IP Power 9855 User Manual



Version: 1.04 Firmware Version: V1.15 Date Released: May. 2024 Warning: Any changes made to this equipment without permission may cause damages to the device!

IMPORTANT NOTICE

- 1. IP Power 9855 as 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 IP Power 9855 in any fashion.
- 4. Please contact the dealer If IP Power 9855 is not working properly.

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1.Introduction

IP Power 9855 is a new generation of the Power Distribution Unit (PDU) & Remote Power Control (RPC) system which **add "Active Spike Filter Design"** in the hardware design and make the system with higher grade stability.

With embedded web server and **HTTPS** protection, 9855 supports higher grade security as working on Internet. User can control power easily and more safely through the web browser in Windows, Android or iOS system, like Internet Explorer (IE) **/ Edge**, Google Chrome, Safari web browser.

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

9855 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 9855 (SYSLOG).

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

User Friendly. Convenience & Powerful,





2.Product Information

2.1 Features

- 1. Single port Remote power controller for power On, Off and Reboot by the internal power switching use 40A relay.
- 2. Add " Active Spike Filter Design" for higher stabilities.
- 3. Current meter up to 10 Amp
- 4. Web Server built-in design, directly control by web browser in Windows, **Android or iOS** system like Internet Explore (IE), Google Chrome and so on.
- 5. Support HTTPS, SSL , TCP/ IP , DHCP, DDNS , SMTP , SSH ,and SNMP
- 6. SYSLOG : Support Log function & send to assign IP address
- 7. Time Schedule can pre-set a suitable time to turn power on / off automatically.
- 8. Auto Ping for network control & segment management automatically
- 9. High grade components for long stability and performance
- 10. **Back Up** for quick setup for multiple devices.
- 11. Support public e-mail -- @gmail.com , @yahoo.com , @hotmail. com......etc.
- 12. Specific software developed by Aviosys and provided free of charge :
 - SDK Available : HTTP Command
 - Windows software " IP Power Center " : Control Multiple Aviosys IP Power devices in one software
 - CNT software (Cross Network Technology)- allows user eliminate set up work on any Router without port forwarding , simply Plug & Play .
- 13. Support different models with different power plug, ex: USA, UK, GE, FR, AU etc.....
- 14. USB Port to get the information of external UPS device .

Specification

- Power input: 100A~240VAC C14 in, 10A
- Maximum of Total loading: 15 A
- Dimensions: 86 x 86 x 80 mm (L x W x H)
- Weight: 314.6 g
- Enclosure Plastic case in white color
- ➢ Operating Temperature: 0~50 ℃
 - Note: The internal power switching relay support up to 40A and support inrush current up to 350A immunity.
 Phase shift switching circuit prevent contact EMI and spike.

2.2 Minimum System Requirements

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

2.3 Package Contents

- > 9855 Unit
- Online CD note : <u>www.aviosys.com/cd</u>

2.4 Interface Description

Outlook

IP Front :	POWER 9855 Ethernet Reset Status
Ethernet	LAN 10/100 Mbps network for Internet
USB port	Connect for UPS to get power information.
LED (status)	Display the outlets as ON (Green) or OFF (RED)
Reset	Please keep pressing the button for 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.
Back:	· · · · · · · · · · · · · · · · · · ·
Input :	100A~240VAC C14 in, 10A
Тор:	
Output	The Power output is on the top of the device. Simply plug in the device that you world like to control power. (Comes in different plug standards)

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 9855, please read this how the saving settings works in 9855.

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.

	Protocol: DHCP client	
lan	Uptime: 1d 20h 52m 43s	
	MAC: 00:76:56:00:43:21	E
(ی) او	RX: 147.97 MB (943404 Pkts.)	
br-lan	TX: 13.67 MB (83652 Pkts.)	
	IPv4: 10.33.122.43/24	
	Protocol: DHCPv6 client	
lan6	Uptime: 1d 20h 54m 5s	
	MAC: 00:76:56:00:43:21	E
(یے) او	RX: 147.97 MB (943404 Pkts.)	
br-lan	TX: 13.67 MB (83652 Pkts.)	
	IPv6: 2001:b011:3801:3388:276:56ff:fe00:4321/64	

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.

ER 2023	/06/21 06:01:50	(Refreshing) Unsaved Changes:
interface		
lan 2 (2) Alias of "lan"	Protocol: Alias Interface (DHCPv6 client) Interface has 4 pending changes	Edit
lan6 ॐ (⊉) br-lan	Protocol: DHCPv6 client Uptime: 1d 21h 1m 15s MAC: 00:76:56:00:43:21 RX: 148.50 MB (947101 Pkts.) TX: 14.17 MB (84927 Pkts.) IPv6: 2001:b011:3801:3388:276:56ff:fe00:4321/64	Edit
		Save & Apply Save Rese

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.

U IP_POWER	2023/06/21 06:	01:09	(Refreshing) (Unsaved Changes: 4)
Power Control interfa	lan		
Configuration / Chang		erface (DHCPv6 client)	
Legend:	Section removed	Option changed	Option removed
<pre># /etc/config/network uci set network.lan.proto='dhcpu</pre>			
uci set network.lan.device='@lar uci set network.lan.reqaddress='u uci set network.lan.reqprefix='a	force'		et
			Close Save & Apply Revert

3.3 Hardware Connection

Before hardware connection, please make sure that there is no more than 2 network cards(include dynamic network card). If there are more than two network card in your PC. You may not get the IP address of 9855

Please connect the 9855 under your router or to the PC directly.

