

PXI/cPCI High-Density, Digital I/O Module

Racal Instruments 1260-1114, a PXI Digital I/O, is an innovative, seamless integration of an off-the-shelf Adapt-a-Switch® digital I/O module on a Racal Instruments PXI carrier. The module installs in any PXI/cPCI chassis without the need for user supplied software or hardware to install or operate.

- ◆ **Adapt-a-Switch® High-Density Digital I/O Module on a Racal Instruments PXI Carrier**
- ◆ **Extended Depth (12.1") for High-Density and Market-Leading Performance**
- ◆ **Available 96 TTL/CMOS Channels; 48 HVOC Channels**
- ◆ **Unmatched 8 MHz Data Transfer Speed**

The 12.1" module length has market-leading performance that utilizes the available service area between the front of a chassis and a cable/connector receiver. Module 1260-1114 has 85% greater component density than a typical PXI digital I/O module, providing higher digital I/O performance. Its high input data rate of 200 KHz exceeds typical digital I/O slow speed data rates. Also, its 1.5A input current (HVOC) far exceeds typical 150 mA ratings in the market today.

To meet the many customer digital I/O needs, the module is available in TTL, CMOS, OC (standard open collector) or HVOC (high-voltage/current open collector) I/O channels. Each TTL or CMOS I/O channel may be placed in high-impedance, tri-state mode. Additionally, the CMOS version features TTL level compliance provided the maximum current of the driver is not exceeded (refer to the specifications). The HVOC module is available in a high-voltage/high-current, 48-channel, open-collector version. The OC version can utilize a separate, external, pull-up supply for up to 32 VDC for each independent group, and the HVOC version can utilize a separate, external, pull-up supply for up to 50 VDC. These versions are ideal for controlling external digital circuitry, switches, relays, and similar devices.

Racal Instruments 1260-1114 has 8 MHz data transfer speed for fast data transfer that is required for timely, uninterrupted data acquisition and processing. For ease of use, and greater programming flexibility, the I/O channels are grouped into 12 separate groups with 8 channels each. Each channel can be configured as an input or output and individually controlled in asynchronous mode or with other channels in synchronous mode. With a high 960-channel count, each 1260-1114 can address a significant portion of all the required digital I/O's to be captured in a single PXI chassis slot. The module has a 2-wire handshake mode available for the control of synchronous I/O transactions. Each handshake line can be programmed as either active high or active low, providing a flexible interface with user signals.

The 1260-1114 is programmable in several operating modes and data may be manipulated in hex, decimal, or binary.

In keeping with cPCI requirements, the module can be ordered either as a 5V or 3.3V PXI bus module. The module includes drivers for LabWindows/CVI 5.1 and LabVIEW 7.0.

1260-1114 PRODUCT SPECIFICATIONS

INPUT/OUTPUT

Output Voltage	TTL	CMOS	OC	HVOC
Vout (high)	≥2VDC@15mA	≥3.8VDC@-8mA	5VDC≤Voh≤32VDC	2≤Voh≤50VDC
Vout (low)	≤0.5VDC@24mA	≤0.44VDC@8mA	≤1.5VDC@200mA	≤0.5VDC@1.5A

Input Voltage	TTL	CMOS	OC	HVOC
Vin (high)	≥2VDC	≥2VDC	≥2VDC	≥2VDC
Vin (low)	≤0.8VDC	≤0.8VDC	≤0.8VDC	≤0.8VDC
Vin (max)	5.5VDC	5.5VDC	32VDC	50VDC

Available I/O Channels

TTL: 96 Bi-directional I/O
 CMOS: 96 Bi-directional I/O
 Open-Collector: 96 Bi-directional open-collector channels
 High Voltage: 48 Bi-directional open-collector channels

Configuration

I/O lines selected as either input or output on an 8-bit byte basis

Data Rate

Static to 8 MHz

Channel Synchronization

Asynchronous, Synchronous or Mixed (Synchronous and Asynchronous)

Synchronous Trigger Handshake Polarity

User Programmable

Synchronous Busy Handshake Polarity

User Programmable

INTERFACE DATA

Cooling

Air Flow: 3.0l/s
 Back Pressure: 0.7 mm H₂O

Power Requirements

+5 VDC at 2.5 A maximum with all channels sourcing maximum loads

ENVIRONMENTAL DATA

Temperature

Operating: 0° C to 55° C
 Storage: -40° C to 75° C

Relative Humidity

85% ±5% non-condensing at <30° C

Altitude

Operating: 10,000 ft.
 Non-Operating: 15,000 ft.

Shock

30 g, 11 ms, ½ sine wave

RELIABILITY

MTBF

783,668 hrs. (MIL-STD-217E)

MTRR

<5 min.

MECHANICAL

Weight

38 oz (1.08 kg).

Dimensions

4.5" H x 0.85" W x 12.1" D

Front Panel I/O Interface Connector

160-pin DIN Connector
 30 g, 11 ms, ½ sine wave

Vibration

0.013 in. (pk-pk), 5-55 Hz

Bench Handling

4-inch drop at 45°

EMC

Emissions

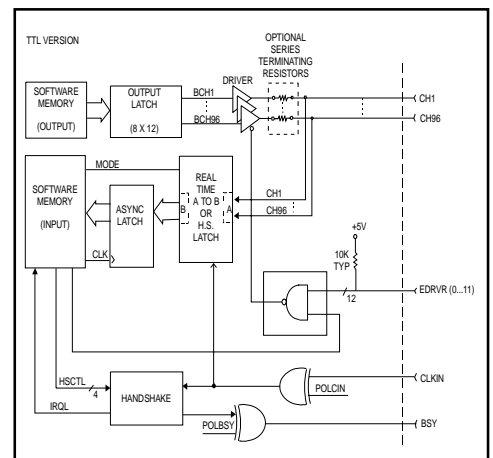
EN5501 1A with limits in accordance with EN50081-1

Immunity

IEC801 2.3.4 with limits in accordance with EN50082-1

Safety

EN61010-1



Note: Each switch card requires one mating connector.

CE The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

ORDERING INFORMATION

MODEL/DESCRIPTION

Racal Instruments 1260-1114OC-3, PXI, AaS High-Speed, High-Density, Digital I/O, 3.3 V Bus Voltage, Open Collector
 Racal Instruments PXI to AaS Carrier/Enclosure 3.3 V Kit
 Racal Instruments PXI to AaS Carrier/Enclosure 5 V Kit
 Racal Instruments 160-pin Connector Kit w/Strain Relief
 Racal Instruments 160-pin Cable Assembly, 6ft., 24 AWG

PART NUMBER

1260-1114OC-001
 408000-001
 408000-002
 407664
 407408-001

The EADS North America Defense Test and Services policy is one of continuous development, consequently the equipment may vary in detail from the description and specification in this publication.



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