



# MF 624

multifunction I/O card for PCI bus



## Introduction

**MF 624** is a multifunction I/O card offering most of the functions required in process control or measurement applications. MF 624 offers A/D conversion, D/A conversion, digital input, digital output, quadrature encoder input, timers, counters, PWM, pulse and frequency measurements. The card contains eight 14-bit analog input channels with simultaneous sample & hold circuit and very short conversion time, eight 14-bit analog output channels, eight digital inputs and eight digital outputs, four encoder inputs with differential line receivers and four counters/timers. Encoders and counters are 32-bit wide. MF 624 has 32-bit architecture for maximum performance.

Analog inputs and outputs offer bipolar ranges  $\pm 10$  V which suits most measurement and control applications.

The card is designed for standard data acquisition and control applications and optimized for use with the Real Time Toolbox for MATLAB®. Because of the small size and low power consumption MF 624 can be used not only in the desktop computers but also in portable computers and notebooks with docking station.

## Applications

- DC voltage measurement
- Transducer and sensor interfacing
- Vibration and transient analysis
- Process monitoring and control
- Waveform acquisition and analysis
- Multichannel data acquisition
- Real-time simulation
- Programmable voltage output
- Position measurements
- Servo systems
- PWM
- Frequency measurements
- Time measurements
- Pulse/frequency generation
- Pulse counting

## Specifications

### Analog Input

Channels:	8 single-ended channels
A/D converter:	14-bit, simultaneous sampling
Conversion time:	1.6 $\mu$ s 1 channel, 1.9 $\mu$ s 2 channels, 2.5 $\mu$ s 4 channels, 3.7 $\mu$ s 8 channels
Input range:	$\pm 10$ V,
Input Impedance:	$10^{10}$ S
Trigger mode:	software, timer, external

### Analog Output

Channels:	8 channels, 14-bit
Output Range:	$\pm 10$ V
Output current:	10 mA max.
Settling time:	31 $\mu$ s FS change to $\pm 1/2$ LSB.

### Digital I/O

Input lines:	8, TTL compatible
Output lines:	8, TTL compatible

### Timer/Counter

Number of channels:	4
Resolution:	32 bit, 20 ns
Modes:	PWM, counter, pulse generation

### Encoder Inputs

Input channels:	4, single ended or differential
Inputs:	A, B, Index
Input frequency:	max 2.5 MHz
Resolution:	32-bit

### General

Power consumption:	500 mA @ +5 V 150 mA @ +12 V 150 mA @ -12 V
Operating temperature:	0 to 50 °C (32 to 140 °F)
I/O Connector:	2 x DB-37 F
Interface:	PCI 5V or 3.3V

### Driver Support

Microsoft Windows  
32 and 64 bit C programming  
Real Time Toolbox for Matlab  
Real-Time Windows Target

## Contact Us

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