

**ENVIROMUX® Series**

**PWR-RMT-RBT-C13**  
**Remote Power Reboot Switch with IEC320**  
**C13 Outlet**  
**Installation and Operation Manual**



**PWR-RMT-RBT-C13**  
**(Front and Rear View)**

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## **CHANGES**

The material in this guide is for information only and is subject to change without notice. Network Technologies Inc reserves the right to make changes in the product design without reservation and without notification to its users.

## **FIRMWARE VERSION**

Current Firmware Version: 1.01

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## INTRODUCTION

The ENVIROMUX® Remote Power Reboot Switch is used to remotely reboot and control power (ON/OFF) to a server or other powered device over IP.

- Two operating modes for power reboot:
  - Manual – select the outlet and turn the power on/off/cycle.
  - Auto – scheduled, triggered, or configurable combination.
    - Scheduled – set date/time/duration of power cycle.
    - Triggered
      - Power on/off a device when a sensor connected to the digital input changes state.
      - Reboot (power cycle) and control power (ON/OFF) to unresponsive IP devices that are connected to the PWR-RMT-RBT-C13 power outlet.
- Configure, control, and monitor the unit via the easy-to-use web interface or HTTP REST API– makes it easy to control power from anywhere in the world.
- Two digital inputs to monitor alarm contacts, environmental sensors, relays, and switch closures.
  - Shut down power when water or other environmental threats are detected.
- Two digital open collector outputs for control of external devices – drive relays for process control, security, and environmental controls.
  - Digital outputs activate upon triggered event or via the user interface.
- Monitor (ping) up to two IP network devices.
  - Unresponsive IP devices can be configured to trigger the outlet of PWR-RMT-RBT-C13 to power ON/OFF/Cycle.
- Automatically configures network settings received from a connected DHCP server.
  - If a DHCP server is not found, the default static IP address will be used.
- Dual password protection with separate user and administrator passwords.
- Integrated mounting brackets for easy surface/wall mounting.
  - Optional DIN mounting available.
- The Remote Reboot Switch is the ideal solution for many applications, such as:
  - Remote reboot of any device, router, server, kiosk, etc. The device need not be network attached.
  - Secure sensitive devices by keeping them powered off when not in use. This prevents hackers from detecting them at all times.
  - Power down equipment when not needed for power savings and to save on wear and tear.
  - Power up alert devices (sirens or lamps) or environmental systems (heaters, coolers, pumps, etc.)
- Cascade an unlimited number of PWR-RMT-RBT-C13 using the digital I/O screw terminals.
  - For a single user interface, use with E-MNG-SH Self-Hosted Enterprise Environment Monitoring System Management Software. (Support coming soon.)
- Flash upgradeable.
- Features coming soon:
  - Compatibility with E-2D, E-5D, and E-16D as an IP sensor.
  - Compatibility with E-MNG-SH Self-Hosted Enterprise Environment Monitoring System Management Software.

### Optional:

For a model with DIN clips to mount in a DIN rail, order PWR-RMT-RBT-C13-D

## SUPPORTED WEB BROWSERS

Most modern web browsers should be supported. The following browsers have been tested:

- Microsoft Edge
- Opera 9.0 or higher
- Google Chrome 9.0.5 or higher
- Safari 1.3 for MAC
- Firefox 50 or higher

## MATERIALS

### Materials supplied with this kit:

- NTI ENVIROMUX PWR-RMT-RBT-C13 Low Cost Power Reboot Switch
- 1-14 AWG 6 Foot Universal Angled Power Cord, Left Angled NEMA 5-15P to Straight IEC 320 C13
  - Country-specific line cord if shipped international
- 1- 5 Foot CAT5e Ethernet Cable
- 1- DIN Clip Kit with hardware (PWR-RMT-RBT-C13-D model only)
- URL Slip with path to this manual

### Output cables available, order based on your application:

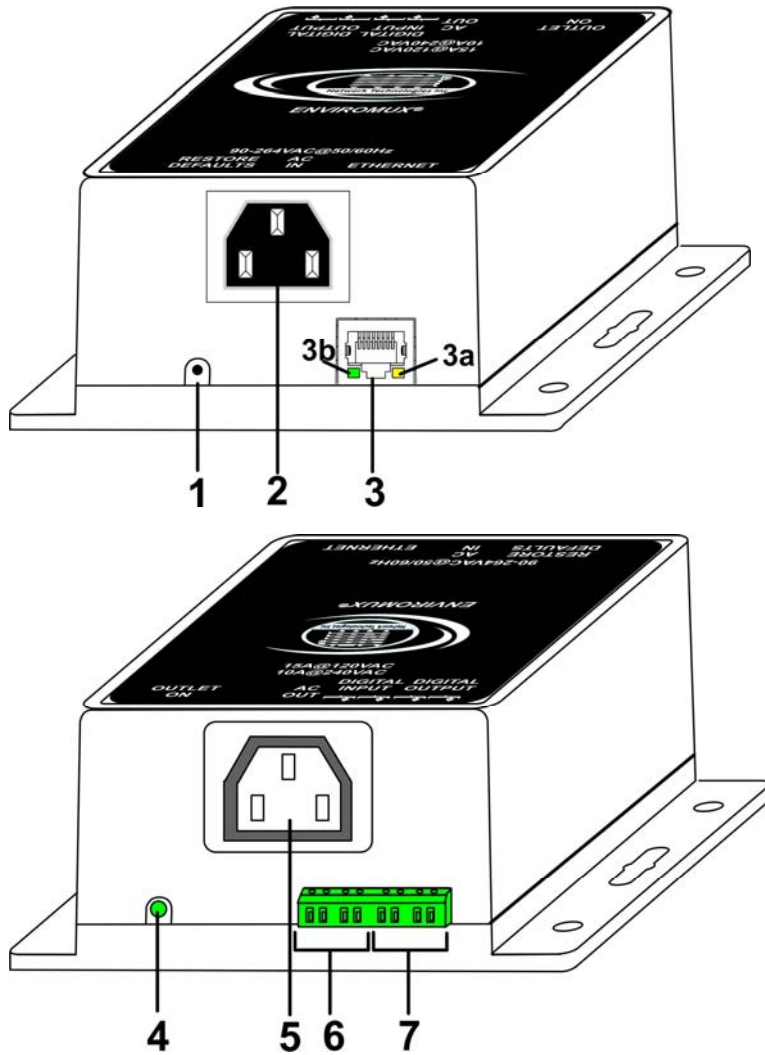
NTI#	Description
PWR-CRD14-C14C13-6	14AWG 6 Foot IEC 320 C14 to C13 cord
PWR-CRD16-C14C13-6	16AWG 6 Foot IEC 320 C14 to C13 cord
PWR-CRD18-C14C7-6	18AWG 6 Foot IEC320 C14 to C7 cord
PWR-CRD14-C14515R-6	14AWG 6 Foot IEC320 C14 to NEMA 5-15R cord

### Additional materials may need to be ordered;

CAT5/5e/6/6a/7 (CATx) unshielded twisted-pair cable(s) terminated with RJ45 connectors wired straight thru- pin 1 to pin 1, etc. for Ethernet connection

Contact your nearest NTI distributor or NTI directly for all of your cable needs at 800-RGB-TECH (800-742-8324) in US & Canada or 330-562-7070 (Worldwide) or at our website at <http://www.networktechinc.com> and we will be happy to be of assistance.

## CONNECTORS AND LEDS



#	LABEL	CONNECTOR/LED	DESCRIPTION
1	RESTORE DEFAULTS	Button	For manually resetting the PWR-RMT-RBT-C13 to default settings-press and hold for 5 seconds to activate
2	AC IN	IEC 320 C14 Plug	For connecting a line service cord
3	ETHERNET	RJ45 female connector	For connection to an Ethernet for remote user control and monitoring <ul style="list-style-type: none"> <li>• <b>3a</b>-Yellow LED– illuminated when Ethernet link is present, blinking indicates activity on the Ethernet port</li> <li>• <b>3b</b>-Green LED - indicates 100Base-T activity when illuminated, 10Base-T activity when dark</li> </ul>
4	OUTLET ON	Green LED	Illuminates to indicate when the AC OUT socket is powered ON.
5	AC OUT	IEC 320 C13 Receptacle	For connecting a cord to power a device
6	DIGITAL IN 1-2	Wire Terminal Block	For connecting dry-contact sensors
7	DIGITAL OUT 1-2	Wire Terminal Block	For connecting output devices

## INSTALLATION

1. Using the holes on the mounting flanges, secure the PWR-RMT-RBT-C13 in your desired location.
2. Connect one end of the power cord to the "AC IN" port in the PWR-RMT-RBT-C13, and the other end to a wall outlet. A power source that is 90-264VAC at 50/60Hz can be connected.