The default IP of 9855 is 192.168.1.168.

To log in to the 9855 directly, please make sure the IP address of you PC is also the same segment as the 9855, like 192.168.1.XXX (XXX = 1~254) or you may not log in the 9855ebpage as different segment.

User can change the FIX IP mode to DHCP mode through our IP search tool " IPEDIT " or through the 9855ebpage as log in. As change to DHCP mode, 9855PRO will get the IP address from user's router.

The way to use IPEDIT to change 9855 as DHCP is as following :

Step 1 : Select the 9855 IP show in the IPEDIT. It shows FIX IP below MAC address section.

- Step 2: Select DHCP area and click "Submit "then it will ask to type the username and password. Please fill root & 12345678 and click OK / setup.
- Step 3: Wait for one minute for 9855 reboots 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 9855 show DHCP in IPEDIT tool.

3.4 Software Installation

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

Under windows system, we offer two software:

- 1. IP Edit (Require to search IP address)
- 2. IP Power Center (For multiple IP Power devices control purpose)

	MEDIA LINK IP FAMILY	PRODUCT MANUAL ENGLISH CHINESE CHINESE CHINESE
1	NETWORK INNER SEARCH TOOL	
0		17 POWER — 🎔 🎞 🔙 🚥 🛤 💊 ¥ 💝 😤 🛩 🦘 🌳 🎔
0	SOFTWARE DEVELOP KIT	
АРР	SmartPhone Hower APP	USB Series 🔀 🔯 📓 🧆 🛋
V	Zersion: 1.76	SOFTWARE 📷 👬

- 1.) Select the IP Power 9855
- 2.) All the available downloads for the 9855 will be shown

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



Then you can select to connect 9855.

3.3.1 LAN connect by IP search software "IPEDIT"



IP Edit is a search tool designed to search, configure, or access the IP Power 9855 from a local network computer.

IP Power 9855 Default Login / Password

Default IP:	192.168.1.168
Default Login username :	root
Default Password:	12345678

Please use our IP Search tool " IPEDIT.exe " to get the IP address of 9855 .

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

P_POWER192.168.1.168	Change Devic	e to yourse	lf		ĥ	1	REF	
	Input Rei	f Button			Al	U '	VEI.	
	Name			IP_	POW	ER		•
	IP Address	192		168		1		168
	Netmask	255		255		255		•)
	Gateway	0		0		0		0
	HTTP Port1				80			
	HTTP Port2				0			
	MAC			00:76:	56:00	0:43:21		
	O PPP	oE(ADSL)		ODH	CP	0	Stat	ic
	G	Rescan		*	Subr	nit (†) I	leset
	4321]:80							
	Update	Ē	' [[F1] Hel	lp	<u>¥</u>		Exit

For example:

The default IP of 9855 is 192.168.1.168.

- Red rectangle show the IPv6 address of IP9855, only IP9855 series can display the IPv6 address.
- To log in to the 9855 directly, please make sure the IP address of you PC is also the same segment as the 9855, like 192.168.1.XXX (XXX = 1~254) or you may not log in the 9855ebpage as different segment.

User can change the FIX IP mode to DHCP mode through our IP search tool "IPEDIT" or through the 9855ebpage as log in . As change to DHCP mode, 9855PRO will get the IP address from user's router.

The way to use IPEDIT to change 9855 as DHCP is as following :

- Step 1 : Select the 9855 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 root & 12345678 and click OK / setup.
- Step 3: Wait for one minutes for 9855PRO 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 9855PRO 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 9855 and check if there are 1 short beep after 1 minutes. This beep means the device boot up successfully. If not, the device may have issue.
- 2. **Network card:** Please check if there are more that two network card include wire / wireless / dynamic in the PC which used IPEDIT software . IPEDIT only support single network PC, please disable the other network connection / functions.
- 3. Anti Virus software / Firewall: Please turn off the antivirus software firewall temporary.
- 4. **Connection:** Please make sure that the 9855 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 192.168.100.122. If the "Local IP Address " at Wi-Fi Info is 192.168.100.
- x (X can the value of 1~254), user PC can get into the webpage of 9855.

3.3.2 Internet Setup

To connect the IP Power 9855 on Internet, there are two ways

- Setup Port Mapping / Port Forwarding in your router. Please check your Router owner's manual.
- Use our own software "IP Power Center" : Please refer to the "IP Power Center "manual in software section of <u>www.aviosys.com/cd</u>

3.3.3 Using IP Service

IP Service is a function which allows user to search for the device easily without having to remember long complicated IP address. Instead, if user know the device's name of user's IPPower device and user can easily find IP Address with IP Service. **To log in the webpage of 9855 on Internet, user still need to do the "Port Forwarding" in own router.**

Before using "IP Service ", please change the device name of user 9855 to avoid similar name in Host Server.

ower Control	IP Service Setting (Search)		
letwork	Enable		
ystem	IP Service Server	Server1	•
plication	Device Name:	IP_POWER	
PService NMP	Country	Country	
letwork UPS	City	City	
ools		Find IP_POWER device on myipedit.com	
Vatchcat		Save	
/ake on LAN			
gout	CNT(MQTT) Setting (Remote cont	rol)	
	MQTT Serivce	IPPower	`
	Enable		

1.) Open IP Edit and select the server that user's 9855 is designated to.

