

Congratulations on purchasing the best network controlled power switch available. The iBoot-G2+ 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-G2+ Including:

- **Web Based** setup and control
- **Telnet** setup and control
- **Event Scheduling:** Set power actions on regular intervals
- **Expansion:** Add low cost iBoot-EXP units for up to three outlets controlled
- **AutoPing:** Automatic monitoring and action for failed equipment.
- **I/O Control:** Control or Monitor your own digital Inputs and Outputs
- **Management Utility:** Easy Setup, Firmware upgrades and Reset to Factory Default
- **Easy Software Integration:** Use the DxP Protocol to build your own custom applications.



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## 2. Important Safety Instructions

**When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:**

1. Read and understand all instructions.
2. Follow all warnings and marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product in an outdoor environment or near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in this product and the back or bottom are provided for ventilation to protect it from overheating; these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug. Do not use a 3-to-2 prong adapter at the receptacle; use of this type adapter may result in risk of electrical shock and/or damage to this product.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
11. Never push objects of any kind into this product through slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electrical shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power supply cord or plug is damaged or frayed.
  - b) If liquid has been spilled into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - e) If the product has been dropped or has been damaged.
  - f) If the product exhibits a distinct change in performance.
14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
15. Do not use the telephone to report a gas leak in the vicinity of the leak.
16. Do not exceed the maximum output rating of the auxiliary power receptacle.

**Save These Instructions**

## 3. General Description

The iBoot-G2+ is a network attached, IP addressed, web controlled AC power switch. Anyone with a web browser can access iBoot-G2+ to perform power On, Off or Power Cycle (Reboot or Power Burst). iBoot-G2+ uses two levels of password for security.

iBoot-G2+ features international standard IEC320 connections and is compatible with power mains worldwide. A simple Web browser interface makes it easy to control power from anywhere in the world with a click of a mouse. iBoot-G2+ 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.



### 3.1. Uses for iBoot

- Remote reboot of any device, routers, servers, kiosks, etc. The device to be rebooted need not be network attached.
- Secure sensitive devices by keeping them powered off when not in use. This prevents hackers from seeing them at all times.
- Power down equipment when not needed for power savings and to save on wear and tear.
- Power up alert devices like sirens, lamps, messages; or control environmental system like heaters, coolers pumps, etc.

### 3.2. Multiple Control Options

In addition to the Web control capabilities, iBoot-G2+ features several other means to operate automatically or under computer control.

**AutoPing:** The AutoPing feature allows iBoot-G2+ to automatically detect failed equipment and perform a timed reboot or other power control function (like turning on an indicator or siren). You set up to four IP addresses to be periodically pinged. When iBoot-G2+ no longer detects a response from the address(es), the programmed power control function is actuated.

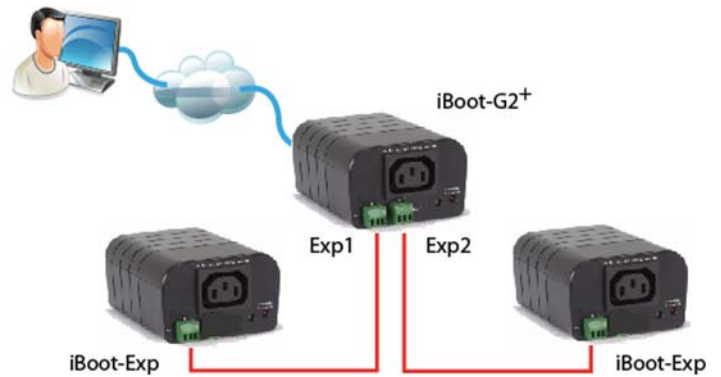
**Telnet:** iBoot's Command Line Interface (CLI) allows direct control and setup through Telnet.

**USB:** iBoot's Command Line Interface (CLI) allows direct control and setup through the USB port.

**Dataprobe Exchange Protocol:** iBoot-G2+ supports Dataprobe Exchange Protocol (DxP) This protocol allows Dataprobe products to communicate across networks, and allows developers to design custom applications to integrate iBoot-G2+ into custom applications. For more information about DxP, contact Dataprobe Applications Engineering and Support.

### 3.3. Expansion to Three Outlets

iBoot-G2+ can be linked to two expansion units, iBoot-Exp to control three outlets. All three outlets are controlled and managed through the iBoot-G2+ web page and CLI. Each outlet is independently controlled. AutoPing can be used to control the main and expansion units independently as well.



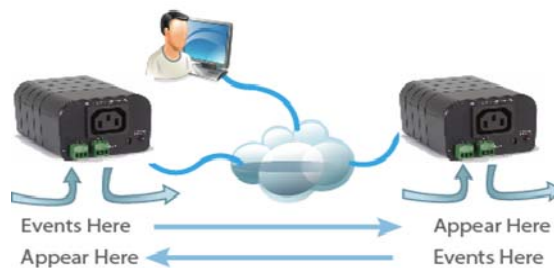
### 3.4. Expansion to GPIO

When not used for expansion to iBoot-Exp, the Expansion Ports on the iBoot-G2+ can be used as general purpose I/O (GPIO) to monitor and control additional devices. Inputs on the expansion ports can be used to monitor alarm contacts, environmental sensors, relays and switch closures. The outputs can drive relays for process control, security and environmental controls.

iBoot-G2+ uses Dataprobe Exchange Protocol (DxP) to communicate with other Dataprobe devices to allow transport of GPIO information across the network. DxP protocol is available from Dataprobe's website, allowing you to create programs to monitor and control any Dataprobe DxP enabled device, or exchange status and control between devices across the network.



*2 Inputs and 2 Outputs as GPIO*

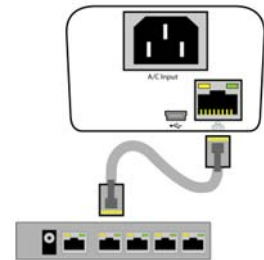


*Transport Digital Events across the Network*

## 4. Hardware Installation

### 4.1. Ethernet Connections

iBoot-G2+ supports 10/100 Ethernet using the cable supplied, or other suitable unshielded twisted pair (Cat 5) cabling. Link (amber) and Activity (green) LEDs on the network connector indicate when the network connection is properly established.



Connect 10/100 Ethernet

### 4.2. AC Power Connections

Connect the device to be powered ON and OFF to the IEC receptacle marked A/C Outlet. An IEC 320 to North American (NEMA 5-15) power cord is included for connecting the iBoot-G2+ outlet to the device to be controlled.

