-
	+

Bind to specific interface:port (by specifying interface address)

Redirect all HTTP to HTTPS

☐

HTTPS Certificate (DER or PEM format)

 /etc/uhttpd.crt (1.31 KB)

HTTPS Private Key (DER or PEM format)

 /etc/uhttpd.key (1.70 KB)

Remove old certificate and key

Remove old certificate and key

generate a new self-signed certificate using the configuration shown below.

Remove configuration for certificate and key

Remove configuration for certificate and key

This permanently deletes the cert, key, and configuration to use same.

Self-signed Certificate Parameters

Valid for # of Days

Length of key in bits

Server Hostname

a.k.a CommonName

Organization

If empty, a random/unique value is used in cert generation

Location

State

Country

Save & Apply

Save

Reset

For example:

Port

port setting

MAIN

General Settings

HTTP listeners (address:port)

0.0.0.0:80 (1)

:::80 (2)

+ (3)

Bind to specific interface:port (by specifying interface address)

HTTPS listener (address:port)

0.0.0.0:443 (1)

:::443 (2)

+ (3)

Bind to specific interface:port (by specifying interface address)

Redirect all HTTP to HTTPS

☐

Device's IP: 0.0.0.0, (ex: 192.168.1.xx or 10.33.122.xx)

port: 80(HTTP). 443(HTTPS) (the ports number depends on the router setting)

1. HTTP listeners (address: port): Bind to specific interface:port by specifying interface address.

(1) Port section: "0.0.0.0" is your IP device, 80 is the port you type

If fill 0.0.0.0 here, ATS 9820 PRO recognize the IP as the device IP address

For example: if the IP address of the ATS 9820 PRO is 192.168.1.168:80

User can fill: 0.0.0.0:80 which also mean 192.168.1.168:80

User can also fill 192.168.1.168:80 here.

(2) This section shows the format of IPV6, as the (1) shows how IP address works, user have to follow the format to type new IP address like: :::80 or :::443 ...etc

(3) Type new port : Add new port for IPV4 or IPV6 section, then click the **dark blue "+"** bottom, and click save & apply, settings complete.

2. HTTPS listeners (address: port): Bind to specific interface:port(by specifying interface address. Same procedure as "1. HTTP listeners"

3. Redirect all HTTP to HTTPS: User can enable this section and which will Direct HTTPS only, and disable HTTP.

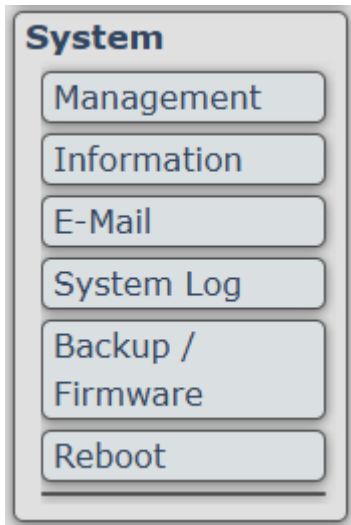
4. HTTPS Certificate (DER or PEM format): Upload certificate Der or PEM file.

5. HTTPS Private Key (DER or PEM format): Upload Private key DER or PEM file.

6. Remove old certificate and key: Generate a new self-signed certificate using the configuration shown below.

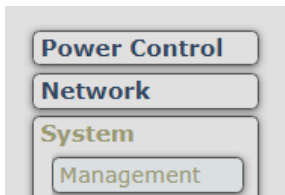
7. Remove configuration for certificate and key: This permanently deletes the cert, key, and configuration to use same.

4.5 System



4.5.1 Management

In this section there are 6 settings: System, Password, SSH Access, SSH-Keys, HTTP(S) Access, ACL settings



[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

System:

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

[General Settings](#) [Time Synchronization](#) [Language](#)

Local Time	2023-06-19 10:59:08	Sync with browser	Sync with NTP-Server
	2023-06-19 10:59:01	Set time manual	
Timezone	Asia/Taipei		

[Save & Apply](#) [Save](#) [Reset](#)

(1) General setting:

1-1 Local Time: Sync the local time through browser, NTP-server or manual setting.

1-2 Timezone: Change your timezone setting.

(2) Time Synchronization:

Enable NTP client and DHCP function, and set your NTP server candidate.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

[General Settings](#) [Time Synchronization](#) [Language](#)

Enable NTP client

☐

Use DHCP advertised servers

☐

NTP server candidates

0.openwrt.pool.ntp.org	-
1.openwrt.pool.ntp.org	-
2.openwrt.pool.ntp.org	-
3.openwrt.pool.ntp.org	-
	+

[Save & Apply](#) [Save](#) [Reset](#)

(3) Language

There are 3 language option of ATS 9820 PRO. The default language is English. The other two languages are “Chinese(Simplified)” and “Taiwanese(Traditional Chinese)”.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Time & Language

Here you can configure the basic aspects of your device like its Language or the timezone.

[General Settings](#) [Time Synchronization](#) [Language](#)

Language

English ▼
auto
English
简体中文 (Chinese Simplified)
繁體中文 (Chinese Traditional)

[Save & Apply](#) [Save](#) [Reset](#)

System Password:

Change the administrator password for accessing the device.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

Password

Changes the administrator password for accessing the device

Password		*
Confirmation		*

SSH Access:

Dropbear offers SSH network shell access and an integrated SCP server.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

SSH Access

Dropbear offers [SSH](#) network shell access and an integrated [SCP](#) server

Dropbear Instance

Interface	unspecified	Delete
Listen only on the given interface or, if unspecified, on all		
Port	22	
Password authentication	☒	Allow SSH password authentication
Allow root logins with password	☒	Allow the <i>root</i> user to login with password
Gateway Ports	☐	Allow remote hosts to connect to local SSH forwarded ports
Add instance		

SSH-Keys:

Public keys allow for the passwordless SSH logins with a higher security compared to use of plain passwords. In order to upload a new key to the device, paste an OpenSSH compatible public key line or drag a .pub file into the input field.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

SSH-Keys

Public keys allow for the passwordless SSH logins with a higher security compared to the use of plain passwords. In order to upload a new key to the device, paste an OpenSSH compatible public key line or drag a .pub file into the input field.

No public keys present yet.

[Add key](#)

HTTP(S) Access:

uHTTPd offers HTTP or HTTPS network access

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

HTTP(S) Access

uHTTPd offers [HTTP](#) or [HTTPS](#) network access.

Settings

Redirect to HTTPS

☐

Enable automatic redirection of [HTTP](#) requests to [HTTPS](#) port.

[Save & Apply](#) [Save](#) [Reset](#)

ACL Settings:

Manage and create the list of account for different settings and authorized purpose.

[System](#) [Password](#) [SSH Access](#) [SSH-Keys](#) [HTTP\(S\) Access](#) [ACL Settings](#)

LuCI Logins

Login name	Session timeout	Read access	Write access	
root	300s	full	full	Edit Delete
guest	300s	full	denied	Edit Delete
admin	300s	full	full	Edit Delete

[Add](#)

[Save & Apply](#) [Save](#) [Reset](#)

For example:

1. root: Can normally operate all the function
2. guest: The authorized only for read access, can't control the device.
3. admin: For the user who used to operate old CGI http command from other IP Power devices.
The user still can use the other IP Power http command through "admin" user.

4.5.2 Information

User can get the system information here.

