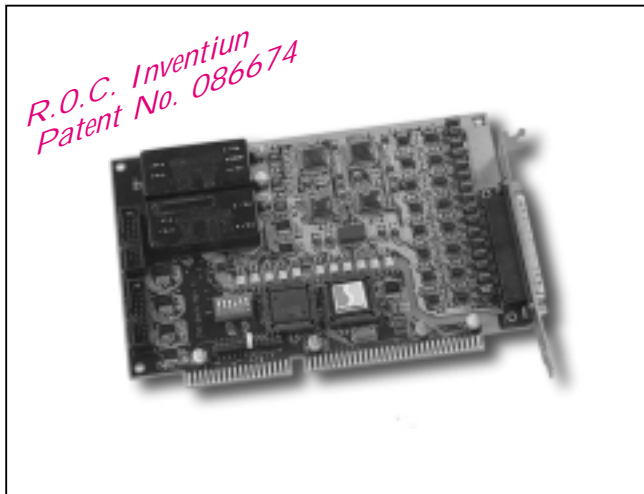




ISO-DA8/ISO-DA16

14-Bit 8/16 Channel Isolated Analog Output Board



Functional Description

The ISO-DA8/16 is an Bus-type isolated 14-bit D/A card for PC/AT compatible computers. The optical isolation of the ISO-DA8/16 can operate with up to 2500Vrms of common-mode voltage.

The ISO-DA8/16 offers 8/16 channel double-buffered analog outputs. The output range may be configured in different ranges: $\pm 10V$, $\pm 5V$, 0~10V, 0~5V voltage output or 4 to 20mA / 0 to 20mA current loop sink. The innovative design improve several drawbacks of the conventional isolated D/A card. For example : 1). Jumperless, Trimless 2). The power-on value of analog output can be pre-defined by the user and stored in the on board EEPROM 3) The calibration is performed under software control, thus eliminating manual trimpot adjustments. The calibration data is stored in EEPROM. Easy recalibration ensures the accuracy of the board 4). Every channel can be selected as voltage or current output 5). High channel count output can be implemented in half size.

Features

- AT bus
- 2500VDC photo-isolation protection
- 8/16 channel, 14-bit analog output
- Unipolar or bipolar outputs available from each converter
- Voltage/Current output from each converter
- Output type (Unipolar or bipolar) and output range (0-5V,+/-5V,0-10V,+/-10V) can be software programmable

- 4-20mA current sink to ground from each converter
- Double-buffered D/A latches
- Command set programming
- Software Calibration
- 16 channel DI, 16 channel DO

Applications

- Programmable voltage source
- Programmable current sink
- Harsh environment operation
- Process control

Specifications

■ Analog Outputs

D/A converter: Quad 14-Bit MDAC
Channels: 8/16 independent
Resolution: 14 bits
Type: double-buffered, multiplying
Integral linearity: 0.006% FSR; typical
Differential linearity: 0.006 % FSR; typical

■ Voltage Output Range :

Unipolar: 0~5V or 0~10V
Bipolar: +/-10Vor,+/- 5V
Current drive: +/-5mA
Absolute accuracy: 0.01% FSR typical
Power on state: programmable

■ Current Output Range :

0-20mA or 4-20mA
Absolute Accuracy: 0.1% FSR typical
Excitation voltage range: + 7 V to +40V
Power On state: programmable