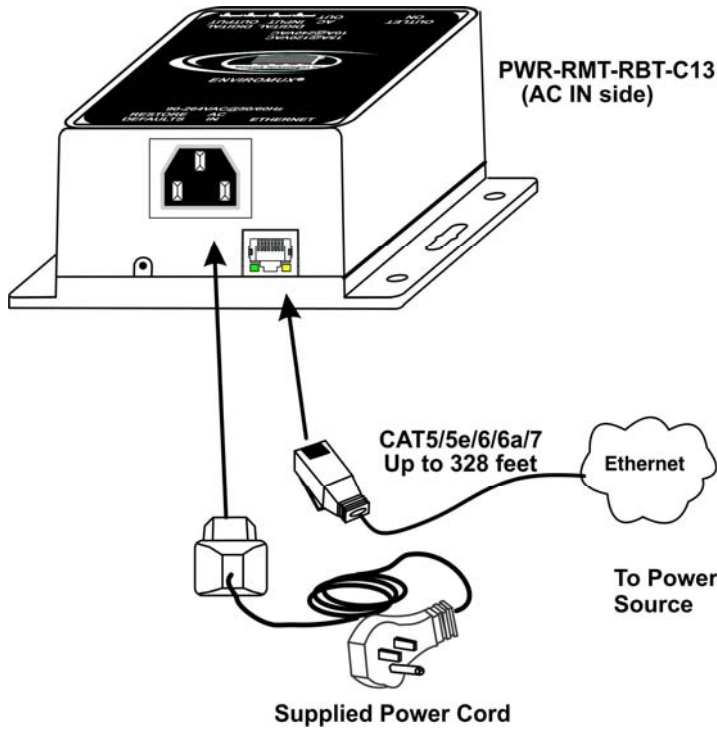


Figure 1- Connect power and Ethernet cables

3. Connect the "ETHERNET" port to your LAN with a CAT5,5e/6/6a/7 cable. This cable can be up to 328 feet in length.
4. Connect the AC OUT receptacle to a 120VAC (maximum 15A) or 240VAC (maximum 10A) device to be controlled using a suitable cable (see page 2 for cables offered by NTI).

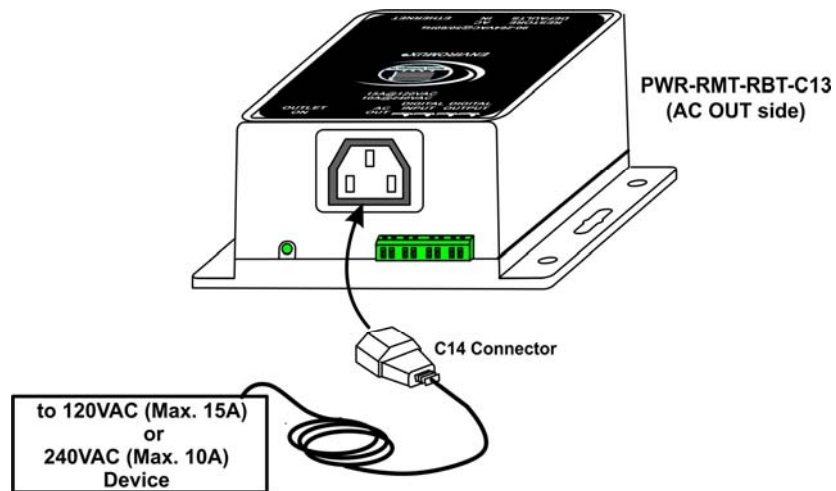


Figure 2- Connect AC OUT cable



5. Connect the DIGITAL IN terminals to sensors that will act as triggers to power the PWR-RMT-RBT-C13 On and OFF. Dry contact sensors can be connected to the PWR-RMT-RBT-C13 using 26-16AWG wire. Up to 2 sensors can be connected. Two-wire switch-only type sensors can be connected to the plus (+) and ground (⏏) terminals of each of 2 sets of terminals.

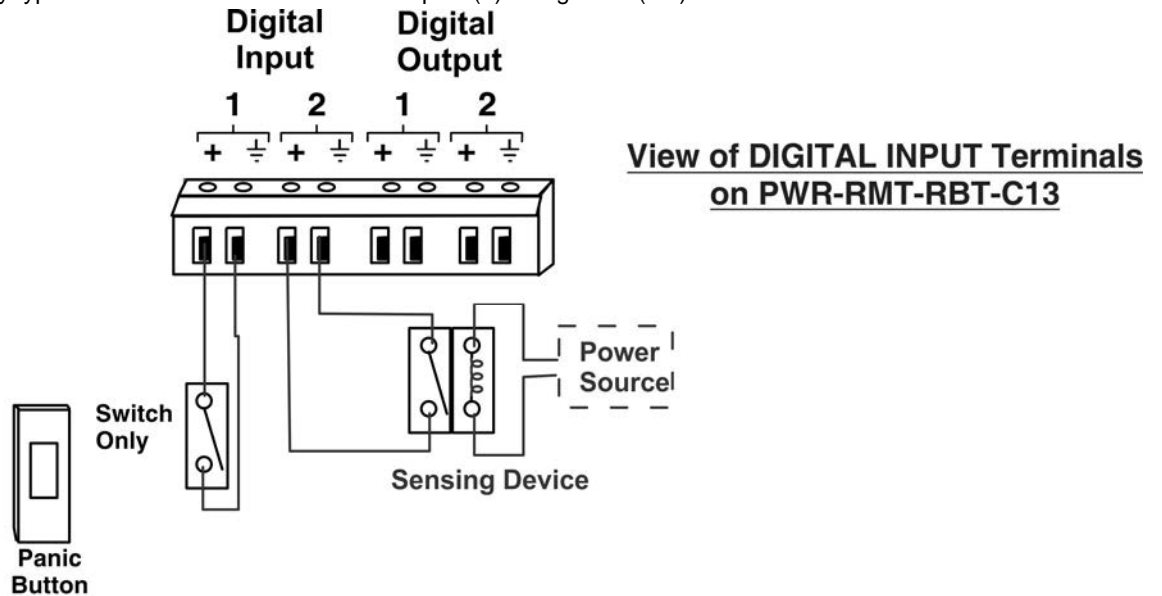


Figure 3- Connect Digital Input sensors

6. Connect the DIGITAL OUT terminals to devices that can be controlled by the PWR-RMT-RBT-C13 using 26 to 16AWG wire. Digital Outputs on the PWR-RMT-RBT-C13 have an open-collector design for the control of up to 2 relays, solenoids, LEDs, and other devices that operate at voltages between 0-24VDC (maximum 500mA).

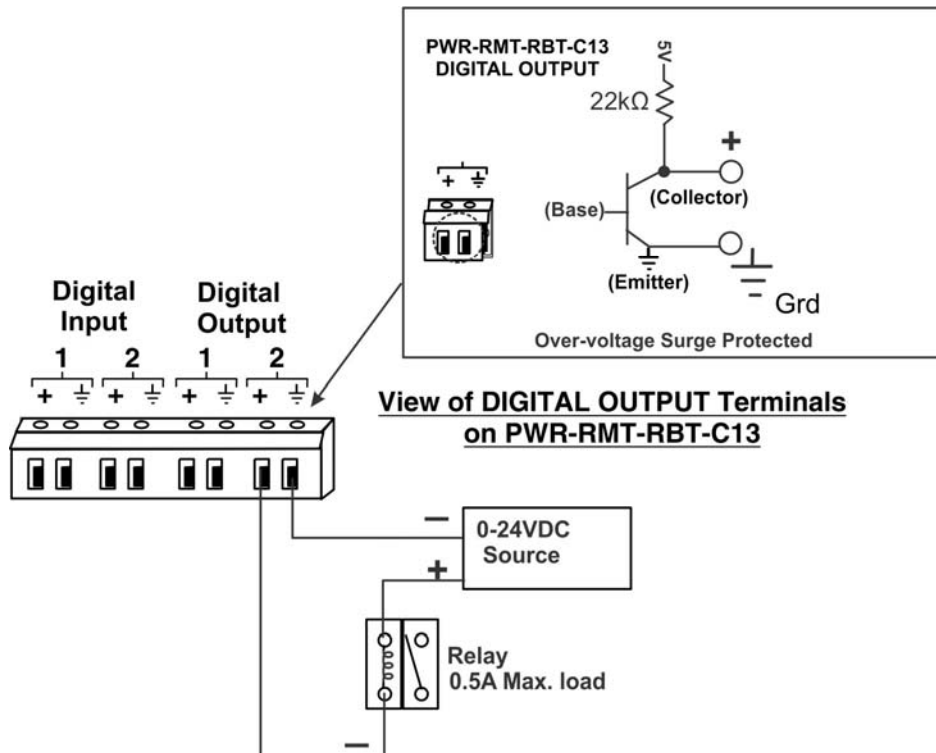


Figure 4- Connect Digital Output devices

## DIN Clip Installation

If you purchased the DIN clip option for your PWR-RMT-RBT-C13 (PWR-RMT-RBT-C13-D), the clips can be attached using the hardware provided. Pass the screw through the flat washer, then through a hole in the mounting flange, and screw it tightly into the threaded hole in the clip. Orient the clips so they allow you to mount the PWR-RMT-RBT-C13-D in the position your application demands.



