



IPM-101 User Manual



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1.) Welcome

Introduction

The IPM-101 is an industrial grade single port relay perfect to power management through an Ethernet connection. This device can easily integrate with other devices and allow power control with your integrated system. With the IPM-101 robust design and high quality components it provides an added incentive to other devices or can be used independently. The IPM-101 brings an economical solution to a professional industry.

Minimum System Requirements

CPU Minimum Requirements

- CPU 2.0GHz or higher

Operating Systems:

- Windows Operating Systems (IE5.0+SPI & Firefox)
- 512 MB system memory or above
- 10/100 Ethernet switch/hub
- Sound Card: DirectX 9.0c compatible sound card
- Ethernet network port/card
- Network cable
- Internet (For remote access) or Ethernet Network (Internal Network use) with some type of Internet connection, (i.e. ADSL, Cable, Dial up or any other forms of Internet service)

Software

Windows XP Service Pack 2 or above.

Resolution of screen setting: 800x600 or higher

2.) Product Overview

Features

- 1.) Inrush Current relay design for extra protection.
- 2.) Designed to control T5 fluorescent lighting.
- 3.) Industrial single port Relay design network controller.
- 4.) Accessible with popular web browsers - IE, Google Chrome, Netscape & Firefox.
- 5.) Supports up to maximum current: 8 Amp.
- 6.) Power surge protection design to protect against high voltage power surge.
- 7.) Designed to meet high voltage and current safety standard design and regulation.
- 8.) Reliability and testing certification MBTF +200,000 hrs+
- 9.) Comes in 5 standard global socket types.
- 10.) Network protocols supported: Http, DDNS, DHCP, Virtual and Dynamic IP.
- 11.) SNMP for trap – send message to manage server.
- 12.) SDK for own software development.
- 13.) Smartphone and IOS supported.
- 14.) Embedded web server - No PC is required for it to work.

Specification

Power Cable Input:

Specification: 10AMP 18AWG 0.75 x 3C (Standard PC Power Cable)

Weight:

192.6 grams without packaging.

Dimensions:

(L x W x H): 8.5 x 7 x 8.5 cm

Casing: Plastic

Relay Specification:

Regular Use: Max. 8A / port

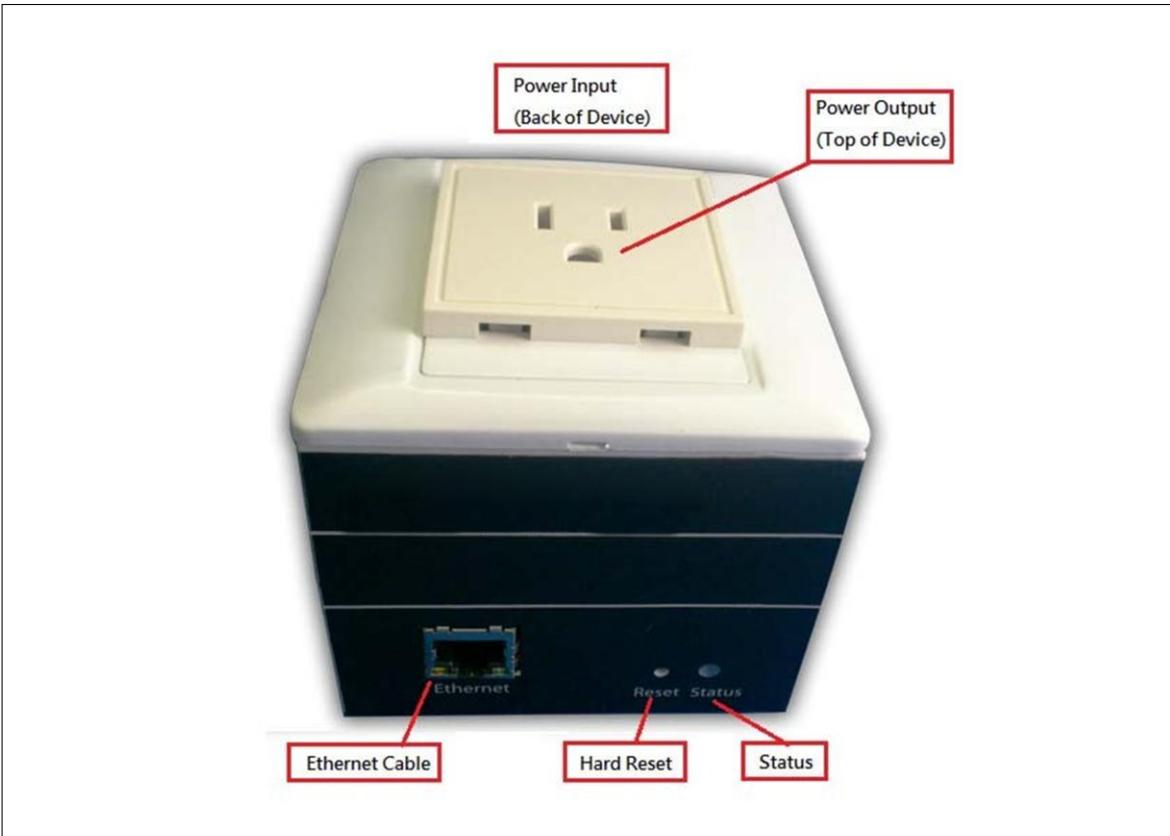
T5 fluorescent light control: 240Watt

Package Contents

1.) IPM-101 Unit x 1	
2.) IPM-101 Installation CD	CD will provide manual, software, and documentation on the IPM-101
3.) Standard PC Power Cable (Optional)	Specification: 10AMP 18AWG 0.75 x 3C

3.) Interface Description

Hardware Interface



Power Cable Input:	The Power Input is found on the back of the device.
Power Output	The Power output is on the top of the device. Simply plug in the device that you would like to power control. (Comes in different plug standards)
RJ45 Ethernet:	Plug in the RJ45 Ethernet cable to the Ethernet port
RESET	To revert to manufacturer default, hold down for 7-9 seconds until you hear 2 long beeps.
Status Indicator	Red Status Indicator: Output port is set to off Green Status Indicator: Output is On

4.) Setting up your Device

Before we Start

*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 that the power input cable is working correctly.
- 3.) Check the cables to make sure there are no problems with the cable.

Setup for Internet Access

To access the IPM-101 from the internet, the router will require port forwarding to be activated for your IP Power device.

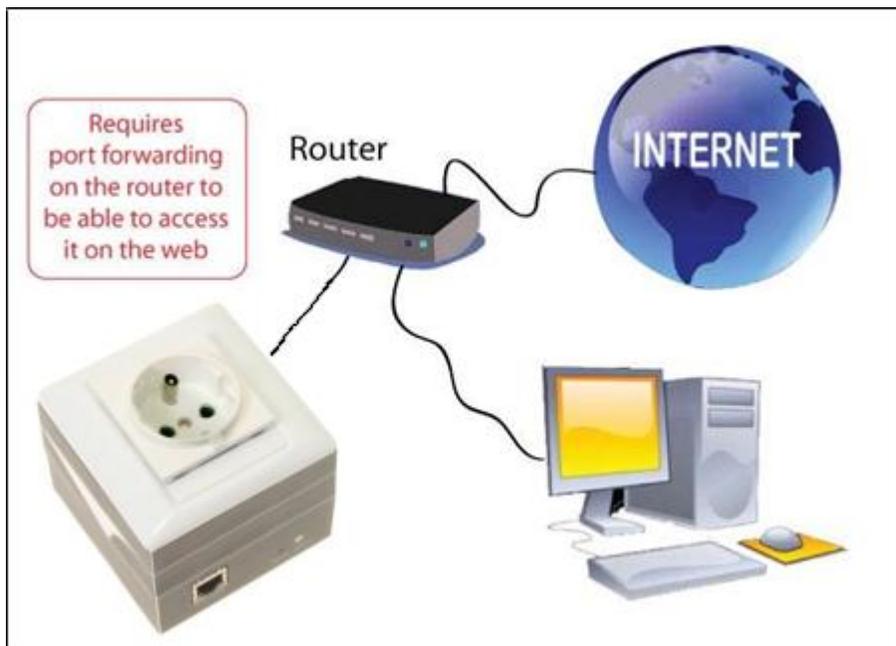
* Please refer to your routers manual on how to port forward the device.

For example

IPM-101 IP Address: 192.168.100.200

Port: 8080

* On the router you will need to port forward both TCP / UDP to the IP Address 192.168.100.200 on Port 8080.



IPM-101 Quick Installation

- 1.) Connect the Ethernet cable (RJ45) to the IPM-101 to your local area network.
- 2.) Then connect the power cable into the power cable input of the IPM-101.
- 3.) Connect the device that you would like to control to the output plug on the top of the IPM-101.
- 4.) Open the IP Edit device search tool from the CD.
- 5.) The device will automatically be set to DHCP and will show on IP Edit.

