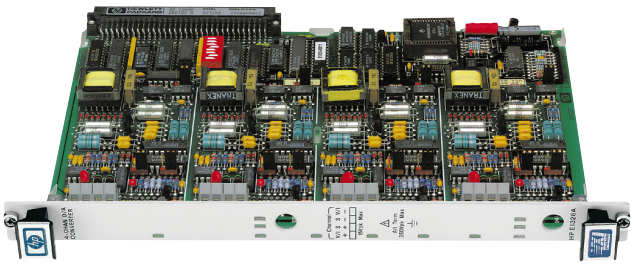
4-Channel D/A Converter HP E1328A

Technical Specifications

- **Four isolated voltage or current DACs**
- **± 10.92 V or ± 21.8 mA output**
- **Software calibration**
- **Remote voltage sensing with *no-fault* operation**
- **Multiple channels connected in series/parallel**



Description

The HP E1328A 4-Channel D/A Converter is a **B size, 1-slot, register-based VXI module.** It has four independent, isolated digital-to-analog channels configurable for either DC voltage or DC current output. Remote voltage sensing is available with no-fault operation.

All four channels are independently isolated and may be floated up to 350 Vdc from ground. Multiple channels may be connected in series or in parallel to increase the voltage or current range (to 48 V or 96 mA using a single module). The D/A Converter can be calibrated through software commands. You can use this module in a system with a 5.5-digit multimeter (HP E1326B or equivalent) and multiplexer. Then, the system can be programmed to automatically calibrate the D/A outputs to 24-hour specifications each day. This product may be adapted for use in a C-size mainframe.

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

C-size Adapter

This product may be adapted for use in a C-size mainframe. See the HP E1403B Adapter description.

Specifications

DC Voltage

Amplitude: ±10.92 Vdc max (cal on), ±12 Vdc max. (cal off)

Resolution: 16 bit *(cal off)* 333μV programming interval *(cal on)* Monotonic to 2 mV

Amplitude accuracy (DC):

(cal on, within ± 5 °C of cal temperature and same load as at cal)

24-hour: ±(0.05% of output + 3.3 mV)

90-day: ±(0.15% of output + 29 mV)

Output current:

Compliance current: 24 mA

Short circuit current: ≤30 mA

Differential ripple and noise: <2 mV rms *(20 Hz–250 kHz, 1 kΩ load)*

DC Current

Range: ±21.8 mA *(cal on)* ±24.0 mA *(cal off)*

Resolution: 667 nA programming interval *(cal on)*, 16 bit resolution *(cal off)* Monotonic to 4 μA

Accuracy:

(cal on, within ± 5 °C of cal temperature and same load as at cal)

24-hour: ±(0.05% of output + 7 μA)

90-day: ±(0.15% of output + 59 μA)

AC Output

Sample rate: 1.3 kSa/s

Amplitude accuracy (AC): not specified

Standard waveforms: No

Arbitrary waveform function: No

Modulation: No

Sweep: No

Output voltage:

Compliance voltage: 13 V

Max open circuit voltage: ≤19 V

Differential ripple and noise: <4 μA rms *(20 Hz - 250 kHz, into 100 Ω)*

General

Settling time: 750 μs *(cal on)*, 500 μs *(cal off)* *(single channel, to rated accuracy)*

Isolation: 250 V rms, 350 Vdc/ac pk *(Channel-to-channel or chassis)*

Max wire size: 16 AWG (1.5 mm)

VXI Characteristics

VXI device type: Register-based

Data transfer bus: A16, D16 DTB Slave

Size: B

Slots: 1

Connectors: P1

Shared memory: n/a

VXI busses: n/a

C-size compatibility: Yes

Instrument Drivers

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

Command module firmware: ROM

Command module firmware rev: A.01

I-SCPI Win 3.1: Yes

I-SCPI Series 700: Yes

C-SCPI LynxOS: Yes

C-SCPI Series 700: Yes

HP VEE Drivers: Yes

VXI*plug&play* Win Framework: No

VXI*plug&play* Win95/NT Framework: No

VXI*plug&play* HP-UX Framework: No (not available at time of publication)

Module Current

	I_{PM}	I_{DM}
+5 V:	0.4	0.02
+12 V:	0.5	0.01
−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: 6.50

ΔP mm H_2O: 0.11

Air Flow liter/s: 0.52

Ordering Information

Description	Product No.
4-Channel D/A Converter	HP E1328A
Service manual	HP E1328A 0B3
Japan - Japanese localization	HP E1328A ABJ
3 yr retn. to HP to 1 yr. OnSite warr.	HP E1328A W01

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