ENHANCE TECHNOLOGY, INC.

Where Storage Begins

EnhanceRAID

TS2060 SS

2U 6-disk SAS Storage RAID Array for D2D/D2D2T Backup

M MAC **W** WIN **Quick start guide**

www.enhance-tech.com

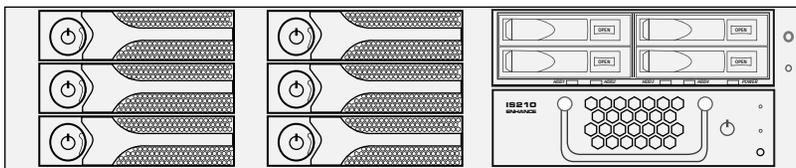# TS2060 SS

Quick start guide

1 **Welcome**
Thank you for choosing Enhance Technology

Thank you for buying Enhance Technology TS2060 Series, the ultimate D2D/D2D2T All-in-One backup storage solution designed for high-impact and high-volume real-time data backup and offline archive storage needs.
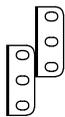
2 **What is in the box?**

Carefully unpack your TS2060 storage system, and inventory the accessories according to your model type.
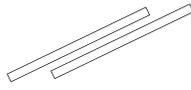
Qty 1 - TS2060 Array with IS210 5.2" HDD Enclosure (optional) & Q14 4x2.5" HDD Enclosure (optional) Installed
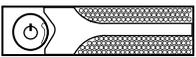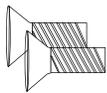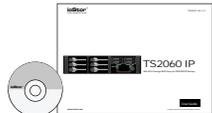
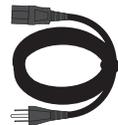**Hot-swap Disk Trays - Qty 6**

Rack-ear Mounting Kit - Qty 2

Slide Rail Set - Qty 2

HDD Mounting Hardware - Qty 16

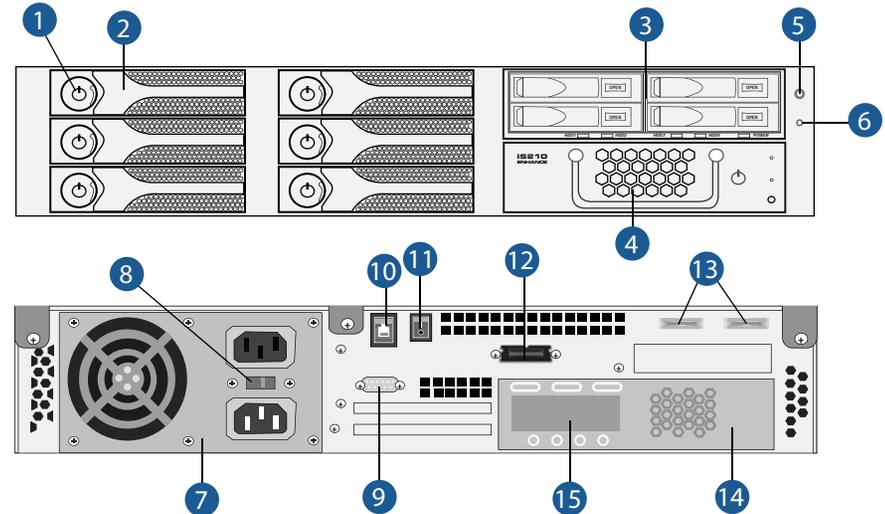**User Guide and CD- Qty 1**

Standard IEC Power Cable - Qty 2

3 **Unpack your TS2060**

Unpack all components including the HDD mounting screws, key sets and cables. If you are missing any of the items mentioned above, please contact your dealer or contact Enhance Technology at www.enhance-tech.com.