- a. If no DHCP is detected the default IP and Login for the device will be the following

Default IP: 192.168.1.100 (When no DHCP is apparent)

Default Login: admin

Default Password: 12345678

- 6.) Then on IP Edit double click on your device and a Internet Explorer window will appear with the login screen.

- 7.) Simply login with the default login and password.

Default Login: admin

Default Password: 12345678

Using IP Edit

IP Edit is a search tool designed to search, configure, or access the IP Power IPM-101 from a local networked computer.

IP Power IPM-101 Default Login / Password

Default IP: 192.168.1.100 (When no DHCP is apparent)

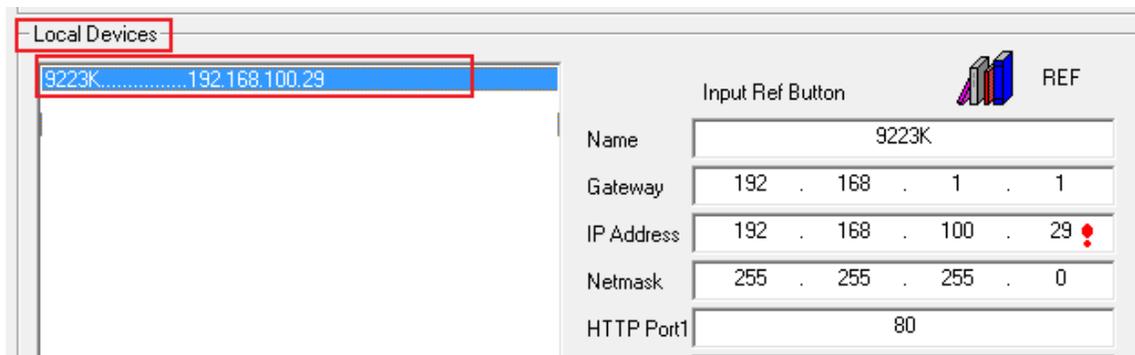
Default Login: admin

Default Password: 12345678

- 1.) Insert the CD provided with the product
- 2.) Install the software IP Edit to the desktop of your computer.
- 3.) Open IP Edit by clicking on the icon



- 4.) In the local devices section you will see your device show up if connected correctly.



- 5.) Select the IPM-101 device and the device information will populate on the right.
- 6.) Check to see that the gateway IP and the IP Address (IPM-101) match your current network.

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

For example:

If you have the following information regarding the IPM-101 and your network

Gateway: 192.168.1.1

Computer IP Address: 192.168.1.122

IPM-101 IP Address: 192.155.2.26

Sub Netmask: 255.255.255.0

Port: 8080

Since the IP Address of the IPM-101 is the following: 192.155.2.26

You will need to make sure that the first 3 segments of your IPM-101 IP Address must match the first 3 segments of your gateway IP.

First 3 Segment of Gateway Address: 192.168.1.X

So your new IP Address for the IPM-101 should be: 192.168.1.26

New Network Information

IPM-101 IP Address: 192.168.1.26

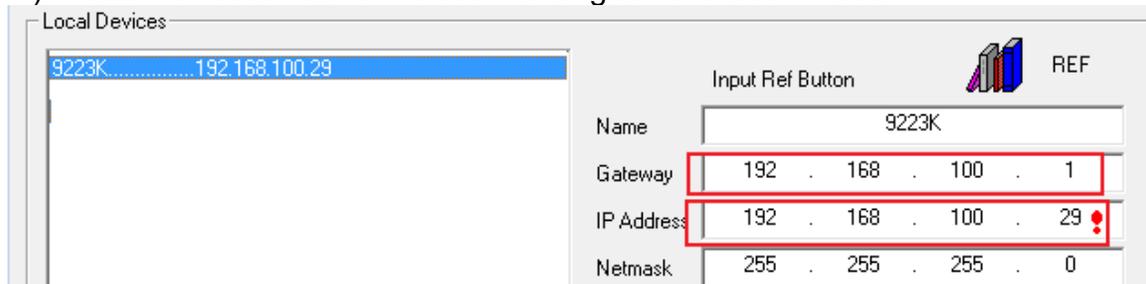
Gateway Address: 192.168.1.1

Local Computer IP Address: 192.168.1.122

Sub Netmask: 255.255.255.0

Port: 8080

7.) Press the rescan button to see if changes have been made.



