Opto 22's *groov* RIO firmware version 3.5 adds real-time control to remote I/O

The latest firmware update offers a CODESYS programming option along with enhancements for performance and security.

Temecula, CA - August 24, 2023 – Opto 22 announces the latest firmware version 3.5 for *groov* RIO edge I/O. This latest release includes the CODESYS runtime engine, allowing the *groov* RIO to now function as a real-time controller coupled with software-configurable I/O.

The new firmware for *groov* RIO delivers a compact, configurable, and secure PLC for end-user or OEM engineers, technicians, and developers with smaller industrial control applications. *groov* RIO with CODESYS embedded uniquely combines the power of an IEC-61131-3 programmable controller with 10 channels of universal, software-configurable I/O, plus state-of-the-art cybersecurity features, including account management, certificates, encryption, and network segmentation.

groov RIO was introduced to the market in 2020. With this new free firmware update, all current *groov* RIO customers can update their existing RIOs to this latest version and gain these new capabilities.

groov RIO as a PLC. Security, control programming, and software-configurable I/O are now in the same compact *groov* RIO edge device. The on-board CODESYS runtime engine fully supports IEC-61131-3 control programs written in the programming language of your choice: structured text, ladder logic diagram, functional block diagram, and continuous or sequential function chart.

In previous firmware versions of *groov* RIO, control options relied on Python or Node-RED programming software. The CODESYS control engine now brings an additional programming option for industrial automation applications requiring more low-level control.

To use this new CODESYS runtime engine, users first download and install the free CODESYS Development System from the US CODESYS Store. Next, they download and install version 3.1.0.0 or later of the free Opto 22 Library Package for the CODESYS Development System from Opto 22. They can then create an application and download it to *groov* RIO, making RIO a compact, self-sufficient, and secure PLC—great for machine-building where space is at a premium or where local I/O needs a small footprint.

The CODESYS runtime engine license (product number GROOV-LIC-CRE-RIO) is available for separate purchase from the Opto 22 website for a list price of $100 USD. Once purchased, the activation process generates a CODESYS license key, which is applied to the appropriate *groov* RIO device through the CODESYS Development System.

Other features added to *groov* RIO firmware version 3.5:

- **Sparkplug 3 compatibility.** The RIO 3.5 firmware now includes Sparkplug 3.0 protocol certification. *groov* RIO products now bear the "Sparkplug Compatible" label, ensuring that the Sparkplug specification has been verified and the product provides the highest level of compatibility.
- **Upgraded Node-RED software.** This release also includes an update to Node-RED version 3.0, which offers enhancements like an improved context menu, debug path tooltips, and the ability to search all Node-RED flows continually.
- **Other notable features.** End users will appreciate the additional User Interface options for I/O batch operations, MMP streaming, and Modbus.

For the *groov* RIO model GRV-R7-MM2001-10, version 3.5 firmware also includes an embedded software upgrade to Inductive Automation's Ignition Edge version 8.1.21, improving security and performance.

For complete information on new features and bug fixes, see the *groov* RIO Release Notes.

Availability

groov RIO 3.5 firmware is available now as a free download from Opto 22. This free update is available for all three *groov* RIO models: the universal I/O models GRV-R7-MM1001-10 and GRV-R7-MM2001-10, and the power and energy monitoring model GRV-R7-I1VAPM-3.

About *groov* RIO

groov RIO is a flexible edge I/O module that quickly connects traditional wired switches and sensors directly to Ethernet networks, software applications, and cloud platforms without intermediary control or communication hardware, such as PLCs, PACs, or PCs. Two *groov* RIO models consist of a single part number providing 8 channels of multifunction I/O (input or output, analog or discrete). One model is specifically designed for power and energy monitoring. All *groov* RIO models include embedded tools for connectivity and control that integrate I/O data seamlessly with business and automation systems. With power over Ethernet and industrial-grade hardware, *groov* RIO deploys quickly anywhere your equipment lives.

About Opto 22

Opto 22 designs and manufactures industrial control products and Internet of Things (IoT) platforms that bridge the gap between information technology (IT) and operations technology (OT). Based on a core design philosophy of leveraging open, standards-based technology, Opto 22 products are deployed worldwide in industrial automation, process control, building automation, industrial refrigeration, remote monitoring, and data acquisition applications. Designed and manufactured in the U.S.A., Opto 22 products have a worldwide reputation for ease of use, innovation, quality, and reliability. For nearly 50 years OEMs, machine builders, automation end-users, and information technology and operations personnel have and continue to trust Opto 22 to deliver high-quality products with superior reliability. The company was founded in 1974 and is privately held in Temecula, California, U.S.A. Opto 22 products are available through a global network of distributors and system integrators. For more information, contact Opto 22 headquarters at +1-951-695-3000, visit www.opto22.com, or follow on Instagram, Twitter, Facebook, LinkedIn, YouTube.

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