

StorCase® Technology
Rhino® JR
RJR110

SCSI Ultra320
Removable
Drive Enclosure
User's Guide

Part No. D89-0000-0256 A02 July 2005

Kingston Technology Affiliate



StorCase Technology, Inc.
17600 Newhope Street
Fountain Valley, CA 92708-9885
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LIMITED WARRANTY

STORCASE TECHNOLOGY, Incorporated (“StorCase”) warrants that its products will be free from defects in material and workmanship, subject to the conditions and limitations set forth below. StorCase will, at its option, either repair or replace any part of its product that proves defective by reason of improper workmanship or materials. Repair parts or replacement products will be provided by StorCase on an exchange basis, and will be either new or reconditioned to be functionally equivalent to new.

This warranty does not cover any product damage that results from accident, abuse, misuse, natural or personal disaster, external power surge or failure, or any unauthorized disassembly, repair or modification. StorCase will not be responsible for any software, firmware or other customer data stored within, or interfacing with a StorCase product.

Duration of Warranty

Seven-Year Warranty: The following StorCase products are covered by this warranty for a period of seven (7) years from the original date of purchase from StorCase or its authorized resellers: all Data Express[®] removable device enclosures and all Data Silo[®], Data Stacker[®] and InfoStation[®] external expansion chassis, except for those components integrated into or purchased separately for use with these products which are identified and covered by the three-year or hard drive warranties described below. All StorCase interface cables and other accessories specifically intended for use with the StorCase products identified above are also covered by this (7) year warranty.

Three-Year Warranty: The following components integrated into or purchased separately for use with StorCase Data Express, Data Silo, Data Stacker and/or InfoStation products are subject to warranty for a period of three (3) years from the original date of purchase from StorCase or its authorized resellers: all RAID controllers, power supplies, fans and blowers.

Two-Year Warranty: The following StorCase products are covered by this warranty for a period of two (2) years from the original date of purchase from StorCase or its authorized resellers: all Rhino[®]JR fixed external expansion chassis (model types “FJR”) and all RhinoJR removable device enclosures (model types “RJR”).

One-Year Warranty: All StorCase products identified as Reconditioned or “Special Inventory” are covered by this warranty for a period of one (1) year from the original date of purchase from StorCase or its authorized resellers. Reconditioned products may only be exchanged for reconditioned products.

Hard Disk Drive Warranty: All hard disk drives purchased from StorCase or through its authorized resellers, whether purchased separately or integrated into StorCase products, are subject to the warranty terms and conditions provided by the drive manufacturer.

Third Party Software Warranty: All third party software purchased from StorCase for use with and/or as part of StorCase products is subject to the warranty terms and conditions provided by the software manufacturer.

Warranty Claim Requirements

To obtain warranty service, the defective product must be returned to your local authorized StorCase dealer or distributor, or, with prior StorCase approval, to the StorCase factory service center.

For defective products returned directly to StorCase, a Return Material Authorization (“RMA”) number must be obtained by calling StorCase Customer Service at (714) 445-3455. The RMA number must be prominently displayed on the outside of the return package. Shipments must be freight-prepaid and insured, and must include the product serial number, a detailed description of the problem experienced, and proof of the original retail purchase date. Products must be properly packaged to prevent damage in transit. Damage resulting from improper packaging will not be covered by this warranty. The StorCase factory service center is located at 17650 Newhope Street, Receiving Dock, Gate #4, Fountain Valley, CA 92780, U.S.A.

Free Technical Support

StorCase provides free technical support. If you experience any difficulty during the installation or subsequent use of a StorCase product, please contact StorCase’s Technical Support Department prior to servicing your system. This warranty covers only repair or replacement of defective StorCase products, as described above. StorCase is not liable for, and does not cover under warranty, any costs associated with servicing and/or installation of StorCase products.

StorCase Technical Support can be reached in the U.S. at (714) 438-1858 or toll-free at (888) 435-5460 (U.S. and Canada only). StorCase European Technical Support can be reached in the U.K. at +44 (0) 1932 738900.

Disclaimers

The foregoing is the complete warranty for the products identified above and supersedes all other warranties and representations, whether oral or written. StorCase expressly disclaims all warranties for the identified products, which are not stated herein, including, to the extent permitted by applicable law, any implied warranty of merchantability or fitness for a particular purpose. In no event will StorCase be liable to the purchaser, or to any user of a StorCase product, for any damages, expenses, lost revenues, lost savings, lost profits, or any other incidental or consequential damages arising from the purchase, use or inability to use a StorCase product, even if StorCase has been advised of the possibility of such damages.