101 IPEdit			X
Internet online devices IP Server : Device Name :	Server2	* necessary Connect) -(H) ec
Not Connected	Country : City :	Search	

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

- 3.) Then type in the 9855 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 9855 device name as IP_POWER, and user can search the device easily :

Internet online devices IP Server :	Server2		v	1	Connec	6	Disconnect
Device Name :	IP_POWER		*ne	cessary) connec		Disconnoor
	Country :			4	Search		
c	12						
Connected to Server I	City :						
Device Name	City : Country	City	IP ddress	Port	Mac Add	dress	Serve 🔺
[Country	City IP_P Denmark	IP ddress Balling	1.520245	Mac Add 1.91.228	dress 80	Serve
Device Name	Country 1475 MH1_	IP_P Denmark	10000000000	178.2	111111111111111111111111111111111111111		Lances and
Device Name	Country 1475 MH1_ 1475 IP_PC	IP_P Denmark WER Country	Balling	178.2	1.91.228 68.50.1	80	00982

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

4. Web Interface

4.1 Connect to your device

Once the 9855 has been setup correctly, log into the device.

First Option

- 1.) Go to IP Edit to find the device that is being used
- 2.) Double click on the device linked and an IE window will appear with the loading screen

Second Option

- 1.) Open Internet Explorer type in the IP Address of the device followed by the : sign.
 - For example: http:192.168.122.188:9258 192.168.122.188 – IP Address
- 2.) Once you have typed in the IP address of the 9855 and it is ready to be worked.

The default Username and Password for the 9855

Username : root Password : 12345678

The Control Console

The right side Menu of the Web Interface for controlling the functionality and setup of the IPPower 9855.



The IP Power 9855 Console consists of six main sections which will be explained in details below.

- **Top Column :** Device name, Time information
- > Power Control : Control, Schedule, Ping
- > Network : Interfaces, Webport
- System : Management, Information, E-mail, System Log, Backup / Flash firmware, Reboot,
- Application : IPService, SNMP, Network UPS tools, Watchcat, Wake on Lan
- Logout

4.2 Top Column

4.2.1 Device name

This section show the device name. You can change the device name here: Application \rightarrow IP Service \rightarrow Device name Change name " IP POWER 9855 " as "Enjoy 9855 "

Power Control	IP Service Setting (Search)		
Network	Enable		
System	IP Service Server	Server1	~
Application	Device Name:	IP_POWER]
IPService SNMP	Country	Country	
Network UPS	City	City	
Tools Watchcat Wake on LAN		Find IP_POWER device on myipedit.com	
Logout	CNT(MQTT) Setting (Remote	control)	
	MQTT Serivce	IPPower	~
	Enable		
	Status		
		Save	

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 \rightarrow Management \rightarrow System (Time & Language) \rightarrow 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	~			
				s	ave & Apply 🔹	Save	Reset

1. SYNC:

- (1) With browser: Sync with the browser log into 9855.
- (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	e like its Language or the timezone.
General Settings Time Synchronization La	inguage
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

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.



4.3 Power Control

The IO Control Section allows you to directly / automatically control the outlets of the 9855 as well as schedule Once, Daily, Weekly, and power cycles.

There are 4 sections: Control, Schedule, Ping and QR code

F	ower Control
	Control
	Scheduler
	Ping
	qrcode
L	

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 15sec : After press power cycle button, the outlet will turn OFF for 15 seconds and then turn ON.

OFF (15 sec) \rightarrow ON

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

 $ON - > OFF (10 sec) \rightarrow ON$

- 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.

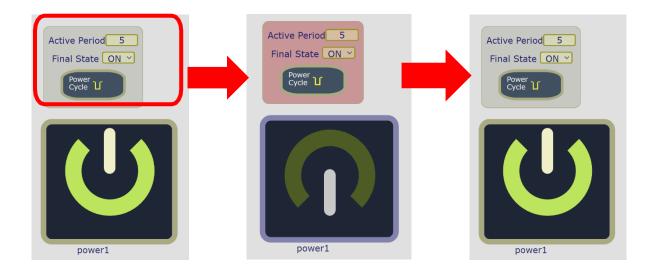
 $OFF \rightarrow ON(8 \text{ sec}) \rightarrow OFF$

- 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 $\ensuremath{\mathsf{OFF}}$.

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 Setup :

User can do the following 8 advance operation in this page :

> Port Name setting:

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

	Control
Outlet1	power1
Disable Control Button	
Disable Power cycle Button	
Email Alerts	
Beep Alert	
Power Cycle Time	60 Seconds
Current (1~10)Amp	8
Temperature Limit:0-60°C Low: 0.(High:60	None
Default Power Status	LAST
Temperature. 29.6°C 85°F ~AC 103V	ave

- Disable Control Button : Stop to control ON/OFF in the webpage manually.
 9855ill follow control by HTTP/CGI command or by Schedule setting.
- Disable Power cycle Button :

Stop to "power cycle" control in the webpage manually . 9855ill follow control by HTTP/CGI command or by Schedule setting.

• E-mail Alarm Setting :

Use can enable /disable the e-mail alarm here. Please refer the page 33 to setup the emailinformation in "Application " \rightarrow Email.

The e-mail alarm section allows 9855 to notify user by following situation :

- Receive E-mail with IP information & MAC Address as 9855 device boot up.
- Receive E-mail as ON/OFF status change in output.
- Beep Alert : User can setup the operation beep (short time beep) sound here.
- Default Power Status: The control section allow user to set the power status on ON or OFF or LAST when the device 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 .

