

**pakedge**device&software **inc.**

## **P2/P2E**

Boot Sequence Power Distribution Unit with Remote Power Cycling and Monitoring



User Guide – Version 1.0

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# Introduction

The Pakedge P2 power distribution unit gives you unprecedented convenience and control, including full remote control of on/off sequencing to power-up and shut down sensitive equipment in the proper sequence, and also to avoid power flooding at startup. Out of the box, the P2 is labeled for easy installation: Just plug in the modem, router and switches into Outlet 1 or Outlet 2 and you are ready to go.

Use the secure, browser-based built-in GUI to remotely configure, monitor, and operate the individual PDUs in your network. Such functions include: **Power Management** - on/off, recycle, reboot, sequenced startup/shutdown of multiple PDUs; **Security** - remote lockdown, PDU IP addressing, secure encrypted connection to Web management GUI; **Remote Monitoring** - power usage; **Alerts** - fully configurable visual, audible, and/or email alerts of power and other events, including impending overloads – with full logging.

## Key Features:

- **Configurable Power-up and Shutdown.** Configure PDUs to power on/off in the proper startup/shutdown sequence required by dependent hardware and protect sensitive equipment against power flooding.
- **Secure Network Control.** Configure the following features for each PDU through the secure, Web-based interface, or by SNMP: switch on/off, recycle, lock power (to prevent unauthorized power-ons), and reboot unresponsive network hardware. The P2 is fully IP-addressable using the built-in secure Web interface.
- **Web-based Monitoring.** Monitor power usage of each PDU in real time, with a true-digital RMS current meter.
- **Configurable Alerts.** Define visual, audible, and email alarms, including alerts of impending overloads, with full logging.
- **Remote Control from Any Location.** Ability to manage the system and devices plugged in to the P2 from a remote location via email, if there is no physical access to the LAN.

# P2 Package

The standard P2 package contains a Power Distribution Unit with supporting hardware and software. The components of the package are:

- Power Distribution Unit
- Side Rack Mount Brackets
- Console Cable
- Quick Start

# Installation

## Rack Mount Instructions

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, make sure the P2's operating temperature is below the manufacturer's specifications.

B) Reduced Air Flow – The P2 should be installed in a rack with proper air flow for safe operations.

C) Mechanical Loading – Do not place heavy objects on top of the P2. Damage due to mechanical loading could create a hazardous condition.

D) Circuit Overloading – Do not overload the circuits. Please read and follow all manufacturers' directions.

### 1. Installing the Side Rack Brackets or mounting to a wall

The P2 comes with two brackets to mount on a rack. To mount the P2 use the following steps:

- a) Attach the mounting brackets to the sides of the unit using the screws provided for each of the brackets. The bracket is equipped with 8 screw holes which gives different options for how to connect the brackets to the unit.
- b) Align the mounting holes of brackets with the notched hole on the vertical rail and attach with the retaining screws.
- c) The P2 can also be mounted to a wall using the built in mounts.

