



**R340-1FP-Sdd-cccc
Real-time Disk System**

Safety Instructions and Specifications

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About This Manual

This manual is intended to serve the following purposes:

- * to provide Product Safety instructions and documentation per the European Union Low Voltage Directive (LVD)
- * to provide the Declaration of Conformity documentation required for the CE Mark
- * to provide Specifications, operational, non-operational and environmental

If you are unable to locate the information you need, please feel free to contact us by e-mail or phone.

About the R340 Real-Time Storage System

Thank you for purchasing the Conduant R340 Real-Time Storage System. Your StreamStor system is a disk-based, real-time recording system for external data sources which can operate standalone or connected to a host computer. The system consists of a 3U chassis housing a StreamStor Amazon controller with attached FPDP2 mezzanine board, shielded FPDP I/O cable and high performance disk drives. Included with your system are the device drivers, software development tools, and additional utility software required to adapt the system to your specific application.

The PCI bus is a high performance I/O bus designed for attaching peripheral devices to computer systems. It is found in computing systems from many different manufacturers and is supported by most major operating systems. The R340 system includes an FPDP2 interface that provides a cabled bridge to the computer PCI bus. By utilizing the PCI bus instead of a proprietary bus interface, the R340 provides an open platform recording system accessible from software applications running Windows or Linux operating system on the host computer. The R340 provides a large capacity and cost effective alternative to system memory or other storage solutions for these applications.

The R340 System is able to receive data directly from the data acquisition device at very high average (sustained) data rates. Virtually all of the available PCI cards that can record data to system memory are compatible with the R340. Only minor software modifications are generally required to redirect data to the FPDP2 interface. This capability is often in the software provided by the manufacturers of such data acquisition devices.

The StreamStor technology used in the R340 was specifically designed to record sequential data without interruption at very high data rates. This is in contrast to traditional storage systems that are designed for data processing purposes and cannot sustain these high data rates. Unlike typical computer disk storage solutions that are designed for optimum performance during random data reads and writes, StreamStor has been designed for optimum performance in sequential read and write operations. The StreamStor system has also been designed to operate without host computer intervention. This eliminates any bottlenecks or interruptions in the data stream due to heavy computer loads or delays.

The StreamStor SDK includes the device drivers and API (Application Programming Interface) to provide a smooth integration of the R340 with the data acquisition device and/or analysis software. Many examples are provided with the SDK and more are available upon request.

The R340 system is a flexible and powerful platform for high performance recording applications. Many custom and unique capabilities are available that are beyond the scope of this documentation so please contact Conduant with your questions and special requirements.


Specifications

Weight	70 lbs (32 kg) with 12 drives installed (maximum)
Size	H 5.25" (13.3cm) x W 17" (43.2cm)x D 26" (66cm)
Electrical rating	100-240V~ 50/60 Hz 5A (total for all 3 power supplies) Note: AC supply variations are not to exceed $\pm 10\%$ of the rated 100-240V~ supply voltage range
Environmental Note that environmental specifications will vary with disk drive selection.	<p>Operating:</p> <p>Temperature: 5C to 50C operating Shock (half sine wave): 300G/2 ms, 160G/1 ms</p> <p>Indoor Use Only</p> <p>Ordinary Protection (not protected against harmful ingress of moisture)</p> <p>Maximum Relative Humidity: 5 – 95% relative humidity, non condensing</p> <p>Non-Operating:</p> <p>Storage Temperature: -40C to 65C Transportation Temperature: -40C to 65C Shock (half sine wave): 1000G/1 ms Altitude: 0 to 2,000 meters</p>
Pollution Degree	2 per EN 61010-1
Capacity	<p>Varies with disk model, up to 12 internal 3.5" SATA disk drives (magnetic or solid-state)</p> <p>The model number is of the form: R340-1FP-S<dd>-<cccc>, where</p> <p>dd is a two digit number indicating the number of disk drives up to 12.</p> <p>cccc is a four digit number indicating the capacity of the disk drives. For example 0250 is a 250 GB drive.</p>
Interfaces	FPDP2, 10/100 Ethernet

Components

The R340 real-time storage system generally consists of the following components:

- R340 System Chassis which contains:
 - up to 12 removable disk drives
 - 1 system drive, non-removable
 - 1 Motherboard and CPU
 - 1 CD/DVD Player and
 - triple redundant power supplies. (The system can run on 1 power supply, the other two are for redundancy.)
- Amazon PCI Board
- FPDP2 mezzanine board
- Cables
 - shielded FPDP2 I/O cable
 - metal clam shells for attaching the shield of the I/O cable to chassis at both ends of the cable
- StreamStor Software Development Kit (SDK)
- User Manuals
 - SDK User's Guide
 - StreamStor Amazon Realtime Disk Controller and User Manual
 - StreamStor FPDP II Daughter Board User Manual

 **CAUTION:** *Please read the entire User Manuals for the Amazon board and the FPDP2 board before removing or installing those boards. Those manuals assume that the user is knowledgeable and comfortable with basic computer work, including installation and safety considerations. If you are unsure as to how to proceed, please contact Conduant support.*

Safety Symbols and Warnings

Safety Symbols

This section provides a description of the safety marking symbols that appear on the R340 chassis. These symbols provide information about potentially dangerous situations.