4 **Understanding your TS2060**
Learn and identify each component of TS2060

Front:
1. Security Key Lock
2. Hot-swap HDDs Tray
3. Q14 4x2.5" Removable HDDs Enclosure (optional)
4. IS210 5.2" Removable HDDs Enclosure (optional)
5. Power LED
6. Alarm Mute Button

Rear:
7. ATX PS2 Power Supply
8. Auto Power Switch
9. RS232 VT100 ANSI Terminal Emulation
10. Web GUI Management Console
11. Power Switch
12. SFF8470 SAS Port
13. eSATA Ports for IS210 and Q14
14. RAID Controller
15. RAID Controller LED

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4 ## Disk Installation

If your system was purchased with capacity, please skip this section and immediately go to next section. If your system was purchased without disks, install each disk into the provided disk trays and fasten using the supplied hdd screws. Do not use any other mounting screws other than the ones provided with your system. System or disk damage may occur if using non-approved mounting hardware.

Hard Disk

Disk Tray

Figure 1.

Disk tray - Bottom view
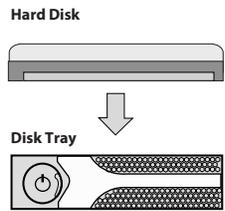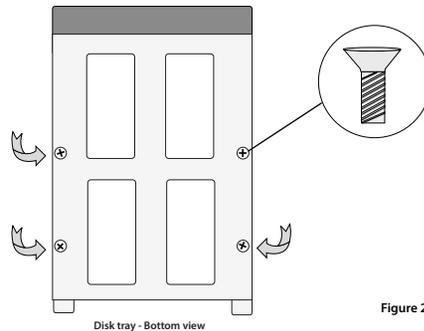
Figure 2.

5 ## Disk Installation for Q14

If your system was purchased without Q14, please skip this section and immediately go to next section. If your system was purchased with Q14, install each disk into the provided disk trays and fasten using the supplied hdd screws. Do not use any other mounting screws other than the ones provided with your system. System or disk damage may occur if using non-approved mounting hardware.

2.5" Hard Disk

Q14 Disk Tray

NOTE: Push OPEN down to unlock

Figure 3.

Q14 Disk tray - Bottom view

Figure 4.

6 ## Disk Installation for IS210

If your system was purchased without IS210, please skip this section and immediately go to next section. If your system was purchased with IS210, install disk into the provided disk trays and fasten using the supplied hdd screws. Do not use any other mounting screws other than the ones provided with your system. System or disk damage may occur if using non-approved mounting hardware.
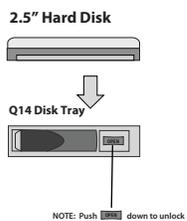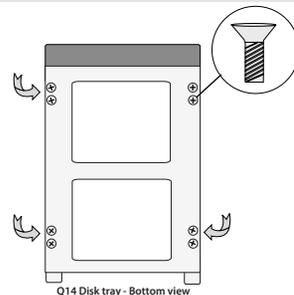
Hard Disk

NOTE: ⏻ Unlock the tray and pull the handle.

Figure 5.

Disk tray - Bottom view
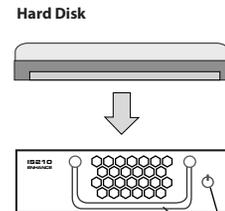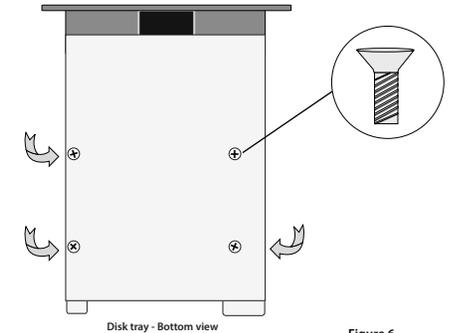
Figure 6.

7 ## Insert Disk Module

After fastening each disk, insert the disk trays in the open disk bay on your system, Q14 and IS210. For added security, your system is equipped with locking disk bays to prevent accidental or malicious disk removal.

Figure 7.

