



# High Density Digital I/O and Timer for PC/104 MPC148



## Features

- ✓ 53 user TTL-level I/O lines
- ✓ I/O direction selectable
- ✓ Switches/LEDs
- ✓ Selectable pull-downs/ups on I/O with current-limiting resistors
- ✓ IRQs on I/O, timers, external
- ✓ Individual grounds for all signals
- ✓ PC/104 format; extended temp available

The MPC148 is a plug-on PC/104 board that adds high density digital I/O and timers to PC/104 systems. Three 82C55s provide bi-directional interfaces to and from A/D, D/A, and general system I/O. System reliability for this additional I/O is enhanced with grounds between each 82C55 signal. Consistent system start-up status is controlled with pull-down/pull-up resistors on all I/O lines.

There are three counter/timers implemented with an 82C54. A matrix of software and jumper posi-

tions provides options for timer frequency, starting and stopping, and interrupt (IRQ) generation.

An 8-position DIP switch and 8 indicator LEDs are on-board for development ease and monitoring system status during run time. Additionally, the switches can be used to set a system address in multi-board systems. The robustness of the MPC148 protects against power sequencing problems in PC/104 systems. This is accomplished with on-board current-limiting resistors that prevent overload currents.

### Software Support

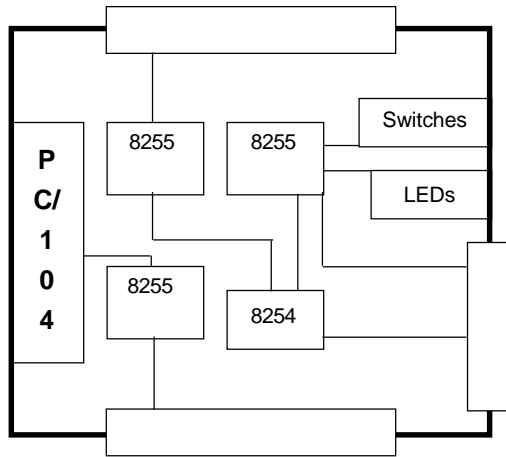
*Example software included  
for DOS/Linux*

### Compatible Hardware

*Any Micro/sys CPU with  
PC/104 expansion connector*

### Mounting/Packaging

*PC/104 standard*



## Specifications:

### Mechanical:

- PC/104 standard
- 3.55" (plus I/O region) x 3.775" x .6"

### Power Requirements:

- +5v  $\pm$ 5% at 150mA max

### Environmental:

- 0° - +70°C operating
- 40° - +85°C operating, -ET version
- 40° - +85°C storage
- 5%-95% relative humidity, non-condensing

### PC/104 Interface:

- 8-bit PC/104 transfers
- IRQ source from I/O, timers, external
- Two interrupts jumperable to IRQ3,4,5,6,7,9,
- Jumperable to IRQ10,11,12,14,15 if MPCOPT16ST installed

### Digital I/O:

- 72 total in nine 8-bit groups
- Outputs sink/source 2.5mA
- Selectable I/Os can source IRQs
- Jumper selectable 4.7k pull-downs/ups on I/O for initialization after reset
- 470-ohm current-limiting resistors
- Individual grounds for all signals

### Counter/Timer:

- 82C54 provides 3 16-bit timer/counters
- Matrix of jumpers for IRQs, gating, internal/external clock, and cascading

### Switch/LEDs:

- 8-position switch, 8 LEDs from dedicated 82C55

### External Connections:

- Two 50-pin headers for digital I/O
- 26-pin header for timer, external-clock, external IRQ, miscellaneous I/O

## Ordering Information:

MPC148	High density I/O and timer
MPC148-ET	High density I/O and timer, extended temperature operation

### Related Products:

CA5049	50-pin to 50-pin ribbon cable
CA5051	26-pin to 26-pin ribbon cable
TB5001	50-point breakout board
MPCOPT16ST	16-bit PC/104 stackthrough connector