Status

System

Hostname	ATS9820
Firmware Version	
Hardware Version	
Hardware Version(H21)	
UBoot Version	4.4.2.1
Web Port	0.0.0.0:80,[::]:80
Local Time	2026-07-31 06:40:37
Uptime	2h 40m 27s
mDNS	ats9820.local, ippowera8.local

Network

IPv4 Upstream	
	Protocol: Static address Address: 10.33.122.149/24 Gateway: 10.33.122.1 DNS 1: 8.8.8.8 DNS 2: 1.1.1.1 Connected: 2h 8m 46s
	 Device: Bridge: "br-lan" MAC address: 00:76:A8:00:02:A8

Active Connections	55 / 8192 (0%)
--------------------	----------------

4.5.3 Email

Email Configuration

The SMTP function offers mail agent to send event notification to mail receiver

Server:	smtp.gmail.com
Form:	aviosys1@gmail.com
To:	aviosys101@gmail.com
Port:	587
tls	☐
Account:	aviosys1
Password:	

[Save & Apply](#) [Verify](#)

➤ Email Setting :

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

- Receive E-mail with IP information & MAC Address as ATS 9820 PRO 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 → Interface → DNS setting

The ATS 9820 PRO allows user to send from public e-mail account , such as@gmail or @hotmail or @yahoo.com

- **Server (SMTP):** This is the mail server of sender
- **From :** Mail sender address to send the E-Mail out. Ex.: ATS_9820_PRO@gmail.com

If user select @gmail or @hotmail account as SMTP Server , ATS 9820 PRO will fill the SSL & Port automatically

- **To :** Mail receiver address to get the E-Mail in. Ex.: 9223@hotmail.com
- **Server :** Please refer to P.65 Server(SMTP)
- **Port :** This is the port of SMTP Server. Most common port to send out e-mail is port 25
- **TLS :** It depends on the inquire of the email server to enable or disable this inquire .As use Gmail account , please enable this function.
- **Account :** Login for the e-mail address . Ex: ATS_9820_PRO@gmail.com
- **Password:** Password for the e-mail address. EX : 12345678
- **Save & Apply:** To store the setting in this section.
- **Verify:** A send e-mail test to make sure the e-mail works.

For example :

Get Email alarm as outlet changed :

User can enable the **Email Alerts** in the advance setting section :

Power Control → Control → Advanced setting

Control

Screen Display Setting

IP Address

Save & Apply

Clear

Outlet Name	power1	power2	power3	power4
Control Button Disable	☐	☐	☐	☐
Power cycle Disable	☐	☐	☐	☐
Email Alerts	☐	☐	☐	☐
 Alert	☐	☐	☐	☐
Current (1~10)Amp	8	8	8	8
Power Cycle Time	60 Seconds	60 Seconds	60 Seconds	60 Seconds

* Can't send to Gmail

Due to the Google update it's policy in recent years, the user have to activate the App password in 2 Step Verification to connect with gmail.

Please refer to the tutorial below:

Aviosys mail setting video tutorial link, start gmail in 0:58:

<https://www.youtube.com/watch?v=xSjtSuQz2Rg>

Move to your (1) Google accounts → (2) login→ (3) manage your google account → (4) Security
→ (5) 2 Step Verification → (6) find App password.

App password will be your setting password for gmail setting, please save your password when it establish.

If you can't find the App password in 2 Step Verification,
click the link below and click → **“Create and manage your app passwords”** :

<https://support.google.com/accounts/answer/185833?hl=zh-Hant>

4.5.4 System Log

In this section, user can get the ATS 9820 PRO system operation information and send the information to assign Server IP address (not support name). **The system information will be deleted after ATS 9820 PRO device power reboot.**

Log:

System log

[Log](#) [Setup](#)

Notice	Info	Warn	Err
IPPower	ALL	Clear	

```
Thu May 14 03:59:30 2026 kern.notice kernel: [ 0.000000] Linux version 5.10.154 (root@jason-VirtualBox) (mipsel-openwrt-
linux-musl-gcc (OpenWrt GCC 11.2.0 r19891+7-dff321191b) 11.2.0, GNU ld (GNU Binutils) 2.37) #0 Thu May 14 03:41:46 2026
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Board has DDR2
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Analog PMU set to hw control
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Digital PMU set to hw control
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] SoC Type: MediaTek MT7688 ver:1 eco:2
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] printk: bootconsole [early0] enabled
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] CPU0 revision is: 00019655 (MIPS 24KEc)
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] MIPS: machine is Aviosys IPPOWER-9050ATS-32M
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Initrd not found or empty - disabling initrd
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Primary instruction cache 64kB, VIPT, 4-way, linesize 32 bytes.
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Primary data cache 32kB, 4-way, PIPT, no aliases, linesize 32
bytes
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Zone ranges:
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Normal [mem 0x0000000000000000-0x000000003fffffff]
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Movable zone start for each node
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Early memory node ranges
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] node 0: [mem 0x0000000000000000-0x000000003fffffff]
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Initmem setup node 0 [mem 0x0000000000000000-0x000000003fffffff]
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] On node 0 totalpages: 16384
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] Normal zone: 144 pages used for memmap
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] Normal zone: 0 pages reserved
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] Normal zone: 16384 pages, LIFO batch:3
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] pcpu-alloc: s0 r0 d32768 u32768 alloc=1*32768
Thu May 14 03:59:30 2026 kern.debug kernel: [ 0.000000] pcpu-alloc: [0] 0
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Built 1 zonelists, mobility grouping on. Total pages: 16240
Thu May 14 03:59:30 2026 kern.notice kernel: [ 0.000000] Kernel command line: console=ttyS0,57600
rootfstype=squashfs,jffs2
Thu May 14 03:59:30 2026 kern.info kernel: [ 0.000000] Dentry cache hash table entries: 8192 (order: 3, 32768 bytes,
linear)
```

Setup:

Setup the IP & port to transfer the log list to external server.

System log

Log Setup

External system log server

External system log server port

External system log server protocol

System log to file

View: **Log**

Log output level

Apply

1. External system log server: Set the IP device that transfer the log list to another server.
2. External system log sever port: Set the port of the external server.
3. External system log server protocol : select UDP or TCP mode

System log to file: link to “**Log**” (Click it, and it will move to Log Record File)

Log Record File

Path: /

File Name	File Type	File Size	Modify Time
log_001_20260106_093122.txt	File	19 KB	Tue Jan 6 08:24:40 2026
log_002_20260106_095828.txt	File	16 KB	Tue Jan 6 09:58:28 2026
log_003_20260107_014636.txt	File	16 KB	Wed Jan 7 01:46:37 2026
log_004_20260106_065549.txt	File	18 KB	Tue Jan 6 08:24:40 2026
log_005_20260106_073558.txt	File	18 KB	Tue Jan 6 08:24:40 2026
log_006_20260106_081105.txt	File	18 KB	Tue Jan 6 08:24:40 2026

```
Mon Jan 5 09:37:24 2026 authpriv info dropbear[1632]: Not backgrounding
Mon Jan 5 09:37:29 2026 kern info kernel [ 69 966522] rt3050-esw 10110000 esw: port 0 link down
Mon Jan 5 09:37:29 2026 daemon notice wpa_supplicant[1765]: Successfully initialized wpa_supplicant
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: bonding
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: 8021q
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: macvlan
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: veth
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: bridge
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: Network device
Mon Jan 5 09:37:30 2026 user notice - Added device handler type: tunnel
Mon Jan 5 09:37:31 2026 user info scanip: ###Start...PID=1908
Mon Jan 5 09:37:32 2026 kern info kernel [ 73 006553] rt3050-esw 10110000 esw: port 0 link up
Mon Jan 5 09:37:32 2026 user info task: ###Start...PID=1960
Mon Jan 5 09:37:35 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/br-lan/address': No such file or directory
Mon Jan 5 09:37:35 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/eth0.2/address': No such file or directory
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: ifconfig: br-lan: error fetching interface information: Device not found
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: killall: /usr/bin/dns-sd: no process killed
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/br-lan/address': No such file or directory
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/eth0.2/address': No such file or directory
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/br-lan/address': No such file or directory
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: cat: can't open '/sys/class/net/eth0.2/address': No such file or directory
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: killall: /usr/bin/dns-sd: no process killed
Mon Jan 5 09:37:36 2026 daemon notice proc: /etc/rc.d/S61mDNSResponder: killall: /usr/bin/dns-sd: no process killed
Mon Jan 5 09:37:37 2026 user info barcode: ###Start...PID=2269
Mon Jan 5 09:37:39 2026 daemon notice proc: /etc/rc.d/S67cni.init: cni is disable
Mon Jan 5 09:37:40 2026 daemon notice proc: /etc/rc.d/S68earthquake.init: earthquake detection is disable
Mon Jan 5 09:37:43 2026 user info gservice: ###Start...PID=2467
```

