Model DIG-1 Digital I/O Module

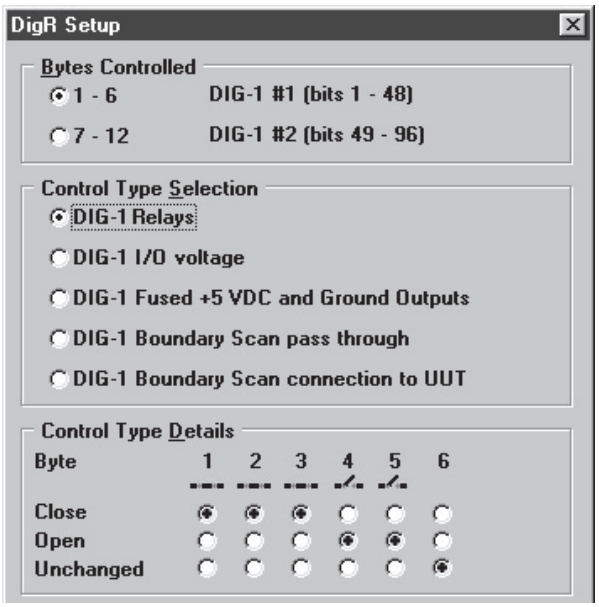
Product Features

- 3.3V and 5V Logic Levels
- 48 Relay-Isolated Digital I/O Points per Module
- Expandable to 96 Digital I/O Points per Visual MDA System
- Relay-Isolated Boundary-Scan I/O
- Relay-Isolated +5V Power Output

Applications

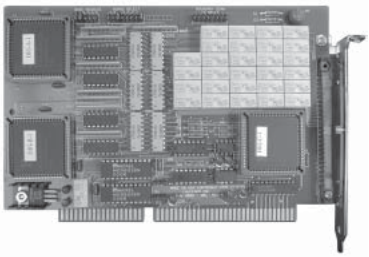
- ***Circuit Assembly Testing***
- ***Functional Digital I/O Testing***
- ***Mixed MDA and Functional Digital Testing***

The Model DIG-1 can be used to power-up and functionally test circuit assemblies with digital I/O signals. The DIG-1 digital I/O pins can be controlled by the Visual MDA test system and by boundary-scan.



Relay-isolation allows the DIG-1 module to be used with integrated MDA and functional test fixtures. The I/O pins are relay-isolated in six groups of 8 I/O pins. The power and ground outputs are relay-isolated. The boundary-scan pins are relay-isolated.

The Model DIG-1 is controlled by CheckSum Visual MDA™ Software. This software provides a variety of software functions to create a flexible test environment. The interactive environment includes a test-executive, test program editor, and statistical process control (SPC). All of the commands of the standard Visual MDA Software package are available to the DIG-1 user.



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Each DIG-1 module uses one ISA slot. Each module provides 48 test points. Up to two DIG-1 modules can be used in a Visual MDA test station, providing for up to 96 test-point capability.

System Configuration

The Model DIG-1 can be integrated with a CheckSum Manufacturing Defects Analyzer (Visual MDA) test system to expand the MDA system's capabilities. The DIG-1 can be installed in your test controller (PC), or integrated with a controller purchased from CheckSum, such as the Model T-120-WIN or T-120-WIN-IC. The system can be expanded by an additional 48 digital I/O pins with a second DIG-1 Module.

To use the DIG-1 in a MDA test system, the test system must be configured with Visual MDA software, and contain at least one ISA expansion slot for each DIG-1 module.

Controlling the DIG-1 with software other than Visual MDA is supported. Up to 256 DIG-1 modules, with 48 I/O pins each, can be addressed and controlled. Contact CheckSum for help with your application.

Custom Test Fixturing

Test fixture kits, or ready-to-use customized test fixtures can be purchased from CheckSum or can be built by a variety of fixturing contractors around the world.

Connection to test fixturing is provided by a standard 50-pin male connector at the DIG-1 back panel.

Contact the CheckSum fixture group for more information and competitive custom fixturing and test programming quotes.

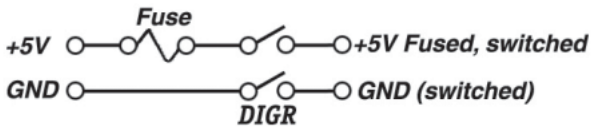
DIG-1 Specifications

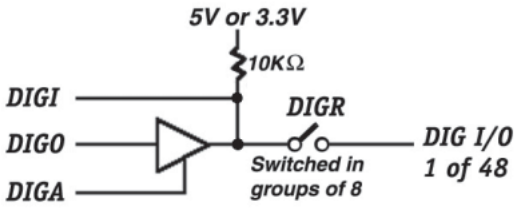
Each digital I/O bit is an individually, bi-directional digital TTL I/O line. The digital I/O bits are also compatible with most CMOS logic families with a 10KΩ pull-up resistor in place. The DIG-1 can be programmed to use 5V or 3.3V for digital input/output. When set to use 3.3V I/O, the pull-up resistor is tied to 3.3V.

I/O Voltage Supply Setting	I-source (max)	I-sink (max)
5V	4mA	24mA
3.3V	3.2mA	10mA

DIG-1 Visual MDA Test Types

DIGA	Digital I/O activate and configure
DIGI	Digital input
DIGO	Digital output
DIGR	Power and digital relay-isolation control
ISP	In-system programming (ISP) control





Data Rates

Data rates are computer CPU frequency dependent

Typical Visual MDA: 1.4KB/sec
Typical .EXE program (ISP): 1MB/sec

Other Specifications

- Model DIG-1 includes Module and 50-Pin Ribbon Cable. Order the Model DIG-1 to add onto any Visual MDA test system.
- Self-test of each module
- Digital I/O Pins per DIG-1 Module: 48
- Maximum I/O Pins per Visual MDA System: 96
- Maximum Addressable I/O Pins: 12,288
- 5V Power supply fuse: 1A
- Mechanical: Half-length, full-height ISA module
- I/O Space requirements: 32 contiguous bytes, jumper-selectable