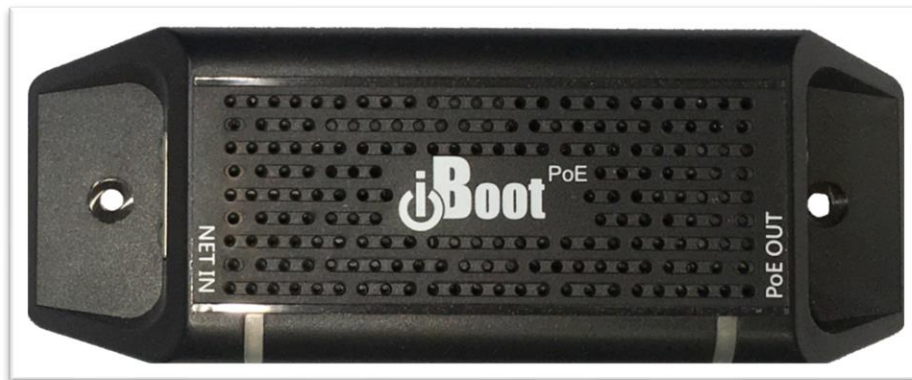




Congratulations on purchasing the best network controlled power switch available. The iBoot-PoE provides you the ability to reboot crashed devices with the click of a mouse. Be sure to read up on all the features of the iBoot-PoE Including:

- **PoE Extender or PoE Injector Function**
- **PoE Plus (802.3at) Compliant** 25.5 Watts Maximum
- **Web Based** setup and control
- **Automatic Reboot** using AutoPing and Traffic Monitor.
- **Event Scheduling** for real-time power control.
- **Telnet** setup and control
- **Management Utility:** Easy Setup, Firmware upgrades and Reset to Factory Default
- **iBoot Cloud Service:** Control all your iBoots from one web portal.

Table of Contents

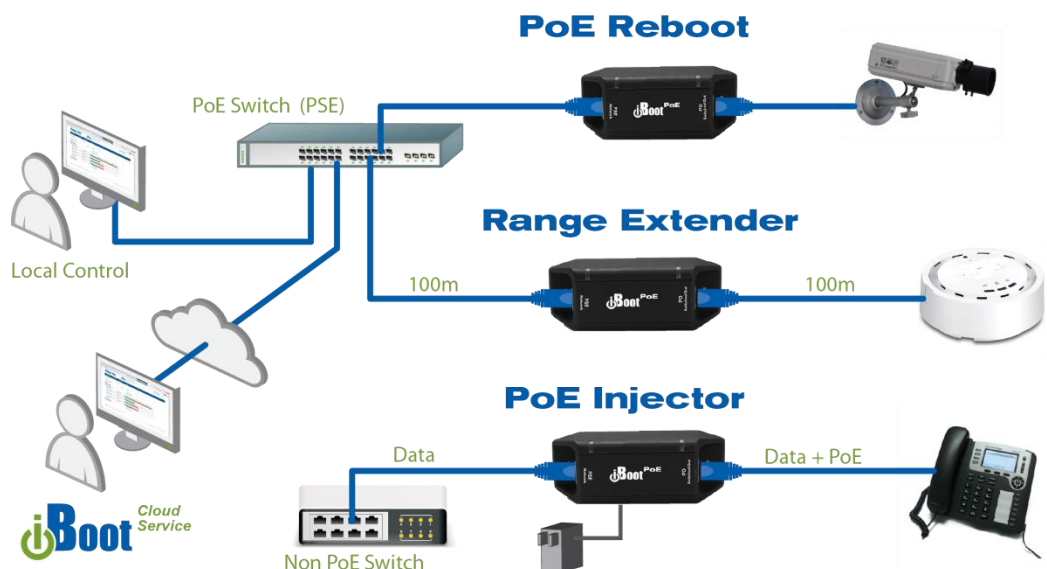
1. General Description	2	8. iBoot Cloud Service	20
2. Hardware Installation	5	9. Command Line Interface	22
3. Initial Configuration	7	10. DXP Protocol	28
4. Web Browser Operation	10	11. Firmware Upgrades	28
5. Web Setup	13	12. Troubleshooting	29
6. Disable Off	18	13. Specifications	30
7. Local Link Multicast Name Resolution	19	14. Technical Support and Warranty	31

1. General Description

The iBoot-PoE is a network attached, IP addressed, web controlled Power Over Ethernet (PoE) power switch. Anyone with a web browser can access iBoot-PoE to perform power On, Off or Power Cycle (Reboot). iBoot-PoE uses two levels of password for security.

iBoot-PoE has a web server built in, as well as the ability to be managed through the iBoot Cloud Service. A simple Web browser interface makes it easy to control power from anywhere in the world with a click of a mouse. iBoot-PoE also supports Telnet for text commands, as well as Dataprobe's Exchange Protocol (DxP) for interfacing to a variety of Dataprobe products and custom software development.

1.1. Uses for iBoot-PoE



- Automatic reboot of PoE devices – Cameras, Access Points, Phones, etc.
- Range Extender – Add 100 meters to PoE runs
- PoE Injector – When used with Power Supply PS-WRI-7 iBoot-PoE is a complete PoE injector with reboot. The external power supply can also function as back-up power in the event that the PoE power fails.

1.2. Automatic Reboot

iBoot-PoE provides two ways to monitor your application and provide automatic reboot when configurable conditions are met

AutoPing

The AutoPing feature allows iBoot-PoE to automatically detect failed equipment and perform a timed reboot or other power control function. You set one or two IP addresses to be periodically pinged. When iBoot-PoE no longer detects a response from these addresses, the programmed power control function is actuated. The two addresses can be AND or OR linked so that both (AND) or either (OR) need to fail in order to take the selected action.

With AutoPing, it is also possible to turn ON or OFF the PD when the trigger conditions are met.

See Section 5.5 On AutoPing Setup



Traffic Monitor

Traffic Monitor measures the bandwidth utilization and reboots the PD when the utilization is too low or too high. It is specifically designed to support high speed access points that crash or degrade over time and need a quick reboot to get up and running properly.

In addition to setting minimum and (optionally) a maximum traffic, settings allow for monitoring of the Uplink and/or Downlink, and to disable the traffic monitoring function at specific times of the day, like when your coffee shop is closed.

See Section 5.5 on Traffic Monitor Setup



Scheduling

Scheduling provides calendar based control of power, to power up or down devices as needed, or to provide regular reboots to ensure proper operation. See Section 5.6

1.3. Automatic Self Configuration

In most cases, the iBoot-PoE will identify all the network elements required to configure itself for automatic monitoring and rebooting of a typical PoE environment. The unit will identify the following:

- Network Router to obtain an IP address and additional settings for proper network configuration. (DHCP)
- Downstream PoE device IP address for self-setup of AutoPing monitoring of the PD for automatic reboot when the PD fails.
- In cases where there are multiple IP addresses on the PD side, as when used to protect a network access point, the iBoot-PoE will self-configure for bandwidth monitoring to determine when an automatic reboot is necessary.

In order for this discovery and self-configuration to take place, the proper installation sequence must be followed. See Section 2.1 for auto configuration procedure.

1.4. Multiple Control Options

In addition to the Web control capabilities, iBoot-PoE features several other means to operate automatically or under computer control.

URL Control

You can send a single URL to the iBoot-PoE containing all the information necessary to query or change the power status. This makes it easy to create a single button on your desktop or embed into a batch file or script.

AutoPing

The AutoPing feature allows iBoot-PoE to automatically detect failed equipment and perform a timed reboot or other power control function. You may set 1 or 2 IP addresses to be periodically pinged. When iBoot-PoE no longer detects a response from the address(es), the programmed power control function is actuated.

Traffic Monitor

In situations where AutoPing is not possible, the iBoot-PoE provides a traffic monitoring feature that can identify slowdowns or failures in bandwidth throughput and auto-reboot when user specified conditions are met.

Telnet

iBoot-PoE's Command Line Interface (CLI) allows direct control and setup through Telnet.

Dataprobe Exchange Protocol

iBoot-PoE supports the Dataprobe Exchange Protocol (DxP). This protocol allows Dataprobe products to communicate across networks and allows developers to design custom applications to integrate iBoot-PoE into unique applications. For more information about DxP, contact Dataprobe Support team (support@dataprobe.com).

