OPTO 22 | PRESS RELEASE

Opto 22 connects real-world industrial devices to millions of Raspberry Pi® single-board computers with release of Digital I/O Carrier Board for Raspberry Pi

Digital I/O Carrier Board blazes a trail for Raspberry Pi developers to design and deploy Pi-based solutions for industrial and commercial applications

Temecula, CA - November 16, 2016 – Industrial automation manufacturer and Internet of Things platform developer Opto 22 has announced the release of the Digital I/O Carrier Board for the versatile Raspberry Pi single-board computer, enabling the Pi to sense or switch up to 16 individually selectable electrical loads ranging from 2.5 to 280 VAC/VDC, with solid-state power and reliability. This new carrier board adds the ability to connect, monitor, control, and automate billions of existing devices that were previously beyond the Pi's built-in 3.3 VDC GPIO sensing and control capabilities.

Using this new carrier board, millions of Raspberry Pi developers across the world can build solutions for real-world industrial automation, remote monitoring, and discrete control applications using their Raspberry Pi and world-class, industrially hardened, guaranteed-for-life I/O modules from a company with over 40 years of industrial automation and manufacturing expertise. More information is available in the Digital I/O Carrier Board for Raspberry Pi Data Sheet.

Education Meets Industry

The Raspberry Pi is a flexible and powerful single-board computing platform originally designed as an educational tool for software students. It's an extremely approachable system that can run both Linux and Windows operating systems. With a variety of input/output interfaces including

USB, HDMI, and 40 3.3 VDC GPIO pins, the Raspberry Pi has been an ideal tool for rapid prototyping and development. Using its built-in GPIO pins, small electrical devices and peripherals like LEDs and push buttons can be connected to the Pi through breadboards and wires to build hobby-level monitoring and control applications.

With over 10 million units sold worldwide, the Raspberry Pi has been an incredibly successful education platform, igniting the imagination of new and experienced developers alike. As a result, new opportunities to use the Raspberry Pi are being identified in commercial and industrial applications, not only for prototyping and proofs of concept, but also in environments where an industrially hardened controller is not required. Oil field operators are beginning to roll out Raspberry Pis with remote sensing and alerting capabilities. Facilities engineers have used the Raspberry Pi for building automation applications such as HVAC control and door status monitoring.

However, the Raspberry Pi is often impractical for deployment in these applications because of the board's 3.3 VDC GPIO pins. Equipment in these applications uses much higher electrical loads that would easily destroy the Raspberry Pi. With the lack of industrial-level I/O, the Pi has been stuck in the education and prototyping realms, unable to be fully leveraged in everyday commercial and industrial applications.

Raspberry Pi Gets New I/O

To enable the Raspberry Pi to interface to a huge number of peripheral electrical devices, Opto 22 designed and manufactured the Digital I/O Carrier Board for Raspberry Pi. Raspberry Pi developers simply attach their Pi to the carrier board, connect the included interface cable to their Pi's 40-pin GPIO connector, and snap the board onto a compatible 4, 8, or 16 I/O module mounting rack. They can use the rack's power supply to power the Pi, and then use their favorite Pi-supported programming language to read and write to up to 16 individually selectable digital input and/or output points. (Mounting rack, power supply, and I/O modules are sold separately.)

Using this new carrier board, Raspberry Pi developers can use their Pi to switch industrial-level electrical loads far beyond the Pi's built-in 3.3 VDC GPIO pins, and control the electrical loads required for real-world devices like industrial motors, pumps, and sensors.The Digital I/O Carrier Board provides a GPIO interface between a Raspberry Pi and digital I/O modules on select Opto 22 mounting racks.

World Class I/O

Opto 22 I/O modules and mounting racks have been field proven for nearly 40 years and are available worldwide. Most I/O modules carry Opto 22's lifetime warranty. Using the Digital I/O Carrier Board enables Raspberry Pi developers to incorporate world-class, industrially hardened I/O modules in their applications, with these features:

- Wide range of electrical load switching and sensing capabilities
- Electrical isolation separating field devices from sensitive Pi electronics (up to 4000 V)
- Single channel flexibility, so you buy only the I/O you need
- Input channels with built-in current limiting
- Output modules that switch up to 3A loads
- Built-in 3A field-serviceable fusing on output channels
- Solid-state technology on most modules
- Built-in status LEDs on all input and output modules for visual status verification
- Easy wiring with 10-gauge wire terminals
- Input current limitation built in—you don't need current limiting resistors
- Lifetime warranty on solid-state modules

Availability

The Digital I/O Carrier Board for Raspberry Pi will be released December 5, 2016, and will be globally available through authorized Raspberry Pi resellers, including RS Components, Allied Electronics, Premier Farnell, and Newark Element14.

About Opto 22

Opto 22 designs and manufactures industrial control products and Internet of Things 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 over 40 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 or visit www.opto22.com.

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OPTO 22 **Corporate Headquarters**

43044 Business Park Drive, Temecula, California, 92590-3614, U.S.A.

Local: 951.695.3000 • Toll-free: 800-321-6786 • FAX: 951.695.3095 • www.opto22.com