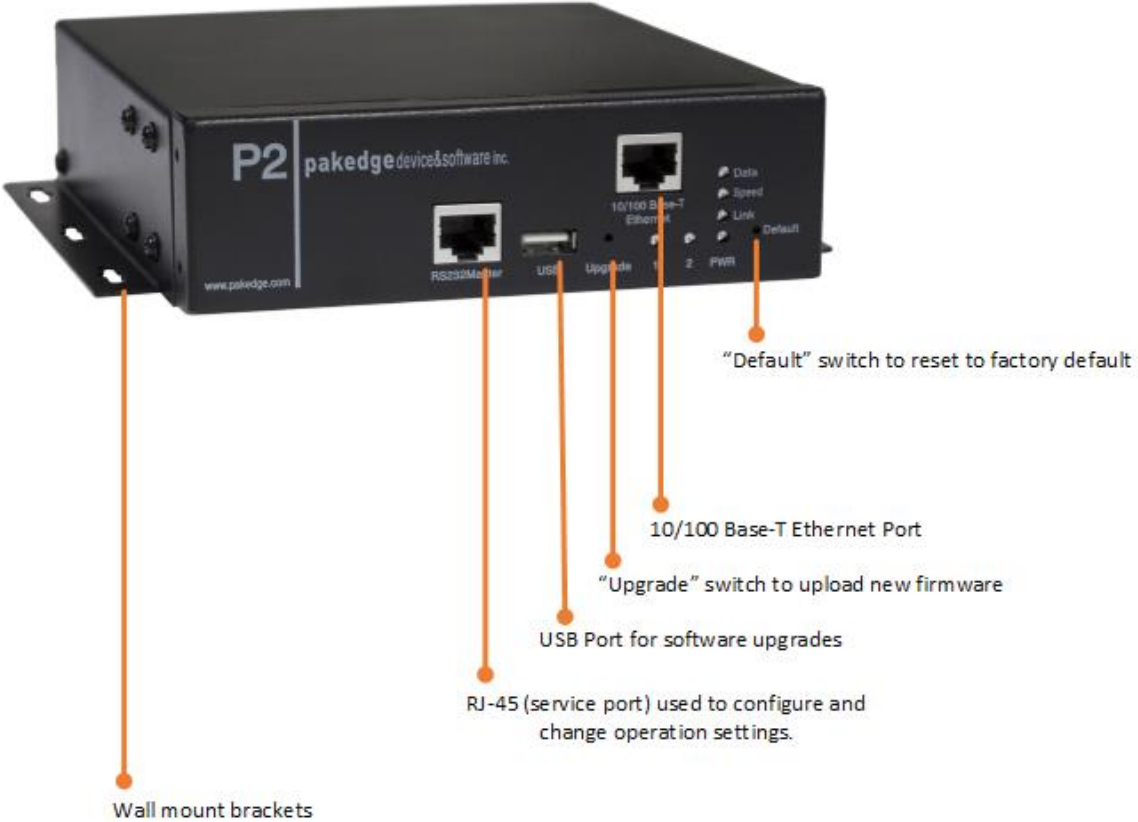
### 2. Connect input power.

### 3. Connect Ethernet cable to the P2 and the other end to an Ethernet switch.

### 4. Connect your devices to the outlets on the P2. You may use any outlet, as there are no required locations for any device.

### 5. Switch on the P2.

# Product Guide



# Web Interface

Open your preferred web browser and type in the P2's IP address in the address bar.

IP Address: 192.168.1.210

You will be prompted to enter a User ID and a Password. Use the following:

Default ID: pakedge

Password: pakedgep

## System Operation Status

Displays the Current for the P2's circuit. The System Status window will also display characteristics of each port, like the port number, Power On Delay, and the status of the Port. If the status is green, the port is On, and if it is red then the port is Off.

**System Operation Status**

**Current A: 0.00A**

Power Outlets						
Port #	Power On Delay(s)	On/Off	Reboot	Status	Port Name	Permission
1	60				Modem	Open
2	120				Router	Open
Reboot All Outlet						

**Reboot duration is 5 seconds.**

## Outlet Setup

**Power On Delay(s):** The device will specify, in seconds, the delay for powering ON each outlet in order to ensure that not all the devices connected to the P2 will power on at once.

**Port Name:** Specify a port name. For example, if you connect a 24-Port switch to Outlet1, you can rename Port#1 to “24-Port-Switch”.

**On/Off:** Specifies the status of the port after the P2 reboots. If you reboot the P2, the status of the outlet will depend on whether it is set to ON or OFF. If set to OFF, the P2 will reboot and the port will be OFF.

**Permission:** If set to “Open”, any user account created on the P2 will be able to change settings related to this port. If more than one user is created under the “User Account Setup” menu, you can select from the drop down menu which user can have access to make changes related to a specific port.

**Auto-Ping and Reboot:** If set to ON, the P2 will ping the device connected to the specific outlet every 15 seconds. If there is no response, the outlet will be rebooted, which will cause the device to reboot as well.

**Ping IP:** Specify the IP address of the device connected to a specific outlet if the “Auto-Ping and Reboot” feature is used and set to ON.

