

README: GRV-EPIC-PR1 Firmware 1.4.3

October 14, 2019. Updated: November 14, 2019.

This Readme provides information about changes to firmware and software for the *groov* EPIC processor, part number GRV-EPIC-PR1, and all of its components:

- *groov* EPIC
- PAC Control Engine
- *groov* Manage
- *groov* View
- Node-RED
- Ignition Edge
- CODESYS Runtime Engine

Some fixes or enhancements may require that you install a corresponding module firmware update. If a fix or enhancement falls into this situation, it will be listed next to the description of the specific fix or enhancement.

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For information on PAC Project Software Suite updates, see the [PAC Project Readme](#).

Installing a GRV-EPIC-PR1 Firmware Update

For instructions on installing a firmware update, refer to "Updating Firmware on a *groov* EPIC Unit" in the [groov EPIC User's Guide, form 2267](#).

Questions

If you have questions, see [How to Get Help](#). To learn where you can find version numbers for the firmware and software components, see [Finding version numbers](#).

Each Fixed Bug is identified by its bug tracking number. If a number listed here has KB as the prefix, click the link to see a KnowledgeBase article with more information.

GRV-EPIC-PR1 Firmware 1.4.3

October 14, 2019. Updated: November 14, 2019.

Known Issue

[KB88647](#) - If a PAC Control strategy has PID loops configured with Mode set to Auto, when you run the strategy, the PID may start in Manual mode (or vice versa). Modify the PAC Control strategy and add the Set PID Mode command in the Powerup chart to set the desired PID mode. This issue affects all versions of GRV-EPIC-PR1 firmware.

groov EPIC 1.4.3

Bug Fixes

- [KB88473](#) - On-Pulse, Off-Pulse, and Period Measurement Complete Status don't return correct value
- [KB88545](#) - Tags are not refreshed correctly after a restart
- [KB88572](#) - PID, Analog Ramping, Streaming or CODESYS I/O data stalls when system time is changed

PAC Control Engine 10.0k

Bug Fixes

- [KB88528](#) - groov I/O: TPO may not update percent on-time (duty) correctly. This affects the modules GRV-OAC-12, GRV-OACI-12, GRV-ODCI-12, and GRV-ODCSRC-24. To completely fix this bug, you need to apply groov I/O module firmware updates to those modules; see the [groov I/O Modules Firmware readme](#) and look for [KB88434](#).
- [KB88530](#) - SNAP I/O Watchdog not working

groov Manage 1.4.3

No enhancements or bug fixes.

groov View 4.1e

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED 0.20.5

No enhancements or bug fixes.

Ignition Edge 7.9.12

No enhancements or bug fixes.

CODESYS Runtime Engine 3.5.13.20

No enhancements or bug fixes.

Component Versions in GRV-EPIC-PR1 Firmware Releases

Component Versions in GRV-EPIC-PR1 Firmware 1.4

GRV-EPIC-PR1 Firmware 1.4.3

- *groov* EPIC 1.4.3
- PAC Control Engine 10.0k
- *groov* Manage 1.4.3
- *groov* View 4.1e
- Node-RED 0.20.5
- Ignition Edge 7.9.12
- CODESYS Runtime Engine 3.5.13.20

GRV-EPIC-PR1 Firmware 1.4.2

- *groov* EPIC 1.4.2
- PAC Control Engine 10.0j
- *groov* Manage 1.4.2
- *groov* View 4.1d
- Node-RED 0.20.5
- Ignition Edge 7.9.12
- CODESYS Runtime Engine 3.5.13.20

GRV-EPIC-PR1 Firmware 1.4.1

- *groov* EPIC 1.4.1
- PAC Control Engine R10.0i
- *groov* Manage 1.4.1
- *groov* View 4.1d
- Node-RED 0.20.5
- Ignition Edge 7.9.11
- CODESYS Runtime Engine 3.15.13.20