2. Hardware Installation

2.1. Auto Configuration Sequence

In most cases, the iBoot-PoE can completely configure itself on initial installation to identify all network elements and automatic reboot of failed devices. For the best results follow this sequence when installing the iBoot-PoE for the first time.

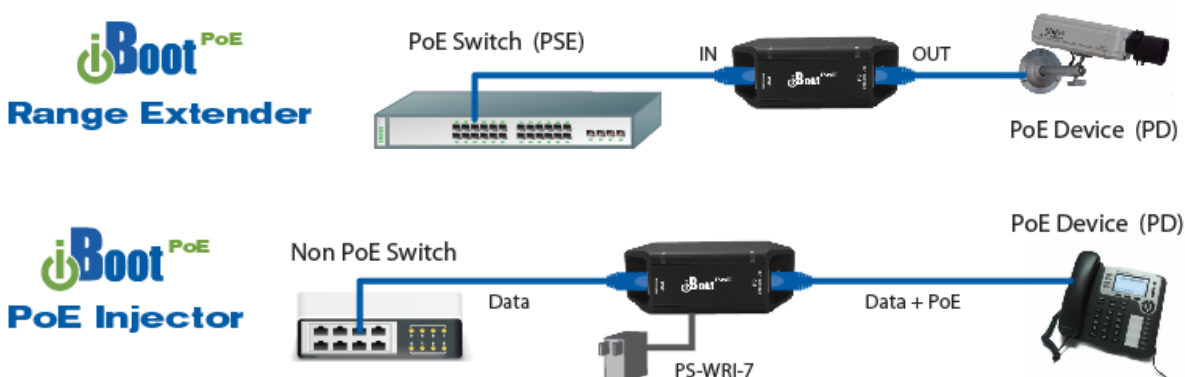
1. Connect the OUT connection of the iBoot-PoE to the PoE powered device to be controlled
2. Connect the IN connection of the iBoot-PoE to the Network Switch
3. Connect the Power Supply to the iBoot-PoE when used as an injector

Auto Configuration takes approximately 30 seconds. During this time, the unit is not accessible or discoverable.

To install the iBoot-PoE without using the Auto Configuration feature, power up the iBoot-PoE either by connecting it to the PSE or with the power supply, for at least 30 seconds before connecting the PD to the OUT connector. The iBoot-PoE will still use DHCP to configure the network if the router supports it. No automatic reboot functions will be enabled.

Auto Configuration can also be initiated via the web page setup. See Section 5.5

2.2. Hardware Connections



iBoot-PoE supports 10/100/1000 Ethernet using the cable supplied, or other suitable unshielded twisted pair (Cat 3-6) cabling.

It is compliant with IEEE 802.3af and 802.3at for devices up to 25.5 Watts.

When Used as a Range Extender

In this mode, an external device supplies the power for both the iBoot-PoE and the Controlled device.

- Connect the Out connector to the PoE Device to be controlled (PD); Camera, Access Point, Phone, etc. Connect only PoE compatible devices.
- Connect the IN connector to the PoE Power source (PSE); PoE Switch, Midspan or Injector

When Used as a PoE Injector

In this mode, the separate power supply PS-WRI-7 supplies power to both the PoE and the Controlled Device.

- Connect the OUT connector to the PoE Device to be controlled (PD); Camera, Access Point, Phone, etc. Connect only PoE compatible devices.
- Connect the IN connector to the network router or switch.
- Then connect the power supply to the iBoot-PoE.

Ethernet LED Displays

- IN connector Green LED indicates Network Activity
 Amber LED indicates 1000Mbps Speed
- OUT connector Green LED indicates Network Activity
 Amber LED indicates PoE power being used by the PD

2.3. Power Connection

When Used as a Range Extender

Power is supplied by the Power Source Equipment (PSE) on the IN connector. No external Power Supply is necessary.

When Used as a PoE Injector

Use only Dataprobe model PS-WRI-7 to power the unit.

With either a proper PSE connected to the IN jack, or the PS-WRI-7 powering the unit, the PWR IN LED will be on. (green)

With both a PSE and PS-WRI-7 connected to the iBoot-PoE, the unit will take power from the external power supply.

2.4. Mounting Options

iBoot-PoE is suitable for desktop, shelf or wall mounting. Two screw holes on the housing can be used to secure the iBoot-PoE to a suitable surface. Ensure that the screw heads do not interfere with the attachment and disconnect of the network cables.

3. Initial Configuration

3.1. DHCP Configuration

If your network supports Dynamic Host Configuration Protocol (**DHCP**), the iBoot will be automatically assigned an IP Address and be ready to use. You can discover the IP Address through your Server/Router, or use Dataprobe's Device Management Utility (DMU).

If your network does not use DHCP, the iBoot-PoE will default to IP Address 192.168.1.254

3.2. Device Management Utility

The DMU is available online at dataprobe.com/support-iboot-poe/, provides the easiest means to find and configure your iBoot-PoE for use. It can:

- Discover all the iBoots on your network
- Display the current IP address of each
- Allow setting of IP address parameters
- Reset to Factory Defaults
- Reset the Admin Password
- Upgrade the Firmware of the iBoot-PoE

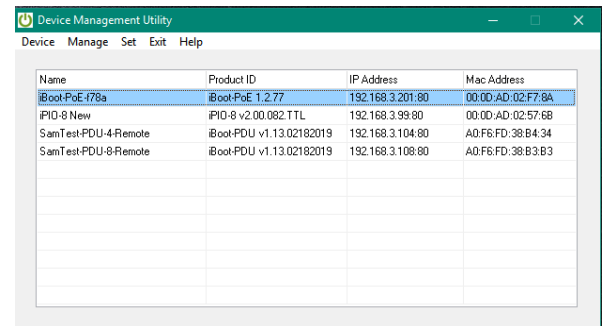
Obtain and use the DMU

1. Download the latest version of the DMU at dataprobe.com/support-iboot-poe/
2. Run DMUSetup.exe
3. Run the DMU

Note: The IP address can only be set within the first two minutes of powering up the iBoot-PoE or pressing the reset button (see Section 12). The DMU will only work with iBoots on the same physical subnet as the PC.

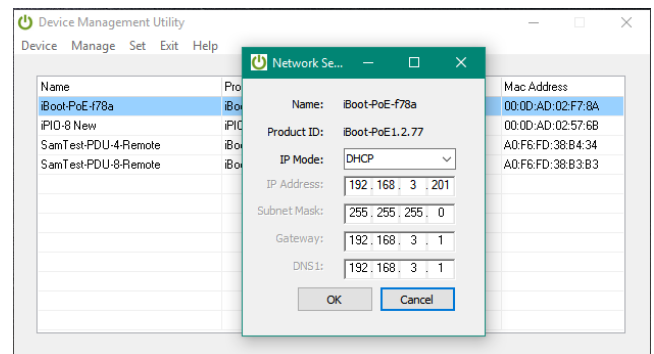
Once the DMU is run, click on Device | Discover to display all the iBoots on your local network. The DMU will display the Location Name of the iBoot, The product ID and Version Number, the current IP Address, and the MAC Address. Factory defaulted iBoots will display with the name **iBoot-PoE-xxxx** (the xxxx is the last segment of the MAC address) the unit will have the factory default IP address of **192.168.1.254, or as set by DHCP**.

The IP address field also indicates the port for web access that is used by the iBoot. The standard port for web browser control is factory default Port 80.