### Power Outlet Setup Menu

Date: 01/29/2013 Time: 07:32:32

Port #	Power On Delay(s)	Port Name	On/Off	Permission	Auto-Ping and reboot	Ping Ip	Email Notification
1	60	Modem	On ▾	Open ▾	On ▾	192.168.11.250	On ▾
2	120	Router	On ▾	Open ▾	Off ▾	0.0.0.0	Off ▾
Reboot Duration In Seconds		5					



# Outlet Timer Setup

Timer Mode:

Select Off/Standard/Customized

Timer Starting Time:

Specify the start time for the timer. The starting time is the actual calendar date and the real-time clock. Once a timer reaches this specified Start Time, the power outlet on/off state will change. The format for noting the start time is as follow: “year:month:day:hour:minute:second.” For example, to change the status of the power outlet from on to off at 7:17:27pm, on July 20<sup>th</sup> 2012, the entry data is 12:07:20:19:17:27.

Timer Period:

Specify the timer period using the following format: “days:hours:minutes:seconds.” This is used for applications that require the power outlet to continuously power cycle based on a specific interval. For example, if you need to schedule power reboot for the outlet daily, the period is 24 hours. Your entry will be 00:24:00:00

Loop Count:

If you need to power cycle an outlet for a certain number of times, specify the loop count. For example, if you schedule the timer to power cycle the outlet every 20 seconds and want to repeat it 300 times, your entry will be 300.

Toggle Duration:

Specify the duration in seconds of the power outlet state that toggles when a new Timer Period starts. The concept of the specification can also be viewed as Duty Cycle. This parameter is meaningful if the Timer Loop Count is > 0. The value of this parameter should be  $0 < \text{Toggle Duration} < \text{Timer Period}$

**Power Outlet Timer Setup Menu**

Date: 01/29/2013 Time: 07:36:01

Port #	Timer Mode	Timer In Standard Mode (see Help Information below)			
		Timer Starting Time (year:mon:day:hour :min:sec) (Calender Time)	Timer Period (day:hour :min:sec)	Loop Count	Toggle Duration (second)
1	Off	Off	Off	Off	Off
2	Off	Off	Off	Off	Off

Help Information (Standard Mode)

# User Account Setup

The P2 can allow up to 8 user accounts. By default, there are 2 accounts created: An “Admin” account and a “User” account. Use the following guidelines when creating user accounts:

**Admin:** An admin account will be able to remove or change existing user accounts, take over power outlets or user serial console ports, and change system settings.

**User:** A user account can make changes to port settings if the “Permission” under the “Power Outlet Setup” menu is set to Open, as well as make system configuration changes.

**Guest:** A guest account is only able to view the system configuration settings and operate unreserved outlets.

Id	Enable	Name	Password	Permission
0	<input checked="" type="checkbox"/>	pakedge	••••••••	Admin ▾
1	<input checked="" type="checkbox"/>	user	••••	User ▾
2	<input type="checkbox"/>			Admin ▾
3	<input type="checkbox"/>			Admin ▾
4	<input type="checkbox"/>			Admin ▾
5	<input type="checkbox"/>			Admin ▾
6	<input type="checkbox"/>			Admin ▾
7	<input type="checkbox"/>			Admin ▾

# System Control

The System Control menu allows you to set the date and time, and change the system’s name, in addition to other administrative options like [using/accessing] Telnet or SNMP.

To set up the System Control, identify/specify the following:

- System (or Site) Name: Change the name of the P2 according to your setup and location.
- Time (hh:mm:ss) : Set the time.
- Date (mm/dd/yyyy): Set the date.
- Master Serial Port Mode: Set to Console.

- Non-Admin Level User System Access Restriction: If enabled, only accounts created with administrator access will be able to access the P2 and make changes.
- Enable Web Access: Enables you to access the P2 through the web interface.
- Enable Telnet: Enables you to access the P2 using Telnet.
- Enable Telnet Anonymous User: Enables you to allow anonymous logins using Telnet with no need for a username or a password.
- Enable Command Control via Email: Enables you to send emails to the P2 to manage it from a remote location.
- Enable SNMP Agent: Enables Simple Network Management Protocol that allows you to receive information about the system for specific elements or objects on the network.
- SNMP Community String: If SNMP is enabled, you can set this option to:
  - Public: Provides Read Only Access to network elements.
  - Private: Provides Read-Write Access to network elements.
  - Trap: A command or message used by the Agent to inform the manager of a certain event.
- SNMP Trap Receiver IP Address: If SNMP is enabled, you need to specify an IP address for the destination where you want to receive the trap notifications.
- Current Alarm Threshold (Pre-defined threshold): If current goes above the threshold for circuit A, the P2 will send an Alert and sound an alarm.
- Temp Alarm Threshold (Pre-defined threshold): If the temperature goes above the threshold, the P2 will send an Alert and sound an alarm.
- Enable Alarm Beep: If a value goes beyond the desired threshold, an Alarm will sound. You can enable/disable the beep.