Gently "press" tray handle to insert HDD

Gently "press" tray handle to insert HDD
Lock the tray by turning the key lock ⟳

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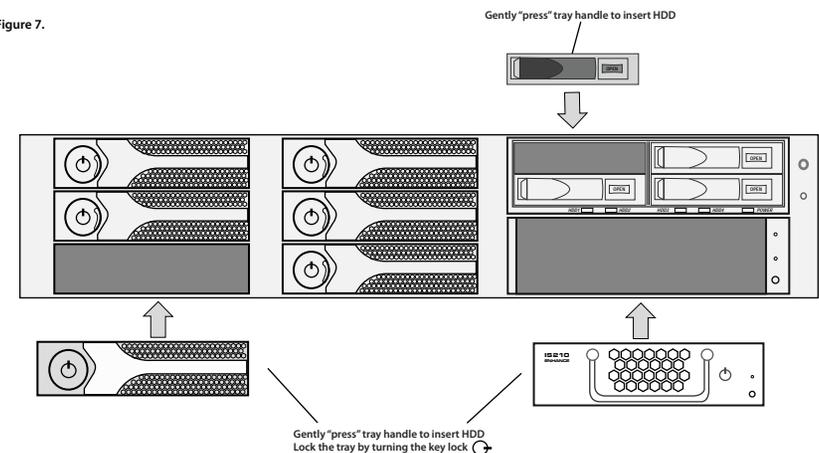
TS2060 SS

8 HBA Installation

Your TS2060 SS features a Hardware RAID architecture. This provides the best support for a wide range of host bus adapters (HBAs). Always follow your HBA installation procedure to ensure proper operation.

1. Touch the metal PCI slot covers on the back of your computer to discharge any static electricity.

2. Unplug ALL cables from your computer, and remove the side access panel according to your system type.
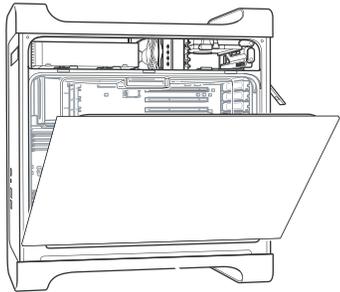
3. Apple G5 users must first remove the deflector cover and place it on a clean, safe surface.

NOTE: Remember to replace the air deflector after you have finished installing your HBA.

⚠ WARNING: Allow a few minutes for the internal computer compenents to cool down before opening your computer system.

9 HBA Installation - Cont'd

Please follow your HBA driver installation notes to ensure operation & hassle free configuration.

Reinstall the screw to secure the card in place.

Port access opening
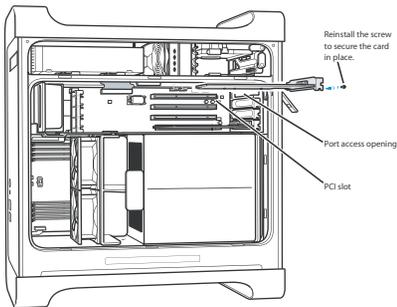
PCI slot

1. Remove the PCI slot cover plate from an available PCI slot. Consult your HBA or video capture card for recommended slot postions.

2. Install & secure your PCI controller card into the slot and firmly press the card into place.

3. Close and replace the system panel.

⚠ WARNING: To minimize the chance of electrical shock, always follow proper saftey rules when working with electrical components.

10 SAS Interface Overview

Introduction to SAS SFF8470 to SFF8088 Cable Types

Your TS2060 SS is equipped with industry standard SFF8470 SAS interface port. The correct cable type is detirmined by the HBA or RAID controller you have seleceted. Usually, on the storage-end the type of connector is SFF8470 and on the host-end HBA, the type of connector is SFF8088.

SFF8470 [SAS]

SFF8470 [Recieving Connector View]

Figure 8.