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



9.) Type in the default login and IP Address to enter the device.

New Network Information

IPM-101 IP Address: 192.168.1.26

Gateway Address: 192.168.1.1

Local Computer IP Address: 192.168.1.122

Sub Netmask: 255.255.255.0

Port: 8080

Default Login/Password: admin/12345678

Using IP Service

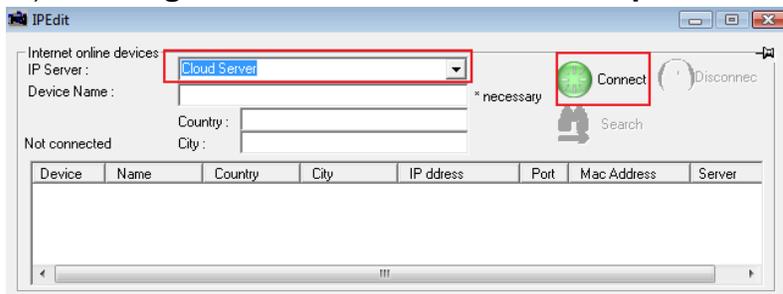
IP Service is a feature which allows you to search for the device easily without having to remember long complicated IP addresses. Instead, all you need to know is the device name of your IP Power device and you can easily find it on IP Service.

In the IPM-101 under the system configuration page, you can select the IP server that you would like the IPM-101 to go to. You can select from the XtendLan server or the Cloud Server. This function must be turned on to work.

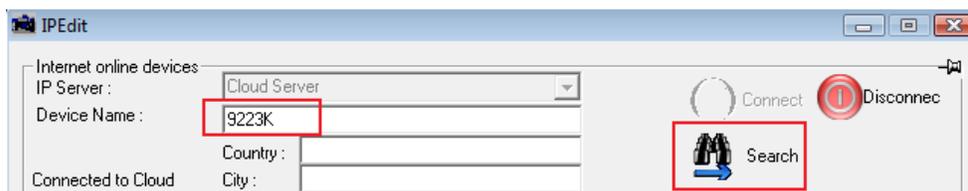
** IPM-101 must be port forwarded for IP Service to work correctly.*

1.) Open IP Edit and Select the server that your IPM-101 is designated to.

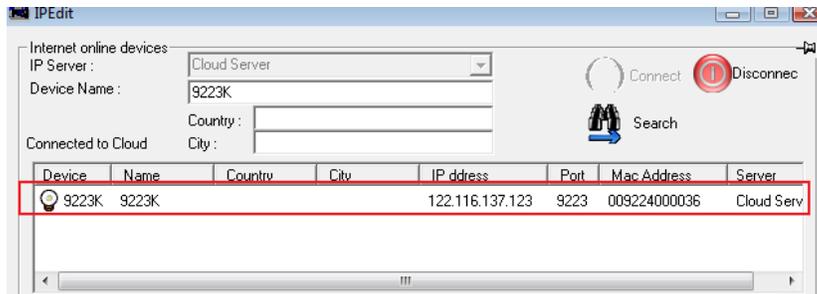
2.) **Hit the green connect button on the top of IPEdit.**



3.) Then type in the IPM-101 Name that you have selected for the device and press the search button.



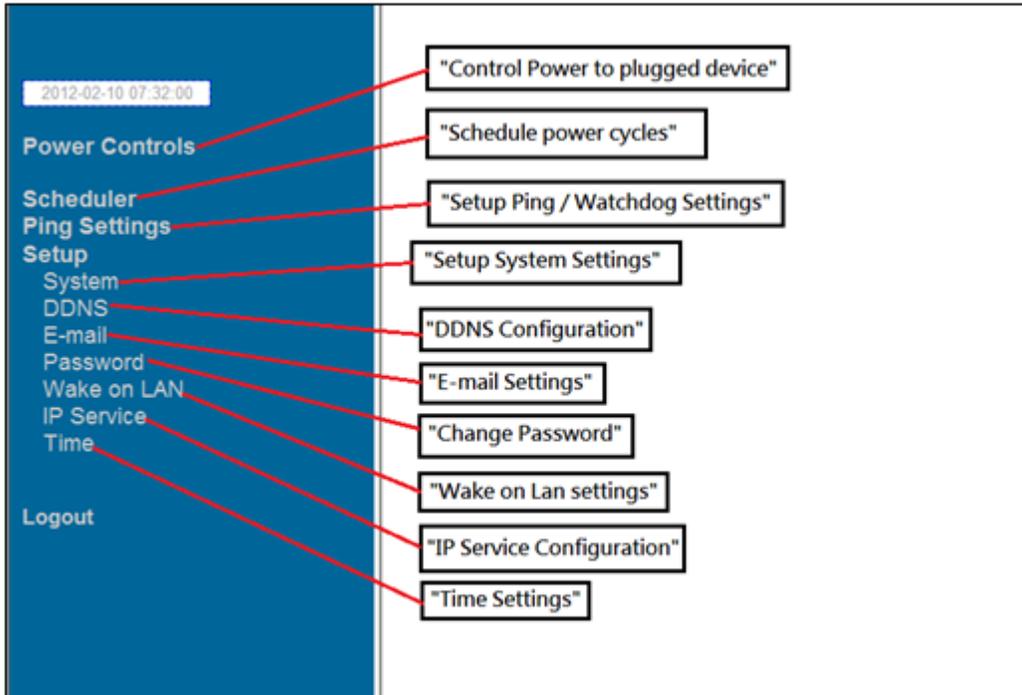
- 4.) Find your device and double click on the screen and a IE window will pop up connecting to your device.
**Your device must be Port forwarded for the login screen to appear.*