Figure 5- DIN clip hardware



Figure 6- DIN Clips Installed

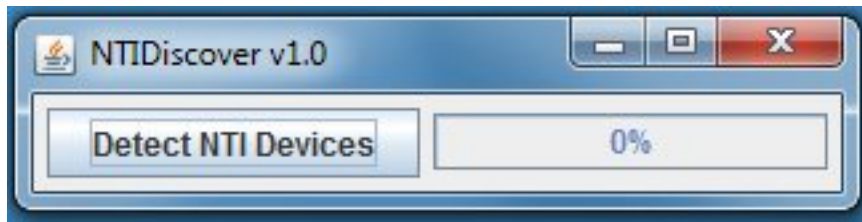
## DEVICE DISCOVERY TOOL

In order to easily locate NTI Devices on a network, the NTI Device Discovery Tool may be used. The Discover Tool can be downloaded from <http://www.networktechinc.com/download/d-environment-monitor-micro.html>, unzipped and saved to a location on your PC. To open it just double-click on the file `NTIDiscover.jar`. This will open the NTI Device Discovery Tool.

**Note:** The Device Discovery Tool requires the Java Runtime Environment (version 6 or later) to operate. Here is a [link](#) to the web page from which it can be downloaded.

**Note:** The computer using the Device Discovery Tool and the NTI Device must be connected to the same subnet in order for the Device Discovery Tool to work. If no devices are found, the message “No Devices Found” will be displayed.

**Tip:** If your Windows program asks which program to open the `NTIDiscover.jar` file with, select the Java program.



**Figure 7- Device Discovery Tool**

Click on the “**Detect NTI Devices**” button to start the discovery process. After a short time, the tool will display all NTI devices on your network, along with their network settings.

Device	MAC Address	IP Address	Mask	Gateway		
E-MICRO	00:0C:82:15:0C:9E	192.168.3.211	255.255.255.0	192.168.3.3	Submit	Blink LED
PWR-RMT-RBT-C13	00:0C:82:1A:FF:02	192.168.3.184	255.255.255.0	192.168.3.3	Submit	Blink LED
PWR-RMT-RBT-C13	00:0C:82:1A:00:01	192.168.3.188	255.255.255.0	192.168.3.3	Submit	Blink LED
IPDU-Sx	00:0C:82:08:00:77	192.168.3.220	255.255.255.0	192.168.3.3	Submit	Blink LED
E-1WCT	00:0C:82:17:00:FB	192.168.3.148	255.255.255.0	192.168.3.3	Submit	Blink LED
<input type="button" value="Submit All"/> <input type="button" value="Refresh"/> <input type="button" value="Close"/>						

### How to Use the Device Discovery Tool

**To Change a Device’s Settings,** within the row of the device whose settings you wish to change, type in a new setting (**one field at a time**) and click on the **Submit** button on that row. Update the IP Address, Mask, and Gateway as needed, **one at a time**. If the tool discovers more than one device, the settings for all devices can be changed in the same fashion. (The “Submit All” button is **not supported** by this product.)

**To Refresh the list of devices,** click on the **Refresh** button.

- To change more than one field;
1. Change a field, click **Submit**, wait 30 seconds as the ENVIROMUX reboots automatically,
  2. Click **Refresh** to update the discovered settings.
  3. Change another field, and repeat. Click **Close** when finished.

“Blink LED” is not supported on this product.

## OPERATION VIA WEB INTERFACE

A user may monitor and configure the settings of the PWR-RMT-RBT-C13 and any sensor connected to it using the Web Interface via any web browser (see page 2 for supported web browsers). To access the Web Interface, connect the PWR-RMT-RBT-C13 to the Ethernet (page 4). Use the Device Discovery Tool (page 7) to setup the network settings. Then, to access the web interface controls, the user must log in.

**Note:** In order to view all of the graphics in the Web Interface, the browser's JavaScript must be enabled.

By default, the PWR-RMT-RBT-C13 is configured to dynamically assign network settings received from a DHCP server on the network it is connected to. (This can be changed to a static IP address to manually enter these settings in the Network Settings on page 16.) The PWR-RMT-RBT-C13 will search for a DHCP server to automatically assign its IP address each time the unit is powered up. If the PWR-RMT-RBT-C13 does not find a DHCP server, the address entered into the static IP address field (page 16 -default address shown below) will be used. If a DHCP server on the network has assigned the IP address, use the Device Discovery Tool to identify the IP address to enter when logging in to the PWR-RMT-RBT-C13.

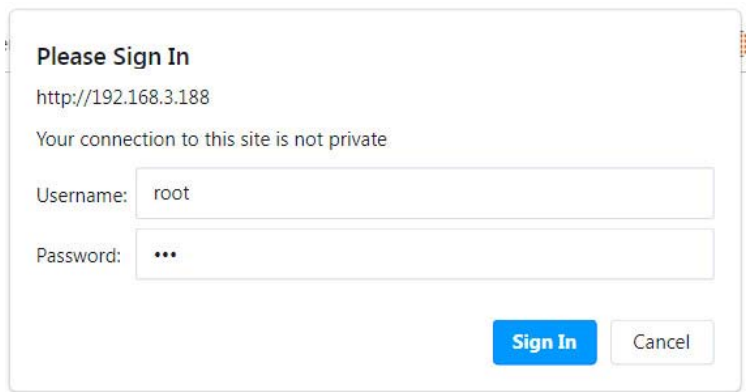
**Note:** The computer using the Device Discovery Tool and the NTI Device must be connected to the same subnet in order for the Device Discovery Tool to work. If no devices are found, the message "No Devices Found" will be displayed.

### Log In and Enter Password

To access the web interface, type the current IP address into the address bar of the web browser. (The default IP address when DHCP is not enabled is shown below):

http://192.168.1.26

A log in prompt requiring a user name and password will appear:



**Figure 8-** Login prompt to access web interface

**User Name = root**  
**Password = nti**  
 (lower case letters only)

**Note:** If you change the root user name or password to something other than "root" and "nti" (page 30), and you forget either of these, in order to regain access to the PWR-RMT-RBT-C13, use the "Restore Defaults" button to reset the Username and Password.

**Note:** usernames and passwords are case sensitive

With a successful log in, the “Outputs” page with a menu at left will appear on the screen:

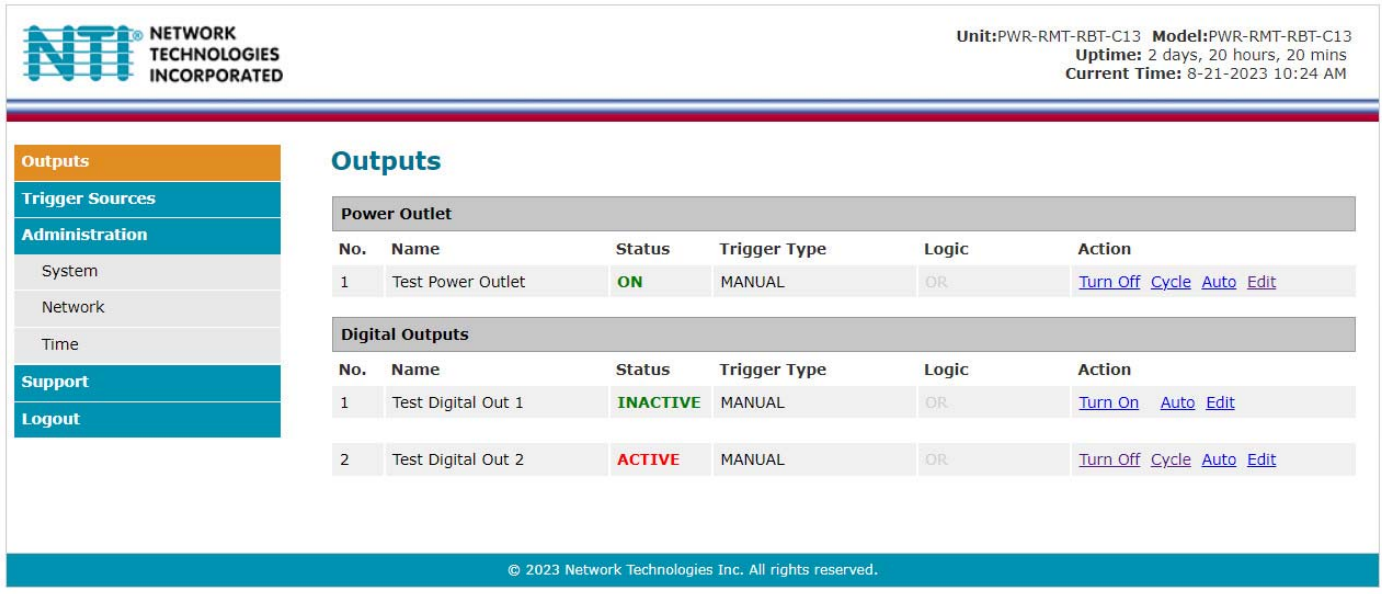


Figure 9- Initial screen- Outputs state

From this initial page, the administrator can use the menu to the left to manage all the functions of the PWR-RMT-RBT-C13.