Name	Product ID	IP Address	Mac Address
iBoot-PoE-f78a	iBoot-PoE 1.2.77	192.168.3.201:80	00:0D:AD:02:F7:8A
iPID-8 New	iPID-8 v2.00.082.TTL	192.168.3.99:80	00:0D:AD:02:57:6B
SamTest-PDU-4-Remote	iBoot-PDU v1.13.02182019	192.168.3.104:80	A0:F6:FD:38:B4:34
SamTest-PDU-8-Remote	iBoot-PDU v1.13.02182019	192.168.3.108:80	A0:F6:FD:38:B3:B3

DMU Discovers Dataprobe Devices on your Network



Name	Product ID	IP Address	Mac Address
iBoot-PoE-f78a	iBoot-PoE1.2.77	192.168.3.201	00:0D:AD:02:F7:8A
iPID-8 New			00:0D:AD:02:57:6B
SamTest-PDU-4-Remote			A0:F6:FD:38:B4:34
SamTest-PDU-8-Remote			A0:F6:FD:38:B3:B3

Network Setup

Name: iBoot-PoE-f78a

Product ID: iBoot-PoE1.2.77

IP Mode: DHCP

IP Address: 192.168.3.201

Subnet Mask: 255.255.255.0

Gateway: 192.168.3.1

DNS1: 192.168.3.1

OK Cancel

Enter New IP Address Parameters for iBoot-PoE

Change the IP Address

1. Click on the row containing the iBoot-PoE to be set. The row will become highlighted.
2. From the menu select Set | Network Settings
3. Select Static from the IP Mode box to manually enter the Address settings
4. Enter the new IP Address, Subnet Mask, Gateway and DNS addresses into the form.
5. Click OK when done.
6. A confirmation box is displayed. Click OK to clear the box.

Once the IP Address is set, other all other operational features of the iBoot-PoE can be set up. Click on Discover again to refresh the display, highlight the desired iBoot-PoE and click on Manage | Launch Browser. See Section 5 to configure the iBoot.

The DMU can be used to reset the Admin password to the default without changing other settings. Highlight an iBoot-PoE from the display and select Set | Admin Password. This must be done within the first two minutes of powering up the iBoot or pressing the reset button.

The DMU can also be used to return an iBoot-PoE to its Factory Default condition. This can be used to recover all iBoot-PoE settings. Highlight an iBoot-PoE from the display and select Set | Factory Defaults. This must be done within the first two minutes of powering up the iBoot or pressing the reset button.

Get all the details on the DMU at <http://dataprobe.com/support-dmu/>

3.3. Other ways to set the IP Address

1. Web Browser via the Set-up Page – See Section 5
2. Command Line Interface See Section 9

3.4. Automatic Configuration

Automatic Configuration provides the quickest and easiest way to get your iBoot-PoE up and running. It diagnoses the installation environment and pre-sets the Automation section based on the application. The iBoot-PoE will self-configure for automatic reboot under the following conditions:

- Factory New Install
- Factory Reset Install See Section 12
- Manually enabling Auto Configure from the Automation web page
- Manually enabling Auto Configure from the CLI command

The steps the iBoot-PoE uses for Auto Configuration are as follows

1. Establish IP credentials on the network using DHCP (if not already established)
2. Listen on the OUT connector for activity for up to 30 seconds
3. Set either the AutoPing or Traffic Monitor active
 - Set AutoPing if only 1 IP Address is discovered
This would be typical of a camera, phone or security system installation
 - Set Traffic Monitor if multiple IP Addresses are discovered
This would be typical of an access point application

The following are the standard settings that will be used for self-configuring AutoPing and Traffic Monitor. All these settings can be changed with either the web setup or Command Line Interface. See Section 5.5 for an explanation of these settings.

AutoPing Setting

Address:	IP or FQDN Address of Pinged Device
Frequency:	10 Seconds
Fail Count:	3
Mode:	Single
Action:	Cycle
Restart:	10 Seconds

Traffic Monitor Settings

Fail Time	10 Seconds
Restart Time	10 Seconds
Number of Cycles	1
Minimum Traffic	0Kbps
Monitoring:	Uplink only
Max Bandwidth Test:	Disabled
Daily Disable:	Disabled

4. Web Browser Operation

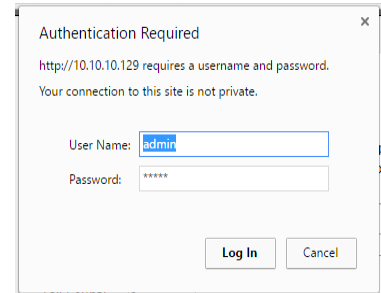
4.1. Password Protection

iBoot-PoE uses two username/password credential sets, one for power control only (User) and one that also provides access to the setup functions (Admin). This configuration can be changed to require Administrator credentials at all times or allow unsecured User level control. See section 5.7.

Default Credentials:

Role	Username (fixed)	Password (settable)
Administrator	admin	admin<last 3 of MAC>
User	user	user<last 3 of MAC>

The MAC address can be found on a sticker on the bottom of the unit.
Typical 00-0D-AD-xx-xx-xx. Example: If your MAC address is 00-0d-ad-aa-bb-cc then the admin password is adminaabbcc and the user password is useraabbcc.



Open your browser and enter the IP address of iBoot-PoE into the address bar. That address will either be the one assigned by your DHCP server, one that it was manually changed to or the default IP Address 192.168.1.254

Enter the username and password when prompted. When the proper username/password is received the Control and Status Page is displayed.

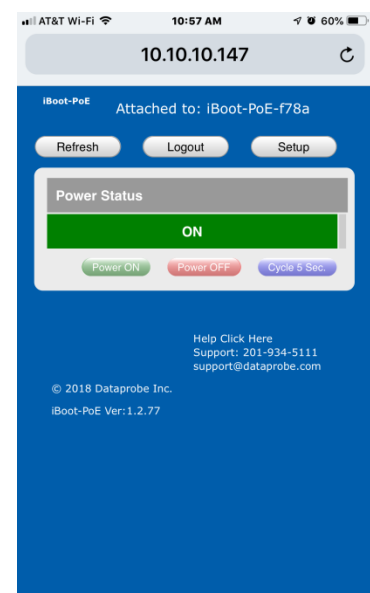
iBoot-PoE uses an inactivity timer for security. This timeout is user selectable from 0 to 99 minutes. Setting to zero disables the timeout feature. When there is no activity for the set time in minutes, the user is automatically logged out and the username and password will need to be entered again for access. This is to prevent accidental lockout by leaving the user logged in.



As the iBoot-PoE allows only one Web user logged in at any time, use caution when disabling the timeout feature, as it is possible to lock out other users by forgetting to logout. Closing the browser will not log the user out and will lock out web access. If you do become locked out, access the iBoot-PoE via Telnet and reboot the unit, or press the reset button (see Section 12).

4.2. Mobile Browser Support

The standard web pages illustrated in this manual are for screen sizes 700 pixels wide and greater. For devices with screen widths below 700 pixels, the iBoot-PoE uses a set of mobile browser pages. The iBoot-PoE automatically detects the screen size and redirects automatically to the mobile pages.



4.3. Control and Status Page

Once the user is validated, the Control and Status page is displayed. (Only one person can be connected to the iBoot-PoE web at a time.)

This page provides automatic updates every 5 seconds.

To control the power, click on the appropriate button. During power cycling, the Power Status bar will indicate the temporary status, with a blue background. Once the cycle is complete, the status bar will revert to its original condition. To abort a power cycle, click on either Power On or Power Off buttons.

If the AutoPing and/or Traffic Monitor features are in use, the page will also display the current status, OK or Failed, for each, with a counter of how many times action was triggered. If connecting with the Admin credentials, reset buttons for the Trigger counter is provided.

If the iBoot-PoE is connected to a time server (see Section 5.4), The Home page will also show the five most recent history events, including the Outlet, Action, User and Time/Date of each event. The iBoot-PoE holds the last 32 events in memory. The user can access a complete history webpage, download the history in a .csv file, or clear the history.