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Kingston Technology Affiliate



Declaration of Conformity

Company Name: StorCase Technology, Inc.

Corporate Office Address: 17600 Newhope Street
Fountain Valley, CA 92708

Product Name: RhinoJr. RJR110 Removable Drive Enclosure

Model Number: S21A107, S21A110


Conforms to the following standards:

EMC Directives: EN 55022: 1998
(89/336/EEC) - EN 61000-3-2 Harmonic Current
- EN 61000-3-3 Voltage Fluctuations and Flicker
EN 55024: 1998 ITE Immunity
- EN 61000-4-2 - EN 61000-4-5
- EN 61000-4-3 - EN 61000-4-6
- EN 61000-4-4 - EN 61000-4-11

EMI Standards: FCC Part 15, Class B

EMC Standards: AS/NZS 3548 Information Technology Equipment

Year of Manufacture: 2004

Signature: 
Full name: Dieter Paul
Position: President

INTRODUCTION

WARNING: The RhinoJR contains NO USER SERVICEABLE PARTS inside the unit. Refer ALL servicing to qualified service personnel!

The StorCase Technology RhinoJR RJR110 removable drive carrier and receiving frame provides low cost, durable and reliable mounting for 3.5" SCSI Ultra320 drives within 5.25" half-height peripheral slots. The RhinoJR is constructed of lightweight aluminum and polycarbonate and allows a drive to be removed and transported to another RhinoJR-equipped computer or expansion chassis, and also provides the ability to secure sensitive data by removing and storing the drive safely for future use.

The RhinoJR carrier is also available separately. Contact your StorCase dealer for further details and ordering information.



Figure 1: RhinoJR RJR110 Removable Drive Enclosure

Front Panel

(Figure 2)

- **Unit ID Number Indicator:** This LED displays the physical address of the SCSI drive carrier.
- **Key Lock/Drive Power Switch** - Performs three functions. The key switch assures proper seating of the drive carrier within the receiving frame, turns power to the drive carrier ON and OFF, and prevents unauthorized removal or installation of the carrier. For the computer to access data on the disk drive, the key must be turned counterclockwise to the locked position.
- **LEDs:**
 - Power** - Steady glow indicates power ON.
 - Drive Activity** - Steady glow indicates that drive is inserted and ready for access.
Flashing indicates drive is being accessed.
 - Fan** - Green indicates normal fan operation.
Red indicates fan failure.
 - OverTemp** - Flashing red indicates overtemperature conditions (default is 60° C). Audible alarm will also sound.
- **Reset Switch:** This will reset OverTemp LED back to Green, as well as turn off audible alarm.
- **Carrier Fan:** Front-mounted carrier fan provides enhanced heat dissipation (4.7 CFM).

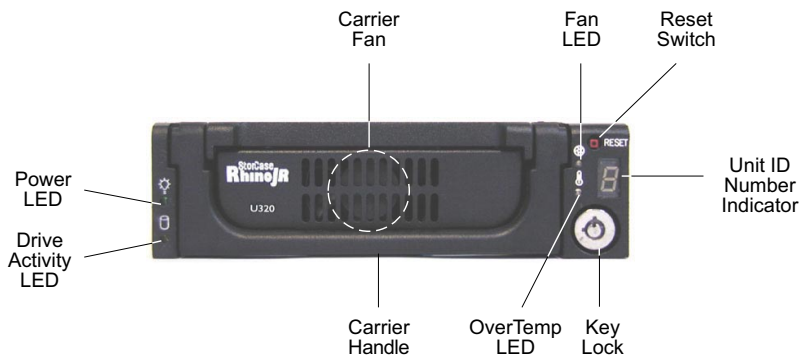


Figure 2: Front Panel

Rear Panel

(Figure 3)

- **DC Power Connector:** Uses a standard 4-pin DC Power Connector to accept DC power.
- **I/O Connector:** The input/output connector provides a standard interface for all Ultra320 signals.
- **Cooling Fan:** Receiving frame fan provides enhanced heat dissipation (4.7 CFM).
- **Unit ID Select Switch:** Allows user to select the ID number of the disk drive. Refer to section "Selecting the SCSI ID Number" for further information.

