Analog, Digital, and Timer I/O for PC/104 MPC555

Features

✓ Sixteen 12-bit channels of analog input

✓ 100kHz A/D sampling rate

✓ Software selectable A/D input ranges

✓ 24 digital I/O lines

✓ 4 Input Jumpers and 8 LEDs

✓ Three 16-bit counter/timers

✓ Optional 12-bit DACs, 4 or 8 channels

✓ 5V-only operation

✓ PC/104 form factor

✓ Extended temperature operation available

The MPC555 Analog and Digital I/O module provides 16 channels of analog input to PC/104 systems that run high or low speed CPUs. The module also includes 24 bits of digital I/O, 4 general-purpose input jumpers, 8 user LEDs, 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, ±5V, and ±10V.

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

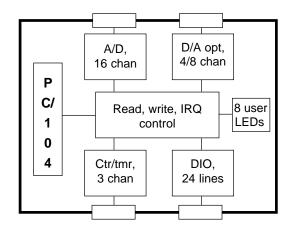| Software Support	Compatible Hardware	Mounting/Packaging
Example software included for DOS/Linux	*Any Micro/sys CPU with PC/104 expansion connector*	*PC/104 standard*

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

Specifications:

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

Power Requirements:
- ❑ +5V ± 5% at 250 mA max, no DAC option
- ❑ DAC option requires additional +5V ± 5%:
  4 channel option - 60 mA max
  8 channel option - 120 mA max

Environmental:
- ❑ 0° - +70°C operation
- ❑ -40° - +85°C operation, -ET version
- ❑ -40° - +85°C storage
- ❑ 5%-95% relative humidity, non-condensing

PC/104 Interface:
- ❑ 8-bit PC/104 module
- ❑ IRQ3-7 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
- ❑ Outputs sink/source 2.5mA

Analog Inputs:
- ❑ Sixteen 12-bit channels
- ❑ ±.5 LSB linearity
- ❑ 6usec conversion, 100kHz sampling rate
- ❑ Software selectable input ranges, +5V, +10V, ±5V, ±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
- ❑ ±.5 LSB linearity
- ❑ 6usec DAC update settling time

Input Jumpers/LEDs:
- ❑ 4 onboard general-purpose input jumpers
- ❑ 8 user LEDs

External Connections:
- ❑ 34-pin header for analog input
- ❑ 26-pin header for digital I/O
- ❑ 16-pin header for counter/timer I/O
- ❑ 16-pin header for analog output option

Ordering Information:

MPC555	8 Analog Input Channels, Digital, Timer I/O
MPC555-ET	8 Analog Input Channels, Digital, Timer I/O, extended temp operation
555OPT1-4	4 Analog Output Channels
555OPT1-8	8 Analog Output Channels
555OPT11	Additional 8 Analog Input Channels

Add -ET to option for extended temp operation

Related Products:

BA0016	16-Position Screw Terminal Strip Breakout Board with Ribbon Cable
BA0026	26-Position Screw Terminal Strip Breakout Board with Ribbon Cable
BA0034	34-Position Screw Terminal Strip Breakout Board with Ribbon Cable

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