GRV-EPIC-PR1 Firmware 1.4.0

- *groov* EPIC 1.4.0
- PAC Control Engine R10.0i
- *groov* Manage 1.4.0
- *groov* View 4.1d
- Node-RED 0.20.5
- Ignition Edge 7.9.11
- CODESYS Runtime Engine 3.15.13.20

Component Versions in GRV-EPIC-PR1 Firmware 1.3

GRV-EPIC-PR1 Firmware 1.3.2

- *groov* EPIC 1.3.2
- PAC Control Engine R10.0h
- *groov* Manage 1.3.2
- *groov* View 4.1c
- Node-RED 0.19.5
- Ignition Edge
- CODESYS Runtime Engine

GRV-EPIC-PR1 Firmware 1.3.1

- *groov* EPIC 1.3.1
- PAC Control Engine R10.0g
- *groov* Manage 1.3.1
- *groov* View 4.1b
- Node-RED 0.19.5
- Ignition Edge
- CODESYS Runtime Engine

GRV-EPIC-PR1 Firmware 1.3.0

- *groov* EPIC 1.3.0
- PAC Control Engine R10.0e
- *groov* Manage 1.3.0
- *groov* View 4.1a
- Node-RED 0.19.5
- Ignition Edge 7.9.10
- CODESYS Runtime Engine

Component Versions in GRV-EPIC-PR1 Firmware 1.2

GRV-EPIC-PR1 Firmware 1.2.2

- *groov* EPIC 1.2.2
- PAC Control Engine
- *groov* Manage 1.2.2
- *groov* View R4.0d
- Node-RED 0.18.7
- Ignition Edge 7.9.9

GRV-EPIC-PR1 Firmware 1.2.1

- *groov* EPIC 1.2.1
- PAC Control Engine
- *groov* Manage 1.2.1
- *groov* View R4.0d
- Node-RED 0.18.7
- Ignition Edge 7.9.9

GRV-EPIC-PR1 Firmware 1.2.0

- *groov* EPIC 1.2.0
- PAC Control Engine
- *groov* Manage 1.2.0
- *groov* View R4.0d
- Node-RED 0.18.7
- Ignition Edge 7.9.9

Component Versions in GRV-EPIC-PR1 Firmware 1.1

GRV-EPIC-PR1 Firmware 1.1.0-b47

- *groov* EPIC 1.1.0-b47
- PAC Control Engine
- *groov* Manage 1.1.0
- *groov* View R4.0c
- Node-RED 0.18.7
- Ignition Edge 7.9.5

Component Versions in GRV-EPIC-PR1 Firmware 1.0

GRV-EPIC-PR1 Firmware 1.0.1-b110

- *groov* EPIC 1.0.1-b110
- PAC Control Engine R10.0a
- *groov* Manage 1.0.1
- *groov* View R4.0b
- Node-RED 0.18.4
- Ignition Edge 7.9.5

GRV-EPIC-PR1 Firmware 1.0.0-b71

- *groov* EPIC 1.0.0-b71
- PAC Control Engine R10.0a
- *groov* Manage 1.0.0
- *groov* View R4.0a
- Node-RED 0.18.4
- Ignition Edge 7.9.5

GRV-EPIC-PR1 Firmware 1.4.2

September 24, 2019. Updated: October 28, 2019.

Enhancements

- This release adds support for the following modules:
 - GRV-IVI-12
 - GRV-IRTD-8
 - GRV-IDCSW-12
- The Sparkplug section of the *groov* Manage user interface has been changed to more accurately reflect the relationship between the two types of payloads that GRV-EPIC-PR1 can publish: string and Sparkplug.
- The Ignition Edge software has been upgraded to version 7.9.12.
- The MariaDB Package in *groov* EPIC processor's repository has been upgraded from 5.5 to 10.3.13, bringing it up to a currently supported level.

groov EPIC 1.4.2

Bug Fixes

- [KB88391](#) - I/O unit's Inspect window incorrectly reports channel quality as good for missing module
- [KB88392](#) - groov EPIC PID output doesn't go to low limit when input is out of range
- [KB88449](#) - Modbus/TCP does not report a cleared latch as cleared

