

# Enhance Technology

# IS316JS

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User Manual September 2011 (v1.0)

## Preface

### About this manual

This manual provides information regarding the hardware features, installation and configuration of the **IS316JS**. Information contained in the manual has been reviewed for accuracy, but not for product warranty because of the various environment/OS/settings. Information and specifications will be changed without further notice. Some pictures and screenshots might be different with the actual machine.

This manual uses section numbering for every topic being discussed for easy and convenient way of finding information in accordance with the user's needs. The following icons are being used for some details and information to be considered in going through with this manual:



#### **NOTES:**

These are notes that contain useful information and tips that the user must give attention to in going through with the subsystem operation.



#### **IMPORTANT!**

These are the important information that the user must remember.



#### **WARNING!**

These are the warnings that the user must follow to avoid unnecessary errors and bodily injury during hardware and software operation of the subsystem.



#### **CAUTION:**

These are the cautions that user must be aware of to prevent damage to the equipment and its components.

### Copyright

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### Trademarks

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### Changes

The material in this document is for information only and is subject to change without notice.

## Limited Warranty

Enhance Technology guarantees all components of Enhance Technology IS products are thoroughly tested before they leave the factory and should function normally under general usage. In case of any system malfunctions, Enhance Technology Corporation and its local representatives and dealers are responsible for repair without cost to the customer if the product fails within the warranty period and under normal usage. Enhance Technology Corporation is not responsible for any damage or loss of data deemed to be caused by its products. It is highly recommended that users conduct necessary back-up practices.

## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna
2. Move the equipment away from the receiver
3. Plug the equipment into an outlet on a circuit different from that to which the receiver is powered.
4. Consult the dealer or an experienced radio/television technician for help

All external connections should be made using shielded cables



## Before You Begin

Before going through with this manual, you should read and focus on the following safety guidelines. Information about the IS316JS system's packaging and delivery are also included. To provide reasonable protection against any harm on the part of the user and to obtain maximum performance, user is advised to be aware of the following safety guidelines particularly in handling hardware components:

### ***Upon receiving of the product:***

- ❖ Place the product in its proper location.
- ❖ To avoid unnecessary dropping out, make sure that somebody is around for immediate assistance.
- ❖ It should be handled with care to avoid dropping that may cause damage to the product. Always use the correct lifting procedures.

### ***Upon installing of the product:***

- ❖ Ambient temperature is very important for the installation site. It must not exceed 30°C. Due to seasonal climate changes; regulate the installation site temperature making it not to exceed the allowed ambient temperature.
- ❖ Before plugging-in any power cords, cables and connectors, make sure that the power switches are turned off. Disconnect first any power connection if the power supply module is being removed from the enclosure.
- ❖ Outlets must be accessible to the equipment.
- ❖ All external connections should be made using shielded cables and as much as possible should not be performed by bare hand. Using anti-static hand gloves is recommended.
- ❖ In installing each component, secure all the mounting screws and locks. Make sure that all screws are fully tightened. Follow correctly all the listed procedures in this manual for reliable performance.

## Packaging, Shipment and Delivery

- ❖ Before removing the subsystem from the shipping carton, you should visually inspect the physical condition of the shipping carton.
- ❖ Unpack and verify that the contents of the shipping carton are complete and in good condition.
- ❖ Exterior damage to the shipping carton may indicate that the contents of the carton are damaged.

If any damage is found, do not remove the components; contact the dealer where you purchased the subsystem for further instructions.

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## Chapter 1 Introduction

### *Overview*

Thank you for choosing the IS316JS 6G SAS JBOD storage. The IS316 JS is a 19-inch 3U 16 bays rackmount JBOD storage array. A ground breaking direct attached storage array that combines a dual port, high-speed 6Gb/s SAS interface, professional grade redundant & hot-swappable components with a 12Gb/s storage expansion bus allowing the addition of multiple IS316JS arrays with absolutely no degradation in performance.

### *Packaging, Shipment and Delivery*

- ❖ Before removing the subsystem from the shipping carton, you should visually inspect the physical condition of the shipping carton.
- ❖ Unpack the subsystem and verify that the contents of the shipping carton are all there and in good condition.
- ❖ Exterior damage to the shipping carton may indicate that the contents of the carton are damaged.
- ❖ If any damage is found, do not remove the components; contact the dealer where you purchased the subsystem for further instructions.

