Agilent E1406A
VXI GPIB Command Module
C-Size

Data Sheet

Features

• 1-Slot, C-size, message-based commander
• GPIB, RS-232, Slot 0, and Resource Manager
• 2 MB RAM
• MXIbus protocol support for high throughput
• Easy to program as message-based instruments

Description

The Agilent Technologies E1406A Command Module is a C-size, 1-slot VXI message-based commander that provides Slot 0 and Resource Manager functions. It can act as a VMEbus system controller and GPIB (IEEE-488)-to-VXIbus interface device for transparently communicating with any manufacturer’s message-based VXI modules. The E1406A Command Module has FLASH memory for downloadable drivers, so you can program Agilent register-based devices using the high-level SCPI programming language. It also translates SCPI commands for register-based instruments and therefore, makes these VXI devices as easy to program as message-based instruments.

This command module also includes a MXIbus Resource Manager for VXIbus extensions. This allows you to maintain high-throughput performance in multiple mainframe systems. With its flexible triggering and clock interfacing, you can synchronize the VXI backplane 10 MHz clock to an external TTL signal.

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

General Characteristics

- Processor: 16 MHz 68000
- Interface: IEEE-488
- Clock accuracy: 0.005% elapsed time
- Memory: 1.75 MB FLASH max.
  2 MB RAM max.
- Shared memory: 512 kB max.
- Agilent IBasic: Yes
- Slot 0 functions: Yes
- Resource manager: Yes
- MXIbus resource manager: Yes
- CLK10: Yes
- Temperature coefficient: 0.001%, to 0.012% of time since last set
  (per °C change in temperature)
- Resolution: 1.0 s

CLK10

- Input: TTL or low-level ac
- Minimum input level: 40 mV p-p
- Maximum input level: 42.5 V p-p
- Output: TTL
- Jitter: 0.03% (-55 db)
- Initial accuracy: 50 ppm
- Maximum stability: ± 20 ppm/year (0-55 °C)
- Typical stability: ± 3 ppm/year at 25 °C

Trigger Input

- Levels: TTL
- Input load: 55 kΩ, 50 pF
- Maximum rate: 12.5 MHz (TTL), 40 MHz (ECL)
- Minimum pulse width: 30 ns (TTL), 12.5 ns (ECL)
- Maximum trigger delay: 30 ns

RS-232 Interface (for terminal only)

- Baud rate: 300, 1200, 2400, 4800, 9600, 19200
- Parity: Even, Odd, One, Zero, None
- Character size: 7, 8
- Pace: Xon/Xoff, None
- Hardware handshake: DTR, RTS
- Buffer size: 16 characters
- RS-232 terminals supported: HP 700/92, HP 700/94, HP 700/22, HP 700/43;
  WYSE WY-30, DEC VT100, DEC VT220
- VXI compliance: Revision 1.4 compliance
### General Specifications

#### VXI Characteristics
- **VXI device type:** Message-based commander
- **Size:** C
- **Slots:** 1
- **Connectors:** P1/2
- **Shared memory:** Yes
- **VXI buses:** Local bus A, TTL Trigger Bus, ECL Trigger Bus

#### Instrument Drivers:
See the Agilent Technologies Website for driver availability and downloading. [http://www.agilent.com/find/inst_drivers](http://www.agilent.com/find/inst_drivers)
- **Command module firmware:** n/a
- **Command module firmware rev:** n/a
- **I-SCPI Win 3.1:** n/a
- **I-SCPI Series 700:** n/a
- **C-SCPI LynxOS:** n/a
- **C-SCPI Series 700:** n/a
- **Panel Drivers:** Yes
- **VXIplug&play Win Framework:** Yes
- **VXIplug&play Win95/NT Framework:** Yes
- **VXIplug&play HP-UX Framework:** No

#### Module Current

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<th>$I_{PM}$</th>
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<tr>
<td>+5 V:</td>
<td>3.2 A</td>
<td>0.32 A</td>
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<td>+12 V:</td>
<td>0.01 A</td>
<td>0.01 A</td>
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<td>-12 V:</td>
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<td>+24 V:</td>
<td>0.03 A</td>
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<tr>
<td>-24 V:</td>
<td>0</td>
<td>0</td>
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<td>-5.2 V:</td>
<td>0.4 A</td>
<td>0.04 A</td>
</tr>
<tr>
<td>-2 V:</td>
<td>0.01 A</td>
<td>0.01 A</td>
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#### Cooling Slot
- **Watts/slot:** 19.00
- **$\Delta P$ mm H$_2$O:** 0.30
- **Air flow liter/s:** 1.50

### Ordering Information

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LXI

www.lxistandard.org
LXI is the LAN-based successor to GPIB, providing faster, more efficient connectivity. Agilent is a founding member of the LXI consortium.

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