SFF8088 [Host-end Connector View]

PCI SAS HBA
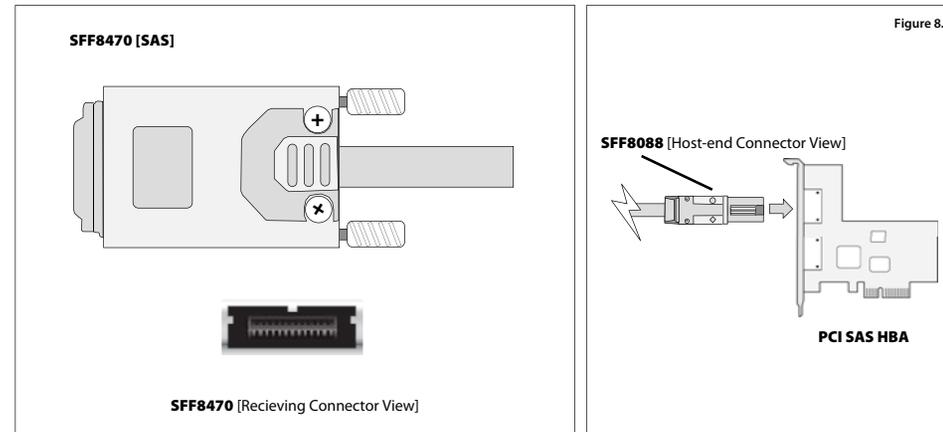
11 Connecting Your TS2060 - Cable Connections

Ensure that the connector is properly secured & fastned. Most commom issues are related to poor cable connection. Do not force connector into place.

SFF8470 SAS Port

Figure 9.
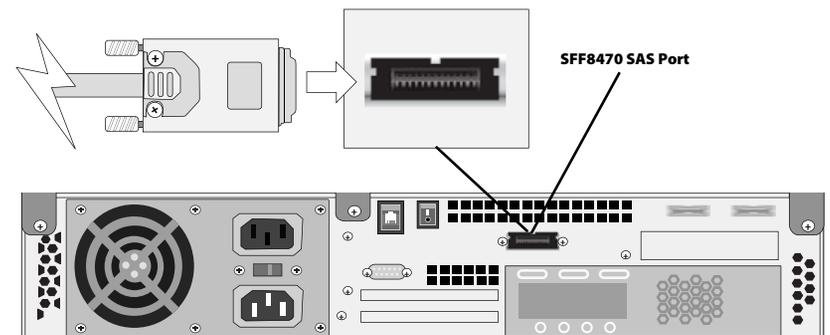
TS2060 SS

12 Connecting Your TS2060 - Cable Connections - Cont'd

Ensure that all of the connectors are properly secured & fastned. Most commom issues are related to poor cable connection. Do not force connector into place.

Thumb Screw SAS Connector

SFF8470 [Storage-end Connector View]　　　SFF8088 [Host-end Connector View]

PCI SAS HBA
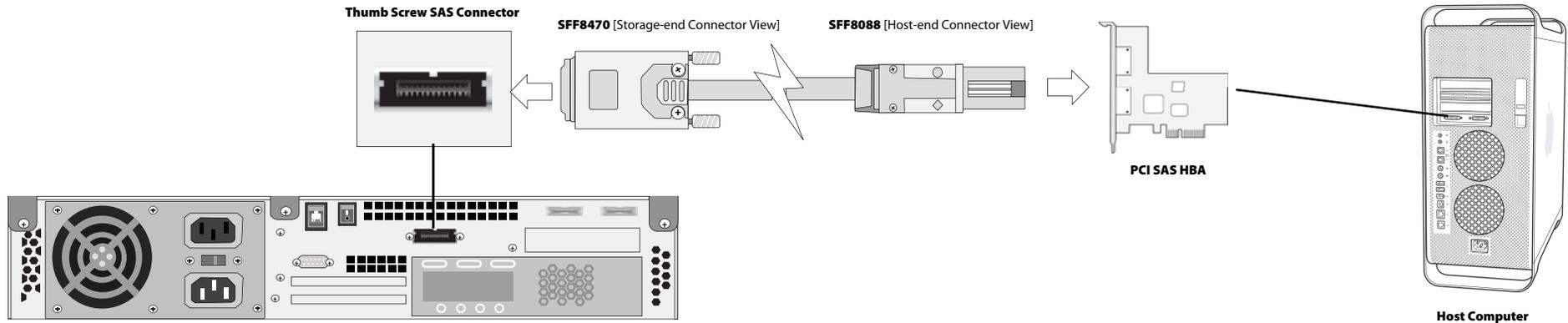
Host Computer

Figure 10.