Function	Description
OUTPUTS	Monitor the output status (Power Outlet and Digital Outputs), trigger types, and logic state of the PWR-RMT-RBT-C13
TRIGGER SOURCES	View and configure the Trigger Sources that can be set to control the output status
ADMINISTRATION	Configure all system, network and user access settings
SUPPORT	Link for downloading a manual
LOGOUT	Log the user out of the web interface

From this page you can click "**Turn ON**" to power the Power Outlet and/or Digital Outputs 1 and 2, click "**Cycle**" to cycle the Power Outlet and/or Digital Outputs 1 and 2, click "**Auto**" to switch to controlling the outlet using Trigger Source settings, and click "**Edit**" to make edits to the output settings and selected Trigger Source settings.

If the Output Control is set to "Auto" (see Figure 11), more information including the status of the triggers that have been set will be shown as seen in Figure 10 (on the next page).

## Outputs

Power Outlet					
No.	Name	Status	Trigger Type	Logic	Action
1	Test Power Outlet	ON	AUTO	OR	<a href="#">Turn Off</a> <a href="#">Manual</a> <a href="#">Edit</a>
			Trigger Source	Trigger State	
			3 Office 365 Mail	FALSE	<a href="#">Edit</a>
			4 E-MICRO P03	FALSE	<a href="#">Edit</a>
			5 Noon Timer	FALSE	<a href="#">Edit</a>
			6 Night Daily Timer	FALSE	<a href="#">Edit</a>
Digital Outputs					
No.	Name	Status	Trigger Type	Logic	Action
1	Test Digital Out 1	INACTIVE	AUTO	OR	<a href="#">Turn On</a> <a href="#">Manual</a> <a href="#">Edit</a>
			Trigger Source	Trigger State	
			4 E-MICRO P03	FALSE	<a href="#">Edit</a>
			5 Noon Timer	FALSE	<a href="#">Edit</a>
			6 Night Daily Timer	FALSE	<a href="#">Edit</a>
2	Test Digital Out 2	ACTIVE	MANUAL	OR	<a href="#">Turn Off</a> <a href="#">Cycle</a> <a href="#">Auto</a> <a href="#">Edit</a>
			Trigger Source	Trigger State	
			4 E-MICRO P03	FALSE	<a href="#">Edit</a>
			5 Noon Timer	FALSE	<a href="#">Edit</a>
			6 Night Daily Timer	FALSE	<a href="#">Edit</a>

With Trigger Type set to Auto, Trigger Sources and their status are shown

Triggers that are not checked (next page) are not listed

When Triggers are checked but the Trigger Type is "Manual", Triggers are listed but greyed out because they are not active

(See Output Control Settings on next page)

Figure 10- Outputs page with Trigger Type set to Auto

## Outputs

### Output Control Settings

Name	<input type="text" value="AC Power Outlet"/> Output Name			
Default State	<input checked="" type="radio"/> Off <input type="radio"/> On Select default state of the output (Output is <b>ON</b> when logic is <b>True</b> in Auto)			
Output Control	<input type="radio"/> Manual <input checked="" type="radio"/> Auto Select to either manually control the output or automatically based on trigger inputs			
Cycle Duration	<input type="text" value="30"/> Specify output power cycle length in secs (1-255)			
<b>Auto Trigger Settings</b>				
E-5D DEL E07 D01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when input <b>closed</b>	<a href="#">Edit</a>
E-5D DEL E07 D02	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when input <b>closed</b>	<a href="#">Edit</a>
E-MICRO P02	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when <b>no response</b>	<a href="#">Edit</a>
Office365	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when <b>no response</b>	<a href="#">Edit</a>
Weekend Timer	<input type="checkbox"/>	<input type="checkbox"/>	True when timer <b>running</b>	<a href="#">Edit</a>
Daily Timer	<input type="checkbox"/>	<input type="checkbox"/>	True when timer <b>running</b>	<a href="#">Edit</a>
Logical function	<input type="text" value="OR"/> <input type="button" value="v"/> Logical function to be applied to trigger list above			

Figure 11- Output Control Settings

Output Control Settings	Description
Name	Enter the name you would like to be applied to the output
Output Control	Choose whether you want the output to be controlled manually, or automatically by configured trigger sources
Default State	Choose if the power up state of the PWR-RMT-RBT-C13 should be with the output powered ON or OFF
Cycle Duration	Specify the output power cycle length in seconds; range is 1-255 ; This is the period of time before the power outlet will be live when the outlet state is cycled.
Digital Input (#1 and #2)	Place checkmark if Digital Input state is desired to be a trigger source Add a checkmark to <b>"Invert input trigger state"</b> to change the trigger state: No checkmark = Input will trigger when contacts are closed/low With checkmark = Input will trigger when contacts are open/high
IP Device (#1 and #2)	Place checkmark if the IP Device state is desired to be a trigger source Add a checkmark to <b>"Invert input trigger state"</b> to change the trigger state: No checkmark = IP Device will trigger when the device is not responding to a ping With checkmark = IP Device will trigger when the device is responding to a ping
Timer (#1 and #2)	Place checkmark if the configured timer is desired to be a trigger source Add a checkmark to <b>"Invert input trigger state"</b> to change the trigger state: No checkmark = A timer will trigger when a timer is scheduled to run With checkmark = A timer will trigger when there is no timer running
Logical Function	Set the logical function to OR or AND OR = if <b>any</b> triggers are in a TRUE state, the output will be ON/ ACTIVE, otherwise it will be OFF/ INACTIVE AND = if <b>all</b> triggers are in a TRUE state, the output will be ON/ ACTIVE, otherwise it will be OFF/ INACTIVE

Digital Input sensors need to be in a new state for a specified amount of time before a trigger can occur. Click "Edit" to open Sensor Settings page.

### Sensor Settings

Description	<input type="text" value="E-5D DEL E07 DO1"/> The description name for this sensor
State Change Delay	<input type="text" value="100"/> ms Specify how long input has to be stable before change is registered (min. 25 ms)

**Figure 12- Set Digital Input sensors specified time period before causing a trigger**

You can enter a custom description for the sensor connected to Digital In #1 and #2. You can also enter how long a state change in the sensor must be stable, in milliseconds, before the sensor state will trigger the output. After making any changes, click "Save".

An IP device can be configured to be pinged by the PWR-RMT-RBT-C13. Click "Edit" to open the IP Device Settings page. After making any changes, click "Save".

### IP Device Settings

Description	<input type="text" value="E-MICRO P02"/> The name for this IP device
Enable	<input checked="" type="checkbox"/> Enable
IP Address	<input type="text" value="192.168.3.105"/> The IP address of the device
Ping Period	<input type="text" value="120"/> (sec) The frequency at which to ping the device(min. 1)
Timeout	<input type="text" value="5"/> (sec) Duration, in seconds, to wait for a response to a ping(min. 1)
Retries	<input type="text" value="3"/> The number of tries before device is considered Unresponsive
Unresponsive Action	<input type="text" value="Latching Trigger"/> <input type="button" value="↔"/> <div style="border: 1px solid black; padding: 2px; display: inline-block;">                 Cycling Trigger                  Latching Trigger                  Cycling Trigger             </div> Select what signal to provide to Output
Cycle Duration	<input type="text" value="60"/> (sec) Select the duration of cycle signal
Re-Ping Wait Time	<input type="text" value="60"/> (sec) Select how long to wait before starting PING sequence again after cycle
Cycle Count	<input type="text" value="0"/> Select how many times to cycle trigger before disabling PING (setting to 0 will try until response to PING is received)

**Figure 13- IP Device Settings**

IP Device Settings	Description
Description	Enter the name you would like to be applied to the IP device
Enable	Apply a checkmark if this IP device is to be enabled to effect the outputs
IP Address	Enter either the IP address or the URL of the IP device
Ping Period	Enter the amount of time in seconds between pings to the IP address
Timeout	Enter the time period in seconds to wait for a response to a ping (range is 1 - 255)



IP Device Settings (continued)	Description
Retries	Enter the number of times an IP address should be pinged before it is considered unresponsive
Unresponsive Action	Choose whether the Trigger will be Latching (continuous) or Cycling (active for the configured cycle duration) A Latching trigger will remain triggered until IP device state changes. Note: Triggered state(response or no response) is determined in output settings. A Cycling Trigger only triggers for the specified duration and returns to normal <b>Note: Selecting Cycling Trigger may not actually trigger the Output Relay if the Output Relay Logical function is set to "AND". See Figure 11: Output Control Settings.</b>
Cycle Duration	Length of time in seconds the a trigger cycle will be in effect (applies only to Cycling Trigger)
Re-Ping Wait time	Length of time in seconds to wait before repeating the ping sequence after a trigger cycle (applies only to Cycling Trigger)
Cycle Count	Select how many times to cycle a trigger before automatically disabling the Ping. (A setting of 0 will cycle the ping until a response it finally received.) (applies only to Cycling Trigger)

Two timers can be configured to trigger when the outputs will be turned ON/OFF or be rendered ACTIVE/INACTIVE. Click "Edit" to open Configure Timer page.