Navigation Buttons

Refresh

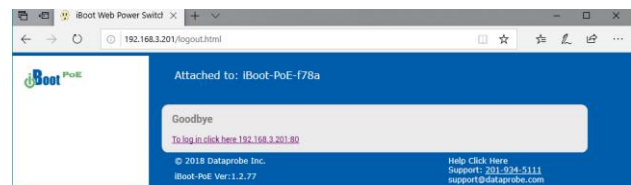
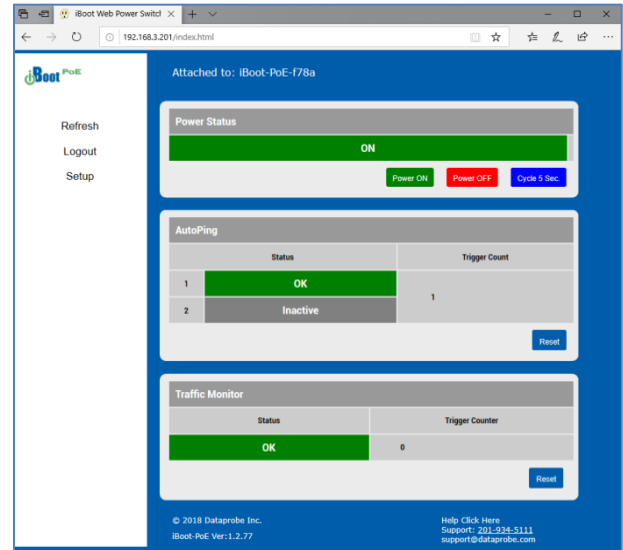
Use the Refresh button to obtain the latest status of iBoot. Using your browser's refresh button can lead to inadvertent power switching. If an NTP server is being used, the time of the last refresh will be shown in the upper right corner.

Setup

To access the Setup page, the administrator credentials are required. When logged in as User, the challenge for Administrator credentials will be displayed.

Logout

When you are finished with iBoot, click on Logout. A Goodbye page will be displayed. This page has a URL link to re-connect with the iBoot. The link back URL is user settable. If no link back is set, the hyperlink will be the unit's IP Address.



4.4. URL Control

iBoot-PoE can be controlled directly by sending a completely formed URL through a browser window or HTTP command. The URL syntax for control is:

http://<address>?s=<status>&t=<time>&u=<user>&p=<password>

Where:

<address> = the IP Address of the device, or DNS name that resolves to the IP Address, plus any HTTP Port if not standard 80

<status> = The status to change the outlet to:
0 = Off
1 = On
2 = Query only, no outlet change

<time> = The amount of time to maintain that condition (optional). Will return to initial state if used.

<user> = user or admin depending on password used

<password> = password associated with user

Syntax notes:

- The order of the variables is not significant.
- The user and password are not required when Auto-Login feature is enabled (see Section 5.7 for security options).

Examples:

http://192.168.1.254?s=1&u=user&p=useraabbcc

Turn the outlet on for the default user.

http://192.168.1.254?s=0&t=5

Reboot for 5 seconds with Auto-Login

http://192.168.1.254:8080?s=2&u=admin&p=adminaabbcc

Return status using http port 8080

URL Command Responses

iBoot-PoE will return an response to a URL command as follows:

<location id> <status>

The full http response is

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>iBoot Status</title>
</head>
<body>
<locationID>iBoot-PoE-f78a</locationID>
<status>OFF</status>
</body>
</html>
```

Security Note

Please note that URL commands are sent in clear text and this technique will expose security credentials. Use only where this is not a concern.

5. Web Setup

iBoot-PoE setup section consists of several pages. Access any page via the buttons on the left of the page. Each time a setting is changed click on the Save button for that page to save the changes before moving to the next page. To return to the control page, use the Status / Control button.

5.1. Device Settings

Location ID: Set a 20 Character name to be displayed on the top of the Home page. This assists in identifying which iBoot-PoE is being accessed. The Location ID is used with LLNMR and a reboot will be required to apply the new name (LLMNR section 7.)

Cycle Time: 1 to 999 seconds power cycle time. This is the length of time the power will be off during a reboot, or on during a power burst.

Disable Off: When checked, this will not allow the iBoot-PoE to turn Off. Cycle will cause a reboot, but no command will leave the power in the OFF state. Unchecked the unit will function normally and allow an off outlet. (See Disable Off section 6)

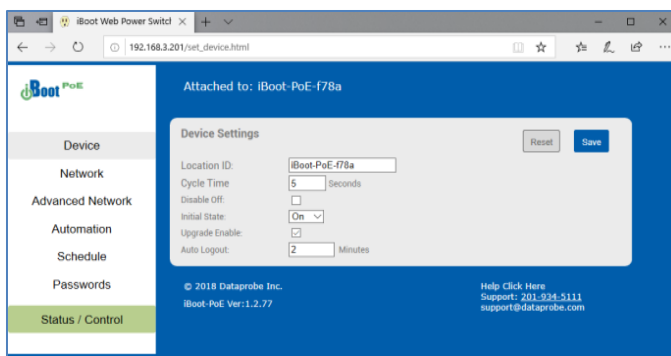
Initial State: The outlet can be set to the state it will assume when the iBoot-PoE is powered up or reset. The choices are: On, Off and Last, meaning the state it was in when the power was removed or reset commenced.

Upgrade Enable: Check this box to allow remote firmware upgrades of the iBoot-PoE. When this box is unchecked, firmware upgrades will not be allowed.

Auto Logout: This setting sets the automatic logout for inactivity on both the web and telnet users. It can be set from 0 to 99 minutes. 0 disables the Auto Logout feature.



As the iBoot-PoE allows only one Web user logged in at any time, use caution when disabling the timeout feature, as it is possible to lock out other users by forgetting to logout. Closing the browser will not log the user out and will lock out web access. If you do become locked out, access the iBoot-PoE via Telnet and reboot the unit, or press the reset button.



5.2. Network Settings

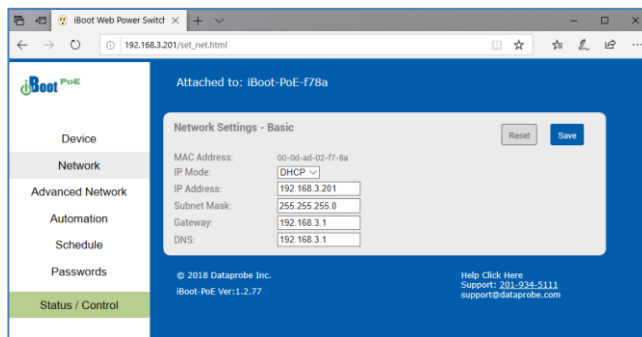
IP Mode: Select Static to set the IP address using the fields below, or DHCP to allow a DHCP server to set the IP Address.

IP address: Enter a static IP address. This will be automatically set if using DHCP

Subnet Mask: Enter the Subnet Mask. This will be automatically set if using DHCP

Gateway: Enter the Gateway. This will be automatically set if using DHCP

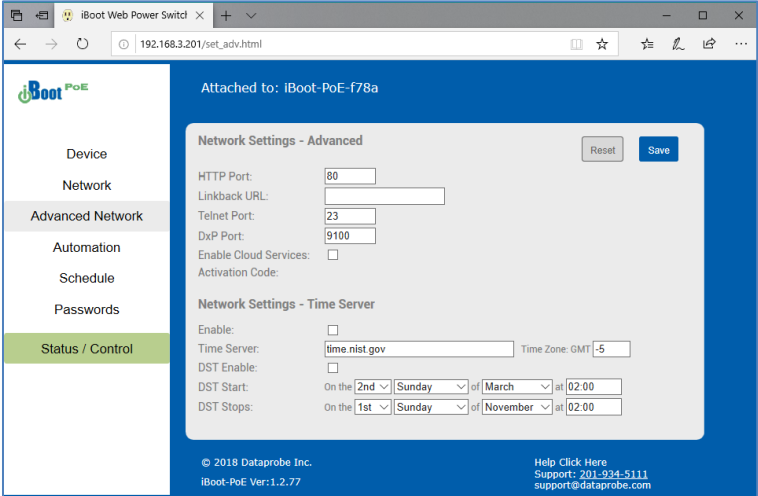
DNS: Enter the Domain Name Server address. This will be automatically set if using DHCP.



5.3. Advanced Network Settings

HTTP Port: This setting is used to allow access to iBoot-PoE on a port other than the Web standard Port 80. If the port is changed, you will need to identify the port number when you enter iBoot's IP address into your browser. If the new port is 8080 then use the address <http://192.168.1.254:8080>.

Linkback URL: This setting allows control of the hotlink displayed on the Goodbye page. It allows use of the public IP address or DNS name instead of the internal IP Address of the iBoot-PoE, which is the default setting. If this setting is left blank, the hotlink will be the IP Address of the unit. Enter up to 128 characters.



Telnet Port: This setting is used to allow access to the iBoot-PoE via telnet by ports other than standard 23.

DxP Port: This setting is used to allow access to the iBoot-PoE via Dataprobe Exchange Protocol (DxP) via ports other than standard 9100.

Enable Cloud Services: This setting enables the iBoot for iBoot Cloud Services (iBCS). iBCS allows the iBoot to be monitored and controlled from a web portal from any browser. It allows multiple iBoots to be managed from a single portal. For a complete description of iBCS and setup instructions, see Section 7.

Note: Some of the TCP/IP Settings require a reboot of the iBoot-PoE, after clicking Save. A Reboot button will appear at the bottom of the page when it is necessary. The new settings will not take effect until the unit is rebooted. Reboot will not affect the power position of the iBoot-PoE. Upon Clicking Reboot, the Goodbye page is displayed with a link to re-login.

5.4. Time Setup

The Advanced Network Setup page also allows setup of the Time server, required for Scheduling and Logging functions.

Enable: Enable or Disable the use of the Time Server with this checkbox

Time Server: Enter the Time Server. The default is **time.nist.gov**

Time Zone: Enter the Time Zone (-12 to +12) relative to GMT

DST Enable: Enable or Disable the use of Daylight Savings Time with this checkbox

DST Start / Stop: Enter the start and stop parameters of Daylight Savings Time here.

5.5. Automation

Automation settings page shows the current status of the AutoPing and Traffic Monitors that are set. It also allows Automatic Configuration of these settings.

The Traffic Monitor shows the current throughput. This will update each time the Refresh button is pressed.

To have the iBoot-PoE re-examine the network and auto-set the automation capabilities, press the Auto Config button.

AutoPing

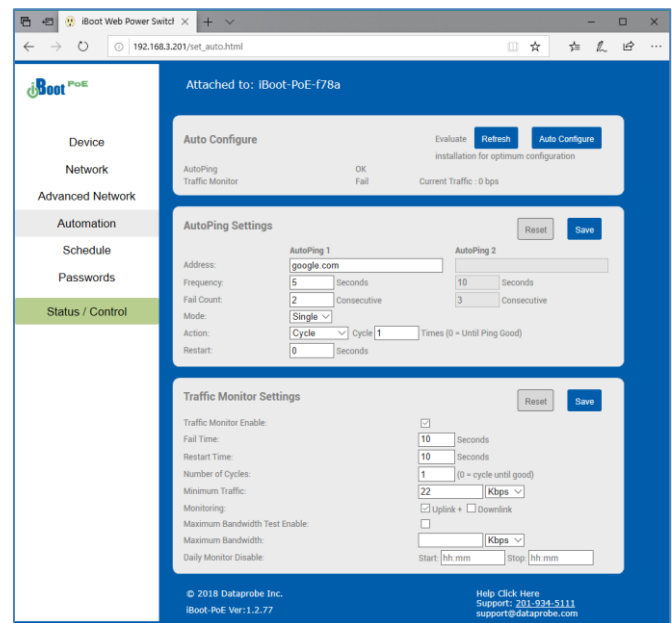
Two separate Auto Ping addresses can be set with And/Or logic.

Address: Enter the IP address of the device, or domain name to be pinged. To enter the second address and settings, select AND or OR for the A/B Logic.

Ping Frequency: Enter 1 to 999 seconds. The ping will go out to the selected device this often.

Fail Count: Enter 1-999 times the ping needs to fail consecutively before the selected action is taken. When the fail count has been reached, the AutoPing action will be triggered.

Mode: Select from Single, AND, OR. With AND, both AutoPings need to exceed their fail count to trigger the Action. With OR, the Action will be triggered if either AutoPing fails.



Action: Select from

None	AutoPing is paused. No Ping tests will be performed.
Power On – Latch	Upon triggering, iBoot-PoE will power on and remain so until changed via the web, telnet, DXP, etc.
Power On – Follow	Upon triggering, iBoot-PoE will power on. When the ping response returns, iBoot-PoE will power off.
Power Off – Latch	Upon triggering, iBoot-PoE will power off and remain so until changed via the web, telnet, DXP, etc.
Power Off – Follow	Upon triggering, iBoot-PoE will power off. When the ping response returns, iBoot-PoE will power on.
Cycle Cycle Times	Upon triggering, iBoot-PoE will cycle the power. If Power Cycle does not result in the ping response the iBoot-PoE can cycle again. The number of times the iBoot-PoE will cycle is set by the Cycle Times setting. To have the iBoot cycle power 3 times to get the system to respond again, set the Cycle Times to 3.

Restart: This setting delays the restart of the AutoPing tests after the Action is completed. This setting allows time for the boot sequence of the failed device to complete.

With AutoPing operational, the main iBoot-PoE page will display the current status of this feature. The status will be OK to indicate that iBoot-PoE is receiving responses to the ping, or that the fail counter has not yet been exceeded.

If the fail count has been exceeded, the status will change to FAIL. The Trigger Counter indicates the number of times the AutoPing action has been triggered. A counter reset button is provided.

Note: All of the AutoPing Settings require a reboot of the iBoot-PoE, after clicking Save. A Reboot button will appear at the bottom of the page. The new settings will not take effect until the unit is rebooted. Reboot will not affect the power position of the iBoot-PoE. Upon Clicking Reboot, the Goodbye page is displayed with a link to re-login.

Traffic Monitor

Traffic Monitor continuously samples the data throughput between the PD and the PSE and will provide automatic reboot when the data rate drops below a set point. It can also set a Maximum rate for reboot, plus time of day settings to temporarily disable the Traffic Monitor on a daily basis.

Traffic Monitor Enable: Enable or disable the Traffic Monitor Service.

Fail Time: Set the time, in seconds that the set rate must be measured before the reboot occurs.

Restart Time: Set the time in seconds after reboot that the Traffic Monitor will begin again to measure traffic. Subsequent reboots will occur when the time equals the Restart Time plus the Fail Time.

Number of Cycles: Set the number of reboots to attempt for a single failure event.

Minimum Traffic: Sets the minimum data rate to trigger the Traffic Monitor. Can be set in Kbps or Mbps

Monitoring: Set whether the Traffic Monitor looks at the Uplink (PSE to PD), Downlink (PD to PSE) or both. Each direction is independently monitored and the Minimum or Maximum setting is per direction.

Maximum Bandwidth: Test Enable: Enable or disable maximum bandwidth triggering

Maximum Bandwidth: Set the maximum data rate to trigger the Traffic Monitor. Can be set in Kbps or Mbps.

Daily Monitor Disable: Set the start time and stop time for disabling the Traffic Monitor. Settings are in 24 hour format HH:MM.

5.6. Event Scheduling

iBoot-PoE can schedule up to eight reoccurring power events. Set the starting date and time, plus the action to be taken and any repeat cycle for each.

To enable the time scheduling function set the network time server in Advanced Network Setup, Section 5.4.

Once the time server is active, scheduled events can occur. Up to eight independent scheduled events can be programmed.

Date: Set the initial date for the event. The format for the date is mm/dd/yyyy.

Time: Set the initial time for the event. The format for the time is hh:mm with hours in 24 hour format.

Repeat: Set the repeat multiplier, if desired. Set the number from 0 to 999 and either Days, Hours, or Minutes. To have the schedule repeat every two days, set this number to 2.

Action: Set the event Action; On, Off or Cycle.

Enable: When this box is checked, the event will occur at the programmed time. When it is unchecked, the event will not occur, but the next calculated event time will be displayed.

Clear: Delete the scheduled event.

Click Save to save the current settings. Click Reset to delete any unwanted changes.

5.7. Password Settings

The iBoot-PoE supports three modes of user and password operation.

Login Required: This mode supports both User and Admin users. Each user has a settable password.

Auto Login: This mode does not require a username of password for the User level operation. No login challenge will be required for any mode of operation, until any setup function is requested. The Admin username and password is required for any admin functions.

User Disabled: There is no User account. The Admin username and password will be required for operation and setup functions across all modes of operation. This is the factory default mode.

Two passwords are used by iBoot. In the Login Required mode, The User Password allows access to the control of iBoot, but not to the Setup functions. Clicking on the Setup button allows the Administrator to log in. Passwords can be up to 20 characters long and are case sensitive.

Enter the current password then the new password twice to confirm.

Default Credentials:

Role	Username (fixed)	Password (settable)
Administrator	admin	admin<last 3 of MAC>
User	user	user<last 3 of MAC>
The MAC address can be found on a sticker on the bottom of the unit. Typical 00-0D-AD-xx-xx-xx. Example: If your MAC address is 00-0d-ad-aa-bb-cc then the admin password is adminaabbcc and the user password is useraabbcc.		

6. Disable Off

This new feature in version 1.2.30 and above ensures that the power to the controlled device will always be on whenever possible. No accidental turning or leaving the power off is possible.

To use the “Disable Off” feature

WEB – On the Setup > Device page check the enable box next to the Disable Off: option and Save.

CLI - telnet to the unit and issue the Command Line Interface command.