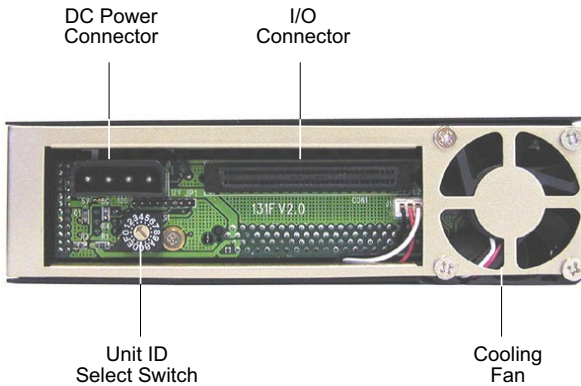


Figure 3: Rear Panel

INSTALLATION

NOTES: A #1 and #2 Phillips screwdriver will be required for this procedure.

RJR110 supports implementations with a maximum of 2 drives per channel.

68-Pin SCSI Version

1. Remove cover from the carrier by turning screw clockwise. Slide the cover off carrier (Figure 4).
2. Carefully insert drive (not included) into the carrier. Slide the drive towards the rear of the carrier so that the drive connectors can mate with the carrier connectors. Once the drive and carrier are mated, turn the drive/carrier assembly over.
3. Bottom-mount the drive into the carrier with four (4) Phillips screws (Figure 5). Reinstall cover onto the carrier.

Secure the cover by turning the screw counterclockwise a *few* rotations only. Do not turn the screw too many times in a counterclockwise direction or the screw will be removed.

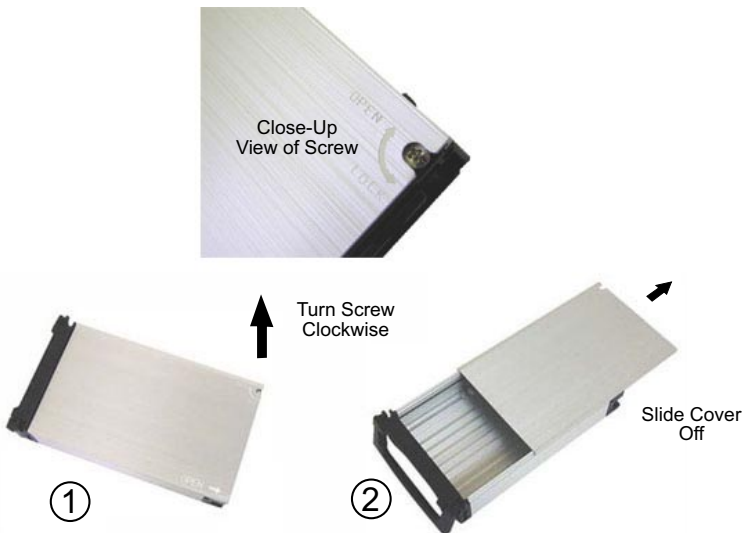


Figure 4: Cover Removal

80-Pin SCA SCSI Version

1. Remove cover from the carrier by turning screw clockwise. Slide the cover off carrier (Figure 4).
2. Carefully insert drive (not included) into the carrier. Turn the drive/carrier assembly over.
3. Bottom-mount the drive into the carrier with four (4) Phillips screws (Figure 5). Reinstall cover onto the carrier.

Secure the cover by turning the screw counterclockwise a *few* rotations only. Do not turn the screw too many times in a counterclockwise direction or the screw will be removed.