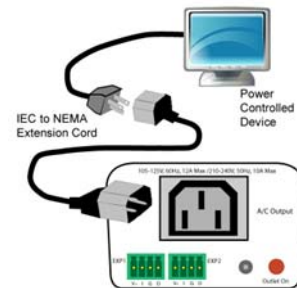
If a cord with a different terminating receptacle is required, be sure it is properly rated and meets all the required local electrical standards. If the device to be powered uses an IEC320 receptacle and detachable power cord, an IEC to IEC extension cord can be used.

The iBoot-G2+ can be connected to a power strip to allow simultaneous control of multiple devices.

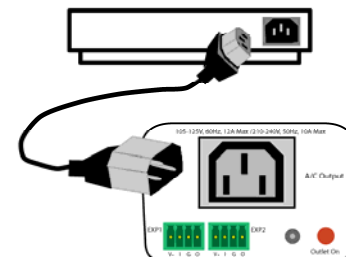
Make sure that the combined load of all controlled devices does not exceed 12 Amps for 105-125VAC or 10 Amps for 210-240VAC.

An LED Indicator next to the Switched Outlet will be On to indicate that the power is On at that outlet. This LED will turn Off to indicate that the power is Off to the outlet.

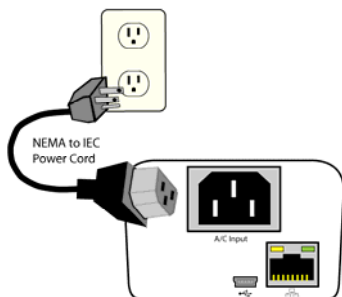
Connect the supplied power cord to the connector labeled AC Input, and the other end to your AC source. If a power cord with a different terminating plug is required, be sure it is properly rated and meets all the required local electrical standards.



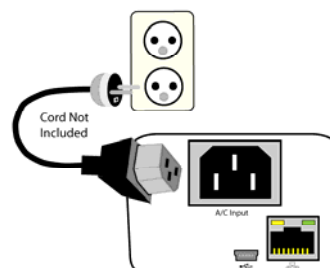
IEC to NEMA 5-15 Outlet Cord for North America Included



Source Additional Outlet Cables Locally



Power Cord for North America Included



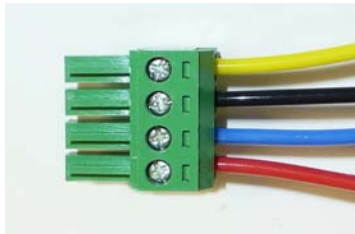
Source Additional Power Cords Locally

### 4.3. Expansion Connections

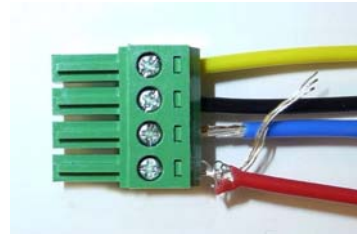
iBoot-G2+ has two Expansion Ports, Exp1 and Exp2 for connection to iBoot-Exp, or for use as General Purpose Inputs and Outputs (GPIO). Mode settings on the iBoot-G2+ determine how the expansion ports function.

Connections to the iBoot-Exp are made using screw terminal blocks. The screw terminal blocks are on removable connectors for easy cable fabrication.

Make sure screw terminals are tightened securely and that there are no loose strands of cable, or excessive stripped wires.



*Proper Screw Terminal Connections*



*Poor Screw Terminal Connections.*

*Note Loose Wires and Excessive Stripping*

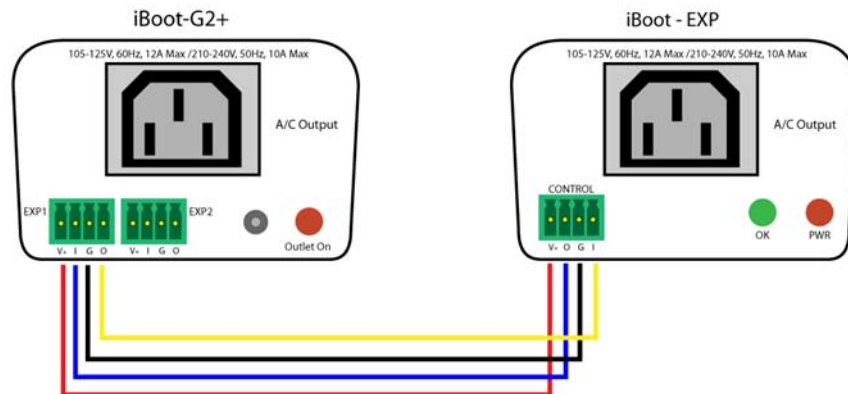
#### Connecting to iBoot-Exp

Terminal blocks are connected pin-to-pin with the iBoot-Exp as shown:

Connect:

Function	iBoot-G2+	iBoot-Exp
Power	V+ Power Out	V+ Power In
Feedback	I Input	O Output
Ground	G Ground	G Ground
Command	O Output	I Input

Expansion units (iBoot-Exp) are shipped with a cable for easy connection to the iBoot-G2+ . Maximum cable length is 1000 ft (305 m) using 22 AWG wire.



*iBoot-G2+ to iBoot-EXP Connections*



## Connection to General Purpose I/O

Function	iBoot-G2+	Description
Power	V+ Power Out	This is +12 VDC power out from the iBoot-G2+ Maximum current 100 mA
Feedback	I Input	Input for status signals. Dry Contact input or Open Collector.
Ground	G Ground	Signal Ground for Input and Output
Command	O Output	2N3904 NPN Transistor. 100 mA Maximum

### 4.4. USB Connection

The iBoot-G2+ has a USB connection that can be used for:

- Connection to a PC for setup and control
- Connection to a PC for heartbeat monitoring

To use the USB port, install the USB driver.