4. Log output level : select level – Debug , Info , Notice , Warning , Error , Critical , Alert, Emergency

Please click “ Apply ” after you change the settings.

4.5.5 Backup / Flash firmware

Flash Operation:

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

There are three sections: Backup, Restore and Upgrade Firmware

The firmware update function only support in LAN connection.

Before update, please DO READ THE HI-LITE MESSAGE BLOW:

Backup: To download a tar archive of the current configuration files.

Restore(Factory reset): To reset the default setting or restore the configuration files.

Upgrade firmware: Upload and upgrade the latest firmware to replace current firmware.

It takes about 1 minute to upload upgrade flash and be patient please. Caution! A corrupted image will hang up the system. And the update will reset the device setting after its done.

* Please backup your setting if you want to restore it after the updating the firmware.

Flash operations

Actions

Backup

Click "Generate archive" to download a tar archive of the current configuration files.

Download backup

Generate archive

Restore

To restore configuration files, you can upload a previously generated backup archive here. To reset the firmware to its initial state, click "Perform reset" (only possible with squashfs images).

Reset to defaults

Perform reset

Restore backup

Upload archive...

Custom files (certificates, scripts) may remain on the system. To prevent this, perform a factory-reset first.

Upgrade Firmware

Upload a sysupgrade-compatible image here to replace the running firmware.

Image

Flash image...

To update the ATS 9820 PRO, please follow the instruction below to prevent anything happens like **update incomplete** or **hardware disable** which may be caused by wrongdoing of updating:

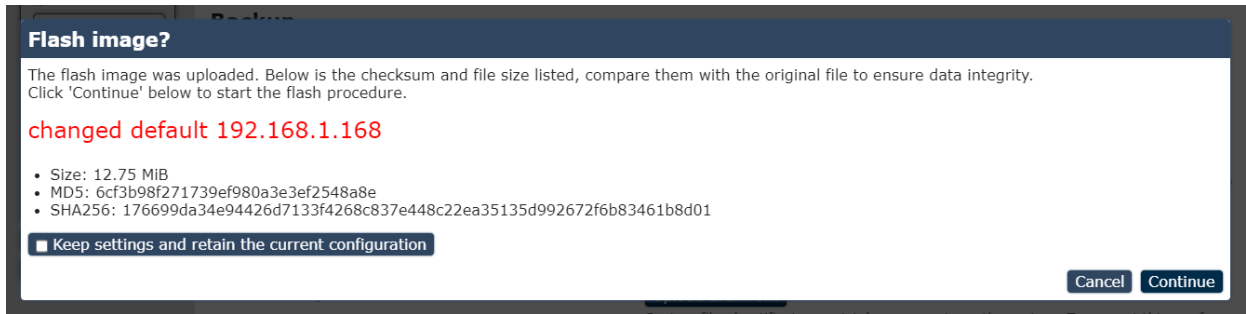
- 1) Turn off all chat programs including (Skype, FB, QQ, AIM, Teams, Line, Yahoo messengeretc.)
- 2) Check to make sure that all devices are turned on safely and powered
- 3) While updating do not turn off the power
- 4) Make sure that the cable is connected firmly
- 5) Do not interrupt the update process, 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) Please change the PORT as 80
- 9) **Reboot and Do the Hardware Reset** (keep pressing RESET button for 7 secs) after update successfully.
- 10) The update will turn back to the default settings, ATS 9820 PRO's devices IP address will turn back to IP: 192.168.1.168. Please open your IPedit and Rescan it to find your device, you can check your device through MAC.
- 11) **Clear the Cookies and Cache from the temporary file of PC and browser** to avoid get the old webpage.

Note: Step 11 is vital procedure, please remember to do this after you update your device!!

Reminder: When you update the firmware, the final procedure screen will display an icon with the

message "**Keep settings and retain the current configuration.**" Please refrain from clicking it if you wish to complete your firmware upgrade.

* If you wish to save the settings to your firmware, click on the "**Keep settings and retain the current configuration**" icon. This action will save your current settings and upgrade your device's firmware.



4.5.6 Reboot

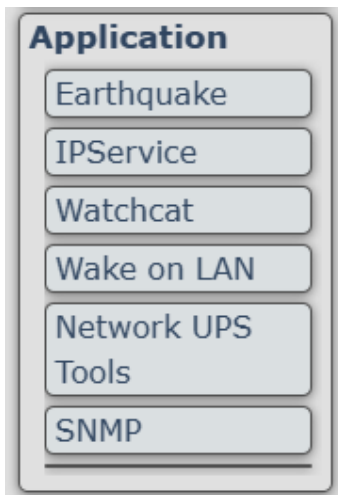
Reboots the operating system of your device.

Reboot

Reboots the operating system of your device

Perform reboot

4.6 Application



4.6.1 Earthquake

When an earthquake is detected, the system automatically executes predefined emergency response strategies—such as shutting down, activating, or rebooting designated power sources—to minimize potential damage. Users can also customize device actions and location-based settings according to their specific environment. It also supports the Earthquake Early Warning (EEW) for power control.

*** The Earthquake Function and Earthquake Early Warning (EEW) are subject to regional availability restrictions.** If you have any questions or require further information about the earthquake-related functions, please contact us.

Before you use this function, please read the Disclaimer below:

Disclaimer:

The earthquake information displayed by this device may be provided by USGS, EMSC, CENC, government agencies, or other third-party data sources. AVIOSYS is responsible only for receiving and displaying such information and does not guarantee its timeliness, completeness, or accuracy. Due to the inherent limitations of current technology in predicting natural disasters, this information must not be relied upon as the sole basis for personal safety or other critical decisions. Users should always refer to official earthquake information and emergency announcements issued by the relevant government authorities.

The first webpage of Earthquake function:

There are three configurable settings in the Earthquake section:

1. Management
2. Simulation
3. Monitor

Management Simulation Monitor

Disclaimer

The earthquake information displayed by this device may be provided by USGS, EMSC, CENC, government agencies, or other third-party data sources. AVIOSYS is responsible only for receiving and displaying such information and does not guarantee its timeliness, completeness, or accuracy. Due to the inherent limitations of current technology in predicting natural disasters, this information must not be relied upon as the sole basis for personal safety or other critical decisions. Users should always refer to official earthquake information and emergency announcements issued by the relevant government authorities.

