Blue Chip Technology

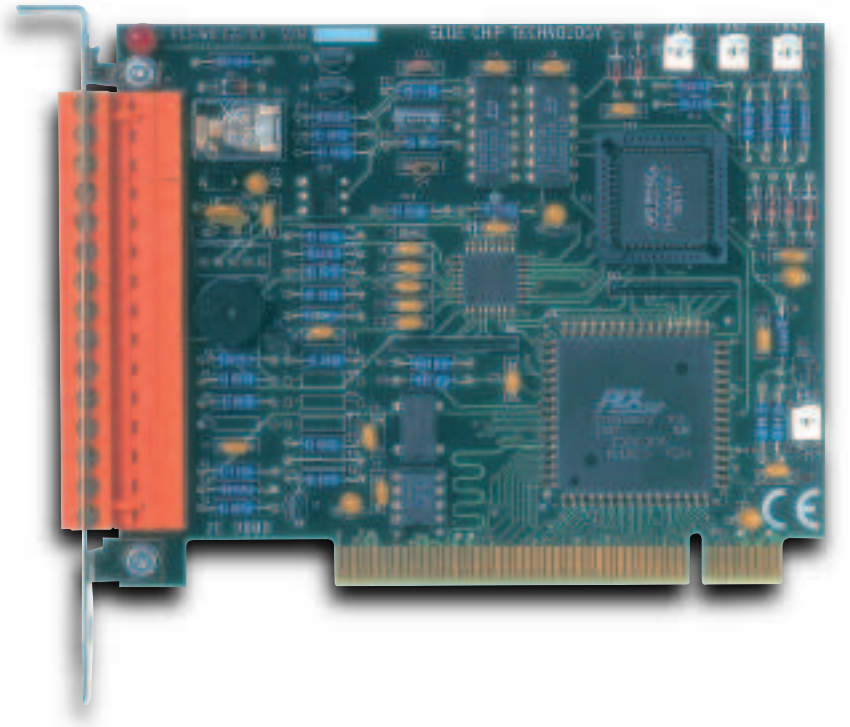
DATA

ACQUISITION CARDS

PCI-WDT

Watchdog Timer Card

The PCI-WD is a PCI-compatible half-card which provides system monitoring of system power supplies, fan operation, system temperature and Processor activity and generates alarm functions in the event of a system malfunction.



The heart of the system monitoring is performed by the National Semiconductor LM78 IC. This highly integrated devices performs the supply, fan and temperature monitoring circuits as well interrupt generation.

Three fan speed counter circuits provide a warning to the system that fans are operating out of specification.

Four PCI power rails (+3.3V, +5V, +12V and -12V) can be monitored for over and under voltage excursions. In the event of the rails drifting out specification the system is notified.

A programmable watchdog timer facilitates monitoring of application software execution. The timer is software selectable between 1 and 255 seconds.

The PCI-WD has an onboard temperature monitor to notify the system that temperature within the PC enclosure has risen past a prescribed level.

In response to any of the above monitoring circuits detecting an error or change in condition, the system can generate a number of responses including activating a relay, activating an on board audible alarm, illuminating an LED or resetting the system. Each of the above responses can be enabled and disabled under software control.

- On-board Watchdog Timer
- Power rail monitoring
- Isolated digital input
- Digital and Relay output
- Monitors 'hot spots' in computer system using remote temperature sensor
- On-board audible alarm
- All functions selectable under software control
- I/O connections via two part screw terminal on the end bracket
- Fully PCI and Plug-and-Play compliant
- Supplied with demonstration software examples
- Drivers for Windows® 2000 and Windows NT® available separately

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Technical Specification

Supply Monitors

Resolution: 8 bit Delta Sigma ADC

Accuracy ±1% / volts

LSB Weighting:
- 3.3 Volt rail 16mV/ bit
- 5 Volt rail 26.8mV/bit
- ±12 Volt rail 64mV/bit

Relay Output

Contact rating: 1A 24V DC, 120V 0.5A AC (non inductive)

Maximum current: 2A

Maximum Switched Voltage: 125 Volts

Maximum Switched Power: 24W/ 60VA

Minimum contact load: 1mA, 1Volt

Digital Input

Maximum Input Voltage: ±50 Volts DC or AC peak

Input Current: 1mA ± 200mA for Vth< Vin< 50V DC
+5µA (max) for -50V DC < Vin < Vth

Open Collector Output:

Maximum Drive Current: 500mA (Logic Low) Vout = 0.4 Volts (non inductive)

Maximum off state voltage 50 Volts DC

Maximum output Dissipation: 750mW

Fan inputs:

Maximum Input voltage: +5Volt from totem pole source
+12Volt open collector source

Fan 1 & 2 nominal input: Divisor = 1, count =153, RPM = 8800
Divisor = 2, count =153, RPM = 4400
Divisor = 3, count =153, RPM = 2200
Divisor = 4, count =153 RPM = 1100

Fan 3 nominal input: Count = 153, RPM = 4400

Temperature Monitor

Range: -10°C < Ta< +100°C

Accuracy: ±3°C

Resolution: 1°C

Interrupts

Interrupt Sources: Register selectable to 12 sources, +3.3V, +5V, +12V, -12V, 3 fan circuits temperature monitor, external input and watchdog timer

Levels Supported: One PCI INTn# interrupt

Address Overhead: 12 I/O addresses in 2 PCI address spaces

Power

Board Power Requirement: +5 Volts, 1.8 W maximum
+3.3Volts @ 1mA max
+12 Volts @ 1mA max
-12 Volts @ 1mA max

Physical

Signal Connections: 1 x 15 way two-part screw terminal connector

Dimensions: 124 (L) x 99 (H) board only
140 (L) x XX (H) x 22(W) including bracket

Options

- 50 way screw terminal adapter
- 1 metre cable with IDC and D type connector
- Windows NT® driver
- Windows® 98/2000 driver

BS EN ISO 9001
Certificate No 33069

CE

3 YEAR WARRANTY

Blue Chip Technology

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