13 Connecting Your TS2060 - Web GUI Connection

Connect TS2060 Web GUI console to the host computer on the network with cross over cable or connect to the Ethernet switch with LAN cable then power on the system.

Web GUI Console

Ethernet Switch
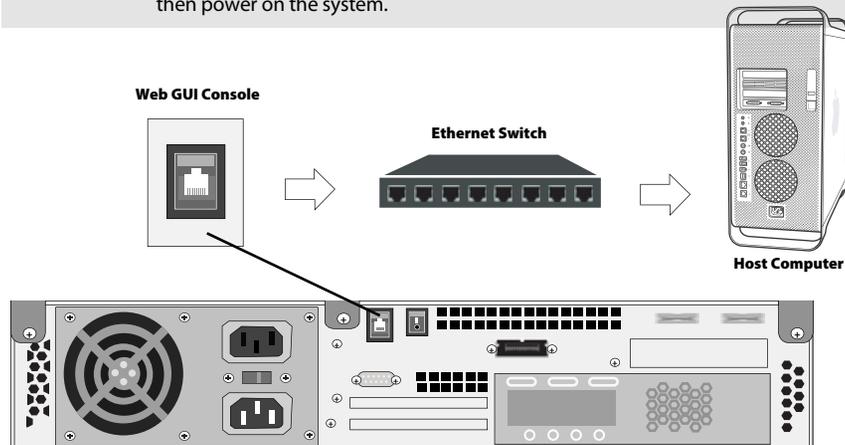
Host Computer

Figure 11.

14 Power On

After connecting both data and Web GUI cables to your system and host computer, power-on your TS2060 first, then power-on your host computer. Your array is now ready for RAID configuration in the Web GUI.

On　Off

WARNING: To minimize the chance of electrical shock, always follow proper safety rules when working with electrical materials.

Figure 12.

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15 **Preparing TS2060 for Configuration**
After power-on, the power LED and hard disks LEDs will light up and your TS2060 will display a message showing the system is booting then change to Initializing mode for few seconds to check the system.

System Booting

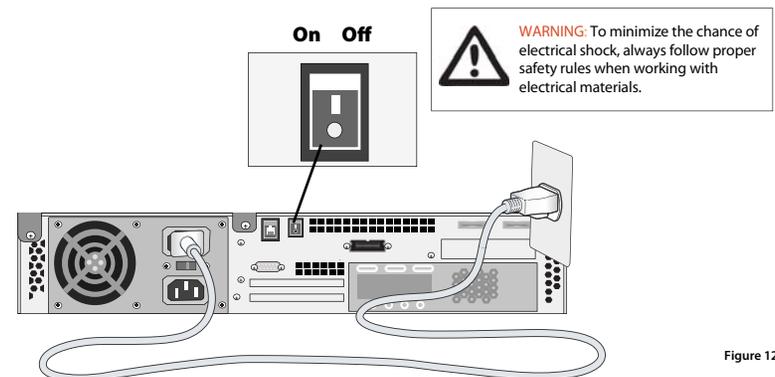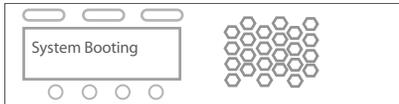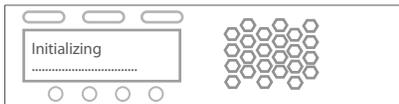1. System is booting up when turn on the power.

Initializing
....

2. RAID controller is initializing the system to check the hardware connection and memory. This is NOT initializing for the hard disks.