- 5.) After you have connected to your device, type in the login and password for your device

5.) Web Interface

The web interface on the IPM-101 consists of 4 main sections. Power Controls, Scheduler, Ping Settings, and Setup



Power Controls: Turn off, Turn on, the socket to provide power to the device.

Scheduler: Schedule specific dates or time to call an action to the IPM-101.

Ping Settings: Watchdog function to make sure your devices are responding normally.

Setup: System Configuration

System: Adjust main settings to device including IP Address, Gateway, Subnet Mask, and etc.

DDNS: Configure DDNS functionality

E-mail: Setup E-mail information

Password: Change password

Wake on Lan: Wake devices up that support wake on lan

IP Service: Configure IP Service functionality to find devices by name

Time: Setup time and date of device

Logout: Logout of the device

Power Controls

The Power Controls page is the panel where the user can directly turn off / on power to the attached device, set timers and name the outlet.

Power	Name	Control	Timer
1		<input type="radio"/> On <input checked="" type="radio"/> Off	0 Sec <input checked="" type="radio"/> On <input type="radio"/> Off
<input type="button" value="Apply"/>			

Name

In the name section the device name can be set. Simply type in a name you would like for the device and hit the apply button. Name does not support special characters (eg. ! *%)

Control

The control section allows the user to directly turn on or turn off the device. Select the control that you would like to execute and hit apply to apply the settings. This will turn the device on or off.

Timer

The timer allows the user to set an amount of time before a control is activated. To do this, simply enter the amount of delay time in seconds you would like the action to occur. Select the On or Off and hit the apply button. When the timer has reached the time set it will execute your command.

For example if Port 1 is on and I would like to turn it off in 30 seconds, the command may look something like the following.

Power	Name	Control	Timer
1	Router	<input checked="" type="radio"/> On <input type="radio"/> Off	30 Sec <input type="radio"/> On <input checked="" type="radio"/> Off
<input type="button" value="Apply"/>			

* The maximum number of seconds that can be set on the timer of the device is 9999.

Scheduler

The power schedule offers flexibility so the user can easily schedule events to control the power of the device.

Power	Date	Time	Repeat	ON/OFF
1	2006 - 06 - 06	06 : 06 : 06	Off	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Off	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Just Once	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Every Days	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Work Days	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Weekend	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Mon.&Thu.	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Tue.&Fri.	<input type="radio"/> ON <input checked="" type="radio"/> OFF
2006 - 06 - 06	06 : 06 : 06	Wed.&Sat.	<input type="radio"/> ON <input checked="" type="radio"/> OFF	
	2006 - 06 - 06	06 : 06 : 06	Off	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Off	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 : 06 : 06	Off	<input type="radio"/> ON <input checked="" type="radio"/> OFF

Date: Enter the date in which the action will occur needs to be set.

Time: Enter the time of the action will occur.

Repeat: Select the frequency of this action.

Just Once (Just one time)

Everyday (Sunday thru Saturday)

Workdays (Monday thru Friday)

Weekend (Saturday, Sunday)

Mon. & Thu. (Monday, Thursday)

Tue. & Fri. (Tuesday, Friday)

Wed. & Sat. (Wednesday, Saturday)

How to use:

If you would like to turn on the device at 8AM and turn off the device at 8PM, the device may be set in this fashion.