Enable



Earthquake Alert Area

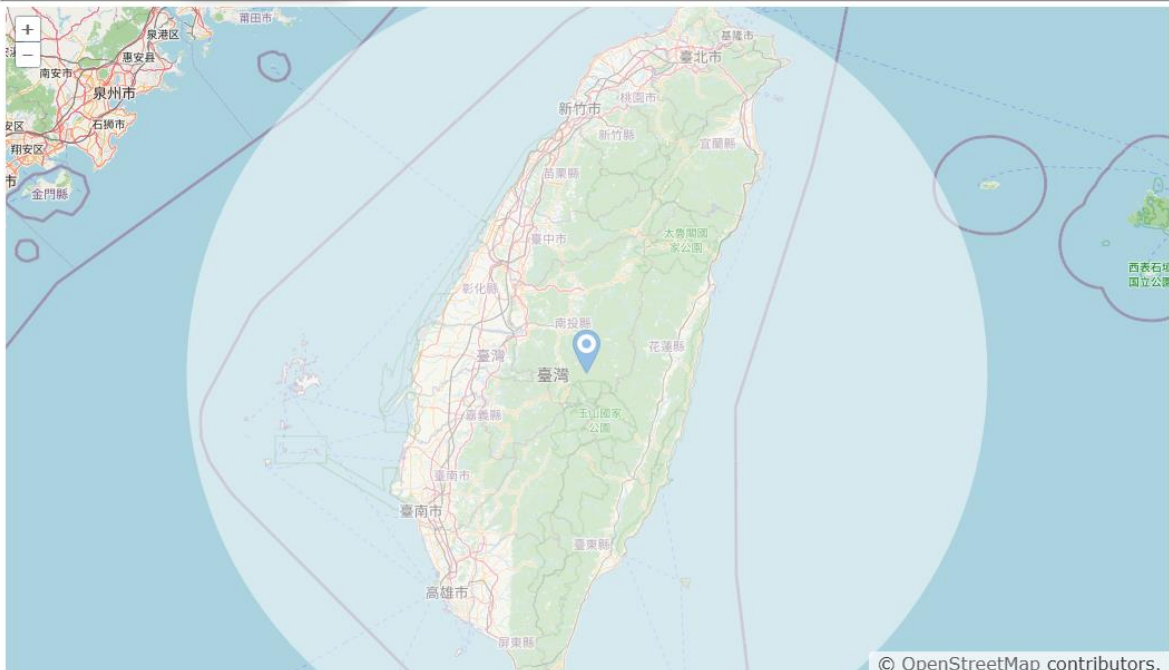
Taiwan

World Map

123.821914, 23.477497

OpenStreetMap

Setting



© OpenStreetMap contributors.

(1) Management:

Management Simulation Monitor

Enable	☐
Earthquake Alert Area	Taiwan

World Map	120.163773, 23.243702
OpenStreetMap	Setting



© OpenStreetMap contributors.

Station Location & Earthquake Alarm Settings	
Longitude:	120.862140
Latitude:	23.751020
Epicentral Distance	200 km
AND	
Magnitude	≥ 4.5
AND	
Intensity	≥ 4級

Deduplicate Settings		
Identified distance for the same earthquake	50	km
Identification time of the same earthquake	300	seconds

Notification & Action Settings	
Beep Alarm	Disable
Email	☐ Confirmation email set up?
Action	☐ Port1 Off Port2 Off Port3 Off Port4 Off None
Multi Control?	☐ Rule1:
Multi Control(CNT)	☐ Rule1:

Advance Settings	
Cancellation Action	☐ Port1 Off Port2 Off Port3 Off Port4 Off None
Multi Control	☐ Rule1:
Multi Control(CNT)	☐ Rule1:

Status

Save & Apply

(1-1) World map

Management Simulation Monitor

Enable	☐
Earthquake Alert Area	Taiwan
World Map 123.331340, 23.238655	
OpenStreetMap	Setting



When you click “settings”, the settings option will expand.

Before:

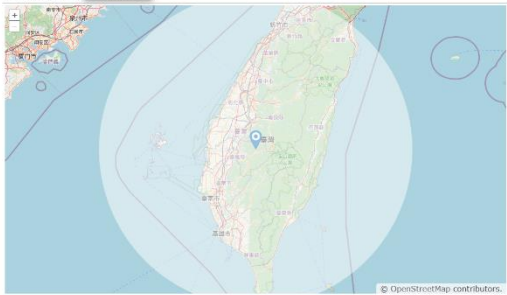
Management Simulation Monitor

Enable ☐

Earthquake Alert Area Taiwan

World Map 123.331340, 23.238655

OpenStreetMap Setting



After:

Management Simulation Monitor

Enable ☐

Earthquake Alert Area Taiwan

World Map 120.163773, 23.243702

OpenStreetMap Setting

Station Location & Earthquake Alarm Settings

Longitude: 120.862140

Latitude: 23.751020

Epicentral Distance km

AND

Magnitude

AND

Intensity

Duplicate Settings

Identified distance for the same earthquake 50 km

Identification time of the same earthquake 300 seconds

Notification & Action Settings

Beep Alarm Disable

Email ☐ Confirmation email sent up

Action ☐ Port1 Off Port2 Off Port3 Off Port4 Off None

Multi Control ☐ Rule1:

Multi Control(CNT) ☐ Rule1:

Advance Settings

Cancellation Action ☐ Port1 Off Port2 Off Port3 Off Port4 Off None

Multi Control ☐ Rule1:

Multi Control(CNT) ☐ Rule1:

Status

Save & Apply

(1-2) Enable

Enable	☐
Earthquake Alert Area	Taiwan

Japan

China

Europe & other regions

Taiwan

USA

PWAVER(Taiwan)

(1-3) Station Location & Earthquake Alarm Settings

Station Location & Earthquake Alarm Settings	
Longitude:	120.7
Latitude:	23.5
Epicentral Distance	200 km
AND	
Magnitude	≥ 4.5
AND	
Intensity	≥ 4级

(1-4) Deduplicate Settings

Deduplicate Settings		
Identified distance for the same earthquake	50	km
Identification time of the same earthquake	300	seconds

(1-5) Notification & Action Settings

Notification & Action Settings	
Beep Alarm	☐ Duration 10 seconds ▼
Email	☐ Confirmation email set up?
Action	☐ Port1 Cycle ▼ Port2 Off ▼ Port3 Off ▼ Port4 Off ▼ 3 seconds On ▼
Multi Control?	☐ Rule1: ▼
Multi Control(CNT)	☐ Rule1: ▼

Action

(1-6) Advance Settings

Advance Settings	
Cancellation Action	☐ Port1 Cycle ▼ Port2 Off ▼ Port3 Off ▼ Port4 Off ▼ 3 seconds On ▼
Multi Control	☐ Rule1: ▼
Multi Control(CNT)	☐ Rule1: ▼

Action

(1-7) Status

Status

Save & Apply

When you click the “Enable” to activate the Earthquake function, the status will display “Connected”

Management Simulation Monitor

Enable	☒
Earthquake Alert Area	USA



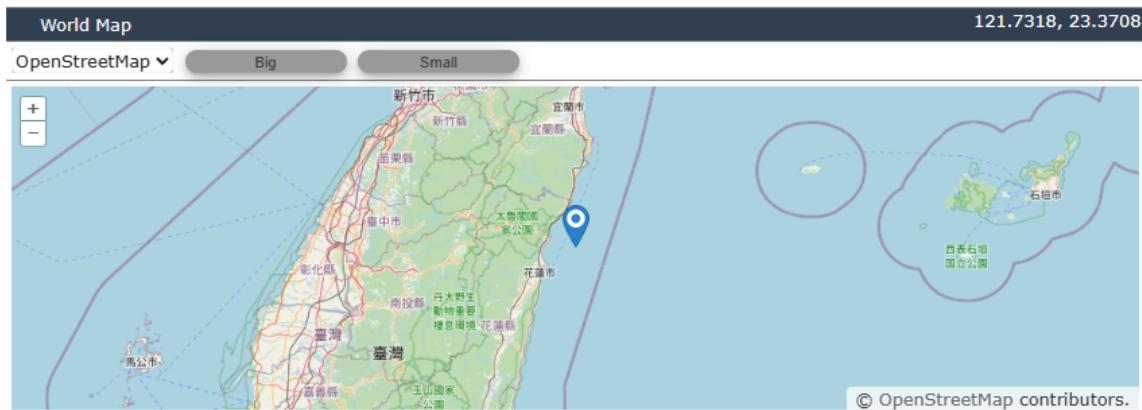
Connected

Save & Apply

(2) Simulation

This function allows users to simulate an earthquake by manually selecting a location. In Event Settings, users can manually configure the earthquake magnitude, event name, location, and other related parameters.