PAC Control Engine 10.0j

Bug Fixes

- [KB88261](#) - Get Date & Time command doesn't get milliseconds of GRV-EPIC-PR1
- [KB88440](#) - Move Numeric Table to I/O Unit [Ex] on groov I/O causes stack error
- [KB88441](#) - Communication to groov I/O unit disabled with -56 error
- [KB88453](#) - Move Numeric Table To I/O Unit [Ex] returns invalid address error
- [KB88461](#) - Set I/O Unit from MOMO Masks returns invalid address error for groov I/O
- [KB88464](#) - Move Numeric Table To I/O Unit [Ex] has no effect if 32 channels per module are specified
- [KB88498](#) - Including "~" in communication handle results in -417 error

groov Manage 1.4.2

- [KB88506](#) - Unable to save groov Manage > Sparkplug changes
- [KB88518](#) - MQTT topics not being published

groov View 4.1d

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED 0.20.5

No enhancements or bug fixes.

Ignition Edge 7.9.12

Bug Fixes

- [KB88503](#) - "publishall" topic doesn't publish all tags
- [KB88514](#) - "status" and "publishall" requests may function erratically

CODESYS Runtime Engine 3.5.13.20

No enhancements or bug fixes.

GRV-EPIC-PR1 Firmware 1.4.1

August 28, 2019.

groov EPIC 1.4.1

Bug Fixes

- [KB88495](#) - Loss of controller host port communication
- [KB88499](#) - Table read returns wrong number of elements or error

PAC Control Engine 10.0i

No enhancements or bug fixes.

groov Manage 1.4.1

Enhancement

You can now configure the GRV-EPIC-PR1 for MQTT with Sparkplug specification or MQTT without Sparkplug specification (plain MQTT).

groov View 4.1d

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED 0.20.5

No enhancements or bug fixes.

Ignition Edge 7.9.11

No enhancements or bug fixes.

CODESYS Runtime Engine 3.5.13.20

No enhancements or bug fixes.

GRV-EPIC-PR1 Firmware 1.4.0

August 16, 2019. Updated: August 20, 2019.

groov EPIC 1.4.0

New Features

You can now configure the character encoding used by the PAC Control REST API to read or write PAC Control variables in strategies running on the GRV-EPIC-PR1.

Networking features have been added:

- Diagnostic tools to test Internet connectivity have been added to *groov* Manage: ping, test tcp port, traceroute, and nslookup.
- Additional configuration options have been added for more complex networking requirements, such as:
 - Setting an order of priority for backup gateways and an order of priority for DNS provisioning according to each network interface.
 - Policy routing is enabled automatically for improved connectivity.
 - Gateway address, name servers, and search domains provisioned by a DHCP server can be manually overridden.
- You can now connect the GRV-EPIC-PR1 to a virtual private network (VPN) with OpenVPN technology. You configure the GRV-EPIC-PR1 as a client to connect to an OpenVPN server.

For your convenience, you can now access the console log files for the PAC Controller and CODESYS Controller from their respective controller pages.

Added CODESYS support for the GRV-CSERI-4 module.

For Ignition users, you can now select between Ignition and Ignition Edge platforms. The Opto 22 Ignition Edge license (GROOV-LIC-EDGE) works only with the Ignition Edge platform. Contact sales@opto22.com for details.

Enhancements

After you apply this update, the system update feature will include the following:

- Offer the ability to preserve all *groov* Manage settings, not just the Network settings.
- During a system firmware update, if the auto-restore of settings does not complete successfully, the processor displays better error messages and an option to restart the processor.

Improvements have been made to provide greater flexibility in configuring the *groov* EPIC processor for more complex networking environments.

Node-RED has been upgraded to version 0.20.5.