### Configure Timer

**Timer Settings**

Name:   
Timer name

Trigger Start Schedule:  Once  Sunday  Monday  Tuesday  Wednesday  Thursday  Friday  Saturday

Trigger Start Date:   
Enter trigger start date in system selected format

Trigger Start Time:     
Enter trigger start time in hh:mm format

Trigger Stop Schedule:  None  Sunday  Monday  Tuesday  Wednesday  Thursday  Friday  Saturday

Trigger Stop Date:   
Enter trigger stop date in system selected format

Trigger Stop Time:     
Enter trigger stop time in hh:mm format

Figure 14- Configure Timer Settings

Configure Timer	Description
Name	Enter a name for the timer
Trigger Start Schedule	Select which days of the week the timer will be in effect. When "Once" is selected, the days of the week in the <b>Trigger Stop Schedule</b> are disabled and the <b>Trigger Start Date</b> is enabled
Trigger Start Date	Enter the start date (in the system-selected format)- only active when "Once" is checked in the <b>Trigger Start Schedule</b>
Trigger Start time	Enter the time of the day in hh:mm format for the trigger to be effective, select AM or PM
Trigger Stop Schedule	Enter the days of the week the timer should not be in effect When "None" is checked, <b>Trigger Stop Date</b> and <b>Trigger Stop Time</b> are disabled. <b>Note:</b> "None" is only available if the Trigger Start Schedule has "Once" selected.
Trigger Stop Date	Enter the date the trigger should stop altogether
Trigger Stop Time	Enter the time of day in hh:mm format that the trigger should stop

After making changes, be sure to click "Save".

## Trigger Sources

On this page you can see the status of each trigger, and if you click "**Edit**" you will have access to Sensor Settings (Figure 12), IP Device Settings (Figure 13) and Timer Settings (Figure 14).

### Trigger Sources

Digital Inputs			
No.	Name	Status	Action
1	Digital Input #1	OPEN	<a href="#">Edit</a>
2	Digital Input #2	OPEN	<a href="#">Edit</a>

IP Device Triggers			
No.	Name	Status	Action
1	IP Device #1	DISABLED	<a href="#">Edit</a>
2	IP Device #2	DISABLED	<a href="#">Edit</a>

Time Triggers			
No.	Name	Status	Action
1	Timer #1	NOT TRIGGERED	<a href="#">Edit</a>
2	Timer #2	TRIGGERED	<a href="#">Edit</a>

Figure 15- Status of Trigger Sources

## Administration Pages

### System Settings

Serial Number:	E003
MAC Address:	00:0C:82:1A:FF:03
Firmware Version:	1.01
Web Page Version:	1.01
Unit Name	<input type="text" value="PWR-RMT-RBT-C13 E03"/> <small>Name assigned to this unit</small>
Disable Warning Pop-up	<input type="checkbox"/> <small>Disable warning pop-up messages. NOTE: Error pop-up will still be displayed.</small>

**See page 20 for further explanation of this feature.**

### Admin Settings

Username	<input type="text" value="root"/> <small>The admin username to login to the device</small>
Password	<input type="password" value="....."/> <small>The admin password to login to the device</small>
Confirm	<input type="password" value="....."/> <small>Confirm the entered password</small>

**Default Username: root**  
**Default Password: nti**  
**(all lower case characters)**

### User Settings

Enable Operator	<input checked="" type="checkbox"/> <small>Enable operator user</small>
Username	<input type="text" value="user"/> <small>The operator username to login to the device</small>
Password	<input type="password" value="....."/> <small>The operator password to login to the device</small>
Confirm	<input type="password" value="....."/> <small>Confirm the entered password</small>

---

**Figure 16- Administration Page Settings**

The System Settings section includes the serial number, MAC address, firmware version, web page version, unit name that the user assigns, and a check box to disable the pop-up warning messages (enabled by default- see page 20).

In the Admin and User Settings you can enter names and passwords. If you ever forget the Admin password, you will need to press the **"RESTORE DEFAULTS"** button on the PWR-RMT-RBT-C13 for 5 seconds and login with the **default username (root) and password (nti)**

At the bottom of this page are the **"Save"** button (be sure to press this after you enter new usernames and passwords!), **"Restore Default Configuration"** (an easy quick way to clear all user settings and start over), and **"Reboot"** button to use to make a fresh start of the PWR-RMT-RBT-C13.

Under **Administration** you will find the **Network Settings** page.

## Network Settings

<b>Enable DHCP</b>	<input type="checkbox"/> Method of acquiring IP settings
<b>IP Address</b>	<input type="text" value="192.168.3.86"/> Statically assigned IPv4 address
<b>Subnet Mask</b>	<input type="text" value="255.255.255.0"/> Statically assigned IPv4 subnet mask
<b>Default Gateway</b>	<input type="text" value="192.168.3.3"/> Statically assigned IPv4 default gateway
<b>Preferred DNS</b>	<input type="text" value="166.102.165.13"/> Statically assigned preferred name server
<b>Alternate DNS</b>	<input type="text" value="166.102.165.12"/> Statically assigned alternate name server

**Figure 17- Network Settings page**

Network Settings	Description
Enable DHCP	Place a checkmark to allow a DHCP server to assign the IP address and other network settings, otherwise static network settings will be as assigned below manually.
IP Address	If DHCP is not enabled, this will be the IP address of the PWR-RMT-RBT-C13
Subnet Mask	Enter a valid subnet mask for static network settings
Default Gateway	Enter a valid default gateway for static network settings
Preferred DNS	Enter a valid DNS server
Alternate DNS	Enter a valid alternate DNS server

Click "**Save**" after any changes are made.

Under **Administration** you will find the **Time Settings** page.

## Time Settings

<b>Time Zone</b>	(GMT-05:00) Eastern Time Select Time Zone
<b>Enable DST</b>	<input checked="" type="checkbox"/> Automatically adjust clock for daylight saving changes
<b>Date Format</b>	MM-DD-YYYY Select Date Format
<b>Time Format</b>	AM/PM Select Time Format
<b>NTP server</b>	nti1.pool.ntp.org Address of the NTP server
<b>NTP Frequency</b>	60 Frequency, in minutes, at which to query NTP server (5-1440)

- (GMT-05:00) Eastern Time
- (GMT-12:00) International DateLineWest
- (GMT-11:00) Midway Island,Samoa
- (GMT-10:00) Hawaii
- (GMT-09:00) Alaska
- (GMT-08:00) Pacific Time
- (GMT-07:00) Mountain Time
- (GMT-07:00) Arizona
- (GMT-06:00) Central Time
- (GMT-05:00) Eastern Time**
- (GMT-05:00) Indiana
- (GMT-04:00) Atlantic Time
- (GMT-03:30) Newfoundland
- (GMT-03:00) Greenland
- (GMT-02:00) Mid-Atlantic
- (GMT-01:00) Azores
- (GMT) Greenwich Mean Time
- (GMT+01:00) Paris
- (GMT+02:00) Athens, Istanbul, Minsk
- (GMT+03:00) Moscow
- (GMT+03:30) Tehran

Save

IP Device Settings	Description
Time Zone	Enter the time zone according to your geographical location
Enable DST	Enable DST to automatically adjust the clock for daylight savings changes
Date Format	Chose the format that the time should be displayed in
Time Format	Select whether the time should be shown in AM/PM or 24 Hour
NTP Server	Apply the IP address or URL of your preferred NTI server
NTP Frequency	Enter the frequency, in minutes, at which to query the NTP server (range is 5-1440)

**Note: This rebooter always needs to have a valid NTP server. If not, Timer functionality will not work as expected.**

## Support Page

The Support Page provides a link for downloading a copy of the current product manual.



## Logout Page

Click "Logout" to completely log out of the PWR-RMT-RBT-C13.

**Note:** If you quickly decide you want to log back in, be sure to change the URL to just the IP address of the PWR-RMT-RBT-C13. When you logout, you will be at <IP address>/logout.html , and from that URL you will not be able to log back in.



The screenshot shows a browser window with the address bar displaying "192.168.3.188/logout.htm". A red arrow points from a warning box to the address bar. The warning box contains the text: "You cannot log in from this URL. Remove the "/logout.html" and try again." To the right of the browser window, a "Please Sign In" dialog box is open, showing the URL "http://192.168.3.188" and a warning: "Your connection to this site is not private". The dialog box includes fields for "Username:" and "Password:" and buttons for "Sign In" and "Cancel".