Located on the chassis. This symbol means caution, refer to the Product Safety and Certification Manual for information.



Located on the front panel. This symbol indicates the unit's mode, where the mode is either *standby* or *on*.

Warnings



Caution

Disconnect all three power cords before removing chassis cover and servicing the unit.

The redundant power supplies are not intended to provide power if power is interrupted. An alarm will sound if one power supply loses functionality. At that time the bad supply should be replaced. Since they are likely to be on the same circuit, an Uninterruptible power supply (UPS) is recommended for power outage backup.



Caution

Do not use the front handles for moving the unit. It's recommended that two people move the unit by placing both hands under both sides of the unit. The handles are not designed to carry the full weight of the unit.

Safety Warnings

Warnings (continued)



Caution

This switch is a cycling type switch. The switch does not fully isolate or disconnect the power supplies from the unit when in the “standby” mode. AC line voltage is still present in the power supplies. All three power cords should be disconnected before removing the top cover.

Cleaning Instructions

The unit should only be cleaned with a damp cloth - no cleaning solutions should be used.

Rack Mount Precautions

If rack mounting the chassis, read and follow the instructions from the rack manufacturer.

If slide rails are to be used with the chassis, read and follow the instructions from the slide rail manufacturer.

CE Mark Declaration of Conformity

Declaration of Conformity



(Manufacturer) Conduant Corporation
(Address) 1501 South Sunset Street, Suite C
Longmont, CO 80501 USA

declares that the product:

High Speed Data Acquisition Unit, 3U, model R340-1FP-Sxx-0250 (where xx indicates the number of drives up to 12) intended for instrument rack mounting, provided with up to 12 hot swappable disk drives, cord connected (3 Mains Power Supply Cords for 3 load sharing power supplies), electrical supply input rated 100-240V~ 50-60Hz 5A.

conforms to the following Directives:

- 1. Low Voltage Directive 2006/95/EC
- 2. Electromagnetic Compatibility Directive 2004/108/EC

using the following primary standards:

EN 61010-1: 2001 : Safety of Electrical Equipment for Measurement, Control and Laboratory Use
EN 61326-1: 2006 : Electrical Equipment for Measurement, Control and Laboratory Use

EMC Requirements

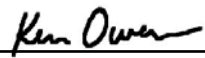
EN 55011: 2007 : Radiated and Conducted Emissions - Class A, Group 1
IEC 61000-4-2 : Electrostatic Discharge
IEC 61000-4-3 : Radiated RF Immunity
IEC 61000-4-4 : Electrical Fast Transients/Burst
IEC 61000-4-5 : Surge Immunity
IEC 61000-4-6 : Conducted RF Immunity
IEC 61000-4-11 : Voltage Dips, Interruptions

and complies with the relevant Essential Health and Safety Requirements.

I, undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards and is therefore eligible to carry the CE Marking.

Ken Owens
(Name)

President / CEO
(Position)


(Signature)

Longmont, Colorado
(Signed at place)

January 19, 2010
(Date)

Technical Support

Conduant wants to be sure that your R340 StreamStor system works correctly and stays working correctly. In the event, however, that you are unable to get your new system to work properly, or if a working system ceases to function, we will do all that we can to get your system back online.

Solving the problem is largely a matter of data collection and steps that must be taken one at a time. In order for us to better serve you, we ask that you take the time to perform the following steps prior to calling us. This way, you can provide us with the most meaningful information possible that will help us solve the problem.

Is the problem one that obviously requires replacement parts due to physical damage to the system? If yes, then please gather the information described below and report the problem to tech support, by phone or through the Conduant web site.

Have you confirmed that no cabling has been inadvertently disconnected or damaged while working around the equipment?

Do all the systems have good power connections and voltages?

Does the confidence test `sscfg.exe` (Windows) or `sstest` (Linux) run OK?

Has the software installation been corrupted? Try re-installing software.

Have you checked the Conduant web site for technical bulletins?

Have you recently installed a new compiler or a new Windows Service Pack?

If the above steps did not resolve the problem, then please initiate a trouble ticket on the support section of the Conduant website at www.conduant.com. Please provide as much information about your system and the problem as possible. We will do all that we can to resolve the problem as quickly as possible.

Contacting Technical Support

E-mail: support@conduant.com

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