192.168.0.200
Enhance Technology

3. The system has booted up successfully and showing the system IP address on the LCD screen.

Now you can login Web GUI to create a RAID Array for your TS2060

Figure 13.

16 **Login Web GUI**
To access Web GUI utility, lanuch the web browser on your computer and enter the TS2060's IP address in the address field.
Login Name: admin   Password: 1234

Web GUI Sreen View

NOTE: By default, the Web GUI's network connection type is set to **Automatic configuration - DHCP**, which should be kept only if your network supports DHCP or you are connecting through a dynamic IP address.

The TS2060's IP address should be seen on the screen of the controller. By default the IP address is **192.168.0.200**

192.168.0.200
Enhance Technology

If you are required to use a permanent IP address, you need to set a static IP address for the system.
(Please refer to User Manual CD for detail infomation)

Figure 14.

17 **Create a RAID Array**
You will be using the Quick Install function in the Web GUI to create a RAID and User Data Volume for your TS2060.

NOTE: The Quick Install function is designed for set up a single RAID level with a single User Data Volume. If you want to configurate your system with multiple RAID levels with multiple User Data Volumes please learn from system User Manual CD for complete instructions.

Step 1: Select Quick Install then choose the RAID Level desired. After choosing the RAID level, click NEXT.

Step 2: In this step, the volume can be customized as needed. Volume size, Bus ID, SCSI ID, and LUN can be assigned specified numbers to be attributed to the volume. The maximum volume size is shown as default. The volume can only be less or equal to the number shown. By default, the Bus ID, SCSI ID, and LUN are set at 0. Click NEXT after desired volume size and IDs are set.

Step 3: Confirm if all the setting are correct then click Confirm to finish the setup.

Done: A summary page with the User data volume will be shown: A RAID 0 user data volume with the UDV name "QUICK86975", named by the system itself, with the total available volume size 222GB.

Figure 15.

NOTE: Depending on the capacity of your system. The RAID array initialization process may take several minutes. Please allow plenty of time for this process. Never turn off your TS2060 while initializing the array.

TS2060 SS

18 **Format Volume for Windows OS**

Please refer to your computer's documentation for detailed information on formatting and preparing volumes for use

To format the drive for Windows OS

1. Click on Control Panel, Performance and Maintenance, Administrative Tools.
2. Click on the Computer Management icon.
3. Click on the Disk Management Icon.
4. Right click on the new drive's icon in the right hand window
5. Select the Format option, click yes in warning window.
6. Type a name for the drive under volume label.
7. Select perform quick format option.
8. Click OK in format warning box.
9. The drive will be formatted and available in My Computer and Windows Explorer.

20 **Troubleshooting**

This section covers some common support questions. If you are experiencing an urgent issue, please contact your dealer or call 1-562-777-3488 ex 119.

Connection Problems:

Always double check for loose cable connections or improperly seated disks if you experience problems where a disk or volume does not appear in your computer, or you recieve an error message stating a disk missing when you have the drives configured as a RAID set.

1. Disconnect the data cables and reconnect each cable one at a time, ensuring each connector is screwed in securely on your system.

2. Make sure the connector is properly secured on your HBA.

3. Check your TS2060 IP's drive presence LEDs, located on the front panel of the system. If the LEDs are not lit, remove the disk and reinsert the disk module.

If the problem persists, please contact your dealer or contact Enhance's support department at support@enhance-tech.com

19 **Format Volume for Mac OS**

Please refer to your computer's documentation for detailed information on formatting and preparing volumes for use

To format the drive for Mac OS

1. Go to the Applications folder on your system hard drive.
2. Open the Utilities folder.
3. Double click on the Disk Utility Program.
4. Find the drive in the left hand window and select the drive.
5. Click on the Partition tab.
6. Under Volume Scheme select 1 Partition
7. Type a name for the drive in the box provided.
8. Select Mac OS extended under the format options.
9. Click on Partition in the Partition dialog box.
10. The drive will be formatted and mounted on the desktop.

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