## User Access

The "User" access is very limited, as compared to the "Administrator" access. The "User" can view the status of Outputs and Trigger Sources, but cannot change any device settings. The "User" can still change the state of the device and change between manual and auto Trigger Type.

### Outputs

Power Outlet					
No.	Name	Status	Trigger Type	Logic	Action
1	Power Outlet	OFF	AUTO	OR	<a href="#">Turn On</a> <a href="#">Manual</a>
			Trigger Source	Trigger State	
			1 Digital Input #1	FALSE	
Digital Outputs					
No.	Name	Status	Trigger Type	Logic	Action
1	Digital Output 1	INACTIVE	MANUAL	OR	<a href="#">Turn On</a> <a href="#">Auto</a>
2	Digital Output 2	INACTIVE	MANUAL	OR	<a href="#">Turn On</a> <a href="#">Auto</a>

Figure 18- Outputs page as viewed by the User

### Trigger Sources

Digital Inputs			
No.	Name	Status	Action
1	Digital Input #1	OPEN	
2	Digital Input #2	OPEN	
IP Trigger			
No.	Name	Status	Action
1	IP Device	RESPONDING	
Time Triggers			
No.	Name	Status	Action
1	Timer #1	NOT TRIGGERED	
2	Timer #2	NOT TRIGGERED	

Figure 19- Trigger Sources page as viewed by the User

## Pop-Up Messages

Under Administration Pages, System Settings, you have the option to disable pop-up messages. These messages will remind you of the consequences of certain actions you might take in the course of controlling the behavior of the Rebooter.

If you are on the Outputs page, and the Trigger Type is set to "Auto", if you click **"Manual"** to manually change the state, a pop-up message will appear for you to acknowledge or cancel the action.

### Outputs

Power Outlet					
No.	Name	Status	Trigger Type	Logic	Action
1	Test Power Outlet	OFF	AUTO	OR	<a href="#">Turn On</a> <a href="#">Manual</a> <a href="#">Edit</a>
			Trigger Source	Trigger State	
3	Office 365 Mail	FALSE	<a href="#">Edit</a>		
4	E-MICRO P03	FALSE	<a href="#">Edit</a>		
5	Noon Timer	TRUE	<a href="#">Edit</a>		
6	Night Daily Timer	FALSE	<a href="#">Edit</a>		

If you click "Manual", this message will pop up.

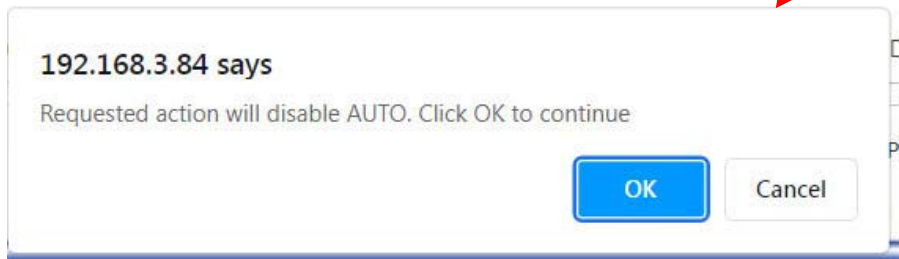


Figure 20- Pop-up for switching to manual trigger

If you are in Device Settings, and you change the Unresponsive Action from "Latching Trigger" to "Cycling Trigger", a pop-up message will warn you that the output logic setting (OR or AND) may mask the cycling operation of the output.

### IP Device Settings

Description	<input type="text" value="E-MICRO P02"/> <small>The name for this IP device</small>
Enable	<input checked="" type="checkbox"/> Enable
IP Address	<input type="text" value="192.168.3.105"/> <small>The IP address of the device</small>
Ping Period	<input type="text" value="120"/> (sec) <small>The frequency at which to ping the device(min. 1)</small>
Timeout	<input type="text" value="5"/> (sec) <small>Duration, in seconds, to wait for a response to a ping(min. 1)</small>
Retries	<input type="text" value="3"/> <small>The number of tries before device is considered Unresponsive</small>
Unresponsive Action	<input type="text" value="Latching Trigger"/> <small>Select what signal to provide to Output</small>
Cycle Duration	<input type="text" value="60"/> (sec) <small>Select the duration of cycle signal</small>
Re-Ping Wait Time	<input type="text" value="60"/> (sec) <small>Select how long to wait before starting PING sequence again after cycle</small>
Cycle Count	<input type="text" value="0"/> <small>Select how many times to cycle trigger before disabling PING (setting to 0 will try until response to PING is received)</small>

If you change this to Cycling Trigger, this message will pop up.



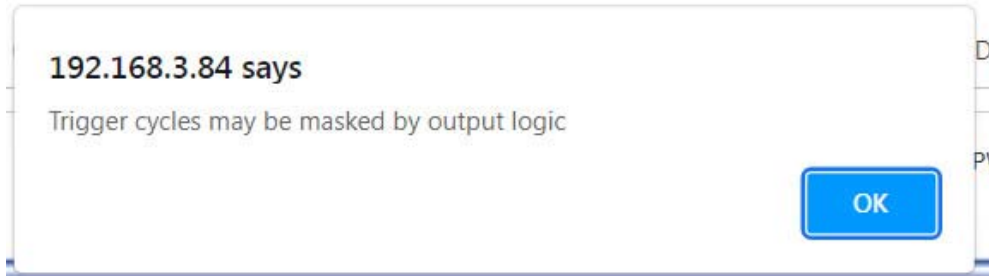


Figure 21- Pop-up for changing trigger type

When in Output Control Settings, if you change the **Logical Function** of the IP Device Auto Trigger Settings from "OR" to "AND", a pop-up message will warn you that the trigger cycle behavior may be masked by the output logic setting.

### Output Control Settings

Name	AC Power Outlet Output Name		
Default State	<input checked="" type="radio"/> Off <input type="radio"/> On Select default state of the output (Output is <b>ON</b> when logic is <b>True</b> in Auto)		
Output Control	<input type="radio"/> Manual <input checked="" type="radio"/> Auto Select to either manually control the output or automatically based on trigger inputs		
Cycle Duration	30 Specify output power cycle length in secs (1-255)		
<b>Auto Trigger Settings</b>			
E-5D DEL E07 DO1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when input <b>closed</b> <a href="#">Edit</a>
E-5D DEL E07 DO2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when input <b>closed</b> <a href="#">Edit</a>
E-MICRO P02	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when <b>no response</b> <a href="#">Edit</a>
Office365	<input checked="" type="checkbox"/>	<input type="checkbox"/>	True when <b>no response</b> <a href="#">Edit</a>
Weekend Timer	<input type="checkbox"/>	<input type="checkbox"/>	True when timer <b>running</b> <a href="#">Edit</a>
Daily Timer	<input type="checkbox"/>	<input type="checkbox"/>	True when timer <b>running</b> <a href="#">Edit</a>
Logical function	OR <input type="button" value="v"/> Logical function to be applied to trigger list above		


If you change this from OR to AND, this message will pop up.



Figure 22- Pop-up for changing Logical function

These pop-up messages can be disabled by clicking the box under Administration Pages, System Settings,

### System Settings

Serial Number:	E003
MAC Address:	00:0C:82:1A:FF:03
Firmware Version:	1.01
Web Page Version:	1.01
Unit Name	<input type="text" value="PWR-RMT-RBT-C13 E03"/> Name assigned to this unit
Disable Warning Pop-up	<input type="checkbox"/>  Disable warning pop-up messages. NOTE: Error pop-up will still be displayed.