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

4.3.2 Schedule

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 " :

	-	Schedule Setting
No.1 01000000	Schedule Action at 00:00:00	
		Schedule List
Duration Mode OONCE OEver	y Week Every Day	•

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 :

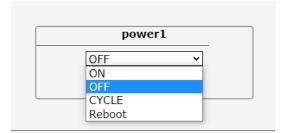
There are 3 setting – Once, Every Week, Every Day

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

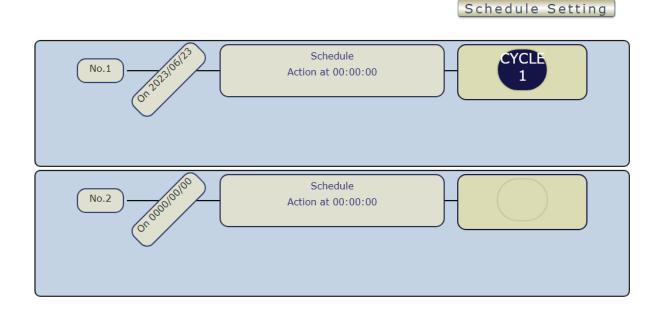
																				Sc	hed	ule List
	1	Scl	nedu	le Mo	de	С	ONC	F		DEv	ery W	/eek			Ever	v Da	v					
								_									,					
. ſ	2023/	106/2	a el																			
e:	-			<u> </u>													_				-	
	0	JL	un	~	202	3				Jul	y 20	23					Augi	ust 2	023		0	
ed	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	sa	Su	Мо	Tu	We	Th	Fr	Sa	
					1	2	3							1			1	2	3	4	5	
	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	
	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	
	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	
	25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31			
								30	31													

3. Select the Time Period.

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



Once the scheduler has been Set Up, click the "Save" button and youwill see your setting located on the bottom of the Action section.



- Apply / Edit a Schedule Event :

Save Delete	Save	Delete
-------------	------	--------

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 .

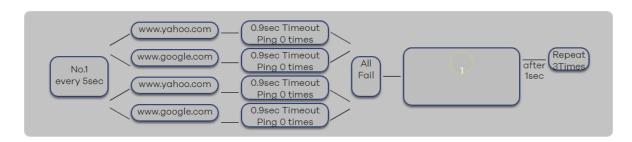
4.3.3 Ping

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 1 rules for Ping**.

- Ping List Page :

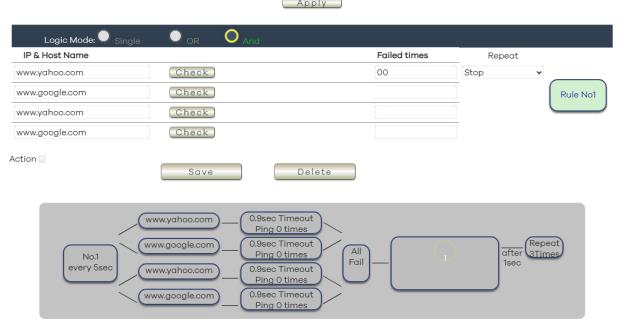
Ping Setting

(



- Ping Setting Page :

			Ping List
Global Ping Base Setting			
Ping Interval:	5	Response Time Out:	900
	Sec.	Response nine out.	ms.
Ping After Action Delay	1	Action Max repeat Times:	3
Ping Arter Action Deldy	Sec.	Action Max repeat Times:	(O=non stop)
		Apply	



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 .

Global Ping Base Setting				[
Ping Interval:	5	Response Time C	Dut:	900	
	Sec.			ms.	
Ping After Action Delay	1	Action Max repe	at Times:	3	
	Sec.	(Apply)		(0=non stop)	
Logic Mode: O Single	🔍 _{or} 🔘 ,				
IP & Host Name			Failed times	Repeat	
in a noot name					
	Check		00	Stop 🗸	
	Check Check		00	Stop 🗸	Rule N
www.yahoo.com				Stop v	Rule N
www.yahoo.com			00	Stop 🗸	

2. Ping Set:

			Ping List
Global Ping Base Setting			
Ping Interval:	5	Response Time Out:	900
Ping intervai:	Sec.	Response nine Out:	ms.
Ding After Action Delay	1	Action May report Times	3
Ping After Action Delay	Sec.	Action Max repeat Times:	(O=non stop)
		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 aresponse 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.

			Repeat	
www.yahoo.com	Check	00	Stop	~
vww.google.com	Check			Rule No1
vww.yahoo.com	Check			
vww.google.com	Check			

➢ 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 fail
 - OR : Execute Action by either one IP Host failure as setting 4 pcs IP Host
 - And : Execute Action by both IP Host failure as setting 4 pcs IP Host

Single : 9855ill Ping one IP address. As the IP fail times reach to the setting times. Action (ON/OFF/RESET) will be activated.

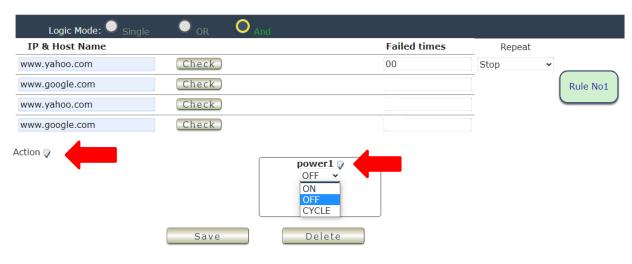
- **OR**: 9855ill Ping 4 IP address. Either one IP fail times reach to the setting times. Action (ON/OFF/RESET) will be activated.
- And : 9855ill Ping 4 IP address. Both IP fail reach to the setting times. Action (ON/OFF/RESET) will be activated.

