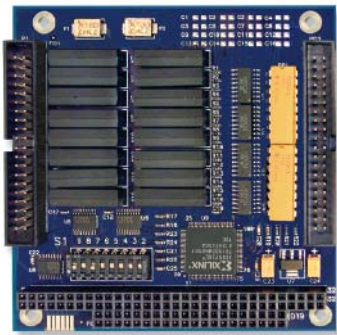




# MiniModule™ GPIO

Handy PC/104 GPIO modules offer 16, 32 or 48 more inputs or outputs to your design



### FEATURES

- 16, 32, or 48 inputs/outputs
- Non-isolated models include:
  - 8255-compatible I/O ports
  - Inputs sink up to 24mA each
  - Outputs source up to 15mA each
  - Capable of driving relay modules
- Isolated models include:
  - Outputs: Reliable 10 VA SIP Reed relays, SPST, 0.15 Ohms
  - Outputs normally open
  - Inputs: Optically isolated
  - Input range selectable with socketed DIP resistor
- QuickStart Kits include board, cables, drivers, and documentation

The MiniModule™ GPIO PC/104 expansion modules feature general-purpose digital inputs and outputs to extend the I/O capabilities of your PC/104-compatible CPUs and single board computers (SBCs) for a variety of applications.

The MiniModule GPIO provides 16, 32, or 48 inputs or outputs. Models with isolation have optically-isolated inputs to protect sensitive electronics from noise, spikes, and ground loop current that is often present in industrial environments and in systems with motors and moving parts. Models with isolation feature single-pole, single-throw (SPST) relay-switched outputs to connect together two of the pins of the I/O connector: +5V and common ground are available at the connector as well. Non-isolated models feature 8255-compatible TTL ports, with inputs sinking up to 24mA each and outputs sourcing up to 15mA each, capable of driving relay racks or other loads.

DIP switches are provided for flexible I/O addressing, with IRQ jumpers for interrupts.

Typical uses of GPIOs include data acquisition, industrial control, relay and motor switching and monitoring, and test and measurement. The rugged PC/104 implementation ensures reliable operation in demanding and harsh environments, and the MiniModule GPIO comes with a lifetime warranty. Ampro's QuickStart Kits provide a convenient development package with the I/O cables, documentation, and software support.

The MiniModule GPIO fully complies with the industry-standard PC/104 Specification, making it a natural choice for system OEMs who need a drop-in expansion for their new or existing PC/104 or EBX CPUs and SBCs. For your next design, choose MiniModule GPIO from Ampro, the inventor of the PC/104 and EBX standards.

## SPECIFICATIONS

### I/O

- 16, 32, or 48 inputs/outputs
- TTL levels
- **Non-isolated models include –**
  - 8255-compatible I/O ports
  - Inputs sink up to 24mA each
  - Outputs source up to 15mA each
  - Capable of driving relay modules
  - Example driver software provided
- **Isolated models include –**
  - High noise immunity for industrial environments
  - Outputs: Reliable 10 VA SIP Reed relays, SPST, 0.15 Ohms
  - Outputs normally open, close when energized by writing a "1" bit
  - Inputs: Optically isolated
  - Input range selectable with socketed DIP resistor

### Bus Interface

- PC/104 bus (ISA)

### Mechanical

- **Size** – 90x96mm (3.6x3.8") PC/104
- **Power** – (typical) 0.13A to 0.79A @ +5V
- **Environmental** – Operating temperature: 0 to 70°C standard

### Warranty

- Lifetime warranty

### ORDERING INFORMATION

MODEL	DESCRIPTION
MM2-GPIO-K-11	QuickStart Kit, non-isolated, (Q-01 module, cables, documentation, software)
MM2-GPIO-K-12	QuickStart Kit, isolated, (Q-02 module, cables, documentation, software)
MM2-GPIO-Q-01	MiniModule GPIO, 48 in/out, non-isolated
MM2-GPIO-Q-02	MiniModule GPIO, 16 in, 16 out, isolated
MM2-GPIO-Q-03	MiniModule GPIO, 16 in, isolated
MM2-GPIO-Q-04	MiniModule GPIO, 16 out, isolated

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