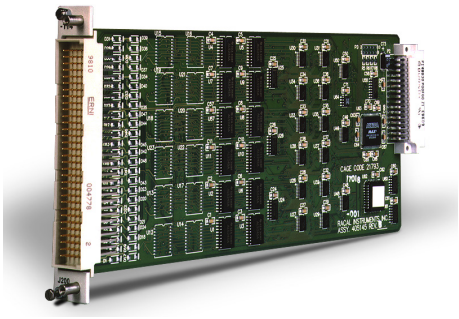


Racal Instruments™ 1260-114

High-Density Digital I/O Plug-in

The 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 Racal Instruments™1260-100 Adapt-a-Switch™ VXIbus carrier. Please refer to the 1260-100 data sheet for specifications and product features.

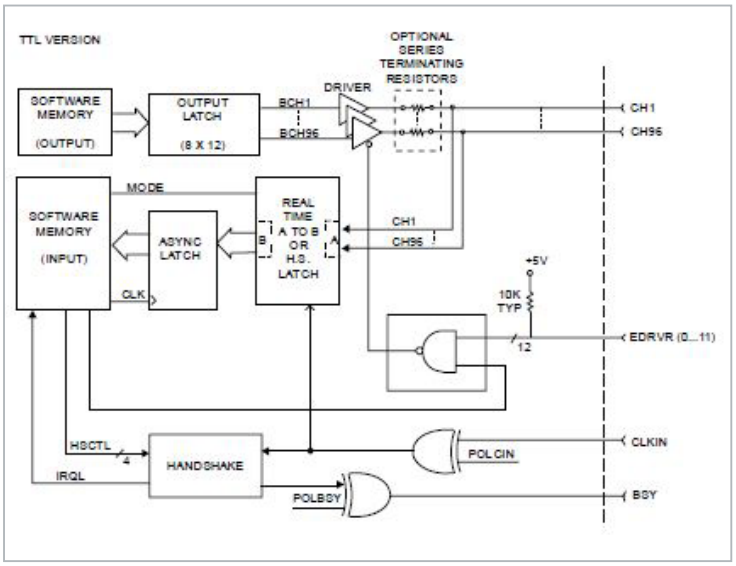
Key Features

- **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**

Product Information

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.



Block Diagram

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 Racal Instruments™ Option-01T switch system controller to allow buffered I/O operations.

The Adapt-a-Switch™ series includes VXI*plug&play* support for frameworks based on Microsoft Win32® application programming interface, including drivers for LabWindows™/CVI and LabVIEW™.

Please refer to the Option 01T data sheet for additional product features.

ASTRONICS TEST SYSTEMS

949.859.8999; 800.722.2528; atssales@astronics.com; www.astronicstestsystems.com

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Input/Output

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

Interface

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

Front Panel I/O Interface Connector
- 160-pin DIN Connector
- Note: Each switch card uses one mating connector

Environmental

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

Relative Humidity
- 85% ±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 to 55 Hz

Bench Handling
- 4-inch drop at 45°

Emissions
- EN55011A with limits in accordance with EN50081-1

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

Safety
- EN61010-1

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

MTTR
- <5 min

Mechanical

Weight
- 6 oz (0.21 kg)

Dimensions
- 4.5” H x 0.75” W x 9.5” D

Cooling
- See 1260-100 cooling data

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

Output Voltage	TTL	CMOS	OC	HVOC
V_{out} (high)	≥2 VDC @ 15 mA	≥3.8V DC @ -8 mA	5 VDC ≤ V_{oh} ≤ 32 VDC	2≤ V_{oh} ≤50 VDC
V_{out} (low)	≤0.5 VDC @ 24 mA	≤0.44 VDC @ 8 mA	≤1.5 VDC @ 200 mA	≤0.5 VDC @ 1.5 A

Input Voltage	TTL	CMOS	OC	HVOC
V_{in} (high)	≥2 VDC	≥2 VDC	≥2 VDC	≥2 VDC
V_{in} (low)	≤0.8 VDC	≤0.8 VDC	≤0.8 VDC	≤0.8 VDC
V_{in} (max)	5.5 VDC	5.5 VDC	32 VDC	50 VDC

Ordering Information

Note: When the 1260-114 is used in a VXI mainframe other than a 1256, a Racal Instruments™ Option 01T Smart Control Module must be installed in the mainframe's left-most slot.

407661-001 : Racal Instruments™ 1260-114TTL
Digital I/O Plug-in Module, TTL Compatible

407661-002 : Racal Instruments™ 1260-114CMOS
Digital I/O Plug-in Module, CMOS Compatible

407661-003 : Racal Instruments™ 1260-114OC
Digital I/O Plug-in Module, Open Collector

407661-004 : Racal Instruments™ 1260-114HVOC
Digital I/O Plug-in Module, High Voltage Open Collector

Accessories:

OPT-405108-001 : Racal Instruments™ Option 01T Smart Control Module installed (manual must be ordered separately; see below)
407531-001 : Racal Instruments™ Option 01T Smart Control Module (not installed) with manual
407664 : 160-Pin Connector Kit with Strain Relief
407408-001 : 160-Pin Cable Assembly, 6 ft, 24 AWG
407409-001 : 160-Pin Cable Assembly, 12 ft, 24 AWG
407809-001 : 160-Pin Cable Assembly, 6 ft, 24 AWG
602258-116 : 160-Pin Backshell
602258-900 : Extra 24 Gauge contact
990897 : Crimp Tool
990898 : Insertion Tool
990899 : Extraction Tool
991020 : Crimp Tool