**Place a checkmark here to disable the pop-up warning messages.**

Figure 23- Disable pop-ups on System Settings page

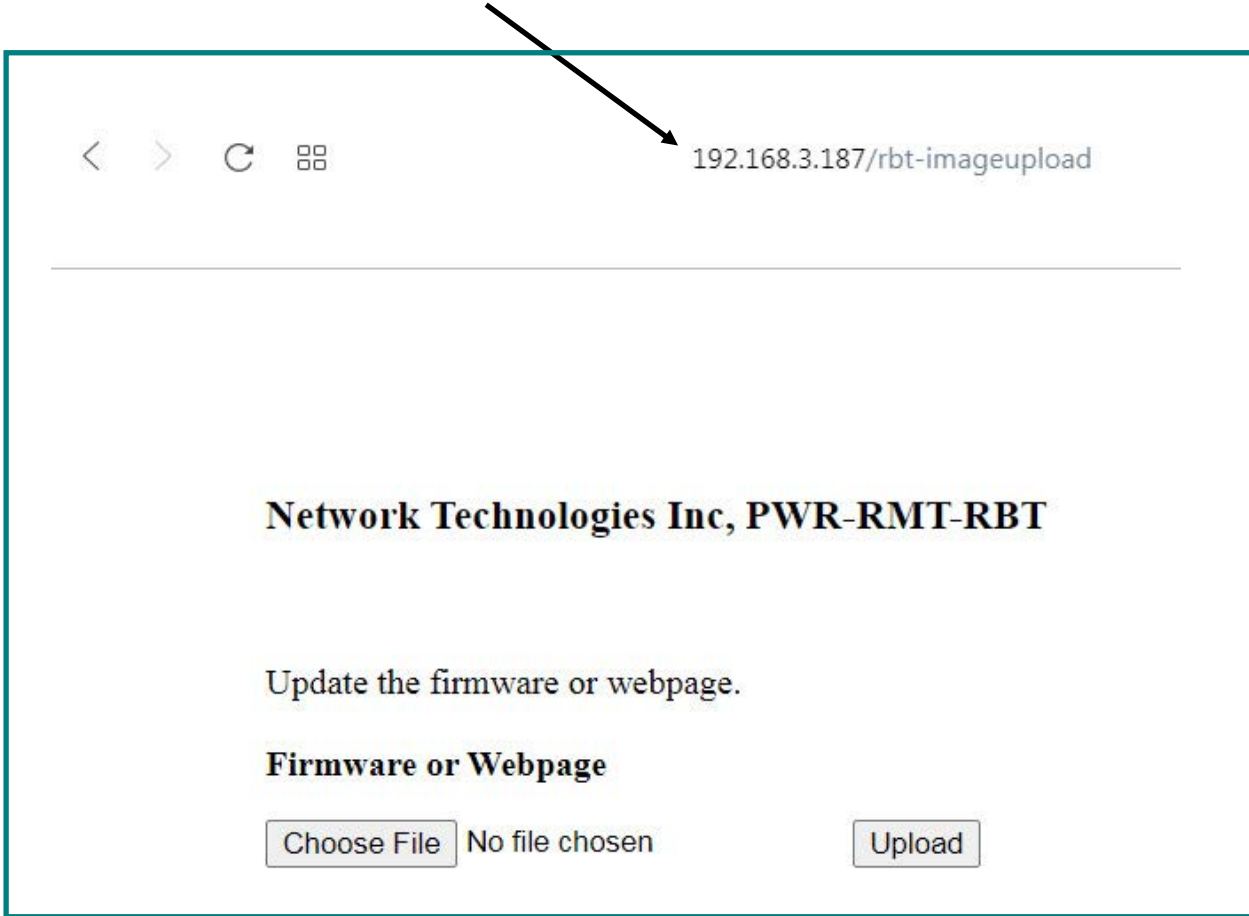
## FIRMWARE UPGRADE

The PWR-RMT-RBT-C13 may, at times, have changes made to its firmware. These changes can easily be applied after installation.

There are two files that make up the PWR-RMT-RBT-C13 programming, a Firmware file, and a Webpage file. The release notes that accompany the files when you download them from our **webpage** will describe what has changed. You should always upload both the new Firmware AND Webpage files.

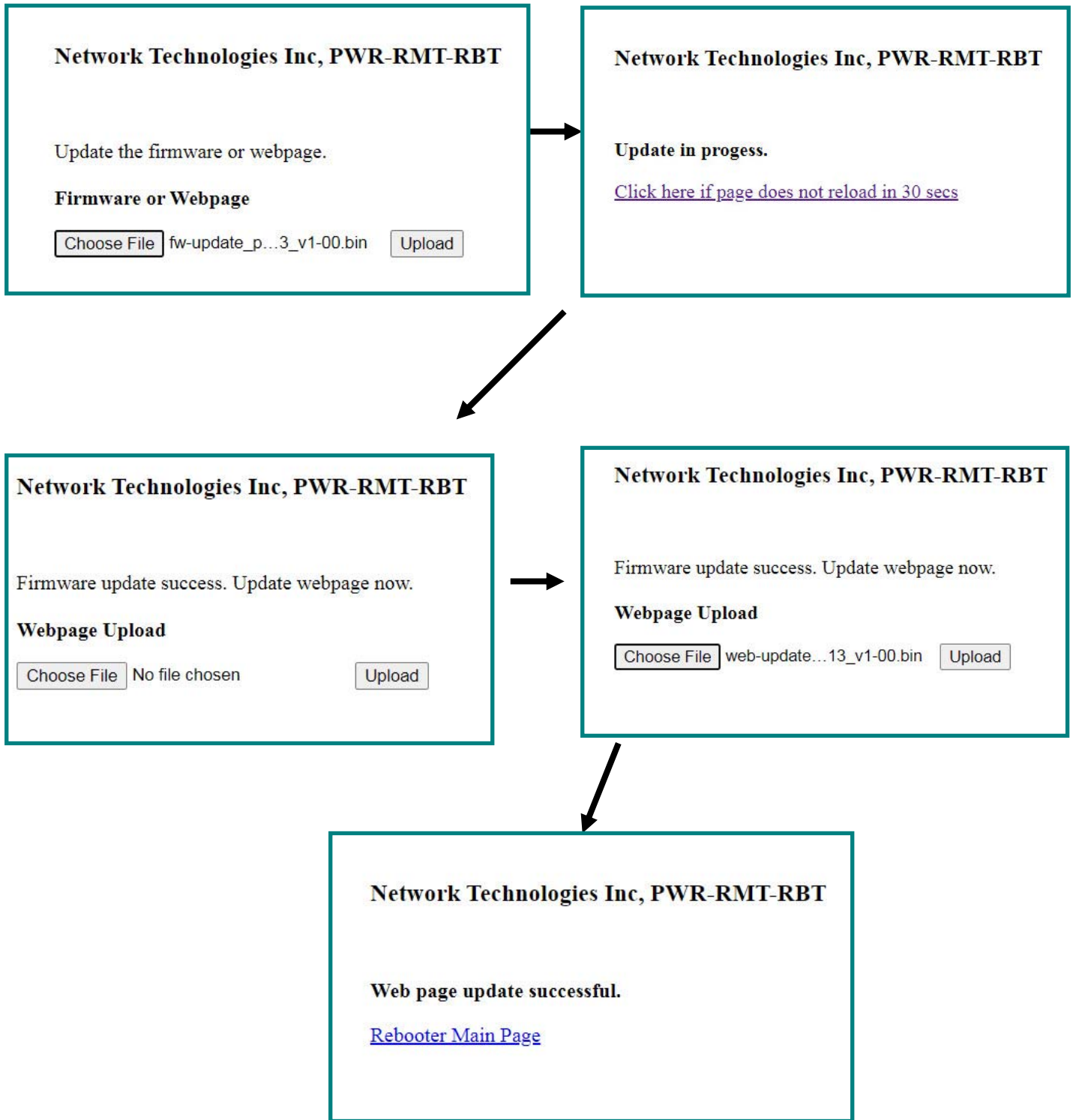
**Note: In case of firmware upload failures, re-try loading again.**

To bring up the software upgrade page, enter the following in the URL bar:  
`<ip of Rebooter>/rbt-imageupload` and press **Enter**.



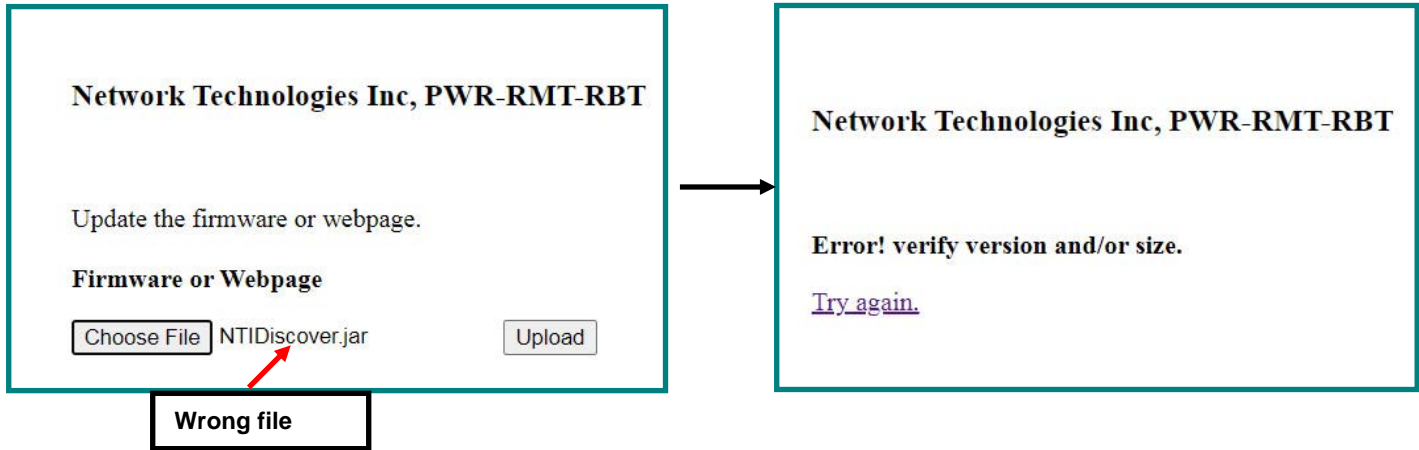
**Figure 24- Firmware Upgrade page for PWR-RMT-RBT-C13**

From this page, you can either select the Firmware file to be uploaded or the Webpage file. There will not be an indication of progress during the upload, but the screens will update as shown on the next page, and this will only take 15 or 20 seconds after the Upload button is pressed.