The Earthquake Display settings are based on configurations previously defined in other ATS 9820 PRO functions. To change these settings, please edit them on the corresponding function pages.



Earthquake Alert Area: Taiwan

Event Setting	
Name:	台灣地震模擬
Time:	GetTime + 300 Sec 2025-02-26 08:33:33 Check
Location:	台灣花蓮縣附近海域
Magnitude:	4.9
Maximum Intensity	3級
Depth:	20 km
Longitude:	121.79
Latitude:	24.09
Save Execution	

Earthquake Display	
Epicentral Distance	200km
Magnitude	≥ 4.5
Intensity	≥ 4
Identified distance for the same earthquake	50km
Identification time of the same earthquake	300seconds
Beep Alarm	Disable
Email	Disable
Action	Disable
Multi Control	Disable
Multi Control(CNT)	Disable
Cancellation Action	Disable
Multi Control	Disable
Multi Control(CNT)	Disable

(3) Monitor

Detect the recent earthquake event of Earthquake.

Click the button on the “Enable Alarm Sound” to enable the alarm sound and start earthquake monitoring. To disable it, click the button “Disable Alarm Sound”.

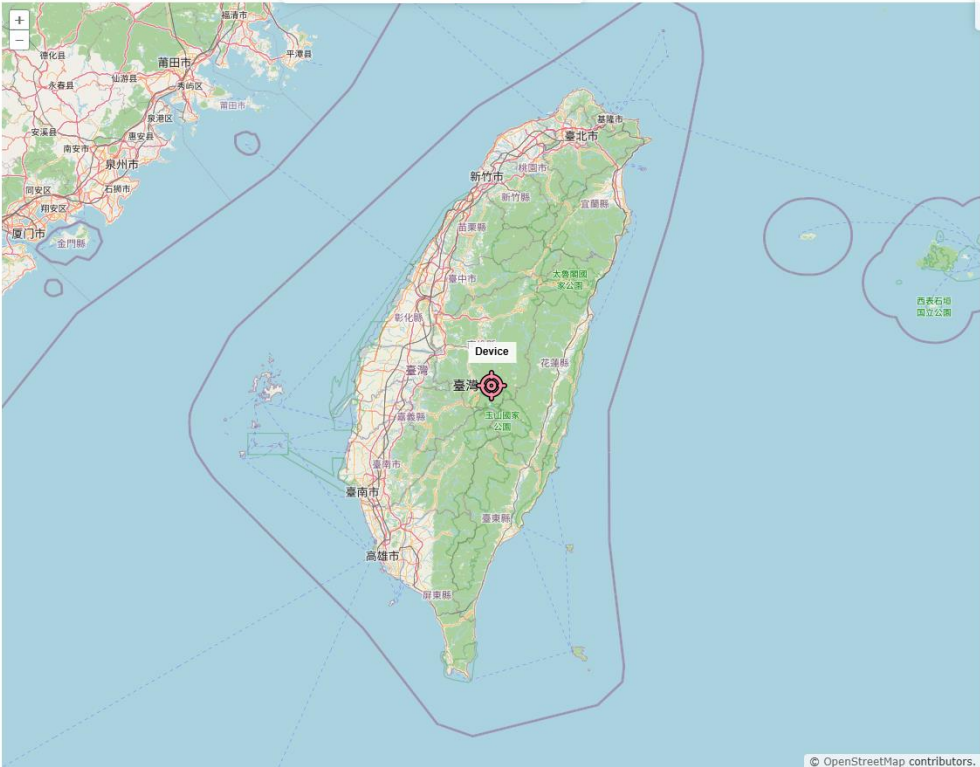
Enable Alarm Sound Stop Replay +

Disable Alarm Sound Stop Replay +

2026/07/31 06:07:25 (UTC)

Management Simulation Monitor

Enable Alarm Sound Stop Replay +



IPPOWER Quake Link

STATUS: normal

Quake Events

4.6.2 IP Service

In this section, user can setup :

- A. Warranty Registration
- B. IP Server setting(Search)
- C. CNT(MQTT) Setting(Remote Control)

**IPPower Warranty Registration(Click)**
Aviosys Inc. - 1-Year Limited Warranty

Unregistered

IP Service Setting (Search)
(⚠) Please change the default administrator password before using IP Service.

Enable☐

IP Service Server

Server1

Device Name:

ATS9820

Country

Country

City

City

Find ATS9820 device on myipedit.com

Save & Apply

CNT(MQTT) Setting (Remote control)

MQTT Service

IPPower

Enable☐

Status

Save & Apply

IP Power Warranty Registration:

Follow the instruction on the webpage and register your ATS 9820 PRO online.

**IPPower Warranty Registration(Click)**
Aviosys Inc. - 1-Year Limited Warranty

Unregistered

MAC Address (Device ID)

00:76:A4:00:02:9C

Automatically detected from your device

Email Address

sample@aviosys.com

Warranty confirmation will be sent to this address

Product Series

e.g. AVIxxxxxxx

The product serial number is located on the bottom of the device.
The label with a number starting with "AVI" is the product serial number.

Register Warranty

If the warranty registration is successful, the screen is shown as below:

**IPPower Warranty Registration(Click)**
Aviosys Inc. – 1-Year Limited Warranty

Status	Active
MAC Address	00:76:A5:00:00:08
E-mail	
Product Series	AVIPF6111
Warranty Start	2026-06-08
Warranty End	2027-06-08
Days Remaining	364 days

A. IP Service Setting (Search)

The IP SERVICE allow ATS 9820 PRO to be accessed easily on the internet by our IP Power Center or IPEDIT. With this feature anyone can find its device with no problems.

IP Service Server: Allows user can find user of ATS 9820 PRO on the internet without having to remember long IP Addresses. Instead user can just remember the name of user device.

IP Service Setting (Search)
(▲) Please change the default administrator password before using IP Service.

Enable

☐

IP Service Server

Server1

Device Name:

ATS9820

Country

Country

City

City

Find ATS9820 device on myipedit.com

Save & Apply

- Enable : Enable or Disable this function by clicking the small box.
- IP Service Server : Custom – the server setting by yourself
Server 1- the server from our company
- Device name, Country & City:

User can search the ATS 9820 PRO 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 #20 for the function of IP Server

IPEdit with DHCP Server

Internet online devices

IP Server : myipedit.com

Device Name : ATS9820

Country :

City :

Connected to

*necessary

Connect

Disconnect

Search

Device	Name	Country	City	IP ddress	Port	Mac Address
 v2.00_2026_...	ATS9820PRO			61.228.153.30	80	0076A80002A8

B. CNT (MQTT) Setting (Remote control)

For developing only. ATS 9820 PRO supports MQTT function, it provide the remote control connection by using IP Power app.

