

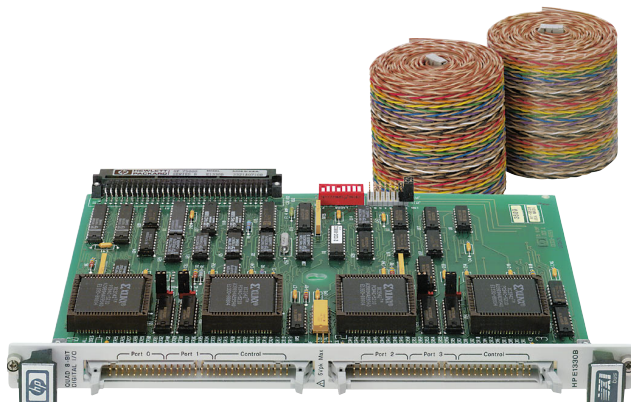
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# Quad 8-Bit Digital Input/Output HP E1330B

## Technical Specifications

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- Quad 8-bit input or output data ports
- Interface to industry standard opto-isolator racks
- Standard GPIO handshake modes
- Wide variety of output data types
- Four-port digital input/output module



### Description

The HP E1330B Quad 8-bit Digital Input/Output module is a **B-size, 1-slot, register-based VXI device**. It is a four-port digital input/output module intended for data communication and digital control.

Each 8-bit port is identical consisting of data and handshake/control lines. Each 8-bit port can be configured for output or input and positive or negative true logic. Ports can be combined allowing data transmission using bytes, words (16-bit), and long words (32-bit). Bit data transmissions are also allowed. Three handshake and control lines are provided for each port when using SCPI programming. The flag line from each of the individual ports can be used independently, or they can be combined when using word or long-word data transmission.

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

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## Handshake and Control Lines

Three handshake and control lines are provided for each port when using SCPI programming. These lines provide the following functions:

**FLG** Flag line. Data handshaking line input to the digital I/O module.

**CTL** Control line. Data handshaking line output by the digital I/O module.

**I/O** Input/output status line. Output line on the module describing the current status of the port.

The flag line from each of the individual ports can be used independently, or they can be combined when using word or long-word data transmission.

Each port has three additional control lines available for custom handshaking and interrupt functions: **PIR** (peripheral interrupt), **/RES** (peripheral reset), and **STS** (status). Control of these three lines is accomplished using register-based programming.

## C-size Adapter

For adapting this product to a C-size mainframe, refer to the section on Accessories in this catalog for a description of the HP E1403B Adapter.

## Specifications

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### General

Number of channels:	32
Channel type:	Input or Output
Output or input type:	TTL
Memory:	none
Max. pattern rate:	n/a
32-bit block transfer:	325 Kb/s
Test synchronization:	Software triggers hardware handshaking
Logic levels:	TTL Compatible, 5 V max

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### Data Lines

<b>Output characteristics:</b>	
$I_{out}$ (High):	-5.2 mA @ $V_{out} = 2.5$ V (Pullup Enabled)
$I_{out}$ (Low):	48 mA @ $V_{out} = 0.5$ V
<b>Input characteristics:</b>	
$I_{in}$ (High):	<2.5 mA @ $V_{in} = 2.5$ V
$I_{in}$ (Low):	<-3.2 mA @ $V_{in} = 0.4$ V
$V_{in}$ (High):	>2.0 V (5.0 V max)
$V_{in}$ (Low):	<0.8 V

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## Handshake Lines

### Output characteristics:

$I_{out}$ (High):	250 $\mu$ A @ $V_{out}$ (High) = 5 V
$I_{out}$ (Low):	40 mA @ $V_{out}$ (Low) = 0.7 V
$I_{out}$ (Low):	16 mA @ $V_{out}$ (Low) = 0.4 V

### Input characteristics:

$V_{in}$ (High):	>2.0 V
$V_{in}$ (Low):	<0.8 V
$I_{in}$ (Low):	<1.75 mA

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## Block Mode Transfers

8-bit wide:	@ 90 KB/s
32-bit wide:	@ 325 KB/s

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## VXI Characteristics

VXI device type:	Register-based
Size:	B
Slots:	1
Connectors:	P1
Shared memory:	No
VXI busses:	No
C-size compatibility:	with HP E1403A Adapter

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## Instrument Drivers

See the HP Website ([http://www.hp.com/go/inst\\_drivers](http://www.hp.com/go/inst_drivers)) for driver availability and downloading.

Command module firmware:	ROM
Command module firmware rev:	A.03
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
HP VEE Drivers:	Yes
VXIplug&play Win Framework:	Yes
VXIplug&play Win95/NT Framework:	Yes
VXIplug&play HP-UX Framework:	No (not available at time of publication)

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## Module Current

	$I_{PM}$	$I_{DM}$
+5 V:	0.5	0.01
+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

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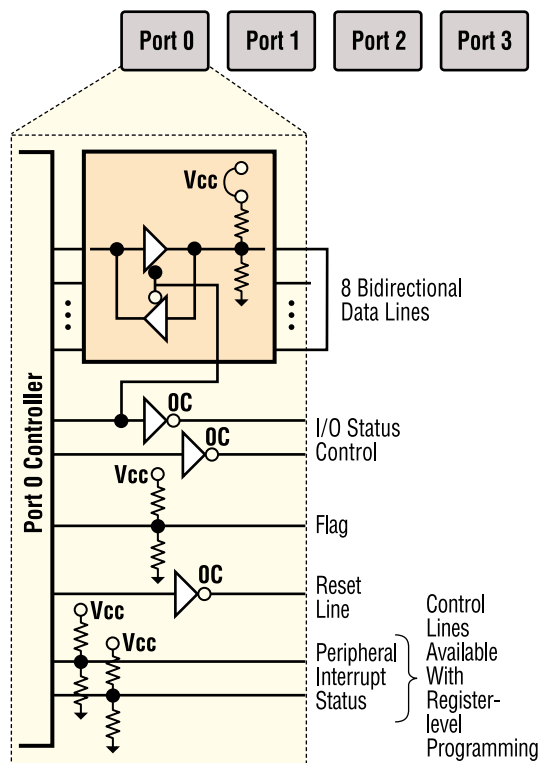
## Cooling/Slot

Watts/slot: 2.50  
 $\Delta P$  mm H<sub>2</sub>O: 0.04  
Air Flow liter/s: 0.21

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## Ordering Information

Description	Product No.
Quad 8-bit digital input/output	HP E1330B
Service manual	HP E1330B 0B3
Japan - Japanese localization	HP E1330B ABJ
3 yr. retn. to HP to 1 yr. OnSite warr.	HP E1330B W01
CABLE ASSY RIBON 60P	HP E1330-61601



HP E1330B Block Diagram

Data Subject to Change  
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