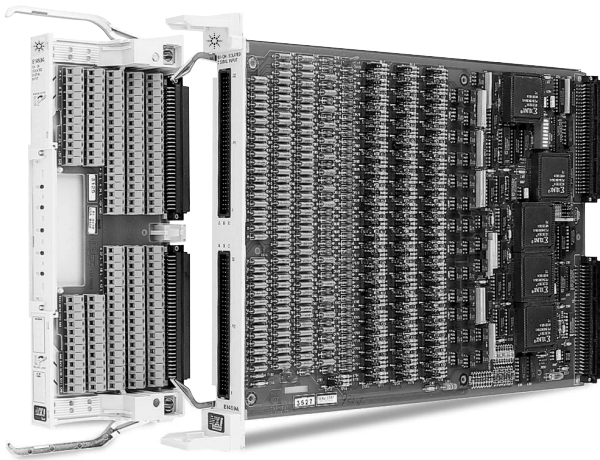


Agilent E1459A

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

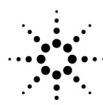
Description

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 Ω effective pull-up resistance, you can detect whether external switches are open or closed.

The debounce feature is programmable for periods of 16 μ 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 channels or between any terminal and chassis) |
| Minimum input pulse width: | 100 ms + debounce time |
| Debounce: | Programmable from 16 μ s 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.

| | |
|-----------------------------------|--------------|
| Command module firmware: | Downloadable |
| Command module 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 |
| VXIplug&play Win Framework: | No |
| VXIplug&play Win 95/NT Framework: | Yes |
| VXIplug&play HP-UX Framework: | No |

Module Current

| | I_{PM} (A) | I_{DM} (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 |
| ΔP mm H ₂ O: | 0.05 |
| Air flow liter/s: | 0.42 |

Ordering Information

| Description | Product No. |
|--|-------------|
| 64-Channel Isolated Digital Input/Interrupt Service Manual | E1459A |
| | E1459A 0B3 |
| 3 Yr. Retn. to Agilent to 1 Yr. OnSite Warr. | E1459A W01 |

Related Literature

2000 Test System and VXI Catalog CD-ROM,
Agilent Pub. No. 5980-0308E (detailed specifications for VXI products)

2000 Test System and VXI Catalog,
Agilent Pub. No. 5980-0307E (overview of VXI products)

1998 Test System and VXI Products Data Book,
Agilent Pub. No. 5966-2812E

Online

Internet access for Agilent product information, services and support
www.agilent.com/find/tmdir

VXI product information
www.agilent.com/find/vxi

Defense Electronics Applications
www.agilent.com/find/defense_ATE

Agilent Technologies VXI Channel Partners
www.agilent.com/find/vxichanpart

Agilent Technologies' HP VEE Application Website
www.agilent.com/find/vee

Agilent Technologies Data Acquisition and Control Website
www.agilent.com/find/data_acq

Agilent Technologies Instrument Driver Downloads
www.agilent.com/find/inst_drivers

Agilent Technologies Electronics Manufacturing Test Solutions
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