IP & Host Name		Failed times	Repeat	
ww.yahoo.com	Check	00	Stop	~
ww.google.com	Check			Rule No
ww.yahoo.com	Check			
ww.google.com	Check			

- IP & Host Name : Input the IP Address (ex: 122.116.123.138) or Host web address (ex: <u>www.google.com</u>) 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 9855 to execute the setupON/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 .

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

(Apply)



Action :

When the number of Ping Failures times have been reached. The device can be set to " ${\sf ON}$, 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

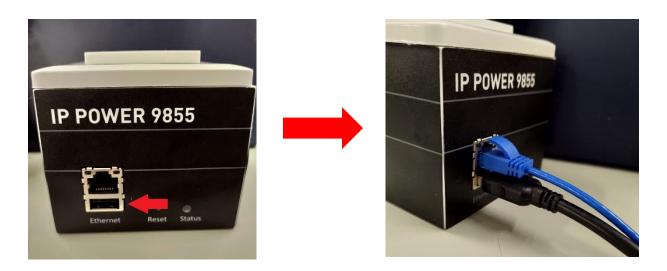
The QR code function operates by using the QR code icon within the device to perform I/O actions, linking to execute actions on scanner 9855 through scanning.



What you need to prepare?

- 1. A network cable, recommend to use the "thin" cable
- 2. A QR Barcode Scanner for PC (USB)

Connect to your IP POWER 9855, and plug your QR Barcode Scanner as the red arrow shown.



Except QR code, general code scanning can also be applied to the 9855, 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 9855's manual provide, you can see one of the code in the on/off picture below.

ON	Counter	OFF
	1	
System Information		
Connect	connect	
	Apply	
14810		

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

I/O control On code:

ON	Counter	OFF	
	2		
System Information	System Information		
Connect	connect		
	Apply		
cmd=setpower+p61=1			

I/O control Off code:

ON	Counter	OFF
	3	
System Information		
Connect	connect	
	Apply	
cmd=setpower+p61=0		

4.4 Network



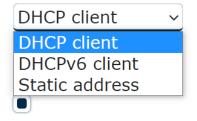
LAN Network Settings

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

Device

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.

	Protocol: DHCP client	
lan	Uptime: 1d 20h 52m 43s	
(بر) 🥶	MAC: 00:76:56:00:43:21	
-	RX: 147.97 MB (943404 Pkts.)	
br-lan	TX: 13.67 MB (83652 Pkts.)	
	IPv4: 10.33.122.43/24	
	Protocol: DHCPv6 client	
lan6	Uptime: 1d 20h 54m 5s	
	MAC: 00:76:56:00:43:21	
(بي) 👽	RX: 147.97 MB (943404 Pkts.)	
br-lan	TX: 13.67 MB (83652 Pkts.)	
	IPv6: 2001:b011:3801:3388:276:56ff:fe00:4321/64	

- 32 -

A. Static Mode (fixed IP)

Setup IP address, DNS and Port manually. This allows the 9855 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 addr	ess	٩it
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	it
Protocol	Static address 🔹	e
Device	ø ^ø 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	J

B. DHCP Mode

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

This allows the 9855 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. 9855ill remember last IP of 9855 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.

Protocol: DHCPv6 client	
Interfaces » lan	
General Settings	
Status	Device: br-lan Uptime: 1d 22h 33m 5s MAC: 00:76:56:00:43:21 XX: 154.66 MB (987934 Pkts.) TX: 16.54 MB (91829 Pkts.) TX: 16.54 MB (91829 Pkts.) IPv4: 10.33.122.43/24
Protocol	DHCP client
Really switch protocol?	Switch protocol
Device	ø ^ø 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.

Protocol: DHCP clien	t 🗖	- ' it
Interfaces » lan		
General Settings		
Status	Device: br-lan Uptime: 1d 22h 33m 35s 𝔅 MAC: 00.7655600:43:21 𝔅 𝔅 154.71 MB (988207 Pkts.) TX: 15.59 MB (91695 Pkts.) TV: 15.59 MB (91695 Pkts.) IPv4: 10.33.122.43/24	it
Protocol	DHCP client •	et
Device	ø≉ br-lan 🔹	
Bring up on boot		
Hostname to send when requesting DHCP	Send the hostname of this device $\ {\ \ }$	
	Dismiss Save	

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 ~
	Save

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, PEAP, MSCHPV2

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

4.4.3 Web Port

A lightweight single-threaded HTTP(S) server

General Settings:

Port

port setting

MAIN

State

Country

General Settings

General Settings	
HTTP listeners (address:port)	0.0.0:80 -
	[::]:80 -
	+
	Bind to specific interface:port (by specifying interface address
HTTPS listener (address:port)	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	730
Length of key in bits	2048
Server Hostname	OpenWrt
	a.k.a CommonName
Organization	
	If empty, a random/unique value is used in cert generation
Location	Unknown

Somewhere

ZZ

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)	0.0.0:443 - (1)
	[::]:443 - (2)
	Bind to specific interface:port (by specifying interface address
Redirect all HTTP to HTTPS	\Box

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, 9855 recognize the IP as the device IP address

For example: if the IP address of the 9855 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

S	System
L	Management
	Information
	E-Mail
L	System Log
	Backup /
L	Firmware
	Reboot
L	