### *Package Contents*

The IS316JS storage should have following items included

- ❖ IS316JS System Unit x1
- ❖ Installation User Guide (CD) x1
- ❖ Power cords x2
- ❖ RS232 null modem cable (phone jack to DB9) x1
- ❖ Spare screws

*Front View*

**IS316JS**



NS2120 Hard Drive Slot Number Reference Chart			
Slot #4	Slot #3	Slot #2	Slot #1
Slot #8	Slot #7	Slot #6	Slot #5
Slot #12	Slot #11	Slot #10	Slot #9
Slot #16	Slot #15	Slot #14	Slot #13

*Disk Tray & HDD Status Indicator*



Item	Descripti
HDD Activity LED	This LED will blink blue when the hard drive is being accessed.
HDD Power/Fault LED	Green LED indicates power is on and hard drive status is good for this slot. If hard drive is defective or failed, the LED is Red. LED is off when there is no hard drive.

### LCD Controller Panel

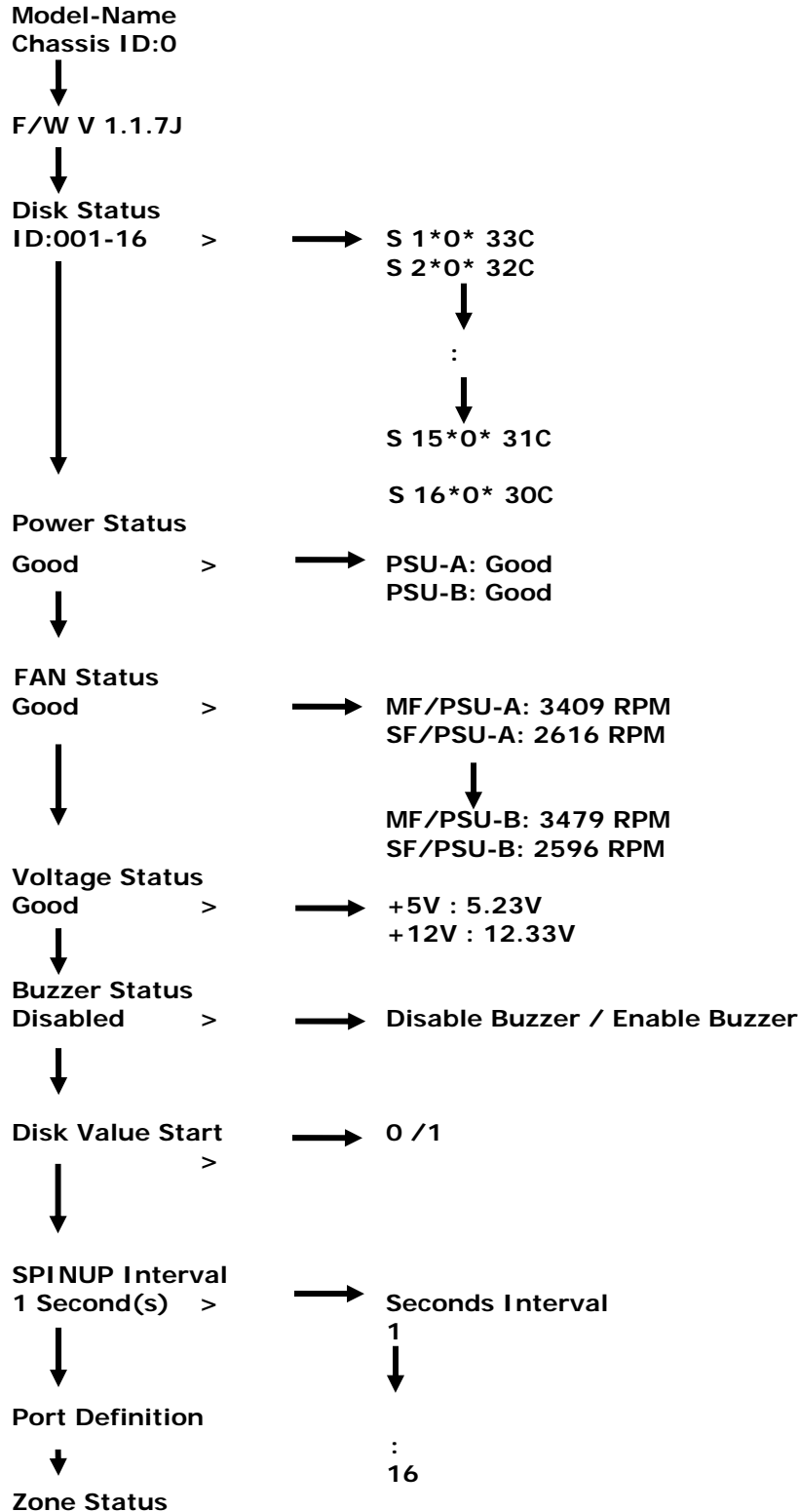
The LCD front panel is an option to setup some system settings. To start using the LCD panel, press the Select button to login and configure the system. See the LCD menu diagram in the next section.