```
set disable off yes
```

Use the following to determine the current status of the feature.

```
get disable off
```

The response will be **Disable Off: Yes** or **Disable Off: No**

Yes will indicate it is enabled and No will indicate it is disabled. By default, the feature is disabled.

To stop using this feature issue the command

```
set disable off no
```

When the feature is enabled, the following will occur:

- If the outlet is Off at the time the feature is enabled, the outlet will turn On
- Initial state will be programmed for On
- Initial state will not allow programming for Off or Last
- If AutoPing action programmed for On-Follow, Off-Latch or Off-Follow, the autoping action will be reprogrammed as None
- AutoPing action will not allow programming for On-Follow, Off-Latch or Off-Latch
- If a Schedule Settings event has action for Off, it will be reprogrammed for On
- Schedule Settings will not allow programming for action Off
- Web page will not show the “Power OFF” button
- Web Page will not process an HTTP POST for Off.
- URL control will not process an unqualified off status request (s=0) A qualified off status request with a time setting (s=0&t=1) of 1 or more will be processed allowing for URL control to cycle off, then back on
- URL control will not process a qualified on status request with a time setting (s=1&t=1) of 1 or more (disabling URL control to cycle on then off)
- DxP control will not process an Off command
- DxP control will not process a pulse on command. (pulse on commands end with outlet off)
- DxP control Pulse Off commands, while in progress, will not allow cycle commands to override them. (avoiding potentially having a completed cycle end as off)
- Cycle commands, while in progress, will not allow new cycle commands to override them. (avoiding potentially having a completed cycle end as off)
- Command Line Interface (CLI) control will not process “set outlet off”
- If cloud control is enabled, the Off command will not be processed.

Disabled

When the feature is disabled, all the modes that can turn the power off will be available and functioning.

7. Local Link Multicast Name Resolution

The Link-Local Multicast Name Resolution (**LLMNR**) is a protocol based on the Domain Name System (DNS) packet format that allows hosts to perform name resolution on the same local link.

On most networks you will be able to access the iBoot-PoE by its device name when on the local network.

By default the name is iBoot-PoE-xxxx where the xxxx is the last 4 segments of the MAC address for your iBoot-PoE. When you reprogram the name of the device, a reboot is required to apply the new name as the LLMNR for the device.

Example: If your MAC address is 00-0d-ad-aa-bb-cc then the URL is <http://iboot-poe-bbcc>

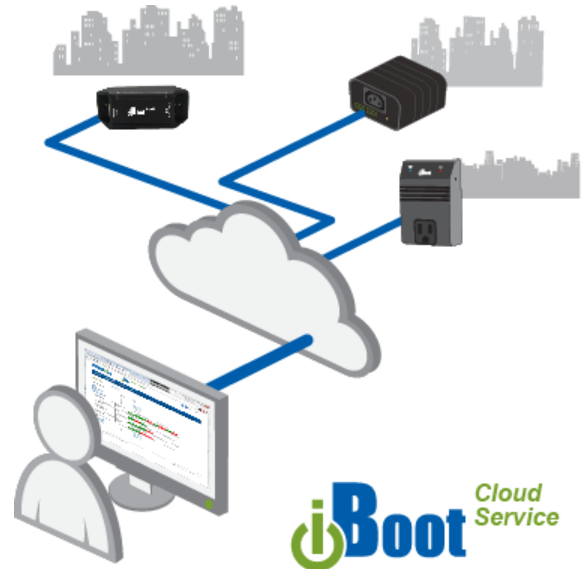
The LLMNR name does not allow spaces. If using the LLMNR feature to access the iBoot-PoE, do not use a space in the name. When accessing the device type the complete URL including the <http://> in order to avoid searching the internet for the name. (<http://iboot-poe-xxxx>)

8. iBoot Cloud Service

iBoot Cloud Service (iBCS) allows customers with iBoot to access and control multiple iBoots in multiple locations from a single portal with a single sign-on.

iBCS will not only make using iBoots easier, by consolidating all units into one sign-on and interface, it will also enhance the number of situations where iBoot can be deployed.

- Customers with Dynamic IP addressing will always be able to access their iBoot from any location.
- Customers that do not allow in-bound connections can access their iBoots.
- Service providers can manage multiple customer accounts with diverse security configurations



iBoot Cloud service is currently in development and is made available to our current users free of charge.

Please note that as at this beta stage, service interruptions may occur or new versions of the iBoot firmware may be made available and necessary to keep current with the cloud development. The full Terms of Service of the iBoot Cloud Service is [available here](#).

While the Cloud Service is in Beta stage, the firmware in the iBoot is fully tested and released by Dataprobe. If you do not enable the cloud capabilities of the iBoot, you can expect continuous and dependable operation.

8.1. iBCS Setup & Operation

Use of the iBoot Cloud Services requires the iBoot to be configured to access the Internet. Please review the installation and configuration procedures to ensure proper setup.

a. Establish Account with iBoot Cloud Server

- Visit <http://iboot.co> from your browser
- Click on Register
- Complete the information
- Confirm Registration by clicking on the link provided in the email.

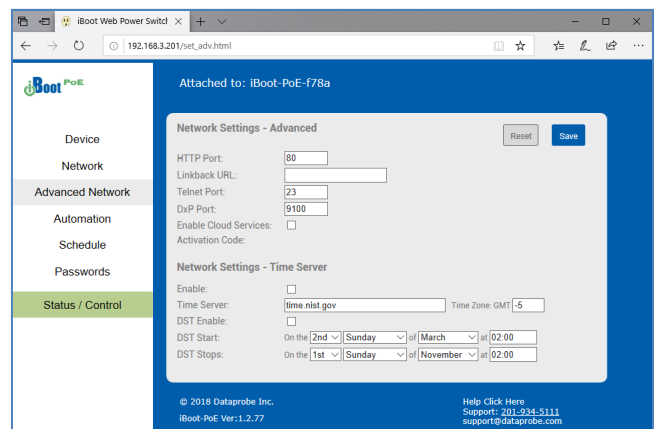
b. Enable Cloud Services on iBoot

Log into the iBoot with Administrator rights

Go to the Advanced Network Setup page
Click on the checkbox Enable Cloud Services:

Within 30 seconds, an 8 character activation code will appear.

This code is also a hotlink to the Cloud Service.

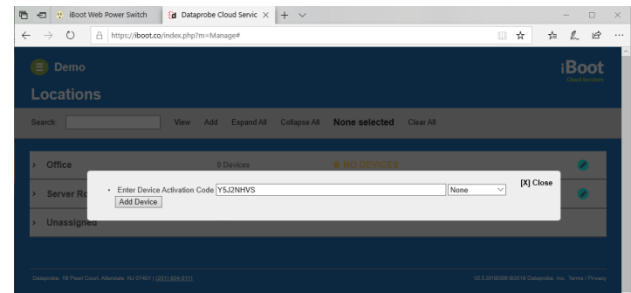


c. Register iBoot with Cloud Account

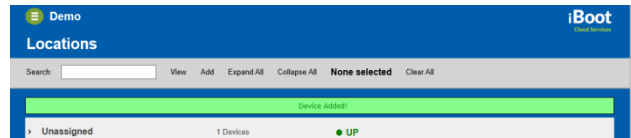
Click on the Activation code to register the iBoot with the Service.

You will be re-directed to the Service. Log-in with your account and the iBoot will be automatically registered with your account.

Alternatively, you can log in to the Service and click on Add Device and enter the activation code in the field provided.



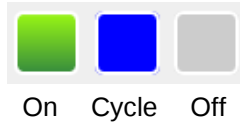
Congratulations. You are now on the cloud.



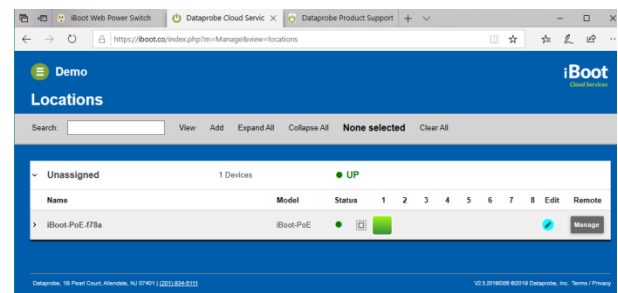
d. iBCS Main Page

The iBCS main web page provides the ability to control your iBoot-PoE from anywhere in the world.

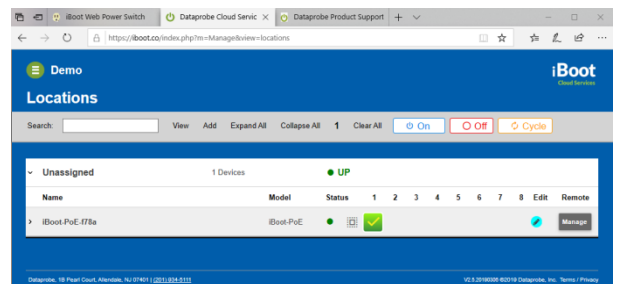
Log onto your iBoot.co account and expand the location to see the iBoot-PoE device and status of the outlet.



On Cycle Off



Select the outlet you want to control, then Click On, Off or Cycle from top bar.



Full cloud operation and feature descriptions are available online here:

<http://Dataprobe.com/iboot-cloud-service>

9. Command Line Interface

The iBoot-PoE Command Line Interface (CLI) provides a text based method for communicating with the iBoot. The syntax of the CLI uses a basic Set (change a variable) and Get (retrieve a variable). The CLI is accessed either through the Telnet protocol, which requires a Telnet client program. Dataprobe provides a simple Telnet Client program (EZ Term) at <http://dataprobe.com/support-iboot-poe/>.

9.1. CLI Access

Open the Telnet client and connect to the IP address set for the iBoot.

The CLI uses the same security options as the web browser. See section 5.7 for an explanation of the options for user setup and security.