4.5.1 Management

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

Power Control	System Password SSH Access SSH-Keys HTTP(S) Access ACL Settings
Network System	Time & Language
Management	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 9855 .The default langrage 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)	Save & Apply 🔻 Save Reset
	繁體中文 (Chinese Traditional)	

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

Listen only on the given interface or, if unspecified, on all
22
Allow <u>SSH</u> password authentication
Allow the root user to login with password
Allow remote hosts to connect to local SSH forwarded ports

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 device, paste an OpenS				pared to the use of plain passwords. In order to upload a new key to the the input field.
No public keys present y	vet.			
Paste or drag SSH key f	ile	Add key		
HTTP(S) Acces				
uHTTPd offers H	ITTP or HT	TPS netv	vork access	
System Password	SSH Access	SSH-Keys	HTTP(S) Access	ACL Settings
HTTP(S) Acce	ess			
uHTTPd offers <u>HTTP</u> or <u>H</u>	TTPS network ac	cess.		
Settings				
Redirect to HTTPS				
			Enable autom	natic redirection of <u>HTTP</u> requests to <u>HTTPS</u> port.

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	ful	ful	Edit Delete
guest	300s	ful	denied	Edit Delete
admin	300s	ful	ful	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	IP_POWER
Firmware Version	v1.10_2023_6_26_op
Hardware Version	IP9855V1000
UBoot Version	4.4.1.8
Web Port	0.0.0.80,[::]:80
Local Time	2023-06-27 07:04:28
Uptime	4h 57m 8s

Network

IPv4 Upstream	IPv4 Upstream
Protocol: DHCP client	Protocol: DHCP client
Address: 10.33.122.2/24	Address: 10.33.122.5/24
Gateway: 10.33.122.1	Gateway: 10.33.122.1
DNS 1: 8.8.8.8	DNS 1: 168.95.192.1
DNS 2: 1.1.1.1	DNS 2: 168.95.1.1
DNS 3: 168.95.192.1	Expires: 23h 33m 10s
DNS 4: 168.95.1.1	Connected: 0h 26m 50s
Expires: 19h 3m 41s	Device: Wireless Network: Client "aviosys-10-2.4G"
Connected: 4h 56m 19s	MAC address: 00:76:56:00:01:09
Device: Bridge: "br-lan"	
MAC address: 00:76:56:00:01:08	
IP	Pv6 Upstream
Protocol: DHCPv6 cli	ent
Address: 2001:b011:3801:3388:276:56ff;fe00:108/64	
Gateway: fe80::1e5f	f:2bff:fe66:a574
DNS 1: 2001:b000:16	68::2
DNS 2: 2001:b000:168::1	
Connected: 4h 56m 15s	
Device: Bridge: '	"br-lan"
MAC address: 00:76:56:00:01:08	
Active Connections	137 / 8192 (1%)

4.5.3 Email

e-Mail

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

SMTP config

From	aviosys1@gmail.com
Server	smtp.gmail.com
To:	aviosys101@gmail.com
Port	587
tls	
Account	aviosys1
Password	•••••
Verify	Save

Email Setting :

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

- Receive E-mail with IP information & MAC Address as 9855 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 \rightarrow Interface \rightarrow DNS setting

The 9855 allows user to send from public e-mail account, such as @gmail or @hotmail or @yahoo.com

- From : Mail sender address to send the E-Mail out. Ex.: <u>9855@gmail.com</u>
- Server (SMTP): This is the mail server of sender

If user select @gmail or @hotmail account as SMTP Server , 9855ill fill the SSL & Port automatically

- To : Mail receiver address to get the E-Mail in. Ex.: <u>9223@hotmail.com</u>
- Server : Please refer to P.37 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: <u>9855@gmail.com</u>
- Password: Password for the e-mail address. EX : 12345678
- Verify: A send e-mail test to make sure the e-mail works.
- Save: To store the setting in this section.

For example :

Get Email alarm as outlet changed :

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

Power Control \rightarrow Control \rightarrow Advanced setting

	Control
Outlet1	power1
Disable Control Button	
Disable Power cycle Button	
Email Alerts	
Beep Alert	
Power Cycle Time	60 Seconds
Current (1~10)Amp	
Temperature Limit:0~60°C Low: 0.(High:60	None
Default Power Status	LAST
	Save

4.5.4 System Log

In this section, user can get the 9855 system operation information and send the information to assign Server IP address (not support name). The system information will be deleted after 9855 device power reboot.

Setup:

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

System log

Setup Log	
External system log server	0.0.0.0
External system log server port	514
External system log server protocol	UDP 🗸
Log output level	Debug 🗸
Cron Log Level	Debug 🗸

•	-	-	
A	O	D	IV.

- 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
- 4. Log output level : select level Debug , Info , Notice , Warning , Error , Critical , Alert & Emergency
- 5. Corn log lever : select Normal or warning

Please click " Apply " after you change the settings.