Bug fixes

- [KB87876](#) - Background download setting returns to disabled after power cycle
- [KB88068](#) - *groov* analog input modules may go offline (red LED) when updating firmware on another analog input module on the same chassis
- [KB88273](#) - *groov* analog input values may read low after restarting GRV-EPIC-PR1
- [KB88274](#) - Can't clear or read DO totalization on/off counter through HDD Read and Clear Area (0xF180B000)

PAC Control Engine 10.0i

Bug fixes

- [KB88229](#) - PID mode in IVAL tab may be incorrect for *groov* I/O units
- [KB88259](#) - Condition blocks with the "greater than or equal" condition always evaluate as true
- [KB88265](#) - Controller returns Status Code of -443 or -20 for HTTP Status Code of 204
- [KB88280](#) - Not Equal? condition always evaluates to true

- [KB88375](#) - Control Engine not responding when Ethernet cable disconnected, then reconnected
- [KB88377](#) - Can't set output or switch to manual mode when PID input out of range
- [KB88409](#) - Changes to comm handle values not set correctly on groov EPIC Serial Module
- [KB88418](#) - Cannot enable communication to groov I/O unit
- [KB88432](#) - groov EPIC Host Port performance

groov Manage 1.4.0

Bug fixes

- [KB87569](#) - Gateway IP address from one interface overrides gateway IP address of another interface
- [KB87979](#) - groov Manage incorrectly reports Node-RED fails to restart
- [KB87991](#) - GRV-EPIC-PR1 cannot communicate to remote I/O or remote hosts
- [KB87999](#) - Can't set firewall rule on ports 22006 and 22007 for TCP or port 8502 for UDP
- [KB88014](#) - Downgrading firmware may cause firewall rules to revert to defaults
- [KB88016](#) - Downgrading firmware may cause auto-restores to fail
- [KB88030](#) - Automatic restore of network and firewall settings may fail after system update
- [KB88034](#) - Restore from backup fails if NTP configured with no time servers
- [KB88069](#) - System Update: Upload progress bar stops; banner turns red
- [KB88155](#) - Network and Firewall settings may not be restored after update
- [KB88185](#) - UTF-8 string may get truncated when written with groov Manage REST API
- [KB88186](#) - Characters missing or incorrect when writing UTF-8 string on the Generic MMP page in groov Manage
- [KB88247](#) - Reset I/O to Defaults does not clear TPO or set digital output channels to OFF
- [KB88346](#) - groov Manage may crash while watching log files
- [KB88445](#) - groov Manage PAC Controller page may not show strategy information

groov View 4.1d

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED 0.20.5

Node-RED has been upgraded to 0.20.5.

Ignition Edge 7.9.11

Bug Fixes

- [KB88363](#) - All OPC UA and Allen-Bradley devices disconnect and become unresponsive

CODESYS Runtime Engine 3.5.13.20

No enhancements or bug fixes.

GRV-EPIC-PR1 Firmware 1.3.2

May 15, 2019. Updated: May 21, 2019

groov EPIC 1.3.2

Enhancements

Support for the GRV-ITR-12 module has been added.

Bug fixes

- [KB88231](#) - Firewall rules disappear/page is empty
- [KB88232](#) - Inverted scaling of groov analog input not working correctly
- [KB88241](#) - groov Manage Module page does not show quality error for groov analog outputs

PAC Control Engine 10.0h

Bug fixes

- [KB88174](#) - Float values that are NaN incorrectly evaluated as true
- [KB88211](#) - Open Outgoing Communication returns -87 error
- [KB88227](#) - Get I/O Channel Quality instruction always returns Good
- [KB88237](#) - PAC Control Engine on GRV-EPIC-PR1 occasionally fails to start
- [KB88254](#) - Can't change PID loop parameters

groov Manage 1.3.2

Bug fixes

- [KB88224](#) - Access Denied error when logging in with groov EPIC Shell password that starts with @ symbol

groov View 4.1c

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED 0.19.5

No enhancements or bug fixes.

Ignition Edge 7.9.10

No enhancements or bug fixes.

CODESYS Runtime Engine

Bug fixes

- [KB88122](#) - CODESYS error during download: 1 unresolved reference
- [KB88123](#) - BACNET Server doesn't appear in Add Device dialog in CODESYS. This fix also requires the following:
 - Opto 22 Library Package for CODESYS Development System 1.0.0.1, which is available on the Opto 22 website (www.opto22.com).
 - Version 1.2.1.0 of CODESYS BACnet SL, which is available at the [CODESYS Store](#) (under the "Previous Versions" tab). You cannot run with any version higher than 1.2.1.0.