CNT(MQTT) Setting (Remote control)	
MQTT Service	IPPower 
Enable	☐
Status	
Save & Apply	

In MQTT service, you can also add your own Custom MQTT or AWS.
Please contact with your distributor for the details if you would like to develop own system.

CNT(MQTT) Setting (Remote control)	
MQTT Service	IPPower 
Enable	IPPower
Status	Custom
	AWS
Save & Apply	

4.6.3 Watchcat

Watchcat allows to configure a periodic reboot and/or when internet connection has been lost for a certain period of time.

(1) Operating mode: Each mode show different setting options.

1. Ping Reboot:

Reboot on internet connection mode: Detect the lost internet based on the Ping host and the period you setting.

For example, when you set the Ping host :192.168.1.128, and the period set on 1d=1 day or 16 h= 16 hours. If the detect no response, it will reboot the device automatically.

Watchcat

Here you can set up several checks and actions to take in the event that a host becomes unreachable. Click the **Add** button at the bottom to set up more than one action.

Watchcat

These rules will govern how this device reacts to network events.

General Settings

Mode	Ping Reboot ▼ Ping Reboot: Reboot this device if a ping to a specified host fails for a specified duration of time. Periodic Reboot: Reboot this device after a specified interval of time. Restart Interface: Restart a network interface if a ping to a specified host fails for a specified duration of time. Run Script: Run a script if a ping to a specified host fails for a specified duration of time.
Period	6h In Periodic Reboot mode, it defines how often to reboot. In Ping Reboot mode, it defines the longest period of time without a reply from the Host To Check before a reboot is engaged. In Network Restart or Run Script mode, it defines the longest period of time without a reply from the Host to Check before the interface is restarted or the script is run. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: 10 seconds would be: 10 or 10s 5 minutes would be: 5m 1 hour would be: 1h 1 week would be: 7d
Host To Check	8.8.8.8 IP address or hostname to ping.
Address family for pinging the host	any ▼
Check Interval	30s How often to ping the host specified above. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: 10 seconds would be: 10 or 10s 5 minutes would be: 5m 1 hour would be: 1h 1 week would be: 7d
Ping Packet Size	Standard: 56 bytes ▼
Force Reboot Delay	30 Applies to Ping Reboot and Periodic Reboot modes When rebooting the router, the service will trigger a soft reboot. Entering a non-zero value here will trigger a delayed hard reboot if the soft reboot were to fail. Enter the number of seconds to wait for the soft reboot to fail or use 0 to disable the forced reboot delay.
Interface	unspecified ▼ Interface to monitor and/or restart

Save & Apply ▼ Save Reset

1-1 Period:

In Periodic Reboot mode, it defines how often to reboot.

In Ping Reboot mode, it defines the longest period of time without a reply from the Host to Check before a reboot is engaged.

In Network Restart or Run Script mode, it defines the longest period of time without a reply from the Host to Check before the interface is restarted or the script is run.

The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days.

Examples:

10 seconds would be: 10 or 10s

5 minutes would be: 5m

1 hour would be: 1h

1 week would be: 7d

1-2 Host to Check: IP address or hostname to ping

1-3 Address family for pinging the host: Three options to choose- Any, IPv4, IPv6

1-4 Check Interval:

How often to ping the host specified above.

The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days.

Examples:

10 seconds would be: 10 or 10s

5 minutes would be: 5m

1 hour would be: 1h

1 week would be: 7d

1-5 Force reboot delay: Applies to Ping Reboot modes

When rebooting the router, the service will trigger a soft reboot, Entering a non-zero value here will trigger a delayed hard reboot if the soft reboot were to fail. Enter the number of seconds to wait for the soft reboot to fail or use 0 to disable the forced reboot delay.

1-6 Interface: Interface to monitor and/or restart.

2. Periodic reboot mode: In this mode, ping host and period are removed. The device will reboot based on the period time you set.
For example, if the device set 24h to reboot, the reboot will follow the setting until the times up or reset the setting.

Watchcat

Here you can set up several checks and actions to take in the event that a host becomes unreachable. Click the **Add** button at the bottom to set up more than one action.

Watchcat

These rules will govern how this device reacts to network events.

General Settings

Mode	Ping Reboot ▼ Ping Reboot: Reboot this device if a ping to a specified host fails for a specified duration of time. Periodic Reboot: Reboot this device after a specified interval of time. Restart Interface: Restart a network interface if a ping to a specified host fails for a specified duration of time. Run Script: Run a script if a ping to a specified host fails for a specified duration of time.
Period	6h In Periodic Reboot mode, it defines how often to reboot. In Ping Reboot mode, it defines the longest period of time without a reply from the Host To Check before a reboot is engaged. In Network Restart or Run Script mode, it defines the longest period of time without a reply from the Host to Check before the interface is restarted or the script is run. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Host To Check	8.8.8.8 IP address or hostname to ping.
Address family for pinging the host	any ▼
Check Interval	30s How often to ping the host specified above. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Ping Packet Size	Standard: 56 bytes ▼
Force Reboot Delay	30 Applies to Ping Reboot and Periodic Reboot modes When rebooting the router, the service will trigger a soft reboot. Entering a non-zero value here will trigger a delayed hard reboot if the soft reboot were to fail. Enter the number of seconds to wait for the soft reboot to fail or use 0 to disable the forced reboot delay.
Interface	unspecified ▼ Interface to monitor and/or restart

Save & Apply ▼ **Save** **Reset**

3. Restart Interface mode: Restart a network interface if a ping to a specified host fails for a specified duration of time.

Here you can set up several checks and actions to take in the event that a host becomes unreachable. Click the **Add** button at the bottom to set up more than one action.

Watchcat

These rules will govern how this device reacts to network events.

General Settings

Mode	Restart Interface ▾ Ping Reboot: Reboot this device if a ping to a specified host fails for a specified duration of time. Periodic Reboot: Reboot this device after a specified interval of time. Restart Interface: Restart a network interface if a ping to a specified host fails for a specified duration of time. Run Script: Run a script if a ping to a specified host fails for a specified duration of time.
Period	6h In Periodic Reboot mode, it defines how often to reboot. In Ping Reboot mode, it defines the longest period of time without a reply from the Host To Check before a reboot is engaged. In Network Restart or Run Script mode, it defines the longest period of time without a reply from the Host to Check before the interface is restarted or the script is run. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Host To Check	8.8.8.8 IP address or hostname to ping.
Address family for pinging the host	any ▾
Check Interval	30s How often to ping the host specified above. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Ping Packet Size	Standard: 56 bytes ▾
Interface	unspecified ▾ Interface to monitor and/or restart
Name of ModemManager Interface	unspecified ▾ Applies to Ping Reboot and Restart Interface modes If using ModemManager, you can have Watchcat restart your ModemManger interface by specifying its name.
Unlock Modem Bands	☐ If using ModemManager, then before restarting the interface, set the modem to be allowed to use any band.

Save & Apply ▾ **Save** **Reset**

3-1 Name of ModemManager Interface:

Applies to Ping Reboot and Restart interface modes it using ModemManager, you can have Watchcat restart your ModemManager interface by Specifying its name.

3-2 Unlock Modem Bands:

If using ModemManager, then before restarting the interface, set the modem to be allowed to use any bond

4. Run Script: Run a script if a ping to a specified host fails for a specified duration of time.

Watchcat

These rules will govern how this device reacts to network events.