Download the driver at

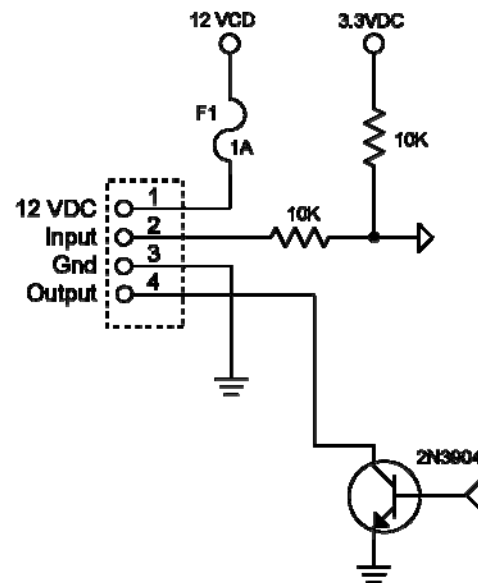
<http://dataprobe.com/support/iboot.html>

#### USB Driver Installation

- Run ibootG2Driver.exe prior to connecting the iBoot-G2+ to the USB port of the PC.
- Connect the USB iBoot-G2+ to a USB port of the PC.
- The PC will discover the iBoot-G2+ and assign a COM port. To find the COM port go to
- Control Panel > System > Device Manager > Ports (COM & LPT) The com port assigned will be USB Serial Port (COMn)

The USB port can now be used with a standard Terminal Client (like HyperTerminal) to communicate directly with the iBoot-G2+. Dataprobe also provides a simple terminal program (EZ Term) at

<http://dataprobe.com/support/iboot.html>



*Schematic of Input and Output Connections  
Used as General Purpose I/O*

## 4.5. Mounting Options

iBoot-G2+ is suitable for desktop or shelf mounting. A mounting kit for wall and DIN rail mounting is available. Order part:

1920033 Mounting Kit for iBoot-G2+ G2 Series



**Remove all cables from the unit prior to installing or removing any mounting hardware.**

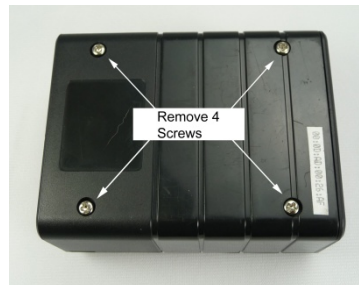


1920033 Mounting Kit  
iBoot G2 Series

### Installing the Wall Mounting Kit

1. Remove the four mounting screws from the underside of the unit.

Do not disassemble the unit.



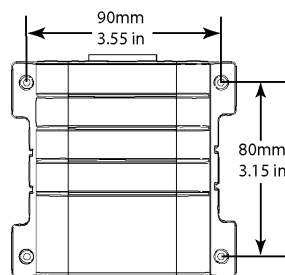
2. Install the wall mounting ears to the unit using the screws removed in Step 2



3. The unit is ready for wall mounting.



4. Use M3 or #4 screws for attachment to suitable surface



### DIN Rail Mounting

1. Install the Wall Mounting Kit as shown.



2. Install the DIN rail clips using the four screws provided.



3. Ready for DIN rail mounting.





## 5. Initial Configuration

The Device Management Utility (DMU), available online at <http://dataprobe.com/support/iBoot.html>, provides the easiest means to find and configure your iBoot-G2+ for use. It can discover all the iBoots on your network, display the current IP address of each, and allow setting of any valid IP address.

### Install and Run the DMU

1. Download DMUSetup.exe
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. The Setup Utility will only work with iBoots on the same local subnets as the PC.

Once the DMU is run, click on Device | Discover to display all the iBoots on your 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 **New iBoot-G2+** and have either the factory default IP address of **192.168.1.254** or an IP address that was automatically assigned by the DHCP server on your network. If the IP address was assigned by a DHCP server, no changes to the IP Address are required.

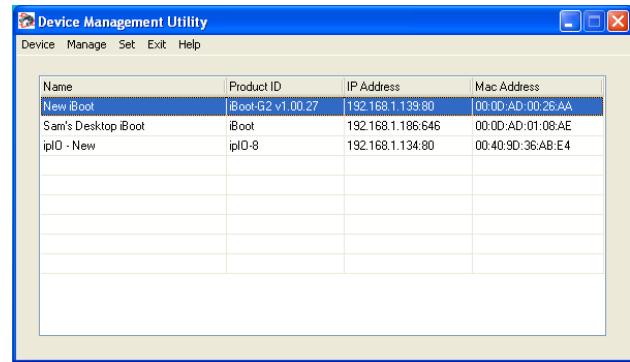
The IP address field also indicates the port for web access that is used by the iBoot. The standard port for web browser control is factory default Port 80.

### Change the IP Address

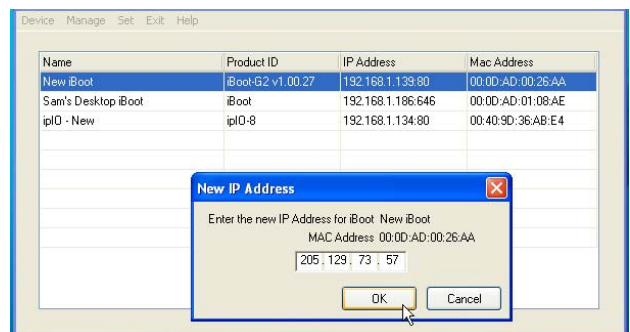
1. Click on the row containing the iBoot-G2+ to be set. The row will become highlighted.
2. From the menu select Set | IP Address
3. Enter the new IP Address into the form. Click OK when done.
4. A confirmation box is displayed. Click OK to clear the box.

Once the IP Address is set, other all other operational features of the iBoot-G2+ can be set up. Click on Discover again to refresh the display, highlight the desired iBoot-G2+ and click on Manage | Launch Browser. Follow the instructions on Page 14 to configure the iBoot.

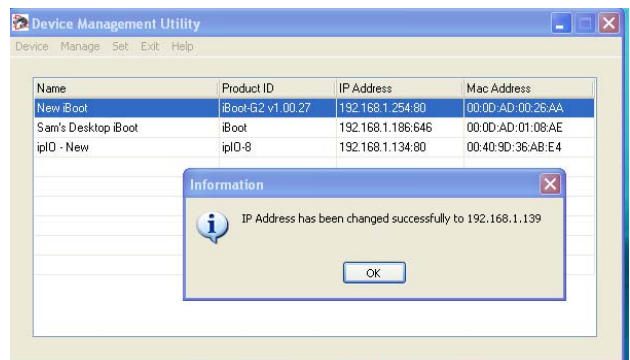
The DMU can also be used to return an iBoot-G2+ to its Factory Default condition. This can be used to recover an iBoot-G2+ with a lost password. Highlight an iBoot-G2+ from the display and select Set | Factory Defaults. This must also be done within the first two minutes of powering up the iBoot.



