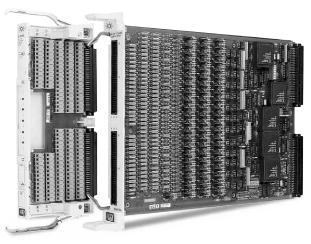


# Agilent E1459A

# **64-Channel Isolated Digital Input/Interrupt**

**Data Sheet** 

- 1-Slot, C-size, register based
- 64 interrupts, maskable and edge-selectable
- Jumper-selectable input levels
- Time-programmable debounce
- On-board 5 V supply for pull-up capability
- Handshake lines for each word (16 channels)



Agilent E1459A

### **Description**

The Agilent E1459A 64-Channel Isolated Digital Input/ Interrupt is a **C-size, 1-slot, register-based VXI module.** It is used to sense dc levels and edge transitions up to 48 Vdc. All inputs are optically isolated to withstand up to 125 V rms or Vdc. Plus, using the module's built-in 5 V supply with 9.4  $k\Omega$  effective pull-up resistance, you can detect whether external switches are open or closed.

The debounce feature is programmable for periods of 16  $\mu s$  to 1074 s in binary increments. Channel groups 1 to 32 and 33 to 64 can each have a unique programmed debounce period.

Each word (16-bit/channel) has strobe in, ready for data, and interrupt out. Strobe-in lines can be connected in parallel for 32- or 64-bit transfers.

Refer to the Agilent Technologies Website for instrument driver availability and downloading instructions, as well as for recent product updates, if applicable.



## **Product Specifications**

Input

**Voltages**: 5, 12, 24, 48 Vdc

Threshold:

min.: 1, 2.5, 7, 14 max.: 4, 9.5, 17, 31

Currents: 0.5, 1.3, 2.8, 5.8 mA (at nominal voltages)

Maximum input voltage: 60 Vdc (Between High and Low terminal of each channel), 125 V rms or Vdc (Between

each channel), 125 V rms or Vdc (Between channels or between any terminal and chasis)

Minimum input pulse

width: 100 ms + debounce time

**Debounce:** Programmable from 16 μs to 1074 s

Output

**5 volt supply:** 4.5 to 5.5 Vdc (at 32 mA total maximum)

**General Characteristics** 

 Number of channels:
 64

 Channel type:
 Input

 Output or input type:
 Variable

 Memory:
 n/a

 Max. pattern rate:
 n/a

 32-bit block transfer:
 n/a

 Test synchronization:
 n/a

Typical time to read 16-bit

word: 1 ms, using register access

Terminal module: Removable, with screw-type terminals

Maximum wire size: 16 AWG (1.5mm)

## **General Specifications**

# **VXI Characteristics**

VXI device type: Register based
Data transfer bus: A16, slave only

 Size:
 C

 Slots:
 1

 Connectors:
 P1/P2

 Shared memory:
 None

 VXI busses:
 None

 C-size compatibility:
 n/a

#### **Instrument Drivers**

See the Agilent Technologies Website (http://www.agilent.com/find/inst drivers) for driver availability and downloading.

No

#### **Command module**

firmware: Downloadable

**Command module** 

Framework:

firmware rev: A.08 I-SCPI Win 3.1: No I-SCPI Series 700: No C-SCPI LynxOS: No C-SCPI Series 700: No **Panel Drivers:** No VXI*plug&play* Win Framework: No VXIplug&play Win 95/NT Framework: Yes VXI plug&play HP-UX

| Module Current |                     |                     |  |
|----------------|---------------------|---------------------|--|
|                | I <sub>PM</sub> (A) | I <sub>DM</sub> (A) |  |
| +5 V:          | 0.19                | 0.10                |  |
| +12 V:         | 0                   | 0                   |  |
| –12 V:         | 0                   | 0                   |  |
| +24 V:         | 0                   | 0                   |  |
| –24 V:         | 0                   | 0                   |  |
| –5.2 V:        | 0                   | 0                   |  |
| −2 V:          | 0                   | 0                   |  |

#### **Cooling/Slot**

Watts/slot: 1.00  $\Delta P \text{ mm H}_2 \mathbf{0}$ : 0.05 Air flow liter/s: 0.42

# Ordering Information Description Product No. 64-Channel Isolated Digital Input/Interrupt E1459A

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