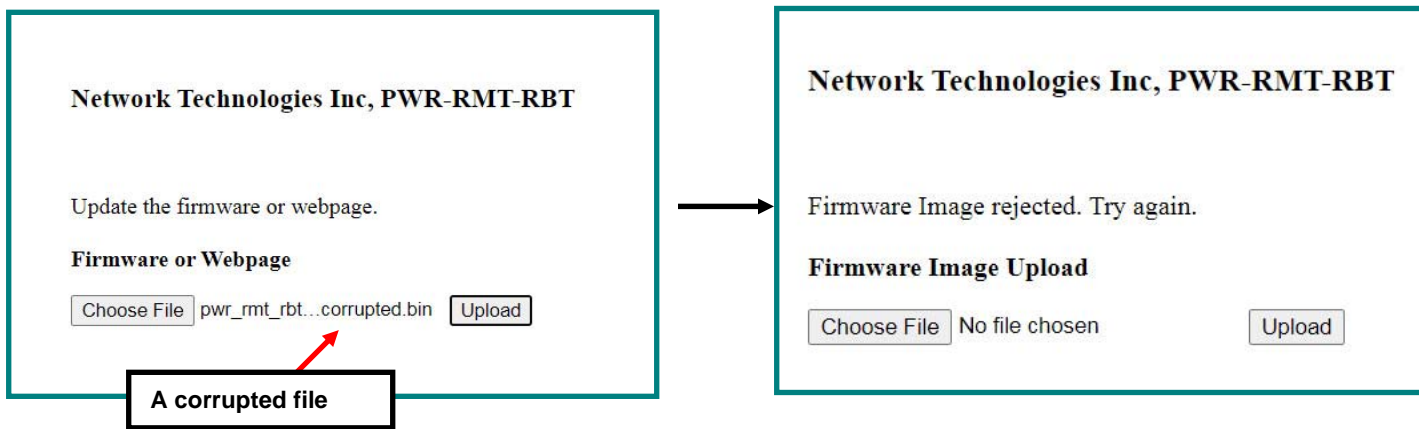


Click on "Rebooter Main Page" to take you to the webpage.

If the file you try to upload is the wrong kind of file, the following error message will be displayed:



If the file you try to upload has been corrupted and will no longer work in the Rebooter, the following error message will be displayed:



## HTTP REST API

You can use HTTP REST API to read and control status of Rebooter outputs. There are 3 API's total: 2 to get the AC output and Digital Output status and 1 to change the state of the AC Output or Digital Outputs.

### 1. API to get Output Status and Trigger Status

Request Type: GET

Endpoint: /outstatus.json

HTTP Auth required

Response Format: JSON

Response contains array of Outputs with "val" having the current status of AC Output (with id #st0) and Digital Outputs (with id #st1, #st2) and a "trig" array containing the status of each Trigger

Example:

```
curl -v -u root:nti "http://192.168.3.xxx/outstatus.json"
```

Response:

```
{
  "statusdata": [{
    "id": "#st0",
    "val": "ON",
    "color": "green",
    "trig": [0, 0, 0, 0, 0, 0]
  }, {
    "id": "#st1",
    "val": "INACTIVE",
    "color": "green",
    "trig": [0, 0, 0, 0, 0, 0]
  }, {
    "id": "#st2",
    "val": "INACTIVE",
    "color": "green",
    "trig": [0, 0, 0, 0, 0, 0]
  }
]
```

### 2. API to get AC Output and Digital Output names and current operation mode

Request Type: GET

Endpoint: /output.json

HTTP Auth required

Response Format: JSON

Response contains AC Output and Digital Output names and mode in arrays in "outdata". Trigger names can be found in "trigname".

Example curl command:

```
curl -v -u root:nti "http://192.168.3.xxx/output.json"
```

Response:

```
{
  "outdata": [
    ["AC Power Outlet", "AUTO", "OR"],
    ["RMT-RBT DO1", "AUTO", "OR"],
    ["RMT-RBT DO2", "AUTO", "OR"]
  ],
  "trigname": [
    ["E-5D DEL E07 DO1", "E-5D DEL E07 DO2", "E-MICRO P02", "Office365", "Weekend Timer", "Daily Timer"],
    [1, 1, 1, 1, 1, 0],
    [1, 1, 1, 1, 1, 1],
    [1, 1, 1, 1, 1, 1]
  ]
}
```

### 3. API to change AC Output or Digital Output status or their Operation Mode

Request Type: GET

Endpoint: /updateOut.html

HTTP Auth required

Response Format: JSON

Required parameters:

“oid” is the index of Outputs ranging from 0 to 2

- 0 = AC Output
- 1= Digital Output 1
- 2= Digital Output 2

“action” is one of “off”, “on”, “mode”, “cycle”. Off and On turn off and turn on the designated output respectively. Mode changes the operation mode from Auto to Manual and vice versa (this is a toggle). “Cycle” power cycles the output as per settings

“jsonr” should always be set to 1

Example Curl commands:

```
curl -v -u root:nti "http://192.168.3.xxx/updateOut.html?oid=0&action=off&jsonr=1"
```

```
curl -v -u root:nti "http://192.168.3.xxx/updateOut.html?oid=1&action=on&jsonr=1"
```

```
curl -v -u root:nti "http://192.168.3.xxx/updateOut.html?oid=0&action=mode&jsonr=1"
```

```
curl -v -u root:nti "http://192.168.3.xxx/updateOut.html?oid=0&action=cycle&jsonr=1"
```

Response if successful:

```
{"code":200, "msg":"OK","data":{}}
```

On Failure, response will have similar format with error code in “code”.



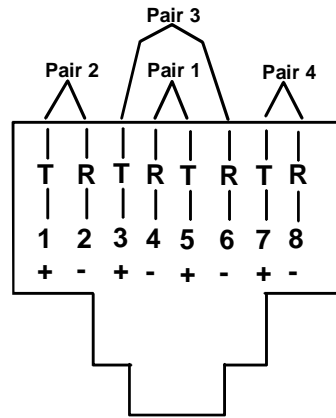
**TECHNICAL SPECIFICATIONS**

Power	90 to 264 VAC at 50 or 60 Hz
Power Switching	up to 15 Amps at 105-125 VAC, 10 Amps at 210-240 VAC.
Power Consumption	1.4W
Input connector	One IEC 320 C14 plug
Output connector	One IEC 320 C13 receptacle
<b>Digital Inputs</b>	
Connector	Two screw terminal pairs for connecting dry contact sensors <ul style="list-style-type: none"> <li>• Accepts 26AWG to 16AWG wire</li> <li>• Potential free</li> <li>• Voltage range: 0 to +36VDC</li> <li>• Over-voltage surge protected</li> </ul>
<b>Digital Outputs</b>	
Connector	Two screw terminal pairs for open-collector outputs <ul style="list-style-type: none"> <li>• Accepts 26AWG to 16AWG wire</li> <li>• Rated sink current 500 mA per output</li> <li>• +5VDC, 22k<math>\Omega</math> pull-ups</li> <li>• Voltage range: 0 to +24VDC</li> <li>• Over-voltage surge protected</li> </ul>
<b>General</b>	
Network Support	One female RJ45 connector 10Base-T Ethernet interface, 10/100 network compatible
Protocols supported	HTTP, TCP/IP, DHCP, Auto-ping TCP Protocol HTTP REST API to control power on/off with response in JSON format Operates and configures via HTTP web page
Browsers supported	Microsoft Edge, Firefox 1.5 and higher, Google Chrome, and Safari 1.3 and higher (for MAC)
Operating & Storage Temperature	-4 to 167°F (-20 to 75°C)
Operating & Storage Relative Humidity	0 to 90% non-condensing RH
Dimensions WxDxH	4.46x4.19x2.13 in (113x106x54 mm) Includes mounting holes to match rack hole spacing.
Approvals	CE, RoHS , TAA compliant

### CATx Cable

The CATx connection cable (CAT5/5e/6/6a/7) between the LAN and the PWR-RMT-RBT-C13 must be terminated with RJ45 connectors and must be wired according to the EIA/TIA 568 B industry standard. Wiring is as per the table and drawing below.

Pin	Wire Color	Pair
1	White/Orange	2
2	Orange	2
3	White/Green	3
4	Blue	1
5	White/Blue	1
6	Green	3
7	White/Brown	4
8	Brown	4



(View Looking into RJ45 Socket)

Figure 25- CATx wiring method

## WARRANTY INFORMATION

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at **(800) 742-8324** (800-RGB-TECH) or **(330) 562-7070** or visit our website at <http://www.networktechinc.com> for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.