*DMU Discovers Dataprobe Devices on Local Network*



*Enter New IP Address for iBoot*



*IP Address Successfully Set*

## 5.1. Other ways to set the IP Address

1. Automatically from a DHCP Server
2. Web Browser via the Set-up Page
3. CLI (Telnet & USB)

**iBoot-G2+ comes with factory installed IP address 192.168.1.254.**

### Setting the IP address from a DHCP Server

A DHCP server will automatically assign an IP address (dynamic address) as well as Subnet Mask and Gateway to the iBoot. If you reboot the iBoot-G2+ with the IP Mode set for DHCP, the DHCP server will be able to assign an IP address. Once an IP address is assigned, you must check the DHCP server or use the iBoot-G2+ Setup Utility to see what address is assigned to the iBoot. You can lock the iBoot-G2+ to the current address, by selecting IP Mode = Static without changing the addresses. Set the IP Mode either by using the web setup page, or via Telnet commands.

If you set the IP address using another method, the address becomes static. To return iBoot-G2+ to dynamic addressing using DHCP, select DHCP mode in Network Setup and reboot the unit.

### Setting the IP address using Web Browser

To set the IP address using a Web Browser, connect the Ethernet connection to your local network and apply power to iBoot.

Open your browser and access iBoot-G2+ by entering the default (192.168.1.254) or current IP address into your browser's Address window. Enter the administrator credentials, click on Setup and follow the instructions on Page 14.

## 6. Web Browser Operation

### 6.1. Password Protection

iBoot-G2+ uses two username/password credential sets, one for normal power control (User) and one that also provides access to the setup functions (Admin).

Default Credentials:

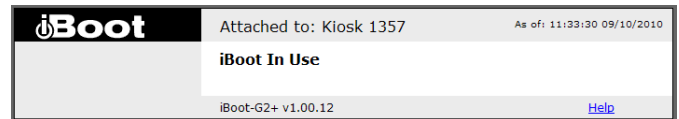
Role	Username (fixed)	Password (user set)
Administrator	admin	admin
User	user	user



Open your browser and enter the IP address of iBoot-G2+ into the address bar. If you have changed the IP address by any of the methods described, enter that address, otherwise, use the default IP address 192.168.1.254

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

iBoot-G2+ 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 logged 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-G2+ 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-G2+ via Telnet and reboot the unit, or press the reset button (see Section 11)

### 6.2. Control and Status Page

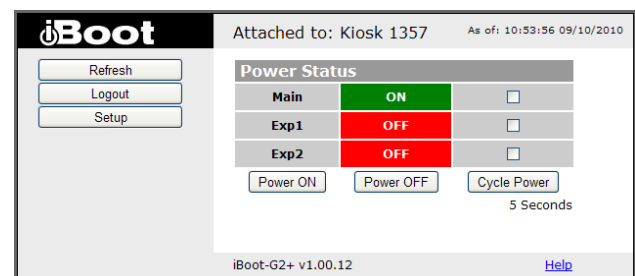
Once the user is validated, the Control and Status is displayed. (Only one person can be connected to the iBoot-G2+ at a time.)

The look of the Control and Status page will be determined by which options are selected for the Expansion, AutoPing and Heartbeat.

#### Expansion Set for iBoot-Exp Mode:

The Control and Status page will show the On or Off status of each of the three manageable outlets, Main, Exp1 and Exp2.

To control the power, select the desired outlets and click on the appropriate button. If an outlet is linked to the Main outlet, an **L** will replace the checkbox (as shown for Exp1) and it will be managed in sync with the Main Outlet.

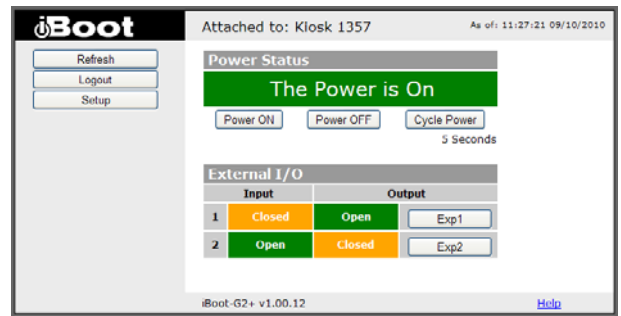


During power cycling, the Power Status bar will indicate the temporary status, with a blue background. Once the cycle is complete, the status bar will revert to

its original condition. To abort a power cycle, select the desired outlet and click on either Power On or Power Off buttons. iBoot-G2+ will assume the status selected.

### Expansion Set for Independent I/O Mode:

The Control and Status page will display the Main Outlet, with power control buttons underneath. The status of Exp1 and Exp2 Inputs and Outlets are displayed beneath the Main Power. To control the power, or to change the status of Exp1 or Exp2, select the appropriate button.



### AutoPing Enabled:

If the AutoPing features is in use, the page will also display the current status, OK or Failed, for each AutoPing used, with a counter showing how many times the Action was triggered. If connecting with the Admin credentials, reset buttons for the Trigger counters are provided.

AutoPing			
	Status	Outlet	Trigger Count
1	A OK	Main	0
	B OK		
2	OK	Exp1	0
3	Fail	Ex	2

### Heartbeat Enabled:

If the Heartbeat feature is enabled, the page will display the current status, OK or Fail of the Heartbeat, with a counter showing how many times the Action was triggered. If connecting with the Admin credentials, reset buttons for the Trigger counters are provided.

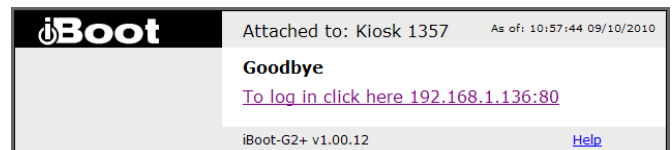
Heartbeat	
Status	Trigger Count
OK	0

### 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 must be used for the initial login.

**Logout:** When you are finished with iBoot, click on Logout. A confirmation page will be displayed. If another user is logged into the iBoot-G2, an In Use page will be displayed.



## 7. Web Setup

iBoot-G2+ 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.

### 7.1. 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-G2+ is being accessed.

**Cycle Time:** 0 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.

**Upgrade Enable:** Check this box to allow remote firmware upgrades of the iBoot-G2+. 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-G2+ 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-G2+ via Telnet and reboot the unit, or press the reset button.