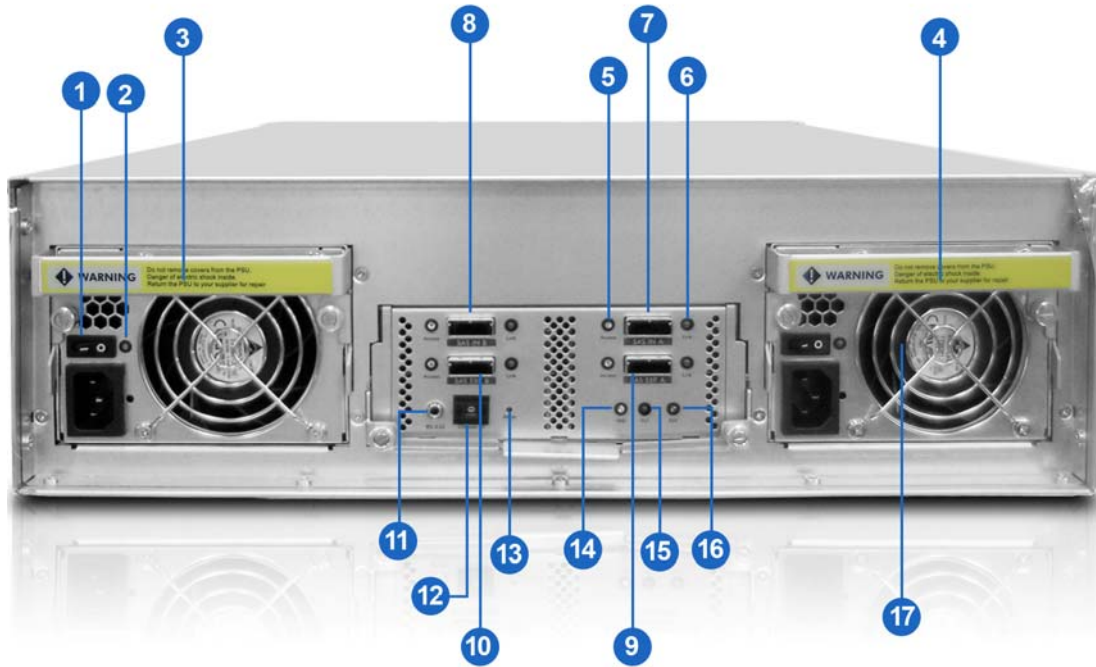
Item		Description
Exit button	<b>EXIT</b>	Press this button to return to the previous menu.
Select button	✓	This is used to enter the option you have selected.
Up and Down Arrow buttons	⬆ ⬇ ⬆	Use the Up or Down arrow keys to go through the information on the LCD screen. This is also used to move between each menu when you configure the system.
POWER LED		Green LED indicates system power is on
Power Fail LED	⊗	LED will turn to red and alarm will sound when the power supply is failed
Fan Fail LED	⊗	LED will turn to red and alarm will sound when the fan is failed
Temperature	⊗	LED will turn to red and alarm will sound when system temperature irregularities
Voltage Warning LED	⊗	LED will turn to red and alarm will sound when system voltage irregularities
Access LED	⊗	LED will blink blue when system is busy / active



