



## DSN-5xx0-10 Primary Array Quick Start Guide

The DSN-5xx0 Primary Array Quick Start Guide provides the information needed to get your DSN-5xx0-10 primary array out of the box and operational with a connection to a host computer. Follow the simple instructions in this guide, and in no time at all you will be part of the iSCSI revolution.

### Important Safety Information:

Before you install the DSN-5xx0-10 primary array, please read all documentation provided on the Product CD.

The DSN-5xx0-10 primary array is available in either single or dual controller configurations. The dual-controller systems offer automatic failover capability for High Availability in the event of a controller failure. Each controller can have either four (DSN-5110-10 and DSN-510) or eight (DSN-5210-10 and DSN-520) 1-GbE data ports or one (DSN-5410-10) 10-GbE data port in each controller for iSCSI communication. Each controller comes with 512 MB of system memory and 1 GB (DSN-5110-10 and DSN-510) or 2 GB (DSN-5210, DSN-520, DSN-5410-10, DSN-540) of buffer memory. The DSN-5xx0-10 primary array can support a total of 4 GB of buffer memory.

For systems with two controllers, both controllers must have the same number and type of data ports, the same amount of Buffer Memory, and the same version of software.

### 1 **Unpack the Package Contents**

Before unpacking, inspect the container for damage. If damage exists, file a claim with the carrier. Remove the items from the container and compare them to the packing list:

- One DSN-5xx0-10 primary array (includes backplane, up to 12 drive carriers with drive blanks, two power supplies, 48 drive carrier screws holding drive blanks, and one canister filler plate)
- One controller with memory and battery in canisters, inserted into the rear of the DSN-5xx0-10 primary array.
- One rack-mount kit in a box (includes rails, mounting hardware, and instructions)
- Six power cords, one RS-232 diagnostic cable, one DSN-5000 Series Product CD.
- One set of packing materials and cartons

If contents are missing or damaged please contact your supplier. Save all packing materials in case you have to return the unit.

### 2 **What Else You Need**

To complete the primary array installation, you need:

- A computer that will act as the iSCSI initiator (see step 7). Please refer to the **D-Link Interoperability** matrix at: <http://www.dlink.com> for tested operating systems, Network Interface Cards (NICs), Host Bus Adapters (HBAs), and network infrastructure.
- A static IP address and Category 6 or 5E (for 1-GbE) or fiber optical (for 10-GbE) network cable for each DSN-5xx0 primary array data port that will connect to your SAN.
- XFP modules for optical connection (10-GbE systems only)
- Ethernet switch (1-GbE for DSN-5110-10 & DSN-5210-10, or 10-GbE for DSN-5410-10) required for dual-controller systems
- Independent AC power supply within 6 feet of the primary array
- Disk drives: refer to the **DSN-5000 Series Hardware Reference Guide** for disk drive installation
- **Note:** The DSN-5xx0-10 primary array can support SAS or SATA hard disk drives from a variety of manufacturers (48 for the DSN-5110-10 and 84 for the DSN-5210-10 & 5410-10). It is possible (but not recommended) to mix SAS and SATA drives in the same array. Also, if you anticipate using dual controllers for HA operation, SAS drives are required.
- *Optional:* In addition, a separate computer may be used as the Management console (see Step 8)
- *Optional, but recommended:* Uninterruptible power supply

### 3 **Rack-Mount Instructions**

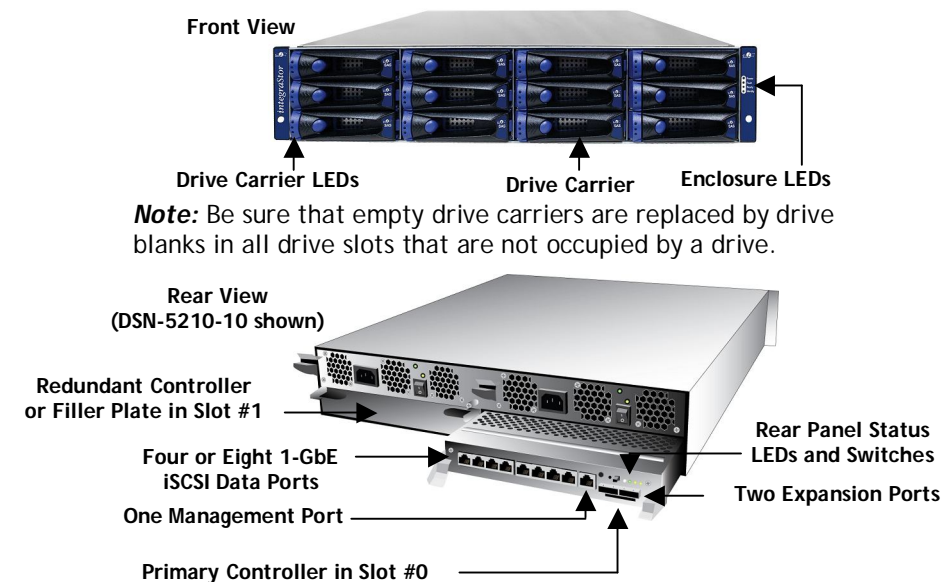
The DSN-5xx0-10 primary array can be mounted in a standard 19-inch rack using the rack-mount kit provided with the DSN-5xx0 primary array.

