

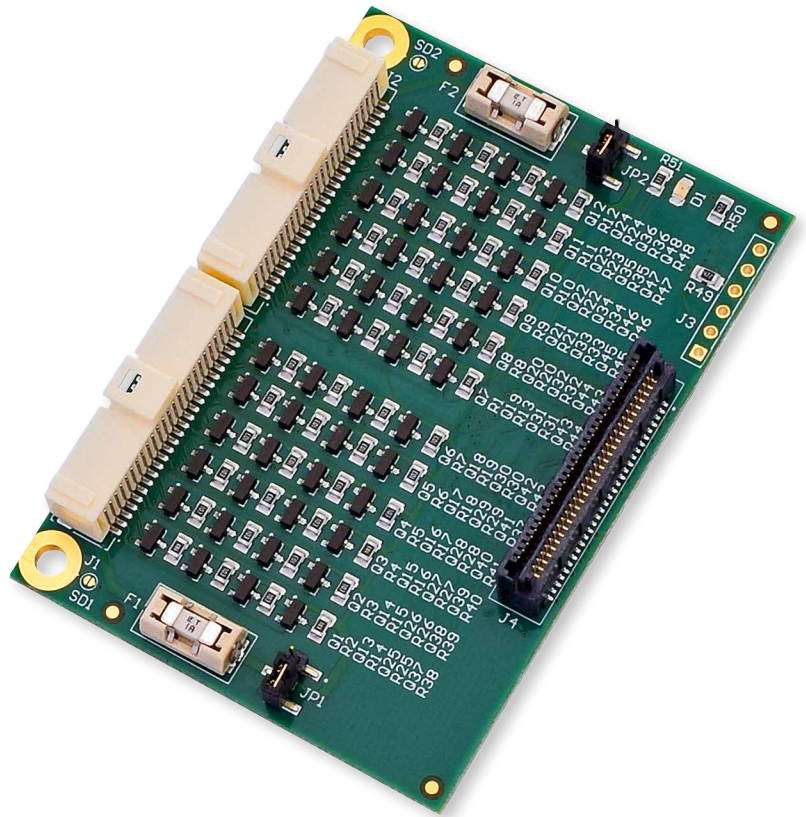
## Features

### Performance for Industrial IoT Applications

- 48 Digital I/O (also referred to as GPIO)
- Each line is configurable for input, output, or output with readback
- Level converters provide support up to 30 Volts DC
- Current: 12 mA sink, 5 mA source
- Each line supports programmable event sensing
- Programmable interrupts
- Supports Windows and Linux x86/ARM drivers
- Lattice Semiconductor Corp., MachXO2™ FPGA
- Single Serial Peripheral Interface (SPI) with activity LED