### 7.2. Expansion Settings

**Mode:** Set iBoot-Exp or Independent I/O mode. iBoot-Exp displays Exp1 and Exp2 as power On/Off modules. Independent I/O mode allows independent monitor of the Inputs and control of the outputs of Exp1 and Exp2. Features are dependent on which mode is selected

- iBoot-Exp Mode: Select Link to Main to have the status of the Expansion unit be identical to the Main outlet of iBoot-G2+. This is convenient if switching both power supplies of dual redundant powered devices.
- Independent I/O: Check Remote Control Enable to allow external devices to control via DxP protocol. Leave unchecked to prevent unwanted control via DxP. To allow the inputs of Exp1 and Exp2 to control additional devices via DxP Protocol, enter the IP address and relay number of the device to be controlled.

Attached to: Kiosk 1357

**Device Settings**

Location ID:

Cycle Time:  Seconds

Upgrade Enable:

Auto Logout:  Minutes

iBoot-G2+ v1.00.12 [Help](#)

Attached to: Kiosk 1357

**Expansion Settings**

Mode:

Linking: Exp 1:  Link to Main  
Exp 2:  Link to Main

iBoot-G2+ v1.00.12 [Help](#)

Attached to: Kiosk 1357

**Expansion Settings**

Mode:

Inputs: IP Address Relay

Exp 1

Exp 2

iBoot-G2+ v1.00.12 [Help](#)

### 7.3. 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

**HTTP Port:** This setting is used to allow access to iBoot-G2+ 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 9105 then use the address <http://192.168.1.254:9105>.

**Telnet Port:** This setting is used to allow access to the iBoot-G2+ via telnet by ports other than standard 23.

**DxP Port:** This setting is used to allow access to the iBoot-G2+ via Dataprobe Exchange Protocol (DxP) via ports other than standard 9100.

**Enable DxP Control:** This setting enables external devices to control the iBoot-G2+ via DxP protocol.

**Enable DxP Query:** This setting enables external devices to query the status of the iBoot-G2+ via DxP protocol.

The screenshot displays the iBoot-G2+ Network Settings configuration page. On the left, a vertical sidebar contains buttons for 'Device', 'Expansion', 'Network', 'AutoPing', 'Heartbeat', 'Schedule', 'Passwords', and 'Home'. The main content area is titled 'Network Settings' and is associated with 'Attached to: Kiosk 1357'. The settings are as follows: IP Mode is set to 'Static'; IP Address is '192.168.1.136'; Subnet Mask is '255.255.255.0'; Gateway is '192.168.1.7'; HTTP Port is '80'; Telnet Port is '23'; and DxP Port is '9100'. Below these fields, there are two checked checkboxes: 'Enable DxP Control' and 'Enable DxP Query'. At the bottom of the settings area are 'Save' and 'Reset' buttons. The footer of the interface shows 'iBoot-G2+ v1.00.12' and a 'Help' link.

**Note:** All of the TCP/IP Settings require a reboot of the iBoot-G2, 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-G2. Upon Clicking Reboot, the Goodbye page is displayed with a link to re-login.



## 7.4. AutoPing

The AutoPing feature allows iBoot-G2+ to automatically detect failed equipment and perform a timed reboot or other power control function (like turning on an indicator or siren). You set up to four IP addresses to be periodically pinged. When iBoot-G2+ 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.

Examples:

Use AutoPing as server monitor: iBoot-G2+ is installed with the device it monitors and automatically reboots if there is no response. Ideal for: Kiosks & Servers

Use Auto-Ping as service monitor: iBoot-G2+ is installed with the device to be rebooted, but pings a remote host to test the communication channel. Ideal for: DSL & Cable Modem Verification

iBoot-G2+ monitors network device and powers up alarm or redundant system when there is no response. Ideal for: Hot Standby Servers, Environmental Control, Alert for any Network Failure

iBoot-G2+ supports three independent AutoPing channels, each controlling either the Main power, or either of the two Expansion ports. The first AutoPing channel can be programmed with two separate IP Addresses with logical AND / OR comparisons to determine the final action.



## 7.5. AutoPing Settings

**IP Address** Enter the IP address of the device to be pinged.

**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.

**A/B Logic:** (AutoPing 1 only) Select from A Only, A AND B, A OR B. 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.

**Control:** Select Main for the internal power outlet, or Exp1, Exp2 for either of the two expansion ports.

AutoPing 1	Ping A	Ping B
IP Address:	192.168.1.1	192.168.1.6
Frequency:	10	10
Fail Count:	3	3
A/B Logic:	A And B	
Control:	Main	
Action:	None	

AutoPing 2	
IP Address:	192.168.1.7
Frequency:	10
Fail Count:	3
Control:	Exp1
Action:	None

AutoPing 3	
IP Address:	192.168.1.2
Frequency:	1
Fail Count:	1
Control:	Exp2
Action:	None

Action: Select from

None	AutoPing not used
Power On – Latch	Upon triggering, iBoot-G2+ will power on and remain so until changed via the web, telnet, DxP, etc.
Power On – Follow	Upon triggering, iBoot-G2+ will power on. When the ping response returns, iBoot-G2+ will power off.
Power Off – Latch	Upon triggering, iBoot-G2+ will power off and remain so until changed via the web, telnet, DxP, etc.
Power Off – Follow	Upon triggering, iBoot-G2+ will power off. When the ping response returns, iBoot-G2+ will power on.
Power Cycle	Upon triggering, iBoot-G2+ will cycle the power. iBoot-G2+ will wait the Ping Frequency x Fail Count; if the response does not return, the power will be recycled again. This will continue until the ping response returns or Auto Ping is turned off. Make sure your Auto Ping frequency is longer than the time required to reboot your device.
Power Cycle Once	Upon triggering, iBoot-G2+ will cycle power one time. It will not cycle again automatically until the ping response returns and is lost again.

With AutoPing operational, the main iBoot-G2+ page will display the current status of this feature. The status will be OK to indicate that iBoot-G2+ 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 Fail Counter will indicate the number of times the failure has occurred, and the Trigger Counter indicates the number of times the AutoPing action has been triggered. A counter reset button is provided when logging in with the Admin password.

**Note:** All of the AutoPing Settings require a reboot of the iBoot-G2+, 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-G2+. Upon Clicking Reboot, the Goodbye page is displayed with a link to re-login.