**Note:** The rack cabinet must provide sufficient airflow to the front and rear of the DSN-5xx0-10 primary array for correct cooling. Ventilation must be sufficient to exhaust heat from the rear of the equipment in the rack. Plan the rack installation with the heaviest item on the bottom of rack.

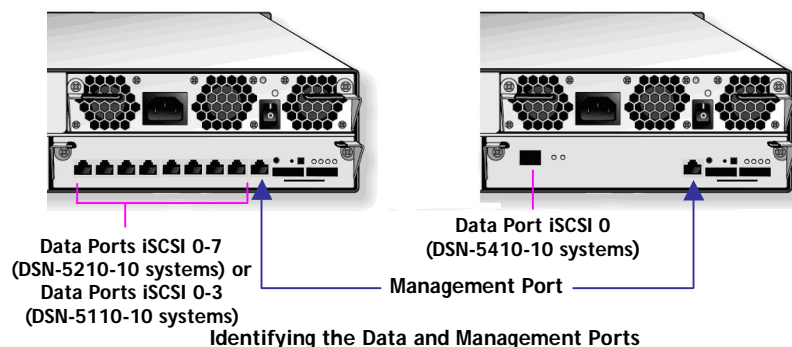
- A. Ensure that power is not being applied to the DSN-5xx0 primary array by removing the power cords before attaching the mounting hardware provided to the left and right sides of the rack supporting the DSN-5xx0-10 primary array.
- B. With the help of another person, slide the DSN-5xx0-10 primary array into place (without drives installed) and secure with the mounting hardware.

### 4 **Install the DSN-5xx0-10 Primary Array**

The DSN-5xx0-10 primary array is a full iSCSI storage subsystem, with up to 12 SATA or SAS disks, and additional storage available through add-on expansion arrays. Enclosure and drive carrier LEDs illuminate on the front of the unit, while interface ports, buttons, and LEDs for port speed, port activity, and status are at the rear.



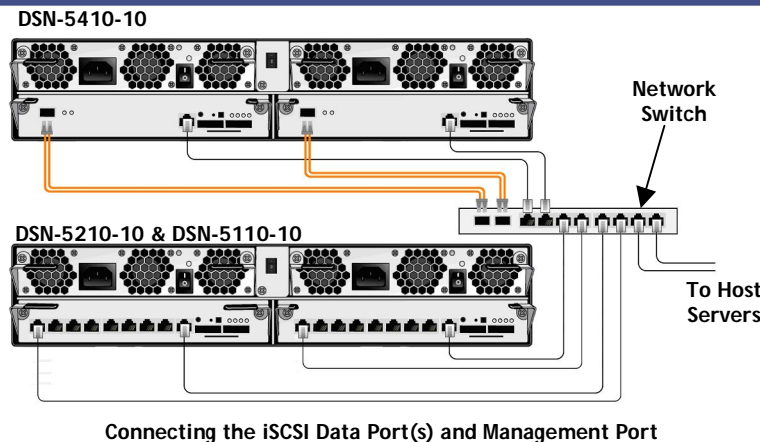
## 5 Connect to the DSN-5xx0-10 Primary Array