General Settings

Mode	Run Script ▾ Ping Reboot: Reboot this device if a ping to a specified host fails for a specified duration of time. Periodic Reboot: Reboot this device after a specified interval of time. Restart Interface: Restart a network interface if a ping to a specified host fails for a specified duration of time. Run Script: Run a script if a ping to a specified host fails for a specified duration of time.
Script to run	/etc/watchcat.user.sh Script to run when the host has not responded for the specified duration of time. The script is passed the interface name as \$1
Period	6h In Periodic Reboot mode, it defines how often to reboot. In Ping Reboot mode, it defines the longest period of time without a reply from the Host To Check before a reboot is engaged. In Network Restart or Run Script mode, it defines the longest period of time without a reply from the Host To Check before the interface is restarted or the script is run. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Host To Check	8.8.8.8 IP address or hostname to ping.
Address family for pinging the host	any ▾
Check Interval	30s How often to ping the host specified above. The default unit is seconds, without a suffix, but you can use the suffix m for minutes, h for hours or d for days. Examples: • 10 seconds would be: 10 or 10s • 5 minutes would be: 5m • 1 hour would be: 1h • 1 week would be: 7d
Ping Packet Size	Standard: 56 bytes ▾
Interface	unspecified ▾ Interface to monitor and/or restart

Save & Apply ▾

Save

Reset

4-1 Script to run: Script to run when the host has not responded for the specified duration of time. The script is passed the interface name as \$1

4.6.4 Wake on Lan

Wake on LAN is a mechanism to remotely boot computers in the local network.

Wake on LAN

Wake on LAN is a mechanism to remotely boot computers in the local network.

Network interface to use	br-lan	Specifies the interface the WoL packet is sent on
Host to wake up	-- Please choose --	Choose the host to wake up or enter a custom MAC address to use
Send to broadcast address	☐	

Wake up host

- Network Interface to use: Specifies the interface the WoL, packet is sent on.
 - (1) Bridge: "br-lan" (lan, lan6)
 - (2) Ethernet adapter: "eth0"
 - (3) Switch VLAN: "eth0.1"
 - (4) Switch VLAN: "eth0.2" (wan)
- Host to wake up: Choose the host to wake up or enter a custom MAC address to use.
- Send to broadcast address: Enable or disable the function

Support the wireless connection:

Click the "Network interface to use", and choose the Wireless Network.

***Note:** You must setting your wireless connection first, or the WOL will not appears this option.

To setting your wireless, please refer to the **4.4.2 (P.54)**

IP_POWER 2024/06/19 07:11:15

Power Control

Network

System

Application

IPService

SNMP

Network UPS

Tools

Watchcat

Wake on LAN

Logout

Wake on LAN

Wake on LAN is a mechanism to remotely boot computers in the local network.

Network interface to use	wlan0	
Host to wake up	Bridge: "br-lan" (lan, lan6) Ethernet Adapter: "eth0" Wireless Network: Client "aviosys-10-2.4G" (wwan) -- custom --	to use
Send to broadcast address	☐	

Wake up host

4.6.5 Network UPS Tools

This function can detect the electricity through UPS, plug by the USB port. After setting your user name and password, move to the (CGI) section, And click to “ NUT CGI ”, you can see the status of UPS.

1. Network UPS Tools (Server):

Network UPS tools server Configuration

[Network UPS Tools \(Server\)](#) [Network UPS Tools \(Monitor\)](#) [Network UPS Tools \(CGI\)](#)

Network UPS Tools (Server)

Network UPS Tools Server Configuration

NUT Users

Username	admin	Delete
Password		+
Role	Master	v
-- Additional Field -- Add		
Add		

Addresses on which to listen

IP Address	0.0.0.0	Delete
Port	3493	Delete
IP Address	0.0.0.0	Delete
Port	3493	Delete
Add		

UPS Server Global Settings

-- Additional Field -- Add	Delete
--	------------------------

Driver Global Settings

-- Additional Field -- Add	Delete
--	------------------------

Driver Configuration

The name of this section will be used as UPS name elsewhere. Driver 'usbhid-ups'

This section contains no values yet

Add

[Save & Apply](#) [Save](#) [Reset](#)

- (1) Username: Setting the username to login
- (2) Password: Setting the password to login
- (3) Role: Switch device role to Master or Slave

Warning: Except NUT users, don't change others settings in the red square, only if you are familiar with these function, you can attempt to setting by your own.

2. Network UPS Tools (Monitor) Network UPS tools monitoring Configuration

[Network UPS Tools \(Server\)](#) [Network UPS Tools \(Monitor\)](#) [Network UPS Tools \(CGI\)](#)

Network UPS Tools (Monitor)

Network UPS Tools Monitoring Configuration

Global Settings

RunAs User	nutmon upsmon drops privileges to this user
Notify command	/usr/bin/notifycmd
Notification defaults	-- Please choose -- Execute notify command Write to syslog
-- Additional Field -- Add	

UPS Master

Name of UPS	myups As configured by NUT	Delete
Hostname or address of UPS	localhost	
Power value	1	
Username		
Password		
-- Additional Field -- Add		

UPS Slave

Name of UPS		Delete
As configured by NUT		
Hostname or address of UPS		
Power value	1	
Username		
Password		
-- Additional Field -- Add		

[Save & Apply](#) [Save](#) [Reset](#)

4.6.6 SNMP

This section is for development of system integrator who is familiar with SNMP knowledge.

MIB

Enable	☐
Version	v1
Authority	Read/Write
Community	private
Trap type	none
Host	192.168.1.1
Community	private
Port	162
Save & Apply	

In Authority, user can select “ Read only ” or “ Read / Write ”

Enable	☐
Version	v1
Authority	Read/Write
community	Read only
	Read/Write

In “ Trap ” type ,user can select “ trapsink “ , “ trap2sink “ or “ informsink ”

Trap type	none
Host	192.168.1.1
Community	private
Port	162

SNMP Version: ATS 9820 PRO provide V1, V2c and V3 version. V1 and V2c remain the same settings, when you switch to V3, user can see the difference in the second picture.

Enable	☐
Version	v1
Authority	v1
Community	v2c
	v3
Trap type	none
Host	192.168.1.1
Community	private
Port	162

SNMP V3: Version V3 add new function, these are: auth, MD5 and DES

MIB

Enable	☐
Version	v3
User	admin
Auth	authPriv
Certification	MD5
Password	 SHOW
Encryption	DES
Password	 SHOW
Trap type	none
Host	192.168.1.1
Community	private
Port	162

Save & Apply

- (1) auth: this function provide the certified and encryption to the device.
User can choose enable(authPriv) or disable(authNoPriv) the certified encryption.

Enable	☐
Version	v3
User	admin
Auth	authPriv
Certification	authPriv
Password	 SHOW
Encryption	DES
Password	 SHOW

- (2) MD5: Setting your password for certified.

- (3) DES: Setting your password for encryption.

Enable	☐
Version	v3
User	admin
Auth	authPriv
Certification	MD5
Password	 SHOW
Encryption	DES
Password	 SHOW

5. Other ways to control

Besides HTTPS/CGI command and SSH we supply here, ATS 9820 PRO also support SNMP (MIB), Please check page #89 to check and enable the function.