GRV-EPIC-PR1 Firmware 1.3.1

April 16, 2019. Updated: May 15, 2019.

groov EPIC 1.3.1

Bug fixes

- [KB87885](#) - Get Analog Totalizer Value Returns -1.#QNAN in PAC Control
- [KB87930](#) - GRV-EPIC-PR1 Touchscreen Keyboard Is Missing Parenthesis Characters '(' & ')'
- [KB87941](#) - Can't type a capital 'z' through GRV-EPIC-PR1 touchscreen
- [KB87971](#) - Strategy Information Not Displayed on Control Engine Page
- [KB88018](#) - groov Digital Output On-pulse or Off-pulse Performs Inconsistently
- [KB88073](#) - Port Forwarding to TCP Port 443 on GRV-EPIC-PR1 Doesn't Work
- [KB88083](#) - "Is I/O Unit Ready?" command always shows groov I/O as ready
- [KB88087](#) - Message Queue Fills With Same 5 Messages Repeatedly
- [KB88091](#) - Incorrect Values Returned When Reading Digital Input Feature Data from Packed Data Area of Memory Map
- [KB88128](#) - Digital feature value readings may be inaccurate
- [KB88144](#) - GRV-EPIC-PR1 may not be able to access itself by hostname

PAC Control Engine 10.0g

This release of groov EPIC firmware includes firmware updates from the following, previously-released PAC firmware: 10.0f. A description of the fixes and enhancements delivered in that release of PAC firmware can be found in the [SNAP PAC Controllers and Brains Firmware Readme](#).

The following PAC Control Engine fixes and enhancements are also part of this groov EPIC firmware release:

Bug fixes

- [KB87872](#) - In PAC Control, configuring groov EPIC as an I/O unit with both IP addresses configured may cause strategy download to fail
- [KB87882](#) - Downloading a strategy with 50 or more PIDs fails with a -62 (stack full) error
- [KB87987](#) - IVAL may not update if PAC Control strategy was not run
- [KB88036](#) - Changing the clock may result in interruption of established sessions
- [KB88054](#) - For some EPIC channel features, configuration fails with "Point Mismatch" errors
- [KB88071](#) - PAC Control Message Queue is filled with -8612 (Old Response to New Command) errors
- [KB88088](#) - Error Reading Persistent Float Tables via REST API on GRV-EPIC-PR1
- [KB88104](#) - Setting groov Digital TPO to Zero Percent Doesn't Stop Pulsing
- [KB88176](#) - Control engine resets when downloading online changes
- [KB88226](#) - Control engine keeps trying to access a groov I/O unit that is offline
- [KB87970](#) - Can't connect to control engine on GRV-EPIC-PR1 after disabling and re-enabling control engine in groov Manage

groov Manage 1.3.1

Bug fixes

- [KB88001](#) - groov Manage does not list CODESYS applications without symbol configuration
- [KB88031](#) - Module Hardware Revision Date Code Off by One Month

groov View 4.1b

You can find a list of enhancements and bug fixes in the [groov View Readme Notes](#).

Node-RED

No enhancements or bug fixes.

Ignition Edge 7.9.10

No enhancements or bug fixes.

CODESYS Runtime Engine

No enhancements or bug fixes.

GRV-EPIC-PR1 Firmware 1.3.0

February 13, 2019. Updated: May 15, 2019.

groov EPIC 1.3.0

Enhancements

The CODESYS Runtime Engine has been added. For information on how to use it, see the [groov EPIC User's Guide, form 2267](#). In addition, a new section for the CODESYS Runtime Engine has been added to the readme.

Licensing options have changed. You no longer need to purchase Plus or Enterprise licenses. The available licenses are:

- GROOV-LIC-EDGE, for full access to Ignition Edge software.
- GROOV-LIC-CRE, for full access to the CODESYS Runtime Engine.
- GROOV-LIC-SHELL, for access through secure shell to the Linux operating system.