- A. Attach an Ethernet cable to the **iSCSI 0** data port on the primary controller of the DSN-5xx0-10 primary array rear panel and to your SAN switch. To connect additional data ports to your SAN, repeat this step using another Ethernet cable and the next data port, up to the number of data ports on the controller. If you have dual controllers, repeat this step for the redundant controller.
- B. On the rear of each controller of the DSN-5xx0-10 primary array, the management port is the 10/100/1000 RJ-45 port labeled **MGMT**. If you have dual controllers, you must connect the management port of both controllers to your network switch. If you have a single controller, you can directly connect this port to your Management Host using a standard Ethernet cable for a GbE host port or a crossover cable for a 10/100 host port. Out of the box, the active management port defaults to the IP address 192.168.1.1. This can be changed using the Start-up Wizard.
- C. The diagnostic port (stereo jack) labeled **DIAG** is used for diagnostic purposes only. If needed, use the supplied RS-232 cable to connect this port to a computer serial port configured for a baud rate of 115,200 bps at 8 data bits, no parity bit, and 1 stop bit.

## 6 Prepare Your Server

This guide assumes that Microsoft Windows 2003 Server or later will be used for product set up. Other operating systems are supported (see step 2), but in this guide, Microsoft Windows 2003 Server will be used. The server must have a 10/100/1000 Gbps NIC. All updates, Service Packs, and drivers for the operating system and NIC must be installed. If your server uses the NIC for iSCSI storage access, install the latest supported version of the Microsoft iSCSI initiator software at: <http://www.microsoft.com/downloads>.



## 7 Prepare the Management Host

- A. The management port on the primary controller of the DSN-5xx0 primary array has an IP address of 192.168.1.1. Therefore, to start with, the NIC must have a fixed IP address of 192.168.1.n (e.g., 192.168.1.2). After you set up the DSN-5xx0 primary array via the Start-Up Wizard, the management port can be changed to the desired IP address (for example, to use on your corporate LAN).
- B. Download Java Runtime Environment 6 (JRE 6), v1.6.0.0 or later. That software is available at: <http://java.com>.

**Note:** Attempting to install the Java Runtime Environment 6 on a non-supported version of Windows or a computer whose Service Packs are out of date will display an error message.

## 8 First-Time Startup

- A. Plug the two power cords into the AC source (for best practices, the second power receptacle should be on a different circuit).
- B. Power up the primary array by turning on both rocker switches on both power supplies at the rear of the unit. The system starts to boot:
  - The **Power** LED on the rear panel of each controller turns solid green when power is applied.
  - The DSN-5xx0-10 primary array goes through its power-on procedure, which takes up to 5 minutes, after which the **READY** LED on the right front rack-mounting bracket turns green.
- C. On the management computer, point your Web browser to the following default IP address: 192.168.1.1
- D. When the Start-up Wizard's Welcome screen appears, click on the "I Accept the End User License Agreement" button.

- E. At the Administrator Account screen, enter a case-sensitive password for the administrator account, if you wish to change the default value. The default username is **admin** and the default password is **admin**. Click **Next**.
- F. At the Management Port screen, enter the IP address, subnet mask, and default gateway that computers will use to access the management port. Change the host name if desired. Click **Next**.
- G. At the Data Port screen, enter the IP address, subnet mask, and default gateway for each iSCSI data port. You can skip any or all of these items, and assign them later. Click **Next**.
- H. At the Email Notification screen, enable email notifications. Enter an SMTP server IP address and port number, return email address, and email address where alerts are to be sent. If desired, you can skip these items and enter them later. Click **Next**.
- I. Review your settings. Use the **Back** button to change any settings that need to be edited. Then click **Finish** and wait for the system to restart. You are now ready to use your DSN-5xx0-10 primary array.

**Note:** For more information about the Start-up Wizard or setting the system date and time, please see the *DSN-5000 Software User's Guide*.

## 9 Configure the DSN-5xx0-10 Primary Array

To configure the DSN-5xx0-10 primary array after the first-time startup, wait for the system to reboot (up to 5 minutes, **System Ready** LED goes ON), then start your Web browser to match the IP address identified in step 8F above (default is 192.168.1.1).

When the browser connects and the GUI is operational, the Login Screen appears and you are ready to connect to the iSCSI world. Enter your Administrative username and password, then select **System Administration** from the View Panel, select the **Settings** tab and select **System Policy** to ensure that the proper battery and system failure policies are defined for your system.

If your DSN-5xx0-10 primary array is equipped with dual controllers, you can verify your network cabling for automatic controller failover by selecting the "**Force System Failover**" item from the System Actions panel. For more detailed information, please see the *DSN-5000 Software User's Guide*.

### Contact Information

For more information about the DSN-5xx0-10 Primary Array  
Web site: <http://www.dlink.com/>