### System Access Control Menu

Item	Value
System(or Site) Name	PDU
Time(hh:mm:ss)	07:43:36
Date(mm/dd/yyyy)	01/29/2013
Master Serial Port Mode	PC Console ▾
Non-Admin Level User System Access Restriction(note)	N ▾
Enable Web Access	Y ▾
Enable Telnet	Y ▾
Telnet Timeout(max 65535 minutes)	0
Enable Telnet Anonymous User	N ▾
Enable Command Control Via Email	Y ▾
Enable SNMP agent	N ▾
SNMP Community String(Pub, Private, Trap)	public
Enable SNMP Trap	N ▾
SNMP Trap Receiver IP Address(x.x.x.x)	192.168.1.2
Current A Alarm Threshold	15.00
Current B Alarm Threshold	15.00
Temp Alarm Threshold	104.00
Enable Alarm Beep	Y ▾

## Serial Port Setup

The Serial Port Setup menu already has pre-defined settings that would need to access the P2 using Telnet. When setting up a Telnet session, make sure the settings on your Telnet client match the settings under the Serial Port Setup menu.

### Serial Port Setup Menu

Port	Port Name	Baud Rate	Data Bit	Parity	Stop Bit	Flow Control
M	Master	115200 ▾	8 ▾	NONE ▾	1 ▾	NONE ▾

## Network Setup

**Obtain IP using DHCP:** Enable or disable DHCP.

**Fallback to static IP:** User static IP if DHCP fails or there is no DHCP server on the network.

**Static IP:** Assign a static IP.

**Subnet Mask:** Define a subnet mask.

**Gateway IP:** By default, the gateway is set to 192.168.1.99. If the IP address of the router is different, then use the IP address of your router.

**Set DNS Server IP manually:** Assign a DNS Server IP manually.

**Primary DNS IP:** Assign a primary DNS IP.

**Secondary DNS IP:** Assign a secondary DNS IP.

**HTTP Port:** Assign a HTTP port. By default set to 80.

**Telnet Port:** Assign a Telnet port. By default set to 23.

**POP3 Port:** Assign a POP3 port. By default set to 110.

**SMTP:** Assign an SMTP port. By default set to 25.

**Incoming Email POP3 Server:** Specify the POP3 (incoming Email) server address. The system supports POP3 Internet Email Protocols, not web based Email services. Make sure that the POP server you use does not require log on secure password authentication. Use command “*getmail*” to check for incoming mail.

**Outgoing Email-SMTP Server:** Specify the SMTP (outgoing Email) server address. This server will be used to send outgoing Emails. The P2 supports SMTP log on secure password authentication option.

**Account Name:** Specify an email address. This email account name will also be used for outgoing emails.

**Account Password:** Specify the password associated with the email address.

**Reply or AutoPing Report Email Address:** This is an additional email address that is used in SMTP testing, Autoping report, and alarm report. There are no limitations on the types of destination email servers. A web based emailing system or SMTP can be used.

**Outgoing Email Authentication SMTP:** If an SMTP (outgoing) email requires a user name and password authentication, select “Y” for this entry.

**Check Email Interval (Seconds):** This entry specifies how often the system checks incoming emails. The interval unit is seconds.

**Access Control List (ACL) Enable:** Enable or disable controlling client IP addresses to access the system.

**Network Connection Check Using This IP:** This entry specifies an IP address or a URL that the P2 will ping periodically for verification of network connectivity if the network connection is down or inactive, and “AutoPing” is in off mode.

**Get SNMP MIB File:** This is the “Management Information Base” text file, which collects, stores management information, and makes this information available to NMS (Network Management System).

