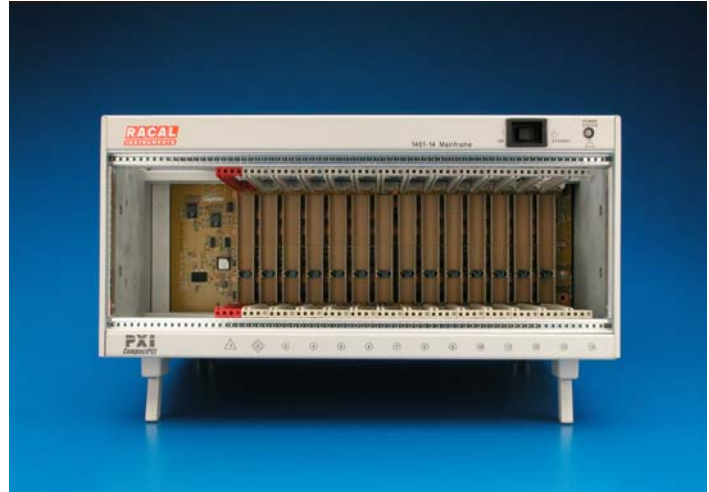


14-Slot PXI Mainframe Model 1461-14



- ◆ **Exceptional Forced-Air Cooling for High Speed and RF Applications**
- ◆ **Single Bridge Card Design for Optimal Backplane Throughput**
- ◆ **Accepts 3U PXI, 3U CompactPCI and 111.7 mm Modules**
- ◆ **526 Watts of Power Available to 14 Slots**
- ◆ **Built-In Power Supply and Fan Monitoring**
- ◆ **Benchtop Unit; Available Rack and Receiver Mounting**

Model 1461-14 is Racal Instruments' newest mainframe. This 3U PXI Chassis is ideal for power-hungry, functional test, data acquisition, and control applications using standard PXI, CompactPCI (cPCI), and mezzanine plug-in cards. Model 1461-14's compact benchtop or rack mount form factor optimizes system density and performance for speed-critical, space-limited applications.

Cost Effective System

With the insertion of a controller, signal sources and acquisition switching cards, a typical 8-slot chassis can quickly run out of space. Model 1461-14 solves this problem with its 14-slot capacity. The 1461-14 is the cost-effective alternative to multiple 8-slot chassis and more expensive 16-slot chassis.

Exceptional Cooling

Model 1461-14 provides exceptional, uniform cooling that helps protect high-power modules from heat damage. The user has the convenience and flexibility of three cooling options. First, the chassis can automatically select high or low fan speed based on temperature. Second, the user manually switches to high or low fan speed. Third, the automatic fan speed control varies fan speed based on temperature. The chassis' dual, 112 CFM, high-pressure impellers pull in air from the rear of the chassis and pressurize the chamber below the modules. This distributes air uniformly across the modules, and releases the air through the top and sides of the chassis.

PXI+cPCI+Mezzanines

To expand system functionality,

granularity, and improve cost-effectiveness mezzanine card carriers can be used with the chassis. The 1461-14 allows the mounting of 111.7 mm height (Standard Eurocard) dual M-Module carriers using special low-profile card guide adapters. These adapters allow a system to be configured with up to 26 separate M- or IP-mezzanine modules with functions like isolated, analog, and digital I/O, counters, digitizers, and signal generators.

Mechanical Options

Rack mounting runners or ears only are available for the 1461-14. In rack mount applications, Model 1461-14 accommodates receiver mechanisms. For portable applications, the chassis has a flexible side handle and integral rear panel handles. For bench top applications, the chassis may sit flat or at an angle.

MODEL 1461-14 SPECIFICATIONS

ELECTRICAL PERFORMANCE

Power Supply Input
90-250 VAC, 47-63 Hz
120 VAC, 47-440 Hz

Max Input Power
575 VA

Inrush Current
Limited to 35A

Power Factor
0.99 Typical

PXI INTERFACE DATA

DC Current

| | | | | |
|-------|--------|------|-------|-------|
| I (A) | +3.3 V | +5 V | +12 V | -12 V |
| | 40 A | 50 A | 8 A | 4 A |

DC Power
Total Available Power = 526 W

Periodic and Random Deviations (PARD)
+3.3/5 V rails: 50 mVp-p
+12V rails: 120mVp-p

Power Supply Protection

Over Voltage
Over Temperature
Over Current
Over Power
Reverse Voltage
Short Circuit

SYSTEM MONITORING

Power Indicator LED
Rear Panel voltage and fans speed monitoring via 9-pin D-sub

Fan Speed Control:
High, Low, and Automatic
speed optimized for low audible noise based on outlet air temperature

Temperature Monitoring:
Two outlet air sensors

MECHANICAL

Mainframe Size
PXI/cPCI Bus, 14 each 3U slots
3 expansion slots (left of slot 1)

Plug-In Module Compatibility

Standard: 3U PXI and cPCI 111.7 mm: For dual M-Module carriers (requires removal of standard card guides and replacement with low profile card guides)

Chassis Weight

33 lbs. (14.97 kg)

Dimensions

6.96" H X 15.06" W X 16.75" D

Cooling

Fans: Dual 112 cfm, impeller
Filters: Dual, rear-accessible, washable, 30 PPI

Standby Switch

Recessed standby switch on front prevents accidental power cycling

ENVIRONMENTAL DATA

Temperature

Operating: 0° C to +50° C
Non-operating: -40° C to +71° C


EMC Compliance

FCC 47 CFR Part 15 Class A
EN 61326:1997+A1:1998, Class A

Safety Compliance

EN61010-1:1993+A2:1995

| ORDERING INFORMATION | | |
|----------------------|---|-------------|
| Model | Description | Part Number |
| 1461-14 | 14-Slot PXI/CompactPCI/111.7 mm Mainframe | 407865-014 |
| Option 04 | Rack-Mount Ears Only | 407865-904 |
| 921394 | Chassis Runner (pair) | 921394 |
| 407865-925 | Shielded Filler Panel w/EMI gasket, 3U | 407865-925 |
| 407865-926 | Filler Panel, 3U | 407865-926 |
| 407865-927 | Automatic Custom Fan and Voltage Monitoring | 407865-927 |

 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 Racal 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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