**LCD Controller Panel Diagram**



**Rear View**



Item	Description
<b>1. Power Switch</b>	Power on/off switch
<b>2. Power Status LED</b>	Indicates power on or fail
<b>3. Power Supply Unit A</b>	Hot-swappable redundant power supply unit A
<b>4. Power Supply Unit B</b>	Hot-swappable redundant power supply unit B
<b>5. Access LED</b>	When port is having access, the LED indicates blue
<b>6. Link LED</b>	When port is connected, the LED indicate green
<b>7. SAS IN Port A</b>	SAS connection A for host
<b>8. SAS IN Port B</b>	SAS connection B for host
<b>9. SAS OUT Port A</b>	SAS expansion port A
<b>10.SAS OUT Port B</b>	SAS expansion port B
<b>11.RS232 Port</b>	Use for upgrading the Firmware of JBOD controller.
<b>12.Chassis ID Dial</b>	Use for assigning the chassis ID number.
<b>13.Mute</b>	Use for silence the alarm beeper
<b>14.HDD LED</b>	Indicates hard drive and system activity in blue
<b>15.Fault LED</b>	Indicates system failure in red
<b>16.Ready LED</b>	Indicates system is ready or powered on in green
<b>17.System Fan</b>	System cooling fan

## Chapter 2 Hardware Installation

### Overview

Installing your IS316JS storage is simple and easy. To help you get started, the following chapter will help you quickly get your IS316JS storage up and running. Please read it carefully to prevent damaging your unit during installation.

**Before you begin**, please be sure to read and understand the safety guidelines in the beginning of the manual. If possible, wear an anti-static wrist strap during installation to prevent static discharge from damaging the sensitive electronic components on the IS316JS storage. Be careful not to use magnetized screwdrivers around the IS316JS storage's electronic components.

**Installing Hard Disk in a Tray** (If your IS316JS storage comes with the hard disk, you can skip this section)

### Installing 3.5" Hard Disk

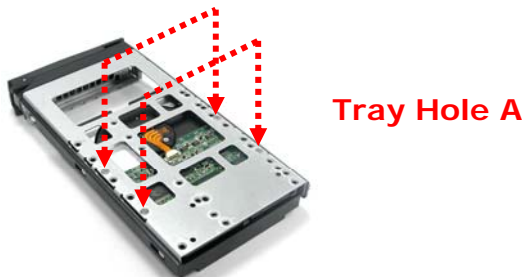
- 1) Press the tray open button to pull out a disk tray



- 2) Pull the lever handle outwards to remove the tray from the enclosure to pull out the disk tray from the system.
- 3) Place the hard drive in the disk tray.



- 4) Install the mounting screws in **Tray Hole A** on the bottom to secure the drive in the disk tray.



- 5) Slide the tray into a slot.
- 6) Close the lever handle until you hear the latch click into place.

#### Installing 2.5" Hard Disk

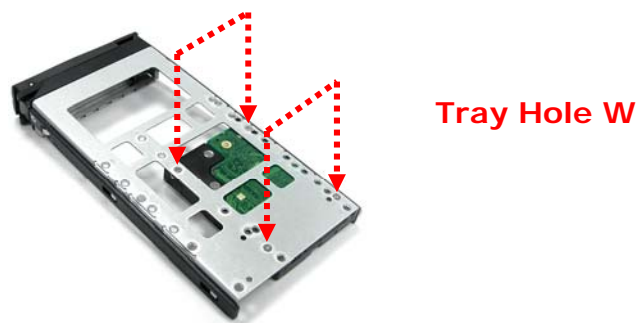
- 1) Press the tray open button to pull out a disk tray



- 2) Pull the lever handle outwards to remove the tray from the enclosure to pull out the disk tray from the system.
- 3) Place the 2.5" hard drive in the disk tray.



- 7) Install the mounting screws in **Tray Hole W** on the bottom to secure the drive in the disk tray.