## Network Setup Menu

Item	Value
Obtain IP using DHCP	N ▾
Fallback to static IP(if DHCP failed)	Y ▾
Static IP (x.x.x.x)	192.168.21.210
Subnet Mask(x.x.x.x)	255.255.255.0
Gateway IP (x.x.x.x)	192.168.1.99
Set DNS Server IP Manually	Y ▾
Primary DNS IP (x.x.x.x)	211.161.46.84
Secondary DNS IP(x.x.x.x)	8.8.8.8
HTTP Port # (Default-80, requires power reboot if changed)	80
Telnet Port # (Default-23)	23
POP3 Port # (Default-110)	110
SMTP Port # (Default-25)	25
Incoming Email-POP3 Server	
Outgoing Email-SMTP Server	
Account Name	
Account Password	
Reply or AutoPing Report Email Address (e.g.: mymail@hotmail.com)	
Outgoing Email Authentication SMTP	N ▾
Checking Email Interval (Seconds)	1800
Access Control List(ACL) Enable	N ▾
IP Access Control Mask 1	N/A ▾ 0.0.0.0
IP Access Control Mask 2	N/A ▾ 0.0.0.0
IP Access Control Mask 3	N/A ▾ 0.0.0.0
IP Access Control Mask 4	N/A ▾ 0.0.0.0
IP Access Control Mask 5	N/A ▾ 0.0.0.0
IP Access Control Mask 6	N/A ▾ 0.0.0.0
Network Connection Check Using This IP (leave blank if Gateway IP is used. Applicable to AutoPing Mode)	0.0.0.0

# Help

The Help section for the P2 is a quick startup reference that includes general information about the P2.

## QUICK STARTUP REFERENCE

### DEFAULT SETTINGS

The system is shipped with Factory Default settings. The default settings for the Local RS232 serial port are: 115200, 8 data bits, no parity, 1 stop bit, and no hardware handshaking (Flow Control). IP is 192.168.1.210, Net mask 255.255.255.0 and Gateway: 192.168.1.99. Administrator's login name is "pakedge" and the password is "pakedge". User's login name is "user" and password is "user". accounts are erased if the system is recovered to the default settings.

Control via Telnet, Email, SNMP and Trap, AutoPing and Reboot are disabled as default settings. Use configuration menu (Terminal program or Web) to change the default settings if you need to.

There are two ways to restore the system to the Factory Default settings. The first method is to press the "Default" switch located on the front panel for 1 second. The second method is to run RS232. After setting the system to default configuration, you should reboot the system to make the configuration available.

### ACCOUNT MANAGEMENT

There are three privilege levels: administrator, user and guest.

*Administration Login:* There is at least one Administration account on the system. The default name is "pakedge" and default password is also "pakedge". The default name and password may be changed. At Administration level, you will be able to make all the necessary changes supported by the device.

*User Login:* The default name and password are "user" and "user". At the user login level, you are only able to operate the outlets that were reserved for you or ports that are "open". You cannot change configurations that administrators did.

*guest (Visitor) Access:* You are only able to view the system configuration settings and power outlets status.

### START CONFIGURATION

To access and configure the system, There are two physical interfaces. One is RS232 serial port (by Hyper Terminal of Windows XP). The other one is RJ45 Ethernet port (by web browser, email, Telnet, etc.).

- 1) Connect the system's RS232 interface with the DB-9 type cable provided by manufacture if your work station is equipped with RS232 port. Configure the Hyper Terminal (or other terminal software) setting.
- 2) Connect the system's Ethernet port to your LAN or pc, if you intend to use the network port.
- 3) Turn the system power on.
- 4) There will be a startup UI at the terminal. Type "help" to get all supported commands.
- 5) The system is set to have a static IP as a default setting. You can set Network connectivity to be Static, DHCP and Auto (if the system does not get a DHCP offer, the system falls back to default settings).
- 6) Use the command "ping" to verify your connection. If network connection is established, you are able to use Telnet, Web Browsing, Emailing and SNMP.

## Email Commands

You can send control commands to the P2 using E-mail. When sending an email, make sure that only plain text is used. The subject of the email should have “rcs” and the body of the email should be as follows:

**username**

**password**

**Command**

By default the “*username*” and “*password*” are pakedge and pakegep.

The “*command*” is what you tell the P2 to do. For example, if you want to turn off all the ports on the P2 you would compose the email using the following:

From:xxx@xxx.com

To: Email setup on the P2

Subject : rcs

pakedge

pakegep

ps 0

To get a list of commands supported by the P2, you can Telnet and issue the command “help”.