## 7.6. Heartbeat

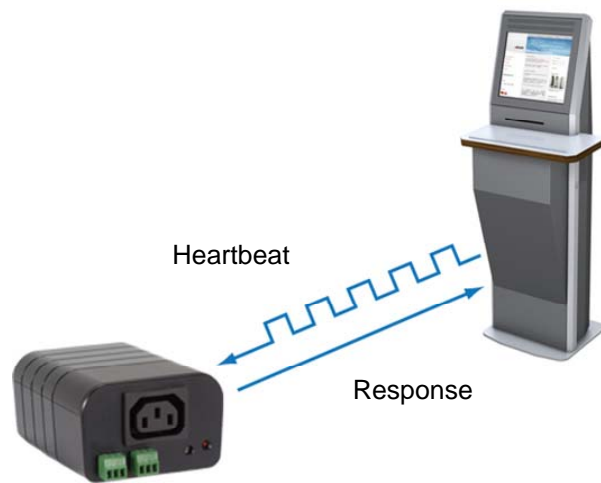
Like AutoPing, the Heartbeat monitor allows iBoot-G2+ to automatically detect failures in critical devices. With the Heartbeat monitor enabled, iBoot-G2+ will expect a message, either from the USB port or network on a regular interval. When it misses a user defined number of intervals, it will perform its programmed action.

Use the heartbeat to insure that your server is running. When the server crashes, it will be automatically rebooted.

The heartbeat can be generated in any of several ways;

A Windows executable program that will run as a tray applet that will transmit heartbeats at a steady interval to an iBoot.  
A Windows .dll file is also available for use by Windows applications.

The Heartbeat Protocol will allow developers to imbed this capability directly into their software products.



## 7.7. Heartbeat Settings

**Source :** Select the source of the heartbeat, either USB, Network or None (heartbeat not used). When using the Network, enter the Port to expect the heartbeat. The default is 9100.

**Frequency:** Enter 1 to 999 seconds. If the heartbeat is not received within this time it will increment the counter.

**Fail Counter:** Enter the number of times (1-99) the heartbeat needs to fail before the selected action is taken. When the fail counter is reached, the heartbeat action will be triggered.

The screenshot shows the iBoot-G2+ web interface. The top left has the iBoot logo. The top right says 'Attached to: Kiosk 1357'. On the left is a sidebar with buttons: Device, Expansion, Network, AutoPing, Heartbeat, Schedule, Passwords, Home. The main area is titled 'HeartBeat Settings'. It contains the following fields:  
Source: None (dropdown) Port: 9100 (text box)  
Frequency: 30 (text box)  
Fail Count: 3 (text box)  
Action: Cycle (dropdown)  
Outlet: Main (dropdown)  
Save (button) Reset (button)  
At the bottom, it says 'iBoot-G2+ v1.00.12' and has a 'Help' link.

Action: select from

None	Heartbeat not used
Power On – Latch	Upon triggering, iBoot-G2+ will power on and remain so until changed via the web, ibootctl.exe or direct messaging.
Power On – Follow	Upon triggering, iBoot-G2+ will power on. When the heartbeat returns, iBoot-G2+ will power off.
Power Off – Latch	Upon triggering, iBoot-G2+ will power off and remain so until changed via the web, ibootctl.exe or direct messaging.
Power Off – Follow	Upon triggering, iBoot-G2+ will power off. When the heartbeat response returns, iBoot-G2+ will power on.
Power Cycle	Upon triggering, iBoot-G2+ will cycle the power. iBoot-G2+ will wait the Heartbeat Frequency x Fail Count; if the heartbeat does not return, the power will be recycled again. This will continue until the heartbeat returns or Heartbeat is turned off. Make sure your Heartbeat frequency is longer than the time required to reboot your device.
Power Cycle Once	Upon triggering, iBoot-G2+ will cycle power one time. It will not cycle again automatically until the heartbeat returns and is lost again.

Outlet: Select Main for the internal power outlet, or Exp1, Exp 2 for either of the two expansion ports.

## 7.8. Using Heartbeat Monitor

With Heartbeat operational, the main iBoot-G2+ page will display the current status of this feature. The status will be OK to indicate that iBoot-G2+ is receiving heartbeats, or that the fail counter has not yet been exceeded.

If the fail count has been exceeded, the status will change to Triggered. The Trigger Counter indicates the number of times the Heartbeat feature has been triggered. A counter reset button is provided when logging in with the System password.

## 7.9. Using the Heartbeat Program

The heartbeat program and instructions are available at <http://dataprobe.com/support/iboot.html>

## 7.10. Event Scheduling

iBoot-G2+ 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:

Enter an accessible Network Time Server and check the Enable box. A list of public time servers is available at <http://www.ntp.org/> Set your local time zone relative to GMT.

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:ss with hours in 24 hour format.

**Repeat:** Set the increment of the repeat, if desired. Set the number from 0 to 999 and either Days, Hours, or Minutes.

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

Click Save to save the current settings. Click Clear to delete any current schedule.

**Note:** All of the Schedule Settings require a reboot of the iBoot-G2+, 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-G2+. Upon Clicking Reboot, the Goodbye page is displayed with a link to re-login.

## 7.11. Passwords

Two passwords are used by iBoot. The User Password allows access to the control of iBoot, but not to the Setup functions. When this password is used, the main screen will not have a link to Setup. The Administrator Password allows access to both the Main Screen and the Setup Screen. 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 (user set)
Administrator	admin	admin
User	user	user

## 8. Command Line Interface

The iBoot-G2+ 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, or via USB which requires a serial communications program like Hyperterminal. Dataprobe also provides a simple terminal program (EZ Term) at <http://dataprobe.com/support/iboot.html>.

### 8.1. CLI Access

#### Via Telnet

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

#### Via USB

Open the console client and connect to the COM port assigned to the iBoot-G2+. The communications parameters are: 9600bps. 8 data bits. No parity. 1 Stop bit. No Flow Control. Once the connection is made send Enter.

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.