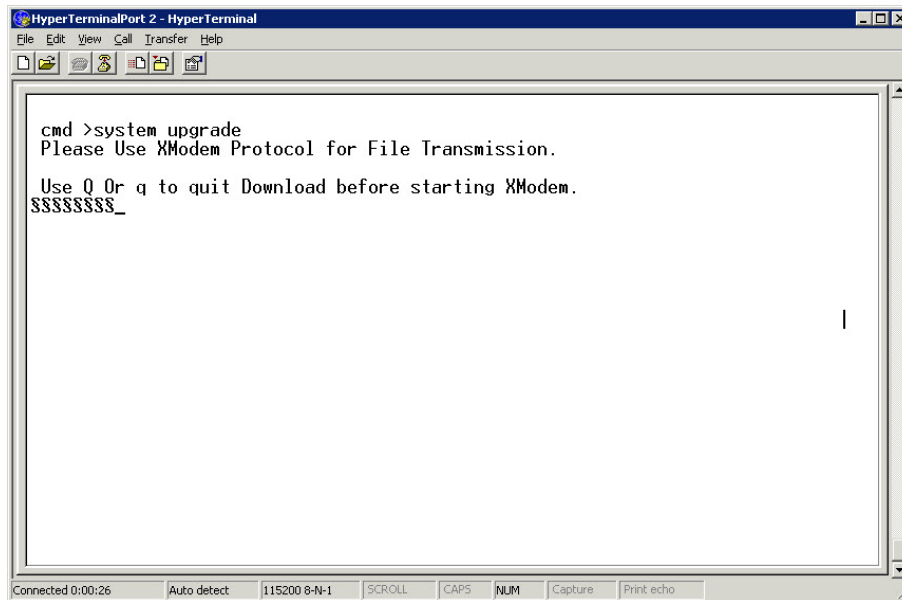
- 4) Slide the tray into a slot.
- 5) Close the lever handle until you hear the latch click into place.

## Chapter 3 Firmware Upgrade

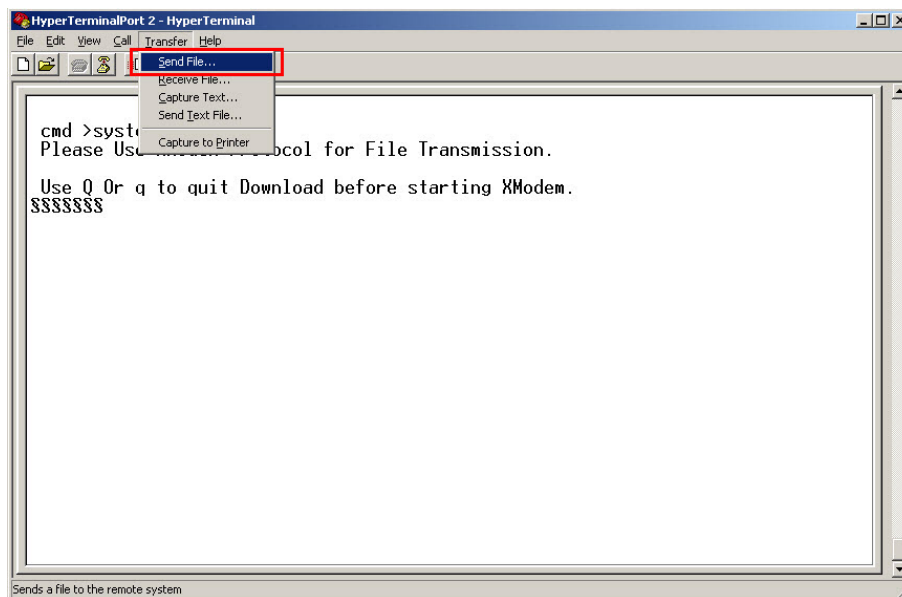


**IMPORTANT:** Before upgrade the JBOD firmware, please shut down server first or make sure no array setting on the JBOD disks. The new Firmware will effective after JBOD power cycle.