Support for the following modules has been added:

- GRV-IICTD-12
- GRV-ITR-12
- GRV-IMAI-8
- GRV-IDCIFQ-12
- GRV-OVMAILP-8

Known Issues

[KB88068](#) - When you are updating module firmware for an individual analog input modules, all of the analog input modules on the chassis will go offline. We recommend you schedule your module firmware update to minimize the impact on your processes.

Bug Fixes

- [KB87781](#) - External HDMI touchscreen monitor may not work properly after rebooting the GRV-EPIC-PR1
- [KB87719](#) - Time difference between GRV-EPIC-PR1 and Control Engine

PAC Control Engine 10.0e

NOTE: This release was delivered only on GRV-EPIC-PR1 firmware.

Bug Fixes

- [KB87957](#) - GRV-EPIC-PR1 I/O unit may go offline
- [KB87887](#) - Cannot Enable Communication to EPIC I/O Unit in PAC Control Strategy
- [KB87905](#) - Cannot Read Directory Listing via FTP Using PAC Control Strategy Logic on EPIC Processor

groov Manage 1.3.0

Enhancements

You can now start and stop a strategy that has been downloaded to your groov EPIC processor. From the groov Manage Home page, click or tap Controller > PAC Controller. In the Strategy box, you can start or stop a strategy and see how many charts are running.

Bug Fixes

- [KB87793](#) - Attempting to upload 20 MB or larger files to GRV-EPIC-PR1 will fail without error
- [KB87815](#) - Uploading an SSL certificate without the private key file fails without error
- [KB87883](#) - Using groov Manage to Reset I/O to Defaults on GRV-EPIC-PR1 I/O Unit does not clear PID Loops
- [KB87974](#) - groov module LED stay violet when module firmware update fails

groov View 4.1a

Enhancements and fixes are listed in the [groov View readme](#).

Node-RED 0.19.5

Enhancement

Node-RED has been upgraded to version 0.19.5.

Bug Fixes

[KB87993](#) - Wires get duplicated when installing missing node types

Ignition Edge 7.9.10

Enhancement

Ignition Edge has been upgraded to version 7.9.10.

CODESYS Runtime Engine

Initial release.

GRV-EPIC-PR1 Firmware 1.2.2

December 11, 2018. Updated February 4, 2019.

PAC Control Engine

Bug Fixes

- [KB87915](#) - Control engine stops working
- [KB87920](#) - Store Strategy to Flash sometimes fails
- [KB87935](#) - Uploading a file or system update may fail
- [KB87640](#) - Store strategy to flash may store strategy to wrong location

GRV-EPIC-PR1 Firmware 1.2.1

October 10, 2018

groov View R4.0d

The bug fixes and enhancements for this release are documented in the [groov View readme](#).

GRV-EPIC-PR1 Firmware 1.2.0

October 8, 2018

groov EPIC 1.2.0

Enhancements

- OptoSupport Remote Support Service
You can now provide secure access for Opto 22 Support to remotely access your GRV-EPIC-PR1 to help diagnose and troubleshoot problems.
- Support for new *groov* serial module (GRV-CSERI-4)
Opto 22 has just released the first serial module for the *groov* system and this firmware update adds support for this module.
- First App Loaded
You can now indicate whether *groov* View or *groov* Manage should be the first app to run when you start GRV-EPIC-PR1.
- Save network configuration through a firmware update
You can now choose to have your network configurations remain intact when you install a firmware update to your *groov* EPIC processor. This is an optional feature.
- Only items with data are saved in a backup file
When you select an item to save in a backup file, but that item does not contain any customizations or only the defaults, it's not saved in your backup file.
- You can now disable or enable navigation to a module page when you touch a module.

- *groov* Manage displays a module as flashing gray if the quality of the module is not known.
- If wireless connectivity is enabled, the *groov* EPIC processor now displays the strength of the wireless connection.