<b>8.2. iBoot-G2+ CLI Syntax</b>		
Command	Description	Factory Default

<u>Control Commands</u>	These commands are used to monitor and control the outlet.	
set <main   exp1   exp2> <on   off   cycle>	This command controls the main outlet, Exp1 or Exp2 For Exp1 and Exp2; on = Closed , off = Open	
get outlets get status	<p>This command returns the current status of the main and expansion outlets. The response to this command is determined by the expansion mode setting.</p> <p>If iBoot-Exp mode:</p> <pre>Main Outlet: On Exp 1:      On L (L indicated Locked to Main) Exp 2:      Off</pre> <p>If Independent I/O mode:</p> <pre>Main Outlet: On  Exp1:   Input:    Open   Output:   Closed  Exp2:   Input:    Open   Output:   Open</pre>	



<u>Device Commands</u>	Set commands are available to the administrator only	
get location	This command returns the iBoot-G2's location ID.	New Boot
set location <20 char. max>	This command is used to set the iBoot-G2's location ID.	
set upgrade enable <yes   no>	Enables or disables the ability to upload new firmware to the iBoot-G2.	yes
get upgrade enable	This command displays the upload enable status.	
logout	Terminates the session	
reboot	This command reboots the iBoot-G2.	

<u>Expansion Commands</u>	These commands are only available to the administrator.	
get expansion	<p>This command displays the current settings of the expansion ports. The response to this command is determined by the expansion mode setting.</p> <p>If iBoot-Exp mode:</p> <pre>Link Exp 1:      Yes Exp 2:      No</pre> <p>If Independent I/O mode:</p> <pre>Output Exp1:   IP Address: 192.168.1.202   Relay:      2 Exp2:   IP Address: 192.168.1.203   Relay:      3</pre>	
set expansion mode <exp   io>	This command sets the mode for the expansion ports to either iBoot-Exp or External I/O	exp
set expansion <exp1   exp2> link <yes  no>	This command sets the Exp1 or Exp2 to be linked to the main outlet for simultaneous control. This command takes effect only when expansion mode is exp.	no
set expansion <exp1   exp2> ipaddress <dotted decimal>	This command sets the IP address to send input status information via DxP protocol to. This command takes effect only when expansion mode is io.	
set expansion <exp1   exp2> relay <1-8>	This command sets the relay number to be controlled by input changes from Exp1 or Exp2. This command takes effect only when expansion mode is io.	Exp1: 2 Exp 2: 3

<u>Network Commands</u>	All set commands require a reboot before they take effect. These commands are only available to the administrator.	
get network	<p>This command will return all the network settings as shown below:</p> <pre>Mode:          Static IP Address:    192.168.1.254 Subnet Mask:   255.255.255.0 Gateway:       192.168.1.1 HTTP Port:     80 Telnet Port:   23</pre>	

	Heartbeat Port 9100 DxP Port: 9100 DxP Control: Enabled DxP Query: Disabled Timeout: 2	
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.	
set ipaddress <dotted decimal>	This command is used to set the iBoot-G2's ip address.	192.168.1.254
set subnet <dotted decimal>	This command is used to set the iBoot-G2'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-G2'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-G2's Telnet server listens for incoming connections on. When set to 0 the Telnet server is disabled	23
set heartbeat port <0-65535>	This command sets the port for the heartbeat protocol. The heartbeat uses UDP and can be the same port number as DxP, which is TCP	9100
set dxp port <0-65535>	This command sets the port that the iBoot-G2'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 dxp control <enable/disable>	This command allows the main and expansion ports to be controlled using Dataprobe Exchange Protocol (DxP) commands.	Disabled
set dxp query <enabled/disable>	This command allows the status of the main and expansion ports to be queried using DxP	Enabled
set time server <dotted decimal>	This command is used to set the IP Address of a network time server.	69.90.182.55
set timeout <0-999>	This command sets the automatic network timeout in minutes.	2

<u>Autoping 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  A          B          Status  Trigger Count IP Address: 192.168.1.7  0.0.0.0  OK      0 Frequency:  10         10 Fail Count:  3         3 Logic:      A And B Action:     Cycle Outlet:     Main           </pre>	
	<pre> Autoping 2          Status  Trigger Count IP Address: 192.168.1.6  OK      0 Frequency:  10 Fail Count:  3 Action:     Cycle Once Outlet:     Exp1           </pre>	

	<pre> Autoping 3 IP Address: 192.168.1.2 Frequency: 10 Fail Count: 1 Action: Cycle Outlet: Exp2  Ok iBoot&gt; </pre>	Status Fail	Trigger Count 43
set autoping <1a   1b   2   3> ipaddress <dotted decimal>	This command is used to set the IP address of AutoPing 1 or AutoPing 2		0.0.0.0
set autoping <1a   1b   2   3> frequency <1-999>	This command is used to set the frequency, in seconds (how often the iBoot-G2+ sends the ping) for each of the AutoPings.		10
set autoping <1a   1b   2   3> 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 1 logic <a   and   or>	Sets logic for AutoPing 1. A = A Only, and = A and B, or = A or B.		A and B
set autoping <1   2   3> action <none   on-latch   on-follow   off-latch   off-follow   cycle   cycle-once>	This command is used to set the action that the iBoot-G2+ will perform when the AutoPing triggers.		None

<b><u>Heartbeat Commands</u></b>	These commands are only available to the administrator.		
get heartbeat	This command displays the heartbeat settings		
	<pre> Source: USB Frequency: 10 Fail Count: 3 Action: Cycle Once Outlet: Main </pre>	Status OK	Trigger Count 0
set heartbeat source <none   usb   network>	This command sets the source for the heartbeat. Either USB or Network		None
set heartbeat frequency <1-999>	This command is used to set the frequency, in seconds. How often the iBoot-G2+ expects the heartbeat		10
set heartbeat failcount <1-999>	This command is used to set the number of consecutive failures the heartbeat must detect before the iBoot-G2+ considers the device to be failed.		3
set heartbeat action <none   on-latch   on-follow   off-latch   off-follow   cycle   cycle-once>	This command is used to set the action that the iBoot-G2+ will perform when the heartbeat detector triggers.		None
Set heartbeat outlet <main   exp1   exp2>	This command sets the outlet that the heartbeat will trigger.		Main

<b><u>User Commands</u></b>	These commands are only available to the administrator.		
set password <user   admin> <old> <new> <repeat>	This command is used to set the password of either the user or administrator.		user admin

<u>Event Commands</u>	These commands are only available to the administrator.																																														
get events	This command displays all scheduled events as shown below. Example:  <table border="1"> <thead> <tr> <th>Name</th> <th>Date</th> <th>Time</th> <th>Repeats</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>1. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>2. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>3. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>4. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>5. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>6. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>7. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> <tr> <td>8. Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annually</td> <td>Power On</td> </tr> </tbody> </table>	Name	Date	Time	Repeats	Action	1. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	2. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	3. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	4. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	5. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	6. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	7. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	8. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On	
Name	Date	Time	Repeats	Action																																											
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7. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On																																											
8. Event Name	mm/dd/yyyy	hh:mm	Annually	Power On																																											
set time enable <yes   no>	This command enables or disables the use of the time server and scheduled events.  <b>Note:</b> When Adding new events through the CLI. Set this to no to prevent unintended power switching	No																																													
get time	Displays the current time and time server (when enabled)  Current Time: 16:10:41 01/27/2010 Server: 64.90.182.55 Time Zone: -4																																														
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> repeat < minute   hour   day>	This command is used to set the increments for repeating scheduled actions																																														
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.																																														
set event <1-8> action <on   off   cycle >	This command is used to set the scheduled action.																																														
set event <1-8> delete	This command deletes the scheduled action.																																														

<u>Prompts</u>	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-G2+ has been rebooted.	