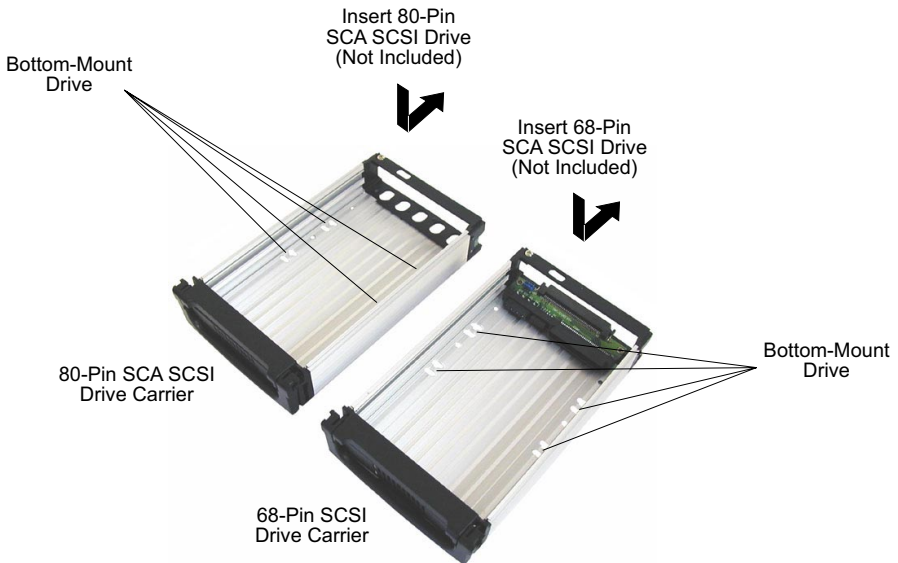
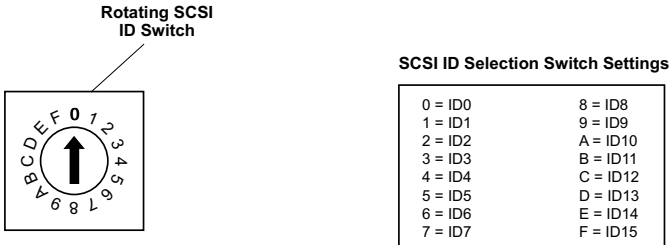


Figure 5: Installing a Drive into the Carrier

Selecting the SCSI ID Number

The RhinoJR SCSI ID selection switch is located on the rear of the receiving frame, as shown in the Figure 3. Carefully select the appropriate SCSI ID number for the installed device. Selecting an invalid ID number, or selecting the same number on different devices may cause unpredictable results and the computer system may not recognize the installed device.



Some SCSI unit ID numbers on the selection switch may be invalid for your interface type. Valid 8-bit ID numbers include 0-7. Valid 16-bit ID numbers include 0-15 (Do not use ID7. It is usually reserved for the host).

Installing the Receiving Frame

The drive should be installed into the carrier before installing the receiving frame into the mounting bay of a computer or expansion chassis.

1. Turn OFF power to computer or expansion chassis.
2. Open computer or expansion chassis according to manufacturer's instructions. If necessary, temporarily remove any expansion boards that may make installation difficult.
3. With the drive carrier locked into place inside the receiving frame, install the Rhino*JR* into the 5.25" drive opening in the computer or expansion chassis. Fasten into place with the four (4) #6-32 Phillips Pan Head screws provided.
4. Adjust the front of the receiving frame so that the carrier slides freely in and out of the receiving frame guides. The position of adjoining peripheral units may require adjustment.
5. Connect the I/O cable from the host adapter to the receiving frame.
6. Connect the DC power cable from the DC power supply in the computer or expansion chassis to the power connector on the Rhino*JR* receiving frame rear panel.
7. Replace any expansion boards that may have been removed earlier. Replace the system cover according to the manufacturer's instructions.
8. Reconnect any system or peripheral cables removed earlier.
9. Turn ON power to the computer. If the installation was successful, and all cables have been properly attached, the system should boot normally.

SPECIFICATIONS

These specifications are for reference only.

Environmental Specifications		
	Operating	Storage
Ambient Temperature	0° C to 40° C	-40° C to 70° C
Relative Humidity ⁽¹⁾	20% to 80%	15% to 90%
Altitude	-1000 to 10,000 ft -305m to 3048m	-1000 to 40,000 ft -305m to 12195m

⁽¹⁾ Non-condensing with maximum gradient of 10% per hour

⁽²⁾ 11 msec pulse width 1/2 sine wave

Physical Specifications	Receiving Frame
Height	1.65" (41.9mm)
Width	5.75" (146.1mm)
Depth	8.98" (228.1mm)
Weight	2.0 lb (0.91kg) ⁽¹⁾

⁽¹⁾ Weight with NO drives installed

Cooling (Total for 2 Fans)
9.4 CFM

NOTICE: This User's Guide is subject to periodic updates without notice. While reasonable efforts have been made to ensure accuracy of this document, StorCase Technology, Inc. assumes no liability resulting from errors or omissions in this publication, or from the use of the information contained herein.

Please check the StorCase website at <http://www.storcase.com> or contact your StorCase representative for the latest revision of this document.