## Appendix A – Specifications

General P2 Specifications	
Input current	13 Amp
Input Voltage	110-220 VAC
Power Input	NEMA5-15P
Outlet Type	NEMA5-15
Dimensions	6.0 x 5.4 x 2.5 L x W x H
Console port specs	Baud Rate: 115200, 8 Data bits, No priority, 1 stop bit, no flow control.
Network Protocols	ICMP, IP, TCP/UDP, DHCP, Telnet, DNS, POP3/SMTP, SNMP, HTTP
Operating Temperature	32°F - 122°F ( 0°C - 50°C )
Storage Temperature	-13°F - 140°F ( -25°C - 60°C )
Humidity	10-90% RH



# Appendix B – Technical Support

Please visit our website for up-to-date support information:

Website: [www.pakedge.com](http://www.pakedge.com)

Email: [support@pakedge.com](mailto:support@pakedge.com)

## CONTACT INFORMATION:

Pakedge Device & Software Inc.

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Foster City, CA 94404

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# Appendix C – Limited Warranty

## Model P2/P2E

Congratulations on purchasing a Pakedge Device & Software product! Pakedge designs and manufactures the finest home networking products. With proper installation, setup, and care, Pakedge products will provide many years of unparalleled performance. Please read this consumer protection plan carefully to learn more about the terms of this warranty.

This is a LIMITED WARRANTY as defined by the U.S. Consumer Product Warranty and Federal Trade Commission Improvement Act.

### What Is Covered Under the Terms of This Warranty

Pakedge Device & Software offers a one (1) year warranty. Pakedge Device & Software will repair or replace products within one (1) year from the date the applicable Pakedge product was shipped by Pakedge if the product does not perform as specified due to a defect in materials, workmanship or functionality. This warranty covers only repair or replacement of the product itself; it does not cover charges for labor and/or installation of the product.

### What Is Not Covered Under the Terms of This Warranty

This warranty only covers failure due to defects in materials and workmanship that occur during normal use and does not cover normal maintenance. In no event does this warranty extend to instances where the product is damaged through uses for which it was not intended, misuse, mishandling, removal and/or reinstallation, neglect, accident or tampering. In no event will Pakedge Device & Software be liable for damages in excess of the purchase price.

This warranty does not cover any appearance item; any damage to living structure; failure resulting from accident (for example: flood, electrical shorts, insulation); misuse, abuse, neglect, mishandling, misapplication, faulty or improper installation or setup adjustments; improper maintenance, alteration, improper use of any input signal and/or power, damage due to lightning or power line surges, spikes and brownouts; damage that occurs during shipping or transit; or damage that is attributed to acts of God.

The foregoing limited warranty is Pakedge's sole warranty and is applicable only to Products sold as new by Authorized Dealers. The remedies provided herein are in lieu of a) any and all other remedies and warranties, whether expressed, implied or statutory, including but not limited to, any implied warranty of merchantability, fitness for a particular purpose or non-infringement, and b) any and all obligations and liabilities of Pakedge for damages including but not limited to incidental, consequential or special damages, or any financial loss, lost profits or expense, or loss of network connection arising out of or in connection with the purchase, use or performance of the Product, even if Pakedge has been advised of the possibility of such damages.

**CAUTION: DAMAGE RESULTING DIRECTLY OR INDIRECTLY FROM IMPROPER INSTALLATION OR SETUP IS SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. IT IS IMPERATIVE THAT INSTALLTION AND SETUP WORK BE PERFORMED ONLY BY AN AUTHORIZED PAKEDGE DEALER TO PROTECT PURCHASER RIGHTS UNDER THIS WARRANTY.**

### **Rights, Limits, and Exclusions**

Pakedge limits its obligation under any implied warranties under state laws to a period not to exceed the warranty period. There are no express warranties. Pakedge also excludes any obligation on its part for incidental or consequential damages related to the failure of this product to function properly. 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. In this case, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

### **Warranty Registration**

Please register Pakedge products at [www.pakedge.com](http://www.pakedge.com). This allows Pakedge to communicate product updates and service enhancements.

**To Obtain Service, Contact Your Pakedge Dealer.**

Repairs made under the terms of this Limited Warranty covering Pakedge product will be performed by an Authorized Pakedge Dealer. If this is not possible, contact Pakedge directly for further instructions. Prior to returning a defective Product directly to Pakedge, you must obtain a Return Material Authorization number and shipping instructions.

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