## 9. DXP Protocol

iBoot-G2+ 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 Main and Expansion Outlets or External Outputs
- Read the status of the Main and Expansion Outlets or External Inputs

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

## 10. Firmware Upgrades

The iBoot-G2+ can be field upgraded. Find the latest version or special purpose versions at <http://dataprobe.com/support/iboot.html>



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-G2+ to factory defaults. Check the release notes for the upgrade before making changes to you iBoot-G2+.

- 1) Insure that the Upgrade Enable checkbox is checked in the Network Setup web page of the iBoot-G2+
- 2) Run the Device Management Utility, available at the link above. If the iBoot-G2+ you would like to upgrade is not visible in the list box, either

Select Device | Discover from the menu to locate iBoot-G2+ units on the local network, or  
Select Device | Add from the menu to add the IP address of the iBoot-G2+.

Once the device is displayed in the list, highlight it

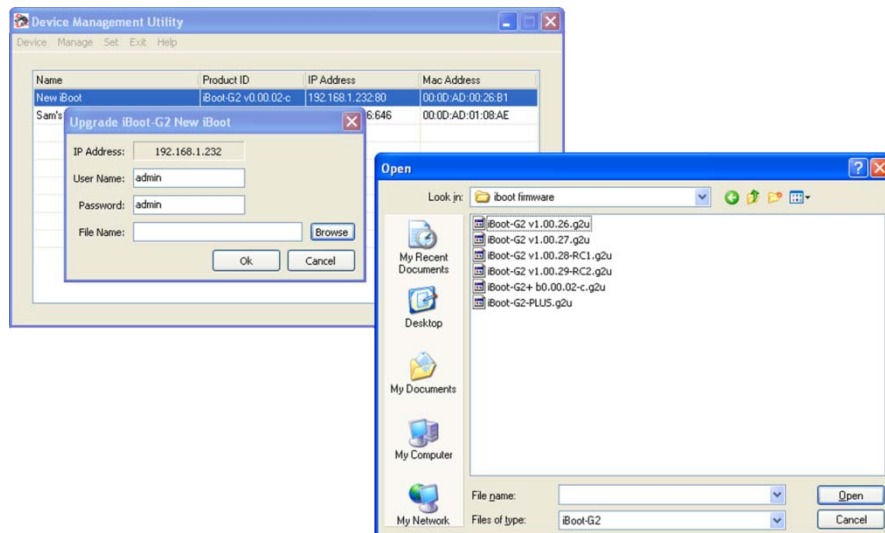
- 3) Select Manage | Upgrade Firmware

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-G2+ 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-G2 or All Files.

Click OK when all the details are entered.

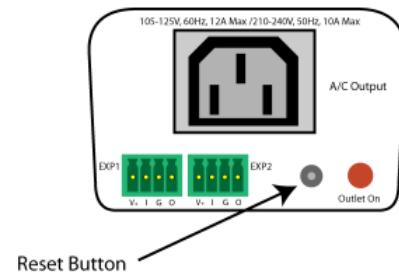
- 4) The upload will begin, and a progress bar will be displayed.
- 5) When the firmware upload is completed, the iBoot-G2+ will automatically reset and be ready for use.



## 11. Troubleshooting

The iBoot-G2+ 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 Factory default IP Address 192.168.1.254





## 12. Specifications

### 12.1. Physical

Height	2.0" 60mm
Width	3.2" 82mm
Depth	4.2" 107mm

Weight	8.6 oz 244g
MTBF	320,000 hours
Temperature	0 – 50 degrees C

### 12.2. AC

Input	IEC 320 C14
Input Cord	16AWGX3C 10A 250 UL/CSA/VDE Rated (1.25mm2X3C)
Voltage Range	Auto Sensing 105-240 VAC
Switched Receptacle	IEC 320 C13
Capacity	12 A Max at 105-125 VAC, 10 A Max at 210-240 VAC

### 12.3. Expansion Ports

Power	V+ Power Out	This is +12 VDC power out from the iBoot-G2+ Maximum current 100 mA
Feedback	I Input	Input for status signals. Dry Contact input or Open Collector.
Ground	G Ground	Signal Ground for Input and Output
Command	O Output	2N3904 NPN Transistor. 100 mA Maximum

### 12.4. Compliance

UL/cUL	UL60950 Listed I.T.E File No. E225914
CE	Directives 89/336/EEC, 92/31/EEC and 93/68/EEC EN 60950: 3rd Edition EN 55022: 1998 Class B
FCC	Part 15 Class B



### 12.5. Communications

Dual 10/100 Unshielded Twisted Pair Ethernet Jacks.
IP Addressed, DHCP assigned or Static
Internal HTTP Web Server
Telnet Server
USB: Com port 9600bps. 8 data bits. No parity. 1 Stop bit. No Flow Control.

## 13. Technical Support and Warranty

Dataprobe Technical Support is available 8:30AM to 5:30PM ET to assist you in the installation and operation of this product. To obtain Technical Support call 201- 934-5111, or Email us at [tech@dataprobe.com](mailto:tech@dataprobe.com). Please have the following information available when you call:

- Model of Product
- Lot and Version Numbers
- Data of Purchase
- Name of Seller (if other than Dataprobe)

**If you purchased this product through an Authorized Dataprobe Reseller, you should contact them first, as they may have information about the application that can more quickly answer your questions.**

### 13.1. 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 One Year 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.

Service under this Warranty is obtained by shipping the product (with all charges prepaid) to an authorized service center. Seller will pay return shipping charges. Call Dataprobe Technical Service at (201) 934-5111 to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies and proof of purchase with shipment.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. 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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