



## M223 16 Bit Digital I/O M Module

The M223 (formerly Agilent E2290A) provides 16 data/actuator lines. These data lines offer TTL compatible inputs and open drain outputs up to 30 volts. Each I/O line also provides active pull-up and pull-down for actuating external devices such as relays or attenuators. The module also has the ability to generate an interrupt based upon matching of a pre-stored pattern in a Compare Register. De-bounce on inputs is available.

### Specifications:

#### Output Characteristics:

$I_{out}$ (High):	20mA (source)
$I_{out}$ (Low):	200 mA (sink)
$V_{out}$ (High):	2.9V (TTL); 30V (OC)
$V_{out}$ (Low):	0.4V

#### Input Characteristics:

$I_{in}$ (High):	n/a
$I_{in}$ (Low):	n/a
$V_{in}$ (High):	1.8V
$V_{in}$ (Low):	0.8V

#### Input De-bounce Control:

Input Register:	none or 3 ms
Pattern Register:	Fixed at 3 ms

#### Bit Addressing Options:

Two 8 bit ports, 1 16 bit,  
Or individual bits

#### Connectors:

44 pin DSUB  
(Female)

#### Temperature:

Operating:	0°C to 55°C
Storage:	-40°C to 75°C

#### Power:

+5V @ 0.385 A

### M Module Compliance

Complies with ANSI/VITA Std 12-1996 for single-wide M Modules.

Data Transfers	16 bit
Interrupts	INTC

Compatible with VXI, VME, PCI,  
PXI, CPCI & Ethernet Carriers

### Applications

- Control of external relays
- Monitoring of digital events

### Ordering Information

Part Number 11029580-0001

### Additional Information

User Manuals for C&H carriers and this module can be found on our website at [www.chtech.com](http://www.chtech.com).