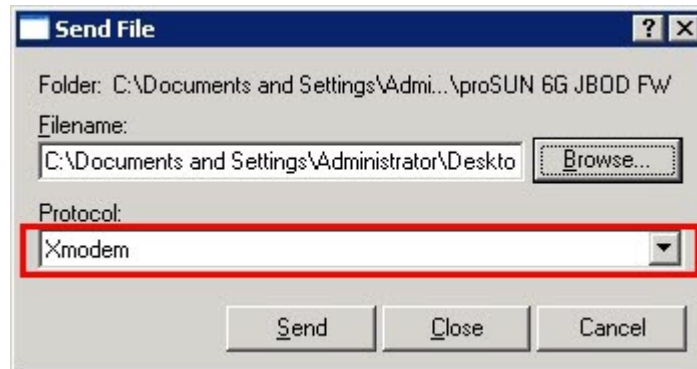
1. Used RS-232 Port (Phone jack to DB9) link IS316JS SAS JBOD, in command line please type "**system upgrade**", than press "**Enter**".



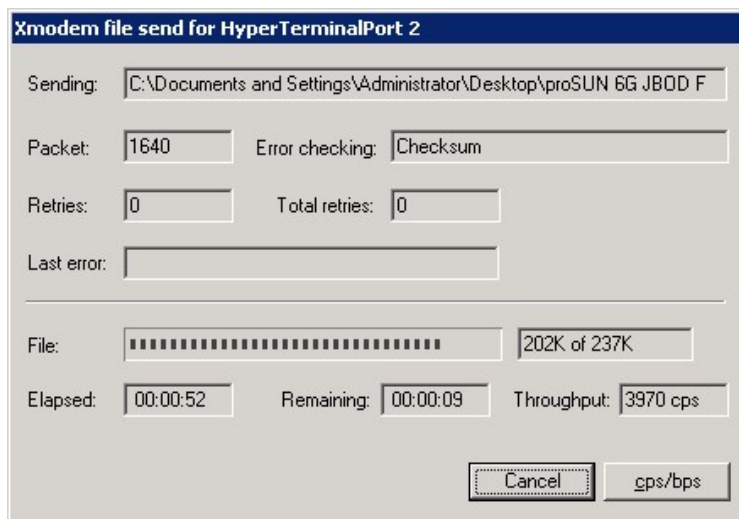
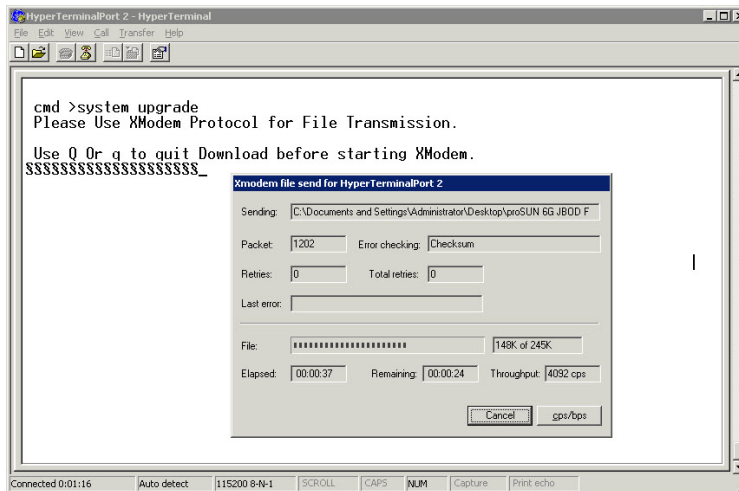
2. Select Transfer & Send File with in 25 seconds