### Rugged Design for Demanding Environments

- -40°C to +85°C Operating Temperature Range
- Shock and vibration tested

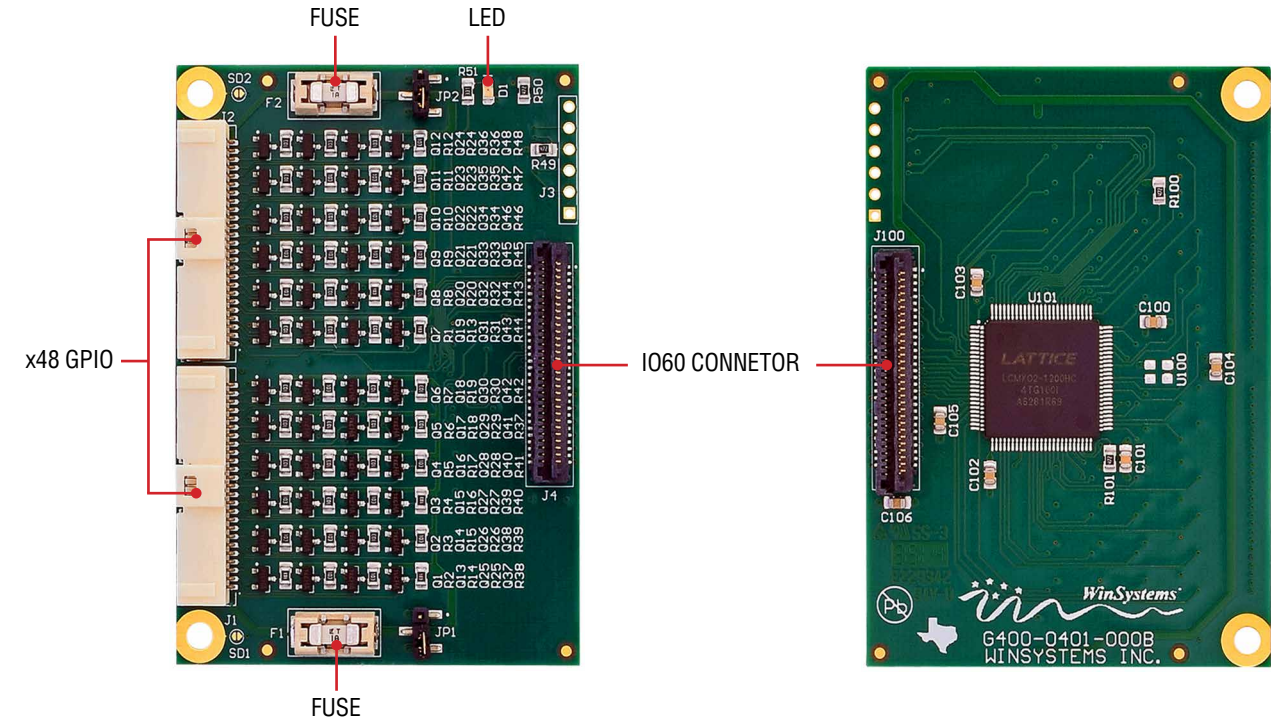


## Product Description

WinSystems' IO60-DIO48 Module adds General Purpose I/O (GPIO) to embedded systems with IO60 expansion featuring 48 Digital I/O lines tolerant to 30 V DC. The SPI interface is implemented through the MACH XO2 SPI-slave EFB (Embedded Function Block) interface. Each bit of each port is implemented as a bi-directional tristate driver. Each bit of each port can also be configured and enabled to detect rising and/or falling edge events and generate a system interrupt.

WinSystems can provide custom configurations for OEM clients. Please contact a Applications Engineer through our contact page for details.

Connectors



Technical Specifications

ELECTRICAL	<ul style="list-style-type: none"><li>Digital I/O: 3 V to 30 VDC</li><li>Vcc: 3.3 V, 250 mA typical</li><li>Current: 12 mA sink, 5 mA source per line</li></ul>
MECHANICAL	<ul style="list-style-type: none"><li>Dimensions: 2.83 in L x 1.97 in W (72 mm L x 50 mm W)</li><li>Weight: 1.0 oz (29 gm)</li><li>PCB Thickness: 0.078 inch (1.98 mm)</li></ul>
ENVIRONMENTAL	<ul style="list-style-type: none"><li>Operational Temp Range: -40 °C to +85 °C</li><li>Humidity (RH): 5% to 95% non-condensing</li><li>Random Shock Testing: MIL-STD-202G, Method 213B, Condition A, 50g half-sine, 11ms duration per axis, 3 axis</li><li>Random Vibration Testing: MIL-STD-202G, Method 214A, Condition D, 01g/Hz (11.95g rms), 20 minutes per axis, 3 axis</li><li>RoHS Compliant: Yes</li></ul>
OS SUPPORT	<ul style="list-style-type: none"><li>Windows and Linux (Drivers and sample code are available for single board computers featuring IO60 expansion.)</li></ul>

Order Information

PART NUMBER	IO60-DIO48
ACCESSORIES	<ul style="list-style-type: none"><li>KIT-IO60-STANDOFF-2 – Standoff kit (included). Contains following items:<ul style="list-style-type: none"><li>Standoff: x2 Aluminum, 5 mm HEX, 12 mm Long, 3.5 mm THREAD, Male/Female</li><li>Nex Nut: x2 Zinc Finish, M3-0.5 DIN</li><li>Screw: x2 Stainless Steel, M3 x 0.5 mm x 6 mm PPH</li></ul></li></ul>

Expansion and Customization Options

WinSystems provides additional cables, expansion cards, power supplies, and solid state drives to complete your embedded computing solution including data acquisition, communications, location, and other features via PCIe/104 and M.2 interfaces. Our Application Engineers are available to guide you through product selection and customized options.

Contact an Application Engineer or visit our website for more information.



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