

High-Density Digital I/O Plug-in Module

- ◆ **96 TTL, CMOS, or Open-Collector Input/Output Channels or 48 High-Voltage/Current Open-Collector Input/Output Channels**
- ◆ **2-wire Programmable Handshaking**
- ◆ **200 kHz Data Rate**
- ◆ **Drives up to 50 V and Sinks up to 1.5 A per channel**
- ◆ **Synchronous, Asynchronous and Mixed Operating Modes**
- ◆ **Standard Adapt-a-Switch™ Plug-in Design for Ease of Replacement**

Racal Instruments™ 1260-114 is a 96-channel digital I/O plug-in for the Adapt-a-Switch™ platform. A 48-channel high voltage/current open-collector version is also available. The 1260-114 installs easily and directly from the front panel into the Adapt-a-Switch VXIbus Carrier, Model 1260-100. Please refer to the 1260-100 data sheet for specifications and product features.

The 1260-114 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 a 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 high channel count of the digital I/O plug-ins allows a significant portion of digital I/O to be realized in a single slot of the Adapt-a-Switch Carrier, saving valuable VXIbus chassis space. The 1260-114 provides 96 digital I/O channels in twelve groups of eight bits each. The 1260-114OC version can utilize a separate external pull-up supply for up to 32 VDC for each independent group, and the 1260-114 HVOC can utilize a separate external pull-up supply for up to 50 VDC. The versions are ideal for controlling external digital circuitry, switches, relays and similar devices. Each channel is configurable as an input or an output and can be individually controlled in asynchronous mode or with other channels in synchronous mode.

The 1260-114 has a two-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 1260-114 is programmable in several operating modes and data may be manipulated in either hex, decimal or binary. Memory is available on the 1260 Series Option-01T Switch system controller to allow buffered I/O operations.

The Adapt-a-Switch™ series includes VXIplug&play support for WIN95/NT frameworks, including drivers for LabWindows/CVI and LabVIEW. Please refer to the Option 01T data sheet for additional product features.

1260-114 PRODUCT SPECIFICATIONS

INPUT/OUTPUT

Output Voltage	TTL	CMOS	OC	HVOC
Vout (high)	$\geq 2\text{VDC}@15\text{mA}$	$\geq 3.8\text{VDC}@8\text{mA}$	$5\text{VDC} \leq V_{oh} \leq 32\text{VDC}$	$2 \leq V_{oh} \leq 50\text{VDC}$
Vout (low)	$\leq 0.5\text{VDC}@24\text{mA}$	$\leq 0.44\text{VDC}@8\text{mA}$	$\leq 1.5\text{VDC}@200\text{mA}$	$\leq 0.5\text{VDC}@1.5\text{A}$

Input Voltage	TTL	CMOS	OC	HVOC
Vin (high)	$\geq 2\text{VDC}$	$\geq 2\text{VDC}$	$\geq 2\text{VDC}$	$\geq 2\text{VDC}$
Vin (low)	$\leq 0.8\text{VDC}$	$\leq 0.8\text{VDC}$	$\leq 0.8\text{VDC}$	$\leq 0.8\text{VDC}$
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: open-collector channels

Configuration

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

Data Rate

Static to 200 kHz (nominal)

Channel Synchronization

Asynchronous, Synchronous or Mixed (Synchronous and Asynchronous)

Synchronous Trigger Handshake Polarity

User Programmable

Synchronous Busy Handshake Polarity

User Programmable

OUTPUT

Impedance

50 Ω

Maximum Offset Voltage

± 50 mV

Capacitance

18 pF

Current

20 mA to 40 mA

ADAPT-A-SWITCH™ PLUG-IN INTERFACE DATA

Cooling

See 1260-100 cooling data

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% \pm 5% non-condensing <30 °C

Altitude

Operating: 10,000 ft.

Non-Operating: 15,000 ft.

Shock

30 g, 11 ms, 1/2 sine wave

Vibration

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

Bench Handling

4-inch drop at 45°

EMC

Emissions

EN55011A with limits in accordance with EN50081-1

Immunity

IEC801-2,3,4 with limits in accordance with EN50082-1

Safety

EN61010-1

RELIABILITY

MTBF

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

TTR

<5 min.

MECHANICAL

Weight

6 oz. (0.21kg)

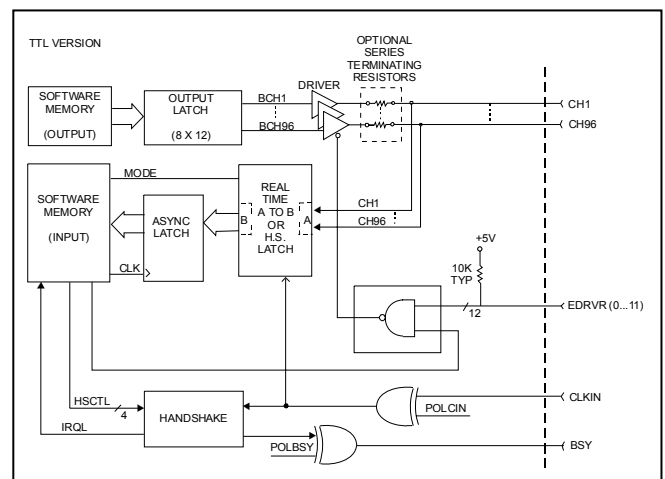
Dimensions

4.5" H x 0.75" W x 9.5" D

Front Panel I/O Interface Connector

160-pin DIN Connector

Note: Each switch card uses one mating connector



ORDERING INFORMATION

MODEL/DESCRIPTION

Racal Instruments 1260-114TTL, Digital I/O Plug-in Module, TTL Compatible

Racal Instruments 1260-114CMOS, Digital I/O Plug-in Module, CMOS Compatible

Racal Instruments 1260-114OC, Digital I/O Plug-in Module, Open Collector

Racal Instruments 1260-114HVOC, Digital I/O Plug-in Module, High Voltage Open Collector

160-pin Connector Kit w/Strain Relief

160-pin Cable Assembly, 6ft., 24 AWG

PART NUMBER

407661-001

407661-002

407661-003

407661-004

407664

407408-0012

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.

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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