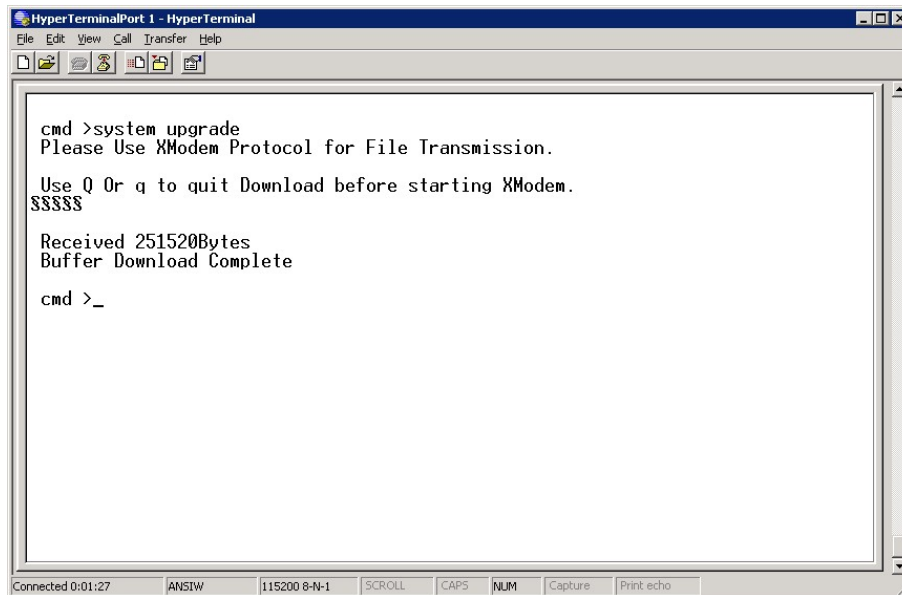
3. Select your firmware file path, and select Xmodem in the communication protocol, and click transfer button.



4. Wait for the transfer of file to complete.



5. When the transfer and firmware update is complete, please power cycle the system.



```
HyperTerminalPort 1 - HyperTerminal
File Edit View Call Transfer Help
[Icons]

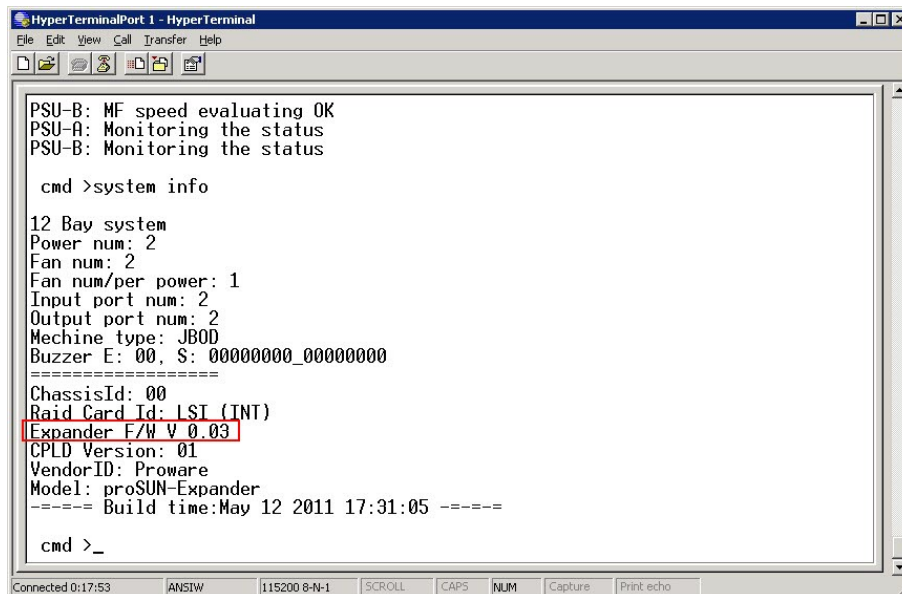
cmd >system upgrade
Please Use XModem Protocol for File Transmission.
Use Q Or q to quit Download before starting XModem.
$$$$$

Received 251520Bytes
Buffer Download Complete

cmd >_

Connected 0:01:27  ANSIW  115200 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

6. In command line, type “**system info**”, you can see the Expander firmware version.



```
HyperTerminalPort 1 - HyperTerminal
File Edit View Call Transfer Help
[Icons]

PSU-B: MF speed evaluating OK
PSU-A: Monitoring the status
PSU-B: Monitoring the status

cmd >system info

12 Bay system
Power num: 2
Fan num: 2
Fan num/per power: 1
Input port num: 2
Output port num: 2
Machine type: JBOD
Buzzer E: 00, S: 00000000_00000000
=====
ChassisId: 00
Raid Card Id: LSI (INT)
Expander F/W V 0.03
CPLD Version: 01
VendorID: Proware
Model: proSUN-Expander
----- Build time:May 12 2011 17:31:05 -----

cmd >_

Connected 0:17:53  ANSIW  115200 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```