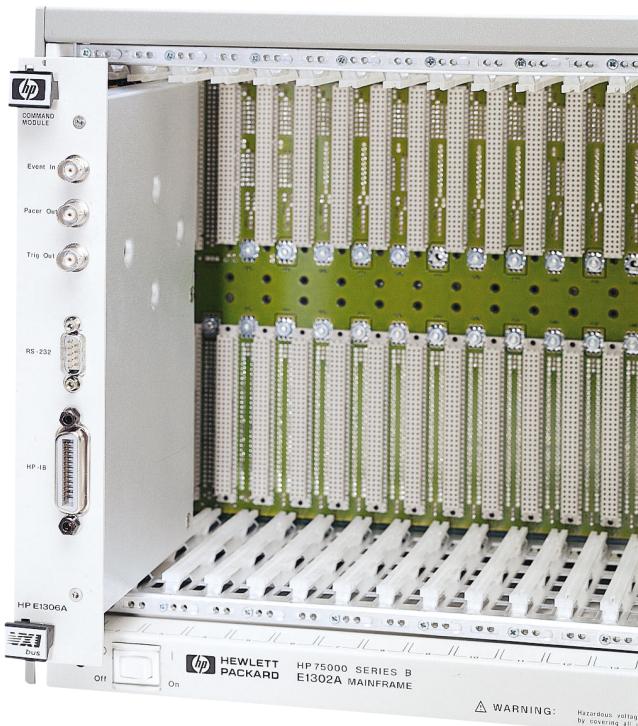# HP-IB Command Module for B-size VXI
# HP E1306A

## Technical Specifications

- **Embedded command module for B-size mainframe**
- **HP-IB and resource manager capabilities**
- **Access any manufacturer's register-based device**
- **Supports SCPI for easy programming**
- **HP VIC included for fast and easy set-up**



### Description

The HP E1306A HP-IB Command Module is a **VXI B-size, 2-slot command module** designed for use with the 20-slot E1302A mainframe. The HP E1306A offers HP-IB interface for your VXI mainframe, and manages the VXI backplane communications.

The command module, which parses the measurement control commands to register-based VXI devices, allows you to send SCPI commands to instruments in a consistent, readable form, making programming easier. The HP E1306A does not support Compiled SCPI (C-SCPI). The built-in RS-232 is intended for an RS-232 terminal connection that provides debugging capabilities for the user.

You can add up to 2 MB nonvolatile RAM memory in 1 MB increments to this command module. Additional memory of 1 MB is recommended for all configurations. For some configurations (i.e., HP E1313A 32-Channel Scanning A/D), you may need to add 2 MB RAM. The additional RAM is needed for instrument reading storage and SCPI downloadable drivers for register-based modules.

Refer to the HP Website directory of addresses (URLs) for instrument driver availability and downloading instructions.

### Configuration Restrictions

The HP E1306A must be used in the first slot of the mainframe, and it must be the resource manager for the system. You cannot use the HP E1306A in a system with any other VME bus masters (i.e., the HP E1306A cannot be used with VXLink, other embedded controllers, or other bus mastering modules).

# Specifications

## Real-time Clock

| | |
|---|---|
| **Clock accuracy:** | 0.01% or elapsed time since last set $\pm 1$ s |
| **Resolution:** | 1 s |
| **Nonvolatile lifetime:** | 60 days (battery life, 1 yr. typical; NiCad battery) |

## Trigger

| | |
|---|---|
| **Accuracy:** | |
|   **First pulse after trigger:** | 0.01% of programmed time $+600$ to 850 ns |
|   **Additional pulses:** | 0.01% of programmed time $\pm 50$ ns |
|   **Number of pulses:** | 1 through 8388607 or continuous |
| **Trigger input:** | TTL compatible |
| **Minimum pulse width:** | 300 ns |

## Built-in RS-232

| | |
|---|---|
| **Baud rate:** | 300, 1200, 2400, 4800, 9600, 19200 |
| **Buffer size:** | 100 characters |

## Non-volatile RAM Lifetime (typical)

| | |
|---|---|
| **512 KB:** | 11 months |
| **1 MB:** | 6 months |
| **2 MB:** | 3 months |

## General Characteristics

| | |
|---|---|
| **Processor:** | 8 MHz 68000 |
| **Interfaces:** | IEEE 488 |
| **Clock accuracy:** | 0.01% elapsed time $\pm 1$ s |
| **Memory:** | 2 MB RAM max |
| **Shared memory:** | No |
| **HP IBASIC:** | No |
| **Slot 0 functions:** | Yes |
| **Resource manager:** | Yes |
| **MXIbus resource manager:** | No |
| **Trigger input:** | TTL |
| **CLK10:** | No |

## VXI Characteristics

| | |
|---|---|
| **VXI device type:** | Register-based Commander |
| **Size:** | B |
| **Slots:** | 2 |
| **Connectors:** | P1 |
| **Shared memory:** | n/a |
| **VXI busses:** | n/a |
| **C-size compatibility:** | Not adaptable to C-size |

## Instrument Drivers

***See the HP Website (http://www.hp.com/go/inst__drivers) for driver availability and downloading.***

| | |
|---|---|
| **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 |
| **HP VEE Drivers:** | Yes |
| **VXI*plug&play* Win Framework:** | Yes |
| **VXI*plug&play* Win95/NT Framework:** | Yes |
| **VXI*plug&play* HP-UX Framework:** | No (not available at time of publication) |

## Module Current

| | $I_{PM}$ | $I_{DM}$ |
|---|---|---|
| **+5 V:** | 0.95 | 0.01 |
| **+12 V:** | 0.02 | 0.01 |
| **−12 V:** | 0.02 | 0.01 |
| **+24 V:** | 0 | 0 |
| **−24 V:** | 0 | 0 |
| **−5.2 V:** | 0 | 0 |
| **−2 V:** | 0 | 0 |

## Cooling/Slot

| | |
|---|---|
| **Watts/slot:** | 5.50 |
| **$\Delta$P mm H$_2$O:** | 0.10 |
| **Air Flow liter/s:** | 0.44 |

# Ordering Information

| Description | Product No. |
|---|---|
| HP-IB command module for B-size VXI | HP E1306A |
| 1 Mbyte nonvolatile memory kit | HP E1306A 010 |