When connection is successful, the User> prompt is displayed. Enter user or admin and press Enter. The prompt will change to Password>. Enter the admin or user password and press Enter. The prompt will change to iBoot>. This indicates successful login. Enter commands as needed. When done, enter the logout command.

Note: The telnet session will auto-disconnect if there is no activity. The maximum auto-disconnect time is 8 minutes. If the Auto-Logout setting is shorter than 8 minutes, that setting will apply. To avoid this and use a longer auto-disconnect time, use a telnet client that periodically sends a No Operation (NOP) command, like [Dtelnet](#).

9.2. iBoot-PoE CLI Syntax

Command	Description	Factory Default
<u>Control Commands</u>		
These commands are used to monitor and control the outlet.		
set outlet <on off cycle>	This command controls the outlet.	
get outlet	This command returns the current status of the outlet.	
<u>Device Commands</u>		
These commands are available to the administrator only		
get location	This command returns the iBoot-PoE's location ID.	iBoot-PoE
set location <20 char. max>	This command is used to set the iBoot-PoE's location ID.	

set cycle <1-999>	This command is used to set the cycle time, in seconds	10
get cycle	This command returns the current cycle time	
set upgrade enable <yes no>	Enables or disables the ability to upload new firmware to the iBoot-PoE.	No
get upgrade enable	This command displays the upload enable status.	
set disable off <yes/no>	When enabled with yes the feature is active. When disabled with no the unit is as any other iBoot-G2.	No
get disable off	This command displays the disable off status	
login	Prompts for admin credentials when logged in as user	
logout	Terminates the session	
reboot	This command reboots the iBoot-PoE.	
<u>Network Commands</u>	All set commands require a reboot before they take effect. These commands are only available to the administrator.	
get network	This command will return all the network settings as shown below: <pre> Mode: DHCP IP Address: 192.168.1.254 Subnet: 255.255.255.0 Gateway: 192.168.1.1 DNS: 8.8.8.8 HTTP Port: 80 Linkback URL: Telnet Port: 23 DxP Port: 9100 Timeout: 20 </pre>	
set ipmode <static dhcp>	This command sets the ip address setting mode. Static mode locks the address as set, dhcp mode allows DHCP server to assign address.	DHCP
set ipaddress <dotted decimal>	This command is used to set the iBoot-PoE's ip address.	192.168.1.254
set subnet <dotted decimal>	This command is used to set the iBoot-PoE's subnet mask.	255.255.255.0
set gateway <dotted decimal>	This command is used to set the Gateway	192.168.1.1
set http port <0-65535>	This command sets the port that the iBoot-PoE's web server listens for incoming connections on. When set to 0 the web server is disabled.	80
set telnet port <0-65535>	This command sets the port that the iBoot-PoE's Telnet server listens for incoming connections on. When set to 0 the Telnet server is disabled	23

set dxp port <0-65535>	This command sets the port that the iBoot-PoE's DXP protocol service listens for incoming connections on. When set to 0 the Protocol service is disabled. Note: At least one of the above MUST NOT be 0. The CLI will protect against all 3 from being set to 0.	9100
set linkback <url>	This command sets the linkback URL displayed on the logout page.	
set timeout <0-99>	This command sets the automatic network timeout in minutes 0 = Timeout not used.	2

<u>Automation Commands</u>	These commands require a reboot before they will take effect. These commands are available to the administrator only.	
get autoping	This command returns all of the AutoPing settings as shown below. <pre> AutoPing 1 AutoPing 2 Address: 192.168.233.254 iboot.co Frequency: 10 10 Fail Count: 3 3 Status: OK OK Trig Count: 0 0 ----- Mode: Single Action: Cycle Once Wait: 2 Restart: 0 </pre>	
set autoping <1 2> address <dotted decimal or name>	This command is used to set the address of AutoPing 1 or AutoPing 2. Use IP Address or domain name.	
set autoping <1 2> frequency <1-999>	This command is used to set the frequency (how often the iBoot-PoE sends the ping) for each of the AutoPings.	10
set autoping <1 2> failcount <1-999>	This command is used to set the number of consecutive failures the AutoPings must detect before the AutoPing considers the pinged device to be failed.	3
set autoping mode <single and or>	Sets single AutoPing or two AutoPing relationship And or Or.	Single
set autoping action <none on-latch on-follow off-latch off-follow cycle>	This command is used to set the action that the iBoot-PoE will perform when the autoping triggers.	None
set autoping cycle <0-999>	This command sets the maximum number of power cycles when the AutoPing triggers. 0 = Unlimited	1
set autoping wait <1-999>	This command sets the time, in seconds for the device to respond to a ping.	2
set autoping restart <1-999>	Sets the delay in seconds to restart AutoPing tests after Action. This command sets the time, in seconds for the device to respond to a ping.	0

set traffic monitor <enable disable>	Enable or disable the traffic monitor	Enabled
set traffic monitor failtime <1-999>	Fail time	10
set traffic monitor restarttime <0-999>	Restart time	10
set traffic monitor cycles <0-99>	Number of cycles	0
set traffic monitor min <0-125000000> <kbps mbps>	Min band width	0
set traffic monitor max <0-125000000> <kbps mbps>	Max band width	0
set traffic monitor maxtest <enable disable>	Enable/disable maximum bandwidth test	Disabled
set traffic monitor startdisable <hh:mm>	Set the start disable time	<00:00>
set traffic monitor stopdisable <hh:mm>	Set the stop disable time	<00:00>
get traffic monitor	Traffic Monitor: Enabled or Disabled Fail Time: in seconds Restart Time: in seconds Number of Cycles: Minimum Bandwidth: as programmed Maximum Test: enabled/disabled Maximum Bandwidth: as programmed Monitor Disable Start Time: hh:mm Stop Time: hh:mm	
set autoconfig start	Starts auto config	
get autoconfig	Displays the status: Running or Found: No device, Single Ended, Multi Ended	

User Commands	These commands are only available to the administrator.	
set user account <yes no>	This command sets whether or not a user account is used. If <n> only the administrator account is active	n
set login required <yes no>	This command sets whether or not a login is required for user level operation. A login is always required for admin functions.	y
set password <user admin> <old> <new> <repeat>	This command is used to set the password of either the user or administrator.	user<last 3 of MAC> admin<last 3 of MAC>

Event Commands	These commands are only available to the administrator.	
