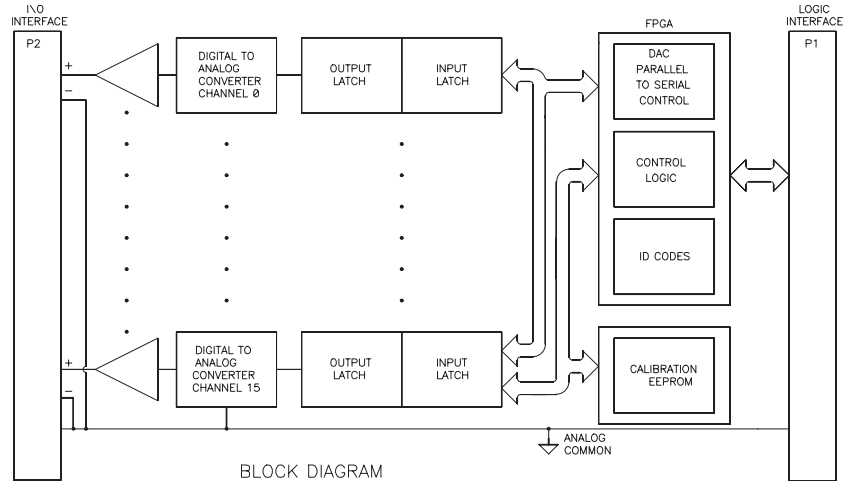


IOS Modules

IOS-231 Analog Output Module



16-bit D/A ♦ 8 or 16 analog voltage output channels

Description

IOS Modules plug into the 4-slot carrier card that is integrated within the I/O Server. Different modules can mix or match in any combination to meet the I/O requirements.

Each output channel on the IOS-231 has its own 16-bit D/A converter (DAC). Individual DACs are faster, and they eliminate glitches typically caused by the re-acquisition process of sample and holds found on multiplexed output boards.

Individual channels also have double-buffered data latches. You can select to update each output when it is written to, or to update all outputs simultaneously. Simultaneous outputs better simulate linear movements in motion processes.

Key Features & Benefits

- 8 or 16 analog voltage output channels
- Independent 16-bit D/A converters per channel with an 13.0µs settling time
- Bipolar voltage (non-isolated) outputs: -10 to +10 volts
- Double-buffered DACs
- High load capability (5mA output current)
- Built-in calibration coefficients
- Outputs reset to 0 volts.
- Internally stored calibration coefficients ensure accuracy.
- Software provides easy selection of transparent or simultaneous output modes.
- Double-buffered DACs allow new data to be written to each channel before the simultaneous trigger updates the outputs.
- -40 to 85°C operating temperature range

Ordering Information

IOS Modules

IOS-231-8
Eight voltage outputs

IOS-231-16
Sixteen voltage outputs

I/O Servers

See www.acromag.com for more information.



IOS modules plug into an I/O Server's integrated carrier



IOS-231 Analog Output Module

Performance Specifications

■ Analog Outputs

Output configuration
8 or 16 single-ended.

D/A Resolution
16 bits.

Output range
Bipolar, -10 to +10V.

Settling time
13 μ S.

Maximum throughput rate
Outputs can be updated simultaneously or individually.
One channel: 13 μ S/conversion.
Sixteen channels simultaneously: 13 μ S/16 channels.

System accuracy
0.0305% of 20V span maximum corrected error
(i.e. calibrated) at 25°C with the output unloaded.

Linearity error
 \pm 2 LSB (maximum).

Data format
Bipolar Offset Binary.

Output at reset
0 volts.

Output current
-5 to 5mA (maximum). This corresponds to a minimum
load resistance of 5K ohms with a 10V output.

■ Data Transfer

Data transfer cycle types supported:
Input/output (IOSel*): DAC data, control registers,
DAC offset and gain calibration coefficients.
ID read (IDSel*): 32 x 8 ID PROM.

Meets IP specifications per ANSI/VITA 4-1995 (R2002).

Access Times (8MHz clock):
ID EEPROM read: 0 wait states (250nS cycle).
DAC channel data write: 2 wait states (500nS cycle).
DAC offset/gain coeff. read: 1 wait state (375nS cycle).
Control register access: 1 wait state (375nS cycle).

■ Environmental

Operating temperature
-40 to 85°C.

Storage temperature
-55 to 100°C.

Relative humidity
5 to 95% non-condensing.

MTBF
Consult factory.

Power
+5V: 45mA.
+12V: 200mA.
-12V: 180mA.

Approvals
CE; UL/cUL Class 1 Division 2 Groups A, B, C, D.

ISO9001
AS9100  MADE IN USA

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