Bug Fixes

- [KB87489](#) - GRV-EPIC-PR1 Display asks for new admin account when one already exists
- [KB87590](#) - Files not accessible between *groov* Manage, Node-RED, and a PAC Control strategy
- [KB87565](#) - Modules disappear or appear incorrectly after hotswapping another module
- [KB87633](#) - Error when backing up: size limit reached
- [KB87643](#) - Sending a file via FTP may cause PR1's controller to stop responding
- [KB87647](#) - Errors in queue and I/O unit won't start
- [KB87674](#) - The module LED remains blue even though module is offline
- [KB87680](#) - NaN values from a PR1 are incorrectly displayed as 0.0
- [KB87682](#) - All *groov* I/O module LEDs turn red and OptoMMP server is unresponsive
- [KB87684](#) - Data in Stream-Read Only area of the memory map is in reverse order
- [KB87693](#) - Channel in analog input module reports incorrect reading
- [KB87718](#) - Simple modules disappear from Modules page after swapping a simple output module

PAC Control Engine

Bug Fixes

- [KB87669](#) - Clamping a persistent variable or table element may disable the PR1 control engine
- [KB87678](#) - Control engine slows down or I/O goes offline

groov Manage 1.2.0

Bug Fixes

- [KB87613](#) - Can't perform a system update after interrupting the previous system update
- [KB87566](#) - Error message appears after system reboot following restore from backup
- [KB87580](#) - Firewall rules are incorrect if multiple browser tabs are open

groov View R4.0d

The bug fixes and enhancements for this release are documented in the [groov View readme](#).

Sparkplug

Bug Fixes

[KB87676](#) - Control programs that use Sparkplug with MQTT stop working

Ignition Edge 7.9.9

Enhancements

Ignition Edge has been upgraded to version 7.9.9. This version removes the 500 tag limit; now supports an unlimited number of Ignition tags.

Bug Fixes

[KB87659](#) - Attempts to enable Ignition Edge may fail

Additional updates

Updates were made to maintain security at the most recent levels.

GRV-EPIC-PR1 Firmware 1.1.0-b47

August 2, 2018.

groov EPIC 1.1.0-b47

Enhancements

- WiFi support has been added.
- Access to groov I/O through groov Manage REST API has been added.
- The following pages in *groov* Manage have been changed to organize the information in a more helpful layout and to include controls for new or updated functions (for example, the addition of WiFi support):
 - Firewall (Home > System > Firewall)
 - Network (Home > System > Network)
 - Backup (Home > Maintenance > Backup)
 - Restore (Home > Maintenance > Restore)
 - Sparkplug Configuration (Home > Sparkplug > Configuration)
 - Info and Help (only if viewed through computer or mobile device)

Bug Fixes

- [KB87406](#) - Touching a groov module does not turn on the touchscreen
- [KB87435](#) - groov I/O module loses custom configuration
- [KB87499](#) - groov digital output modules with TPO settings do not accept changes
 - This fix requires that you also install a module firmware update. See the [groov I/O Module Firmware readme](#).
- [KB87514](#) - groov EPIC PR1 host port may stop responding, causing PAC Control to freeze
- [KB87518](#) - groov digital input module may return a zero
- [KB87544](#) - GRV-EPIC-PR1 locks up at high temperature
- [KB87606](#) - Opto 22 application logs use up excessive disk space

PAC Control Engine

Bug Fixes

[KB87620](#) - PAC Control: PID "Set" instructions write corrupted data

groov Manage 1.1.0

Bug Fixes

- [KB87390](#) - groov Manage does not show current strategy running on Control Engine
- [KB87433](#) - groov Manage: text on Download Backup button disappears
- [KB87453](#) - Slow firewall port validation with large port range
- [KB87495](#) - In Generic MMP page, a String value causes an invalid value message
- [KB87502](#) - Status shows no progress when you drop something other than a file into the upload area
- [KB87503](#) - System Status Page shows error message when multiple browser tabs or windows try to access it
- [KB87541](#) - groov Manage may not display MAC address on Network page
- [KB87570](#) - Manual DNS entries are lost after a reboot

groov View R4.0c

The bug fixes and enhancements for this release are documented in the [groov View readme](#).