System Log:

Setup:

System log

Setup Log

External system log server

External system log server port

External system log server protocol

Log output level

Cron Log Level

Apply

Log:

System log

Setup Log

daemon.err ALL	
2023-06-21T01:05:28,: 45347.055285 Poll UPS [myups@localhost] failed - Driver not connected	-
2023-06-21T01:05:33,: 45352.056565 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:05:38,: 45357.057845 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:05:43,: 45362.059265 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:05:48,: 45367.060550 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:05:53,: 45372.061914 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:05:58,: 45377.063187 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:03,: 45382.064465 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:08,: 45387.065743 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:13,: 45392.067024 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:18,: 45397.068315 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:23,: 45402.069653 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:28,: 45407.070917 Poll UPS [myups@localhost] failed - Driver not connected	
2023-06-21T01:06:28,: 45407.071018 UPS myups@localhost is unavailable	
2023-06-21T01:06:28,: > libmsock: using getaddrinfo	
2023-06-21T01:06:28,: > AF_INET6	
2023-06-21T01:06:28;: IPv6 address: 2404:6800:4008:c03::6c	
2023-06-21T01:06:28,: > EINPROGRESS=150,EWOULDBLOCK=11	
2023-06-21T01:06:28,: > connect(): socket=3,rc=-1, errno=150	
2023-06-21T01:06:28,: > Try socket 3	
2023-06-21T01:06:28,: > Setting read timeout to: 5 seconds	
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	-
2023-06-21T01:06:29,: > Setting read timeout to: 5 seconds	1

0.0.0.0

514

UDP

Debug

Debug

~

~

~

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 9855, please follow the instruction below to prevent anything happens like **update incomplete** or **hardware disable** which may be caused by wrongdoing of updating:

- 1) Turn off all chat programs including (Skype, FB. QQ, AIM, Yahoo 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.
- The update will turn back to the default settings, 9855'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 reset your firmware, click on the "Keep settings and retain the current configuration" icon. This action will save your current settings but will not upgrade your device's firmware; it will only refresh it.



4.5.6 Reboot

Reboots the operating system of your device.

Reboot

Reboots the operating system of your device

Perform reboot

4.6 Application

A	pplication
	IPService
	SNMP
	Network UPS
	Tools
	Watchcat
	Wake on LAN

4.6.1 IP Service

In this section, user can setup :

A. IP Server setting(Search)

B. CNT2 (MQTT)Setting(Remote Control)

IP Service Setting (Search)		
Enable		
IP Service Server	Server1	~
Device Name:	IPPower]
Country	Country]
City	City]
	Find IPPower device on myipedit.com	
	Save	
CNT(MQTT) Setting (Remote control)		

CNT(MQTT) Setting (Remote control)		
MQTT Serivce	IPPower	~
Enable		
Status		
	Save	

A. IP Service Setting (Search)

The IP SERVICE allow 9855 to be accessed easily on the internet by our IP Power Center or IP EDIT. With this feature anyone can find its device with no problems.

IP Service Server: Allows user can find user of 9855 on the internet without having to remember long IP Addresses. Instead user can just remember the name of user device.

IP Service Setting (Search)		
Enable		
IP Service Server	Server1	~
Device Name:	IPPower	
Country	Country	
City	City	
	Find IPPower device on myipedit.com	
	Save	

- 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 9855 by Device name, Country or City.

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

Please refer page #14 for the function of IP Server

Internet onlin IP Server :	e devices	erver1			1		
Device Nam	e: 92	58		*nec	essary) Connect	Disconnec
Connected to	Server1 City Name	Country	City	IP ddress	Port	Mac Address	Serve *
[City Franconia	IP ddress 71.168.75.96	Port 80	Mac Address 00925800d65f	Serve ▲
Device	Name	Country USA	1.000	A 1953 S 15	1.5.6.710		1000000

B. CNT (MQTT) Setting (Remote control)

For developing only. 9855 supports MQTT function. Please contact with your distributor for the details if you would like to develop own system.

CNT(MQTT) Setting (Remote control)	
MQTT Serivce	IPPower v
Enable	
Status	
	Save

4.6.2 SNMP

This section is for development of system integrator who is familiar with SNMP knowledge. 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	none trapsink
community	trap2sink trapV3
port	informsink
EngineID	0x8000000000

SNMP Version: IP9855 provide V1, V2 and V3 version. V1 and V2 remain the same settings, when you switch to V3, user can see the difference in the second picture.

Enable	
Version	<u>v1</u>
Authority	v1 v2c
community	v3
Trap type	none 🗸
host	192.168.1.1
community	private
port	162

Apply

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

Enable			
Version	v3	~	
User	admin		
auth	authPriv	~	
MD5	•••••		
DES	•••••		
Trap type	none	~	
host	192.168.1.1		
community	private		
,			
port	162		

(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	~
MD5	authPriv authNoPriv	
DES	•••••	

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

Enable		
Version	v3 •	
User	admin	
auth	authPriv 🗸	
MD5		
DES	••••••	

4.6.3 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 of 5 roots (Nonitor)	network of 5 roots (COL

Network UPS Tools (Server)

Network UPS Tools Server Configuration

NUT Users		
Username	upsmon	
Password	•••••	*
Role	Master 🗸	
Additional Field 🗸 Add Add		
Addresses on which to listen		
IP Address	0.0.0.0]
Port	3493]
Add		
Driver Configuration		
The name of this section will be used as UPS name elsewhere		
Driver	usbhid-ups 🗸	
Port	auto]
Additional Field V Add		

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

Warring: 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
Notify command	/usr/bin/notifycmd
Notification defaults	Please choose Execute notify command Write to syslog
Notify when on battery	Please choose Execute notify command Write to syslog
Additional Field 🗸 Add	
UPS Master	
Name of UPS	myups
	As configured by NUT
Hostname or address of UPS	localhost
Power value	1
Username	upsmon
Password	•••••
Additional Field 🗸 Add Add	

3. Network UPS Tools: (CGI) Network UPS tools CGI Configuration

Network UPS Tools (Server) Network UPS Tools (Monitor) Network UPS Tools (CGI)

