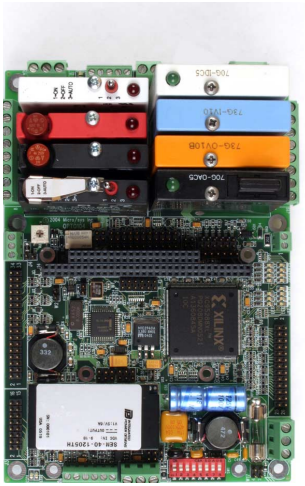
Optically Isolated Analog and Digital I/O Module Rack On EPIC-Footprint OPTO104



Features

- ✓ Accepts up to eight G4 or G5 OPTO modules for isolated digital and analog I/O
- ✓ Remote slave OPTO104 boards can be added via a ribbon cable
- ✓ Rotary encoder input
- ✓ LCD/keypad interface
- ✓ CAN bus
- ✓ Wide supply voltage range
- ✓ General-purpose status LEDs
- ✓ Onboard temperature sensor

The OPTO104 is a user-configurable I/O board ideal for use in industrial systems requiring high voltage isolation for analog and digital I/O. Standard PC/104 CPU boards plug onto the OPTO104. It accepts up to eight optically-isolated I/O modules. The G4 module series provides either AC or DC I/O with a wide range of voltages. The G5 module series provides an analog interface for voltage or temperature measurements.

The OPTO104 has a CAN bus interface and an onboard temperature sensor. The CAN interface allows digital I/O, analog I/O, control commands, and temperature data to be easily communicated in a factory.

The OPTO104 also provides hardware interfaces to a wide variety of industrial-user interface devices. These devices include a rotary encoder, an alphanumeric LCD, a keypad, and onboard general-purpose LEDs.

Software Support

Example software included for DOS, Linux

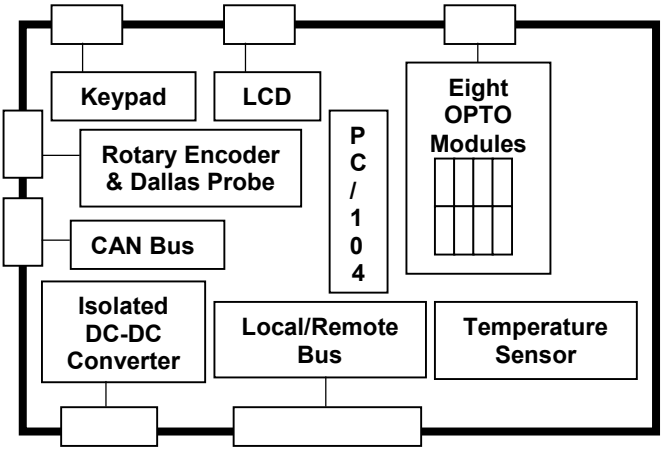
Compatible Hardware

Any Micro/sys CPU with PC/104 expansion connector

Mounting/Packaging

Enclosure, ENC104-4
Standoffs, STDOFF104

Micro/sys 3730 Park Place, Montrose, CA 91020 (818)244-4600 Fax (818)244-4246
email: info@embeddedsys.com



Specifications:

Mechanical:

- EPIC-footprint board size with corner mounting holes
- 4.53" x 6.50" x 0.6" (If OPTO modules are installed, the height may be as much as 2.55")

Power Requirements:

OPTO104	+5v ±5% at 300mA Max, plus current needed for installed I/O modules. Board with 8 modules installed 500mA Max.
OPTO104-12	9-18V
OPTO104-24	18-36V
OPTO104-48	36-75V

Environmental:

- -40 - +85°C operating
- -40 - +85°C storage
- 5%-95% relative humidity, non-condensing

PC/104 Interface:

- 8-bit PC/104 transfers with 16-bit pass-through connector
- Jumper selectable base address range from 000h to 3F0h
- Occupies 16 byte-wide addresses

DC-DC Converter Input:

- DC-DC converter option at power input allows wide voltage ranges (9-18V, 18-36V, 36-75V)
- Isolates OPTO104 from power supply input voltage
- On-board jumper can bleed off static charge from the output (caused by common-mode leakage current) to the safety ground or the -IN. This lowers the susceptibility to ESD.

OPTO Modules:

- Accepts eight G4 or G5 modules
- Digital and analog modules may be mixed
- Up to 4000 volts of opto-isolation
- Remote (having no CPU) OPTO104 boards may be connected with 26-wire ribbon cable

Alphanumeric LCD Interface:

- Connects to a wide variety of alphanumeric displays
- 8-data lines and RS, RW, and CE control lines
- On-board or off-board contrast adjustment

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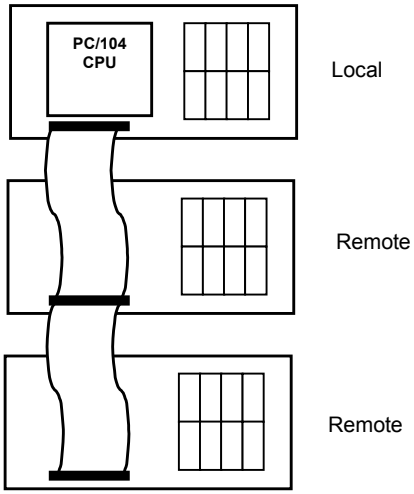

Keypad Interface:
- ❑ 4 x 4 matrix keypad
- ❑ 10k pull-ups to +5V

CAN Bus:
- ❑ Uses Intel 82527 CAN controller
- ❑ Supports CAN specification 2.0, Parts A and B
- ❑ Jumper selectable termination

Rotary Encoder Interface:
- ❑ Provides general-purpose quadrature input
- ❑ Connects to Grayhill 61K128-050 or equivalent

Watchdog Timer:
- ❑ 1.6 second timeout
- ❑ Resets all output modules upon timeout

Dallas Probe Interface:
- ❑ Connects to Dallas iButton Probe
- ❑ 1-Wire interface

Onboard Temperature Sensor:
- ❑ Dallas DS75U temperature sensor
- ❑ Measures board temperatures of –40° to +85°C

External Connections:
- ❑ Two 8-point screw terminal strips for isolated I/O
- ❑ Two 5-point screw terminal strips for non-isolated I/O
- ❑ One 26-pin header for local/remote OPTO bus
- ❑ One 6-point screw terminal strip for a rotary encoder and Dallas iButton Probe
- ❑ One 16-pin header for a matrix keypad
- ❑ One 34-pin header for an alphanumeric LCD
- ❑ One 3-pin header for off-board LCD contrast potentiometer
- ❑ One 3-point screw terminal strip for CAN bus

Ordering Information:

OPTO104	8 G4/G5 module sockets, CAN bus, 5V input voltage
OPTO104-12	8 G4/G5 module sockets, CAN bus, 9-18V input voltage
OPTO104-24	8 G4/G5 module sockets, CAN bus, 18-36V input voltage
OPTO104-48	8 G4/G5 module sockets, CAN bus, 36-75V input voltage

Related Products:

CA5050	34-pin to 34-pin ribbon cable
CA5051	26-pin to 26-pin ribbon cable
LC0240	2 line by 40 character LCD
CA4129	OPTO104 to LC0240 cable
KEYPAD16	Keypad, 4 x 4, Customizable Legends
CA4130	OPTO104 to KEYPAD16 cable
STDOFF104	Two .6” nylon standoffs, machine screws, and nuts for mounting
OMD-xxx	Opto-isolated digital modules from Opto 22 and Grayhill. See OMD-xxx data sheet for details

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OMA-xxx	Opto-isolated analog modules from Grayhill. See OMA-xxx data sheet for details