Power Schedule				
Power	Date	Time	PARAMETER	Power ON/OFF
	2006 - 06 - 06	08 : 00 : 00	Just Once	<input checked="" type="radio"/> ON <input type="radio"/> OFF
	2006 - 06 - 06	20 : 00 : 00	Just Once	<input type="radio"/> ON <input checked="" type="radio"/> OFF
	2006 - 06 - 06	06 - 06 - 06	Disable	<input type="radio"/> ON <input checked="" type="radio"/> OFF

Ping Settings

The Auto-ping functionality allows the IPM-101 to check if the device have malfunctioned or needs to be restarted. If the device is no working correctly the IPM-101 Ping will activate the action that you have selected to reinstate the state of the device

Relay	Enable	Ping IP	Ping Failures	Delay Before Action (Seconds)	Delay After Action (Seconds)	Continue Ping	Action
1	DISABLE ▾		2	2	2	Continue ▾	OFF ▾ OFF ON Reset
	DISABLE ▾		2	2	2		
	DISABLE ▾		2	2	2		
	DISABLE ▾		2	2	2		
Global Setting							
Ping Type:	<input checked="" type="radio"/> OR <input type="radio"/> AND						
Ping Interval:	2	Seconds					
Ping EchoWait:	20	Millisecond					
Submit							

Relay: A description of which on let to use Ping function

Enable: Disable or Enable ping settings

Ping IP Address: Specify the IP Address to Ping

Ping Failures: The number of ping failures before the Action is activated.

Action Delay (Seconds): After the Ping Failures has been reached, you can set the delay time (seconds) before the action is activated.

Some uses of this function would be for systems or computers that require a shut down time

Delay after action (Seconds): The number of seconds it takes the attached devices to startup. Once those devices start, the Startup Action will be activated to ***continue pinging or stop pinging***.

Continue Ping: After start up Delay has been reached the start up action will either ***Continue Pinging or Stop Pinging***

Action: When the number of Ping Failures have been reached. The device can be set to perform a Off, On, or Reset function.

Ping Type: Ping type sets a condition in the case where either all or 1 of the conditions are met the action will be activated. For instance, if you set Ping Type to "ALL", all the Ping IP's must fail for the action to be activated. On the other hand if you set Ping Type to "OR" as long as one of the Ping IP fails it will cause the action to be activated.

Ping Time Interval (Seconds): The number of seconds between each ping

Ping Response Time (Milliseconds): The number of milliseconds 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.

Please view the example below for more details:

Ping Setting

Relay	Enable	Ping IP	Ping Failures	Delay Before Action (Seconds)	Delay After Action (Seconds)	Continue Ping	Action
1	ENABLE ▾	www.sample.com	3	3	3	Continue ▾	Reset ▾
	ENABLE ▾	www.google.com	3	3	3		
	DISABLE ▾	www.yahoo.com	3	3	3		
	DISABLE ▾	www.facebook.com	3	3	3		
Global Setting							
Ping Type:	<input checked="" type="radio"/> OR <input type="radio"/> AND						
3.) Ping Interval:	3	Seconds					
Ping EchoWait:	3000	Millisecond					
Submit							

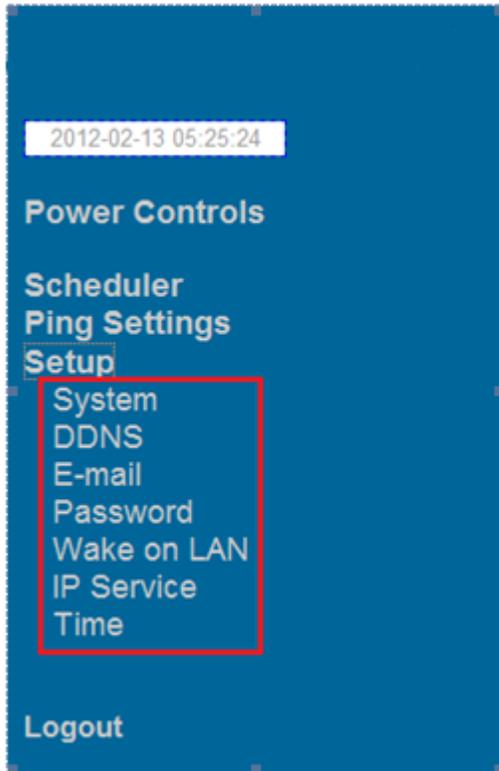
In the picture above:

- 1.) **Power 1 Ping** function is **enabled for two websites**
- 2.) The IPM-101 will ping the web address www.sample.com & www.google.com
- 3.) If there is a response within the **Ping Response Time** the IPM-101 will send another ping signal the set **Ping Time Interval** which is 3 seconds for this example.
- 4.) If the IPM-101 does not receive a response from the device it will constitute a **Ping Failure**.
- 5.) After 3 consecutive failure the device will go to the **Action Delay** section. In this case the device will delay for 3 seconds.
- 6.) When action delay has been reached the **Action** will be set off. Here we have set the IPM-101 to **Reset** the device.
- 7.) Once the device has been reset the IPM-101 will go into **Startup Delay** mode. In this case it is 3 seconds.
- 8.) After the startup delay mode has been reached the IPM-101 will check the **Startup Action** whether to continue or stop pinging the device. Here we have it set to Continue.
- 9.) Then the process starts all over.

10.) Since the Ping Type is set to or if any of the Ping IP constitute a failure then the action will be committed. If the Ping Type was set to "AND" all conditions must be met for the action to be activated.

Setup

The setup page allows the user to configure the system settings of the IPM-101. This includes network information, IP Server, CNT, CGI commands, and the firmware version.



System

The system section allows you to make changes to the network information of the IPM-101. This includes changes to the IP Address, Gateway, Subnet Mast, and DNS. In additional under the system section you will also find other features including SNMP, Telnet, DHCP, Beeper configuration and more.

IP Address:	192	168	50	157	9223
Subnet Mask:	255	255	255	0	
Gateway:	192	168	50	1	
DNS:	168	95	192	1	
SNMP	<input type="radio"/> On <input checked="" type="radio"/> Off				
TELNET	<input type="radio"/> On <input checked="" type="radio"/> Off				
DHCP	<input type="radio"/> On <input checked="" type="radio"/> Off				
Beeper	<input checked="" type="radio"/> On <input type="radio"/> Off				
CGI Command	<input checked="" type="radio"/> On <input type="radio"/> Off				
Delay	0 Sec <input type="button" value="v"/>				
Device Name:	IP Power 9255				
Firmware:	V4.00 2012/02/08				
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>					

IP Address: IP Address of the IPM-101 device.

Subnet Mask: The subnet mask information can be populated here

Default Gateway: Enter the gateway for the router.

DNS: Enter the DNS information here.

Note: Not having the correct DNS information will affect the NTP and SMTP mail server.

SNMP: Enable or Disable SNMP functionality

Telnet: Enable or Disable Telnet functionality

DHCP: This will enable or disable the DHCP on the device

Beeper: This will enable or disable the beep on the device

CGI Command: This will enable or disable the http commands for the IPM-101

Delay Switch: The Delay switch will delay the device to activate the command to a designated amount of time. If set to 10 seconds after commands during scheduler or http commands are sent there will be a 10 second delay.

Device Name: Select the name for the device here, and this name will be used for registering the device on IP Service.

Firmware: Will provide information on the current firmware for the device

DDNS

The DDNS Setup allows the user to setup the IPM-101 with a DDNS server. This way instead of having to remember long IP Addresses, the user now can easily use a WWW link to connect to the device. This also is a good solution for users to have a dynamic IP Address where the IP continually changes and is not constant.

Note: We recommend using free services like www.dyndns.com for this portion. The device may react differently to other ddns services.

DDNS:	OFF ▾
Server IP:	204.13.248.109
Domain:	
UserName:	
Password:	
Proxy Settings	
Proxy Server:	OFF ▾
IP Address:	
Port:	-1
<input type="button" value="SAVE"/> <input type="button" value="UPDATE"/>	

DDNS Server IP: The DDNS server IP

Domain: Type in the dyndns domain name

Username: Enter the DDNS username here

Password: Enter the DDNS password.

Enable DDNS: When using DDNS make sure that it is enabled.

If user is using a proxy account, you will need to enable it here.

Proxy Enable: Select true or false to enable or disable the proxy server

Proxy IP: The Proxy IP is the IP Address of the Proxy Server

Proxy Port: Enter the port of the proxy server here.

E-mail

This section is where email settings are inputted. After the information is populated the IPM-101 will send notifications regarding the device when activated.