get events	This command displays all scheduled events as shown below. Example: <pre> Date Time Repeats 1. 01/13/2013 16:00 every 1 Day(s) On Run 2. 01/13/2013 16:15 every 0 Day(s) On Run 3. 01/15/2013 17:00 every 1 Hour(s) Cycle Run 4. 02/16/2014 12:00 every 1 Day(s) Off Run 5. 02/16/2014 12:10 every 1 Day(s) On Run 6. 02/17/2013 01:05 every 0 Day(s) On Run 7. 02/18/2013 01:00 every 0 Day(s) On Run 8. 03/18/2014 01:00 every 0 Day(s) On Run </pre>	
set time enable <yes no>	This command enables or disables the use of the time server and scheduled events. Note: When Adding new events through the CLI. Set this to no to prevent unintended power switching	No
set time server <dotted decimal>	This command is used to set the IP Address of a network time server.	69.90.182.55
get time	Displays the current time and time server settings: <pre> Current Time: 07/30/2015 10:41:05 Timezone: -5 DST: Enabled Starts the 2nd Sunday of March at 2:00 Stops the 1st Sunday of November at 2:00 server: time.nist.gov </pre>	
set event <1-8> <run hold>	This command is used to all the event to run, or put the event on hold	run
set event <1-8> date <mm/dd/yyyy>	This command is used to set the scheduled action's start date.	
set event <1-8> time <hh:mm>	This command is used to set the time the scheduled action will occur in 24 hour format.	
set event <1-8> action <on off cycle>	This command is used to set the scheduled action.	
set event <1-8> repeat <day hour minute>	This command is used to set how often the scheduled action will repeat.	
set event <1-8> mult <0-999>	This command sets how often the event will repeat, the number of increments (as set by the command above) before the next event.	
del event <1-8>	This command deletes the specified event	

Prompts	The CLI will use the following prompts:	
User>	This prompts the user to enter his user name (user or admin). This is the first prompt that the user is presented with.	
Password>	This prompts the user to enter his password.	
iBoot >	This is the prompt that will be displayed after the user has successfully logged in.	
iBoot Reboot Required>	This is the prompt that will be displayed whenever there have been changes made that require a reboot. This prompt will remain the active prompt until the iBoot-PoE has been rebooted.	

10. DXP Protocol

iBoot-PoE supports the Dataprobe Exchange Protocol (DXP) for inter device communications and to allow software developers to integrate Dataprobe product into custom applications. Through the DXP protocol, the developer can:

- Turn on and off power to the Outlet
- Pulse the Power On or Off for a specified about of time.
- Read the status of the Outlet

The DXP Protocol, as well as example code and scripts in a variety of languages are available at dataprobe.com/support-iboot-poe/

11. Firmware Upgrades

The iBoot-PoE can be field upgraded. Find the latest version or special purpose versions at dataprobe.com/support-iboot-poe/



Upgrading the firmware with a minor upgrade (i.e. 1.01.xx to 1.01.yy) will not alter the user defined settings. Major upgrades may or may not reset the iBoot-PoE to factory defaults. Check the release notes for the upgrade before making changes to you iBoot-PoE.

- 1) Ensure that the Upgrade Enable checkbox is checked in the Network Setup web page of the iBoot-PoE
- 2) Run the Device Management Utility, available at the link above. If the iBoot-PoE you would like to upgrade is not visible in the list box, either

Select Device | Discover from the menu to locate iBoot-PoE units on the local network, or
Select Device | Add from the menu to add the IP address of the iBoot-PoE.

Once the device is displayed in the list, highlight it

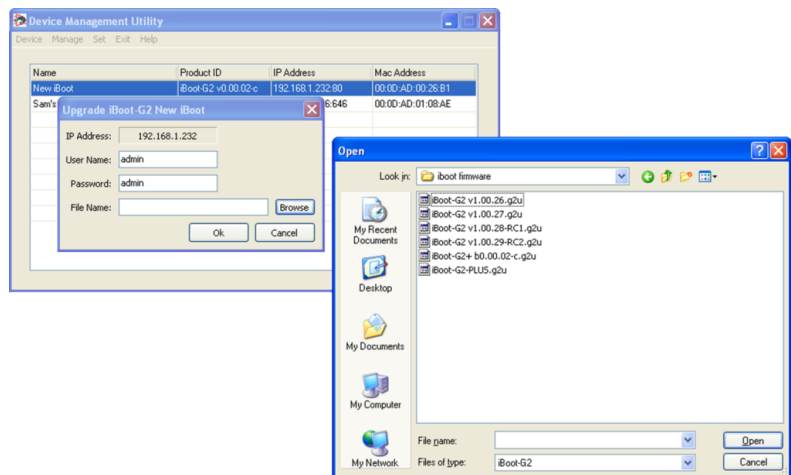
- 3) Select Manage | Upgrade Firmware

Enter User Name admin and the Password for the Administrator.

Enter the filename of the firmware, or click Browse and find the file of the firmware file to be used. iBoot-PoE firmware uses the extension **.g2u**. If you don't see any files of that type, make sure the 'Files of type' box is set for iBoot-PoE or All Files.

Click OK when all the details are entered.

- 4) The upload will begin, and a progress bar will be displayed.
- 5) When the firmware upload is completed, the iBoot-PoE will automatically reset and be ready for use.



12. Troubleshooting

The iBoot-PoE has a recessed pushbutton switch in the event the unit is not performing as expected. Use the pushbutton as follows:

Action	Result
Momentary	Soft Reset. Will not change outlet status.
5 Seconds push	Reset to Factory Defaults. Hold the button in until the Outlet LED is blinking, then release.
Hold in while and Power up the iBoot	Recovery Mode. Allows upload of new firmware to the current IP Address. Will recover to the Factory default IP Address 192.168.1.254 if the database has been corrupted.

Factory reset – excluding basic network settings can be done using the Device Management Utility (DMU) See Section 3.2.



13. Specifications

13.1. Physical

Height	1.85" 47.0 mm
Width	4.9" 24.5 mm
Depth	1.35" 34.3 mm
Weight	3.9 oz 110g
MTBF	TBD
Temperature	TBD

13.2. Power

PoE	802.3af and 802.3at Compliant 25.5 Watts Maximum combined
-----	---

13.3. Compliance

FCC	Part 15 Class B
CE	Pending

13.4. Network

Dual 10/100/1000 Unshielded Twisted Pair Ethernet Jacks.
IP Addressed, DHCP assigned or Static
Internal HTTP Web Server
Forms Processing Browser required
Telnet Server

User Settings Record your Setup here for reference

Location:		HTTP Port:	
MAC Address:		Auto-Ping Address:	
IP Address:		Auto-Ping Port:	
Subnet Mask:		Heartbeat Port:	
Gateway:			

14. Technical Support and Warranty

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of **Three Years** from the date of initial purchase. If the product should prove defective within that period, Seller will repair or replace the product, at its sole discretion. Repairs may be made with new or refurbished components and replacements may be new or refurbished at the Sellers sole discretion. Repaired or replaced units shall be warranted for the balance of the original warranty, or 90 days, whichever is greater.

If Purchased from Dataprobe Inc.; Service under this Warranty is obtained by shipping the product (with all charges prepaid) to the address below. Seller will pay return shipping charges within the United States. Call Dataprobe Technical Service to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies, accessories and proof of purchase with shipment.

If purchased from an Authorized Dataprobe Reseller; Service under this Warranty is obtained by contacting your Authorized Dataprobe Reseller.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLECT. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PURPOSE ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from jurisdictions to jurisdiction.

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability of fitness for any specific application.

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