■ Digital I/O

Inputs: 16 channels/ TTL levels
Outputs: 16 channels/ TTL levels

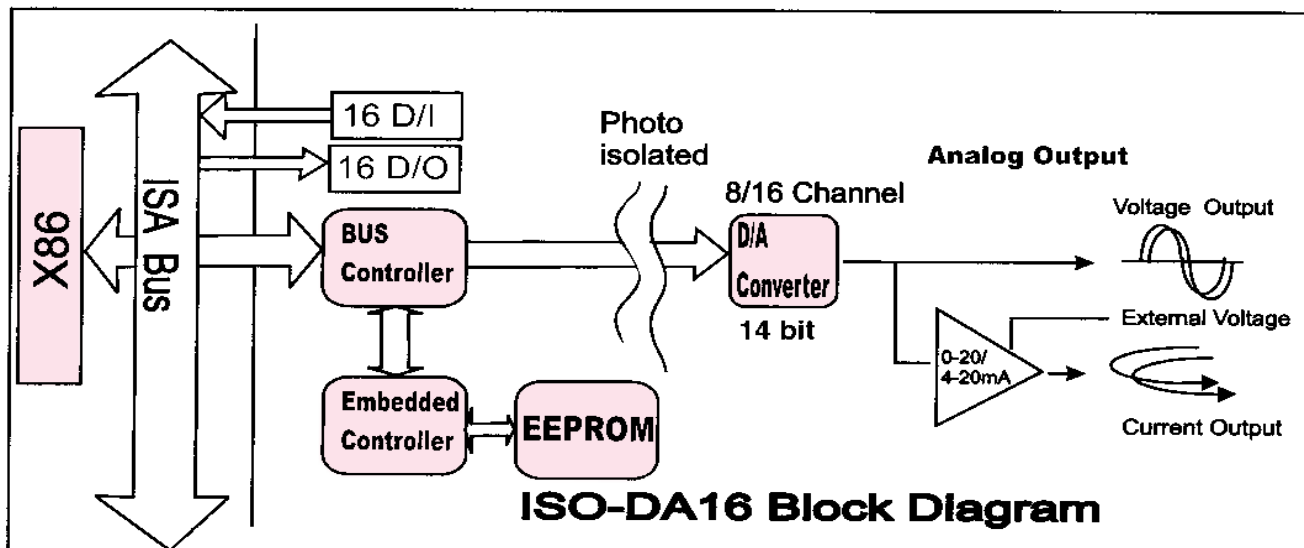
■ Stability

Offset temperature coefficient: +/- 50 μ V/ $^{\circ}$ C
Gain temperature coefficient: +/- 10ppm/ $^{\circ}$ C



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ISA-Bus

Power Requirements

- ISO-DA8: +5VDC @800mA max.
- ISO-DA16: +5VDC @1400mA max.

General Environment

- Operating temp: 0-50°C
- Storage temp: -20°C to 70°C
- Humidity: 0 to 90%
- Dimensions: 182 mm x 122 mm

Software

- ISO-DA Development Toolkit for DOS
- ISO-DA Development Toolkit for Win95
- ISO-DA Development Toolkit for WinNT

Order Description

- ISO-DA8: 8 Channel 14 BIT Isolated Analog Output Board
- ISO-DA16: 16 Channel 14 BIT Isolated Analog Output Board

Options

- DN-37: I/O connector Block with DIN- Rail mounting
- DB-37: 37-pin directly connect board
- ADP-20/PCI: 20-pin Extender
- ISO-DA LabVIEW Development Toolkit for Win95
- ISO-DA LabVIEW Development Toolkit for WinNT

Pin Assignment

V 0	1	•	20	I 0
V 1	2	•	21	I 1
V 2	3	•	22	I 2
V 3	4	•	23	I 3
AGND	5	•	24	AGND
V 4	6	•	25	I 4
V 5	7	•	26	I 5
V 6	8	•	27	I 6
V 7	9	•	28	I 7
AGND	10	•	29	AGND
V 8	11	•	30	I 8
V 9	12	•	31	I 9
V 10	13	•	32	I 10
V 11	14	•	33	I 11
AGND	15	•	34	I 12
V 12	16	•	35	I 13
V 13	17	•	36	I 14
V 14	18	•	37	I 15
V 15	19	•		

Note:

- AOn: Analog Voltage Output Channel
- IOn: Current Loop Output Channel
- A.GND: Analog Ground