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Dell HC490 300GB Ultra320 SCSI Internal Hard Drive User Manual

Model: HC490

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Dell HC490 300GB Ultra320 SCSI Internal Hard Drive. Please read this manual thoroughly before attempting to install or use the product to ensure optimal performance and prevent damage.

The Dell HC490 is a high-performance 3.5-inch internal hard drive designed for server and workstation environments requiring reliable data storage. It features a 300GB capacity, Ultra320 SCSI interface, and a rotational speed of 10,000 RPM.



Image 1.1: Dell HC490 300GB Ultra320 SCSI Internal Hard Drive. This image displays the front view of the hard drive, highlighting its standard 3.5-inch form factor and connector interface.

2. SAFETY INFORMATION

Observe the following safety precautions to prevent injury and damage to the hard drive or other components:

- **Electrostatic Discharge (ESD) Protection:** Always wear an anti-static wrist strap or frequently touch a grounded metal object before handling the hard drive to discharge static electricity. ESD can severely damage electronic components.
- **Power Disconnection:** Ensure the computer system is completely powered off and unplugged from the electrical outlet before installing or removing the hard drive.
- **Proper Handling:** Handle the hard drive by its edges or frame. Avoid touching the circuit board or connector pins.

- **Environmental Conditions:** Do not expose the hard drive to extreme temperatures, humidity, or direct sunlight.
- **Physical Impact:** Avoid dropping or subjecting the hard drive to any physical shock, as this can cause permanent damage.

3. PACKAGE CONTENTS

Verify that your package contains the following items:

- Dell HC490 300GB Ultra320 SCSI Internal Hard Drive (Quantity: 1)
- Documentation (e.g., Quick Start Guide, Warranty Information - if applicable)

Note: Additional accessories such as mounting screws or SCSI cables may be required for installation and are typically sold separately or provided with your server system.

4. SETUP AND INSTALLATION

Follow these steps to install the Dell HC490 hard drive into your compatible server or workstation system:

1. Prepare the System:

- Power off the computer system completely and unplug all power cables.
- Open the computer case according to the manufacturer's instructions.
- Discharge any static electricity by touching a grounded metal surface or wearing an anti-static wrist strap.

2. Locate an Available Drive Bay:

- Identify an empty 3.5-inch drive bay within your server chassis.
- If replacing an existing drive, carefully remove the old drive.

3. Mount the Hard Drive:

- Slide the Dell HC490 hard drive into the empty drive bay.
- Secure the hard drive using the appropriate mounting screws or drive caddy mechanism provided by your system's chassis. Ensure it is firmly seated to prevent vibration.

4. Connect Cables:

- Connect the Ultra320 SCSI data cable from the hard drive to an available SCSI controller port on your motherboard or expansion card.
- Connect a power cable from the system's power supply unit (PSU) to the hard drive's power connector.

5. Close and Power On:

- Close the computer case and reconnect all power cables.
- Power on the system.

6. System Recognition and Initialization:

- Upon booting, the system's BIOS/UEFI or SCSI controller should detect the new hard drive.
- Access your operating system's disk management utility to initialize, partition, and format the new hard drive before use. Refer to your operating system's documentation for specific instructions.

5. OPERATING INSTRUCTIONS

Once installed and formatted, the Dell HC490 hard drive operates as a standard storage device within your system. Data can be written to and read from the drive by the operating system and applications.

- **Data Storage:** Use the drive for storing operating system files, applications, and user data.
- **Performance:** The 10,000 RPM rotational speed and Ultra320 SCSI interface provide high-speed data access suitable for demanding server applications.
- **Compatibility:** Ensure your operating system and SCSI controller drivers are up-to-date for optimal compatibility and performance.

6. MAINTENANCE

Proper maintenance helps ensure the longevity and reliability of your hard drive:

- **Data Backup:** Regularly back up important data to an external storage device or network location. Hard drives are mechanical devices and can fail.
- **Environmental Control:** Maintain a stable operating environment. Avoid excessive heat, dust, and humidity. Ensure adequate airflow within the computer chassis.
- **Firmware Updates:** Periodically check the Dell support website for any available firmware updates for the HC490 hard drive. Firmware updates can improve performance, stability, or address known issues.
- **Disk Health Monitoring:** Utilize S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) tools to monitor the health status of the hard drive.

7. TROUBLESHOOTING

If you encounter issues with your Dell HC490 hard drive, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
Drive not detected by system.	Loose or incorrect cable connections, incorrect BIOS/SCSI controller settings, faulty drive.	<ul style="list-style-type: none">• Verify all data and power cables are securely connected.• Check BIOS/UEFI or SCSI controller settings to ensure the drive is enabled and detected.• Test the drive in another system or with a different cable/port if possible.
Poor performance or slow data transfer.	Fragmented drive, outdated drivers, system resource contention, drive nearing failure.	<ul style="list-style-type: none">• Defragment the drive (if using a traditional file system).• Update SCSI controller drivers.• Check system resource usage.• Run diagnostic tools to check drive health.

Problem	Possible Cause	Solution
Unusual noises (clicking, grinding).	Mechanical failure, head crash.	<ul style="list-style-type: none"> • Immediately back up any accessible data. • Discontinue use of the drive. This often indicates imminent drive failure. • Contact Dell support or a data recovery specialist if data is critical.

If these steps do not resolve the issue, contact Dell technical support for further assistance.

8. SPECIFICATIONS

Key technical specifications for the Dell HC490 300GB Ultra320 SCSI Internal Hard Drive:

Model Number	HC490 (BBN - HC490 - 3081)
Capacity	300 GB
Interface	Ultra320 SCSI
Rotational Speed	10,000 RPM
Form Factor	3.5-inch Internal
Buffer Size	8 MB (from product description)
Dimensions (LxWxH)	5.4 x 3.1 x 0.6 inches
Weight	1 pound
Connectivity Technology	SCSI
Installation Type	Internal Hard Drive

9. WARRANTY AND SUPPORT

Warranty information for the Dell HC490 hard drive is typically provided at the time of purchase or included with the product packaging. Please refer to your purchase documentation for specific warranty terms and conditions.

For technical support, driver downloads, or additional product information, please visit the official Dell support website:

www.dell.com/support