Sparkplug

Bug Fixes

- [KB87536](#) - Erratic responsiveness
- [KB87546](#) - Sparkplug doesn't reconnect to MQTT broker
- [KB87548](#) - Tags are valid but values don't change

Node-RED 0.18.7

Enhancements

Node-RED has been upgraded to version 0.18.7.

Bug Fixes

[KB87507](#) - Can't access USB-to-serial converter from Node-RED

Additional updates

Updates were made to maintain security at the most recent levels.

GRV-EPIC-PR1 Firmware 1.0.1-b110

June 14, 2018

groov EPIC 1.0.1-b110

Bug Fixes

- [KB85353](#) - Cannot communicate to GRV-EPIC-PR1 through Modbus/TCP
- [KB87424](#) - No warning generated in error queue if strategy I/O configuration does not match physical I/O
- 86674, 87326, 87421, 87423, 87432

PAC Control engine R10.0a

Bug Fixes

- [KB87494](#) - GRV-EPIC-PR1 host task locks up when examining errors on certain channel types
- [KB87630](#) - PAC Control: PID "Set" instructions write corrupted data

groov Manage 1.0.1

Bug Fixes

- [KB87450](#) - Changing PR1 Ethernet from DHCP to Manual does not take effect until user restarts the unit
- [KB87442](#) - Accounts page shows "null" for first user's email
- 87434

groov View R4.0b

The bug fixes and enhancements for this release are documented in the [groov View readme](#).

GRV-EPIC-PR1 Firmware 1.0.0-b71

May 18, 2018

Initial Release. These are the version numbers for the firmware and software components in this initial release:

- PAC Control Engine R10.0a
- *groov* EPIC 1.0.0-b71
- *groov* Manage 1.0.0
- *groov* View R4.0a
- Node-RED 0.18.4
- Ignition Edge 7.9.5

How to Get Help

If you have any questions about the *groov* EPIC processor, you can call, fax, or e-mail Opto 22 Product Support. Hours are Monday through Friday, 7 a.m. to 5 p.m. Pacific Time.

Phone: 800-TEK-OPTO (800-835-6786) or 951-695-3080

Fax: 951-695-3017

Email: support@opto22.com

Opto 22 website: www.opto22.com

When calling for technical support, be prepared to provide the following information about your system to the Product Support engineer:

- Version information for *groov* EPIC, PAC Control Engine, *groov* View, *groov* Manage, and, if applicable, Node-RED and Ignition Edge
 - A description of your system equipment:
 - Computer CPU type, speed, memory, and operating system
 - Controller model and firmware version
 - Module types and their firmware versions
 - A description of your Setup and Configuration: how it is connected, the purpose of each device, external connections, and networks
 - Specific error messages or other diagnostic indications
-

Finding Version Numbers

You can find the version numbers for the *groov* EPIC firmware and software components in the following locations:

groov EPIC Firmware

Log into your GRV-EPIC-PR1 as a user with administrator authority. From the Home screen, click or tap on Info and Help, then click or tap on About. The version number is listed under "System Version".

PAC Control Engine

In PAC Control, make sure you have a strategy with your GRV-EPIC-PR1 as the control engine. While the strategy is running, click on Control Engine > Inspect.

groov Manage

Log into your GRV-EPIC-PR1 as a user with administrator authority. From the Home screen, click or tap on Info and Help, then click or tap on About. You might have to scroll down the screen to see the version information.

groov View

Log into your GRV-EPIC-PR1 as a user with administrator authority. From the Home screen, click or tap on *groov* View. While *groov* View is loading, you'll see the version number in the middle of the screen. If you miss it, you can also click or tap on the cog (upper right corner) and select About *groov* View.

Node-RED

Log into your GRV-EPIC-PR1 as a user with administrator authority. From the Home screen, click or tap on Node-RED. You might have to scroll down the screen to see the Node-RED version information.