SPECIFICATIONS

CIO-DIO24
CIO-DIO24H
CIO-DIO/CTR3

Digital I/O

MEASUREMENT COMPUTING™

Revision 7, January, 2001

A. CIO-DIO24

Power consumption

+5V:	170 mA typical, 270 mA maximum

Digital Input / Output

Digital Type	82C55
Configuration	2 banks of 8, 2 banks of 4, programmable by bank as input/output
Number of channels	24 I/O
Output High	3.0 volts min @ –2.5 mA
Output Low	0.4 volts max @ 2.5 mA
Input High	2.0 volts min, 5.5 volts absolute maximum
Input Low	0.8 volts max, –0.5 volts absolute minimum
Power-up / reset state	Input mode (high impedance)
Interrupts	2 through 7, jumper-selectable
Interrupt enable	External (IR Enable), logic low enabled (disabled by default via internal 10k resistor to +5V)
Interrupt sources	External (IR Input), rising edge

Environmental

Operating temperature range	0 to 50°C
Storage temperature range	–40 to +100°C
Humidity	0 to 90% non-condensing

B. CIO-DIO24H

Power consumption

+5V:	
All ports input mode	550 mA typical, 700 maximum
All ports output mode, all bits low	500 mA typical
All ports output mode, all bits high	360 mA typical

Digital Input / Output

Digital Type	82C55 mode 0 emulation
Output:	74S244
Input:	74LS373
Configuration	2 banks of 8, 2 banks of 4, programmable by bank as input/output
Number of channels	24 I/O
Output High	2.4 volts min @ –15 mA
Output Low	0.5 volts max @ 64 mA
Input High	2.0 volts min, 7 volts absolute maximum
Input Low	0.8 volts max, –0.5 volts absolute minimum
Power-up / reset state	Input mode (high impedance)
Interrupts	2 through 7, jumper-selectable
Interrupt enable	External (IR Enable), logic low enabled (disabled by default via internal 10k resistor to +5V)
Interrupt sources	External (IR Input), TTL, rising edge

Environmental

Operating temperature range	0 to 70°C
Storage temperature range	–40 to +100°C
Humidity	0 to 90% non-condensing

C. CIO-DIO24/CTR3

Power Consumption

+5V:	190 mA typical, 300 mA maximum

Digital Input / Output

Digital Type	82C55
Configuration	2 banks of 8, 2 banks of 4, programmable by bank as input/output
Number of channels	24 I/O
Output High	3.0 volts min @ –2.5mA
Output Low	0.4 volts max @ 2.5mA
Input High	2.0 volts min, 5.5 volts absolute maximum
Input Low	0.8 volts max, –0.5 volts absolute minimum
Power-up / reset state	Input mode (high impedance)
Interrupts	2 through 7, jumper selectable
Interrupt enable	External (IR Enable), logic low enabled (disabled by default via internal 10k resistor to +5V)
Interrupt sources	External (IR Input), rising edge

Counter Section

Counter type	82C54
Configuration	3 down-counters, 16 bits each
Counter 0 - independent, user-configurable	
Source:	user connector (CLK0) and optionally, 10 MHz on-board crystal oscillator, selectable by jumper
Gate:	user connector (GATE0)
Output:	user connector (OUT0) and optionally, counter 1 clock input, selectable by jumper
Counter 1 - independent, user configurable	
Source:	user connector (CLK1) and optionally, counter 0 output, selectable by jumper
Gate:	user connector (GATE1)
Output:	user connector (OUT1) and optionally, counter 2 clock input, selectable by jumper
Counter 2 - independent, user configurable	
Source:	user connector (CLK2) and optionally, counter 1 output, selectable by jumper
Gate:	user connector (GATE2)
Output:	user connector (OUT2)
Clock input frequency	10 MHz maximum
High pulse width (clock input)	30 ns minimum
Low pulse width (clock input)	50 ns minimum

Gate width high	50 ns minimum
Gate width low	50 ns minimum
Input low voltage	0.8V maximum
Input high voltage	2.0V minimum
Output low voltage	0.4V maximum
Output high voltage	3.0V minimum

Environmental

Operating temperature range	0 to 70°C
Storage temperature range	–40 to +100°C
Humidity	0 to 90% non-condensing

Measurement Computing Corporation
16 Commerce Boulevard,
Middleboro, Massachusetts 02346

(508) 946-5100

Fax: (508) 946-9500

E-mail: info@measurementcomputing.com
www.measurementcomputing.com