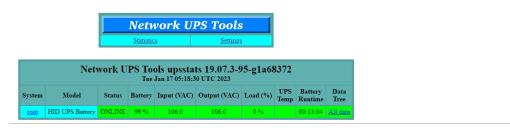
Network UPS Tools (CGI)	
Network UPS Tools CGI Configuration	
NUT CGI Access	
Go to NUT CGI	
Host	
UPS name	myups As configured by NUT
Hostname or IP address	,
Display name	root
Additional Field 🗸 Add	
Add	
Control UPS via CGI	
Enable	

Save & Apply Save Reset

NUT CGI Access Click the "Go to Nut CGI " icon, you will see the screen show network UPS Tools

Network U	PS Tools
<u>Statistics</u>	<u>Settings</u>

Statistics: Show the detect of UPS status. Settings: (Under-development, please wait for advice)



4.6.4 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.

ere you can set up several checks and actions to nan one action.	take in the event that a host becomes unreachable. Click the Add button at the bottom to set up mor
Vatchcat	
hese rules will govern how this device reacts to n	etwork events.
Seneral Settings	
lode	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
eriod	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 ${\bf m}$ for minutes, I for hours or ${\bf d}$ 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
lost To Check	8.8.8
	IP address or hostname to ping.
ddress family for pinging the host	any 🗸
heck 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, ${\rm I}$ 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
ing Packet Size	Standard: 56 bytes ►
orce 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 reboo delay.
nterface	unspecified •

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.

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
	 10 seconds would be: 10 of 105 5 minutes would be: 5m 1 hour would be: 1h 1 week would be: 7d
	• 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	0
	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

4.6.5 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	e local network.
Network interface to use	ø ^ø 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	0

Wake up host

- Network Interface to use: Specifies the interface the WoL, packet is sent on.
 (1) Broadcast on all interfaces: All the function below will broadcast at the same time.
 - (2) eth0: Device's MAC address
 - (3) wlan0: Wireless lan
 - (4) br-lan: Ethernet
- 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

5. Other ways to control

Besides HTTPS/CGI command and SSH we supply here, 9855 also support SNMP (MIB), Please check page #47 to check and enable the function.

5.1 CGI HTTP Commands

CGI Commands allow you to easily integrate the 9855ith 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
 - 1.1 http://root:12345678@192.168.1.18/set.cmd?cmd=getpower
 - 1.2 <u>http://192.168.1.18/set.cmd?user=root+pass=12345678+cmd=getpower</u> The above 2 way also for HTTPS
- 2. Command

set.cmd?cmd=

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

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

System return :

<!--CGI-DATABEG--> Version=v1.09_418

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

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

System return:

<!--CGI-DATABEG-->

mac=007628000284

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

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

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

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

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

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?cmd=setpowercycle&p61=5

System return: CGI Command : Data follows p61 cycle ok

2.6 Get current Amp value : getcurrent

For example : http://192.168.1.18/set.cmd?cmd=getcurrent

System return:

<!--CGI-DATABEG--> c61= 0.0, temp=28.3

<!--CGI-DATAEND-->

5.2 SSH commands

To login to the 9855 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)



(2) Command list:

🖉 root@IPPower: ~	_	×
root@IPPower:~# ioctrl -h		^
Usage: ioctrl [-h help]: display this help [-s setpower p61=1 or 0]: turn on/off ports on the device		
<pre>[-1 setcycle p61=x (x=1~9999)]: outlet, will turn 'off to [-p getpower]: get the on/off status of the device [-c current]: get the current value of the device [-v getvoltage]: get the voltage value of the device</pre>	on	
<pre>[-t temp]: get the temperature value of the device [-r reboot]: System Restart [-f version]: display version information</pre>		
root@IPPower:~# ioctrl -s p6=1 p61 ok,		
root@IPPower:~# ioctrl -c Current value: 0.0		
root@IPPower:~# ioctrl -v		
Voltage value: 105.00 root@IPPower:~# ioctrl -t		
Temperature value: 30.30		
Fahrenheit value: 86.5		
root@IPPower:~# ioctrl -p		
Power Status: 1 root@IPPower:~#		~

6. FAQ :

Q1: Why can't I see the 9855's IP address in IPEDIT.exe

Ans.:

Please check if your 9855 had boot up successfully. There is a short beep sound to show 9855 boot up successfully after device power up for 45 seconds.

There are several possibilities for this issue as 9855 boot up successfully :

1. Segment of your PC :

Please check the PC you use is under same LAN/ network / segment as 9855.

2. Firewall / Antivirus protection :

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

3. Network card :

IPEDIT can only work for the PC with one network card. If there are more than 1 network card, include dynamic network card, please disable one and make sure the one you selected is Under the same segment with IP9855

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 9855 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.

Notice :

Under DHCP mode - 9855ill get the Network type (Gateway) information automatically. But if under Static mode, please do fill up the correct Network type (gateway).

Step : Connect user PC and 9855 to a router by LAN. Then **reboot 9855 (MUST DO)**. After 45 seconds with a long beep sound, user can find the LAN IP of 9855 by IPEIDT.exe

Q4: How can I reset to default:

Ans : Keep pressing the button of "RESET for 7 seconds and then release it.

To reset to original manufacture settings : press the reset button with a sharpen pin for 7 seconds then RELEASE. There will be total 4 beeps sound which means reset start and 9855ill be rebooted itself -there is one beep after reboot, and most information go back to default setting (LAN IP)