



# Analog, Digital, and Timer I/O for PC/104 MPC550



## Features

- ✓ Sixteen 12-bit channels of analog input
- ✓ 100KHz A/D sampling rate
- ✓ Software selectable A/D input ranges
- ✓ 24 digital I/O lines
- ✓ Three 16-bit counter/timers
- ✓ Optional 12-bit DACs, 4 or 8 channels
- ✓ 5V only operation
- ✓ PC/104 form factor

The MPC550 Analog and Digital I/O module provides 16 channels of analog input to PC/104 systems. The module also includes 24 bits of digital I/O and three general purpose counter/timers. Additionally, up to 8 channels of analog output are available.

The analog input section implements a complete data acquisition system with programmable input ranges. The input ranges supported can be

either unipolar or bipolar. Ranges available are +5V, +10V,  $\pm 5V$ , and  $\pm 10V$ .

The three 16-bit counter/timer channels can be used to count digital input events, measure time between events, and to generate system timing interrupts. The counter/timers normally clocked by the PC/104 system clock, with options for a user-supplied oscillator if a particular frequency is needed.

### Software Support

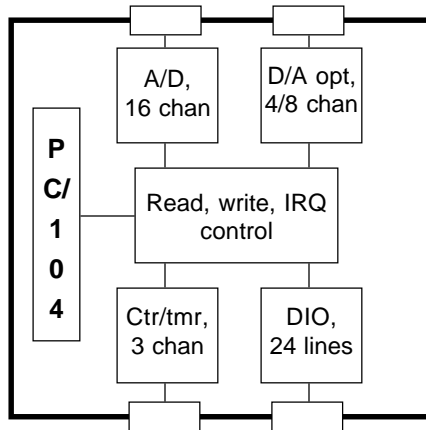
*Drivers provided*

### Compatible Hardware

*Custom interfacing*

### 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 250 mA max, no DAC option
- DAC option requires additional +5V  $\pm$  5%:
  - 4 channel option - 60 mA max
  - 8 channel option - 120 mA max

### Environmental:

- 0° - +70°C operating
- 25° - +85°C storage
- 5%-95% relative humidity, non-condensing

### PC/104 Interface:

- 8-bit PC/104 module
- IRQ2-7 supported
- IRQ10, 11, 12, 14, 15 supported if optional 16-bit PC/104 connector installed
- PC/104 interrupt sharing supported

### Digital I/O:

- 24 TTL-level I/O lines from 82C55 device
- In output mode, 2.4 mA source/sink

### Analog Inputs:

- Sixteen 12-bit channels
- $\pm$ .5 LSB linearity
- 6usec conversion, 100KHz sampling rate
- Software selectable input ranges, +5V, +10V,  $\pm$ 5V,  $\pm$ 10V

### Counter/Timers:

- Three 16-bit channels from 82C54 device
- 8MHz maximum input count rate
- Cascadeable for larger counts

### Analog Output Option:

- Four or eight 12-bit DAC channels
- 10V full scale output, all channels
- $\pm$ .5 LSB linearity
- 6usec DAC update settling time

### External Connections:

- 20-pin header for analog input
- 26-pin header for digital I/O
- 10-pin header for counter/timer I/O
- 14-pin header for analog output option

## Ordering Information:

- |           |                              |
|-----------|------------------------------|
| MPC550    | Analog, Digital, Timer I/O   |
| 550OPT1-4 | Analog output option, 4 chan |
| 550OPT1-8 | Analog output option, 8 chan |