5.1 CGI HTTP Commands

CGI Commands allow you to easily integrate the ATS 9820 PRO 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 : root. Password : 12345678

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getpower>

The above command 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?user=root+pass=12345678+cmd=getversion>

System return :

```
<!--CGI-DATABEG-->
```

```
<p>
```

```
Version=v2.00_2026_07_31_op</p>
```

```
<!--CGI-DATAEND-->
```

2.2 To get MACaddress: getmac

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getmac>

System return:

```
<!--CGI-DATABEG-->
```

```
<p>
```

```
mac=0076A80002A8</p>
```

```
<!--CGI-DATAEND-->
```

2.3 To get the status of power on/ off: getpower

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getpower>

System return:

CGI Command : Data follows

<!--CGI-DATABEG-->

<p>

p61=1,p62=0,p63=1,p64=0,p65=0,p66=0,p67=1,p68=0,ats=1

</p>

<!--CGI-DATAEND-->

2.4 To set the power on / off : setpower&p6x=0 or 1

p6x=0 means off, p6x=1 means ON,

Example : Turn on POWER1 and turn off POWER1:

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=setpower&p61=1>

System return: CGI Command : Data follows p61=1, p61=0

<!--CGI-DATABEG-->

<p>

p61=0</p>

<!--CGI-DATAEND-->

2.5 Setup power to reboot as RESET: setpowercycle& p6x=delayTime

; dealyTime mean the time (second) waitingfor reset

For example :

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=setpowercycle&p61=5>

System return: CGI Command : Data follows p61 cycle ok

<!--CGI-DATABEG-->

<p>

p61=5,p61 cycle ok</p>

<!--CGI-DATAEND-->

2.6 Get current schedule value : getschedule

For example:

<http://192.168.1.18/goform/getschedule11?user=root+pass=12345678>

```
<!--CGI-DATABEG-->  
,schedule0=0000000000000000000000000000000000  
schedule0t=000;000;000;000;000;000;000;000  
sch0lan_rule=0;1  
schedule1=0000000000000000000000000000000000  
schedule1t=000;000;000;000;000;000;000;000  
sch1lan_rule=0;1  
  
. .  
  
schedule29=0000000000000000000000000000000000  
schedule29t=000;000;000;000;000;000;000;000  
sch29lan_rule=0;1  
,  
<!--CGI-DATAEND-->
```

2.7 Get current Amp value : getcurrent

For example :

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getcurrent>

System return:

```
<!--CGI-DATABEG-->
<p>
c61=0.0, c62=0.0, c63=0.0, c64=0.0,c65=0.0, c66=0.0, c67=0.0, c68=0.0</p>
<!--CGI-DATAEND-->
```

2.8 Get current Amp value : getvoltage

For example :

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getvoltage>

System return:

```
<!--CGI-DATABEG-->
<p>
voltage=108,voltage2=108,di=0;0</p>
<!--CGI-DATAEND-->
```

2.9 Get temperature value : gettemp or gettemperature

For example :

<http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=gettemp>

System return:

```
<!--CGI-DATABEG-->  
<p>  
temperature=34.9</p>  
  
<!--CGI-DATAEND-->
```

5.2 SSH commands

To login to the ATS 9820 PRO in SSH

- 1) Open the putty and select SSH, after typing your ID address, putty will appears the command line and ask for login.

Login : root

Password : 12345678 (**Note:** The password won't display when you type)

10.33.122.2 - PuTTY

```
login as: root
root@10.33.122.2's password: 
```

(2) Command list:

```
root@ATS9820: ~
root@ATS9820:~# ioctl -h
*****
Usage: ioctl
[-h | --help ].....: display this help
[-s | --setpower p6l=1 or 0].....: turn on/off ports on the device
[-l | --setcycle p6l=x (x=1~9999)].....: outlet, will turn 'off to on'
[-a | --setats switch=x x=1 or 0].....: ats, turn 'main or second'
[-p | --getpower ]...: get the on/off status of the device
[-c | --current ].....: get the current value of the device
[-d | --getdi ].....: get the digit input of the device
[-v | --getvoltage ].....: get the voltage value of the device
[--getmodbusdo]
[--setmodbusdo] dol=0/1
[-t | --temp ].....: get the temperature value of the device
[-version ].....: display version information
[-reboot ].....: System Restart
-----
root@ATS9820:~# ioctl -s p6=1
p6l ok,
root@ATS9820:~# ioctl -c
Current value: c61=0.0, c62=0.0, c63=0.0, c64=0.0, c65=0.0, c66=0.0, c67=0.0, c68=0.0
root@ATS9820:~# ioctl -v
Voltage value: 0, Voltage value2: 110, Ats=Second
root@ATS9820:~# ioctl -t
Temperature value: 41.50
Fahrenheit value: 106.7
root@ATS9820:~# ioctl -p
p6l=1, p62=1, p63=1, p64=1, p65=0, p66=0, p67=1, p68=1, ats=0
root@ATS9820:~# 
```

Command example:

command setpower: ioctl -s

```
root@ATS9820:~# ioctl -s p61=1
p61 ok
root@ATS9820:~# ioctl -s p61=0
p61 ok
```

command setcycle: ioctl -l

```
root@ATS9820:~# ioctl -l p61=15
p61 cycle ok
root@ATS9820:~# ioctl -l p62=10
p62 cycle ok
```

command setats switch: ioctl -a

```
root@ATS9820:~# ioctl -a switch=1
root@ATS9820:~# ioctl -a switch=0
```

Switch=1 → Main power source

Switch=0 → Secondary power source

command getpower: ioctl -p

```
root@ATS9820:~# ioctl -p
p61=1,p62=1,p63=1,p64=1,p65=0,p66=0,p67=1,p68=1,ats=0
```

command current: ioctl -c

```
Current value: c61=0.0, c62=0.0, c63=0.0, c64=0.0,c65=0.0, c66=0.0, c67=0.0, c68=0.0
```

command getvoltage: ioctl -v

```
root@ATS9820:~# ioctl -v
Voltage value: 0, Voltage value2: 111, Ats=Second
```

command temp: ioctl -t

```
root@ATS9820:~# ioctl -t
Temperature value: 40.40
Fahrenheit value: 104.7
```

6. FAQ :

Q1: Why can't I see the ATS 9820 PRO's IP address in IPEDIT.exe

Ans: Please check if your ATS 9820 PRO had boot up successfully. There is a short beep sound to show ATS 9820 PRO boot up successfully after device power up around 45~51 seconds.

There are several possibilities for this issue as ATS 9820 PRO boot up successfully :

1. Segment of your PC :

Please make sure that the PC and the ATS 9820 PRO are connected to the **same router** or **network switch(Hub)**. Otherwise, they may be on different network segments (subnets) and will not be able to communicate with each other.

2. Firewall / Antivirus protection :

Please turn off some Anti-Virus / online chatting software.

If connect to PC directly, please wait for the boot up beep first and then connect the network cable to your PC. And the default IP is 192.168.1.168

Q2: Why can't I see my ATS 9820 PRO after arrange the port forwarding in my router?

Ans: Please make sure the Network Type (Gateway) is correct - LAN or WAN .

Q3: 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.

* If use Gmail, please refer page #65 to set your "APP password" in your google account.

Q4: How can I reset to default:

Ans: To reset to default settings : press the reset button with a sharpen pin for 5~7 seconds then RELEASE. There will be total 3 beeps sound which means reset start and ATS 9820 PRO will be rebooted itself -there is one beep after reboot, and most information go back to default setting (LAN IP)

Q5: If the ATS 9820 PRO loses power while both network connections are active, how can the network connection be restored?

Ans: When power is restored, the ATS 9820 PRO will automatically resume its network functions.

If the ATS 9820 PRO is configured with dual-network connections, it does not search for network connectivity based on the order of Net 1 and Net 2.

During startup, the ATS 9820 PRO will attempt to establish a connection through both network interfaces. As long as either Net 1 or Net 2 is available, the ATS 9820 PRO will successfully restore network connectivity.