MailServer:	sample.com
Port:	25
Pop3Server:	sample.com
User Name:	login@sample.com
Password:	●●●●●●●●
Sender:	login@sample.com
Receiver1:	receiver@sample.com.tw
Receiver2:	
Receiver3:	
Subject:	IP Power 9255
Body:	mailbody IP Power 9255

Save Send

Mail Server: Enter the mail server of email that you are using

Port: Enter the port of the mail server

Pop3 Server: Enter the pop3 server name

User Name: Enter a valid username for the email server

Password: Enter a password

Sender: Enter the sender email address

Receiver 1, 2, 3: Enter the receiver email address

Subject: Enter a subject line for the email so that the received would be able to identify the email

Mail Body: Enter the information that is in the body of the device

Note: Not all email servers may be compatible with the IPM-101. Please see the FAQ section of the manual for a list of compatible Email providers.

Change Password

The change password function, will allow the user to change the current password of the device.

Old Password:		<input type="text"/>
New Password:		<input type="text"/>
Confirm New Password:		<input type="text"/>
		<input type="submit" value="Submit"/>

Changing the password of the device:

- 1.) Type in the old password for the device
- 2.) Then type in the new password maximum of 8 characters
- 3.) Repeat the new password again
- 4.) Then hit the submit button.

The login required option allows the user to choose whether they would like to disable login capabilities for the device.

Wake on Lan

The network wake up function allows the IPM-101 to wake up computers, servers or systems that have a wake on lan capability. This functionality is not available on all PC's and requires the motherboard or Ethernet card to have Wake on Lan support for this functionality to work correctly.

MAC:		<input type="text" value="FFFFFFFFFFFF"/>
		<input type="button" value="Save"/> <input type="button" value="Send"/>

Simply just type in the Mac address of the system that you would like to start up and hit the send button and the device will be activated.

IP Server Configuration

The IP Server Configuration page is where the IPM-101 can be configured to connect to IP service.

Country:	<input type="text"/>
City:	<input type="text"/>
CNT ON/OFF:	OFF ▾ Server1 ▾
IPsrv ON/OFF:	OFF ▾
IPsrv ServerAdr:	122 . 116 . 138 . 129
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

IP service allows you to easily find your device off the web or off the google cloud server without the need to remember long IP Addresses. Instead you can find your device easily just by searching with the name of your device.

Time

The date and time settings allow the user to synchronize the IPM-101 with their local time or a NTP server.

Date / Time

Date / Time: (yyyy-mm-dd HH:MM:SS)									
2012	-	2	-	13	6	:	3	:	14
NTP Server IP Address:									
192	.	43	.	244	.	18	Timezone:	0	
<input type="button" value="SAVE"/> <input type="button" value="NTP"/> <input type="button" value="Local-Time"/>									

NTP: Network Time Protocol can be entered into the IPM-101. Simply just enter the IP Address of the NTP Server and hit the NTP button to synchronize. Then press save .

* For NTP to work correctly the DNS server must be configured correctly on your [System configuration page](#)

Local Time: The local time gets the time of the PC that is currently being used.

Logout

Click on the Logout link after you finish each session of using the IPM-101. This will ensure that any other person that uses the device next will not be able to control the devices without logging in.

6.) Controlling the Device

CGI HTTP Commands

Http commands allow you to control the device with commands. The basic commands are provided below.

There are two ways to input http commands with authorization required

Password in http:

`http://login:password@ipaddress:port/command`

Password not in http:

`http://ipaddress:port/command`

Note: If you use the password not in http: command you will need to enter it when the browser asks for the password.

a.) Set Power Command

The Set Power command allows you to control the devices on/off through the http commands. With this command you can integrate can integrate the IPM-101 with any other system.

Outlet	Power On	Power Off
Output 1	61 = 1	61 = 0

Ex. For Single Port Control On

<http://192.168.1.3/set.cmd?cmd=setpower+p61=1>

Output: P61=1

Ex. For Single Port Control Off

<http://192.168.1.3/set.cmd?cmd=setpower+p61=0>

Output:P61=0

b.) Power Delay

The Power delay command allows you to delay the set power command.

Ex. For 5 Seconds Delay then On

<http://ip/set.cmd?delay=5+cmd=setpower+p61=1>

Delay range = 1 - 9999 seconds

EX: <http://192.168.1.52/set.cmd?delay=158+cmd=setpower+p61=1>

c.) Read Power Command

1. Set Port On/Off

<http://192.168.1.3/set.cmd?cmd=setpower+p61=1> (relay open) ,
setpower+p61=0(relay closed)

P61=1

2. Read Port

<http://192.168.1.3/set.cmd?cmd=getpower>

P61=1