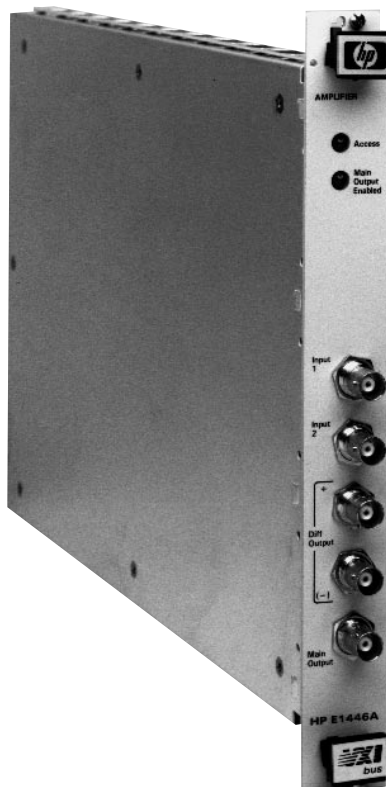

Summing Amplifier/DAC HP E1446A

Technical Specifications

- Drive 50-Ohm loads with 20 Vp-p
- Sum two input signals
- Add DC offset with internal DAC
- Can function as a standalone power DAC
- Can act as servant to the HP E1445A



Description

The HP E1446A Summing Amplifier/DAC is **C-size, 1-slot, register-based VXI module**. It has the output drive capability needed to drive 20 Vp-p into a 50-Ohm load and 40 Vp-p into high impedance. This allows selection of a low-power signal source such as the HP E1445A and boost its power output.

Two separate signals can easily be combined with the HP E1446A. Pre-amplifier attenuators provide independent level control prior to the summing node. The power output has a switchable 20-dB post attenuator to reduce the sum of the two inputs.

A precision 16-bit Digital-to-Analog Converter provides programmable DC offsets and levels. The HP E1446A programs in the SCPI language by using the HP E1406A Command Module or the HP E1445A Arbitrary Function Generator. The command module is not required when used with the arbitrary function generator.

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

Specifications

Input

Number of inputs:	2
Input impedance:	50 Ω , 75 Ω , or 1 M Ω // 20 pF
Pre-attenuator on both input channels:	31 dB in 1 dB steps

Output

Number of outputs:	Number of outputs: one single-ended power output and one differential (inverting and noninverting) output
Max gain into 50 Ω :	
Power output:	10
Differential output:	1
Max output level:	40 Vp-p into high impedance, 20 Vp-p into 50 Ω on single-ended output, ± 1 V on differential outputs
Output impedance:	50 Ω , 75 Ω , and low impedance on power output; 50 Ω , 75 Ω on differential output
DC accuracy:	$\pm 1\%$ of full scale
Full power bandwidth:	10 MHz
Small signal bandwidth:	15 MHz
Post-attenuator on power output channel:	0 or 20 dB
DAC resolution:	16 bits
DAC accuracy:	0.5% of full scale plus 0.7% of setting
Max current:	200 mA
DAC settling time:	15 μ s to 0.03%

VXI Characteristics

VXI device type:	Register-based
Size:	C
Slots:	1
Connectors:	P1/2
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:	Download
Command module firmware rev:	A.06
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:	No
VXIplug&play Win95/NT Framework:	No
VXIplug&play HP-UX Framework:	No (not available at time of publication)

Module Current

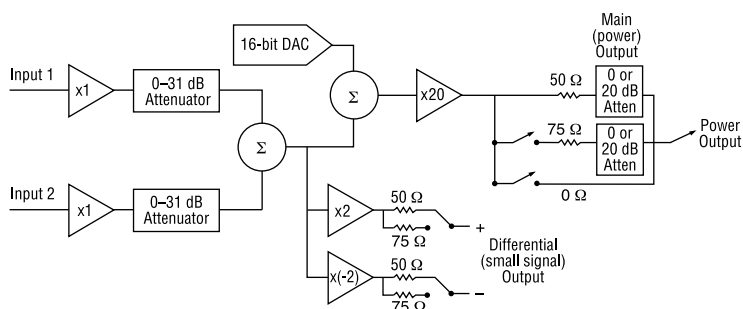
	I_{PM}	I_{DM}
+5 V:	0.4	0.04
+12 V:	0.2	0.06
-12 V:	0.08	0.05
+24 V:	0.36	0.27
-24 V:	0.34	0.27
-5.2 V:	0.22	0.04
-2 V:	0	0

Cooling/Slot

Watts/slot:	16.00
ΔP mm H ₂ O:	0.14
Air Flow liter/s:	1.28

Ordering Information

Description	Product No.
Summing Amplifier/DAC	HP E1446A
Service manual	E1446A 0B3
3 yr retn. to HP to 1 yr. OnSite warr.	E1446A W01



Data Subject to Change
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