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# 1 Configuring Rboot

## 1.1 Introduction

### 1.1.1 Overview

The Rboot menu includes all functions supported by Rboot, including booting the main program, updating the universal boot loader (Uboot), updating Rboot, and reinstalling the system.

### 1.1.2 Accessing the Rboot Menu

#### 1. Connecting to the Client

Connect the COM port of a PC to the serial port of the device through a serial port cable, start the client software, and configure the following settings:

- Protocol type -for connection: Serial
- Port for connection: COM
- Bits per second: 9600
- Data bit: 8
- Parity check: N/A
- Stop bit: 1
- Data flow control: N/A

#### 2. Starting the Device

After the device is started, the following information is displayed:

```
Press Ctrl+B to enter Boot Menu, Press Ctrl+C to enter Rboot
Press Ctrl+C.
```

When Rboot is started, the current version is displayed.

```
Rboot                               Version: 1.1.22
-----
```

#### 3. Accessing the Rboot Menu Interface

The interface displays the following:

```
===== Rboot Menu(Ctrl+Z to upper level) =====
TOP menu items.
*****
0. Tftp utilities.
1. X/Y/ZModem utilities.
2. Run main.
```

```

    3. SetMac utilities.
    4. Scattered utilities.
*****
Press a key to run the command:

```

After the device displays the menu interface, select a menu item to select the corresponding function.

Press the first character of the menu item to perform the function of the menu item. If the menu item is a submenu, the submenu is accessed. The device displays the interface of the submenu.

Press **Ctrl+Z** to exit the current submenu and return to the previous-level menu.

**1.1.3 Downloading Tftp utilities**

This is a submenu. After you access the submenu, the following information is displayed:

```

===== Rboot Menu(Ctrl+Z to upper level) =====
    Tftp utilities.
*****
    0. Upgrade uboot/bios program.
    1. Upgrade rboot program.
    2. Upgrade main program.
    3. Upgrade the entire device by distribute package.
    4. Burn the total FlashROM by this downloaded file.
*****
Press a key to run the command:

```

**1. Upgrading Uboot/Bios**

This function downloads a Uboot or BIOS file to the flash memory to update the master or slave Uboot of the system or the master or slave BIOS of the system, depending on the product.

- (1) Start the Trivial File Transfer Protocol (TFTP) server on the PC or supervisor module.
- (2) Be sure to put the Uboot or BIOS upgrade image file to be downloaded in the TFTP server directory of the PC or supervisor module.
- (3) Connect the device to the PC through an Ethernet cable.
- (4) On the menu interface, select **Upgrade uboot/bios program**.
- (5) Enter **Local IP** (IP address of the switch), **Remote IP** (IP address of the PC), and **Filename** (name of the Uboot or BIOS file to be downloaded) based on prompts and press **Enter**.
- (6) Wait until the system displays a message indicating that the operation is complete.

**2. Upgrading Rboot**

This function downloads an Rboot file to the flash memory to update Rboot of the system.

- (1) Start the TFTP server on the PC or supervisor module.
- (2) Be sure to put the Rboot upgrade image file to be downloaded in the TFTP server directory of the PC or supervisor module.
- (3) Connect the device to the PC through an Ethernet cable.
- (4) On the menu interface, select **Upgrade rboot program**.

- (5) Enter **Local IP** (IP address of the switch), **Remote IP** (IP address of the PC), and **Filename** (name of the Rboot file to be downloaded) based on prompts and press **Enter**.

### 3. Upgrading the Main Program

The function is used to parse a main program package and upgrade the main program. If the main program package contains Uboot or Rboot, Uboot or Rboot is upgraded depending on the version.

- (1) Start the TFTP server on the PC or supervisor module.
- (2) Be sure to put the upgrade image file of the main program to be downloaded in the TFTP server directory of the PC or supervisor module.
- (3) Connect the device to the PC through an Ethernet cable.
- (4) On the menu interface, select **Upgrade main program**.
- (5) Enter **Local IP** (IP address of the switch), **Remote IP** (IP address of the PC), and **Filename** (name of the main program file to be downloaded) based on prompts and press **Enter**.
- (6) Wait until the system displays a message indicating that the operation is complete.

### 4. Upgrade the Software Package

This function is used to parse a software package, retrieve the main program from the software package, and upgrade the device by using the main program according to the upgrade procedure of the main program.

- (1) Start the TFTP server on the PC or supervisor module.
- (2) Be sure to put the upgrade image file of the software package to be downloaded in the TFTP server directory of the PC or supervisor module.
- (3) Connect the device to the PC through an Ethernet cable.
- (4) On the menu interface, select **Upgrade the entire device by distribute package**.
- (5) Enter **Local IP** (IP address of the switch), **Remote IP** (IP address of the PC), and **Filename** (name of the program file to be downloaded) based on prompts and press **Enter**.
- (6) Wait until the system displays a message indicating that the operation is complete.

### 5. Upgrading the Flash ROM File

This function is used to refresh the ROM files (including the slave Uboot, master Uboot, and Rboot) in the flash memory to burn such files into the flash memory again. After upgrade, the baud rate is changed to **9600** and **SetMac** needs to be set again.

- (1) Start the TFTP server on the PC or supervisor module.
- (2) Be sure to put the ROM upgrade image file to be downloaded in the TFTP server directory of the PC or supervisor module.
- (3) Connect the device to the PC through an Ethernet cable.
- (4) On the menu interface, select **Burn the total FlashROM by this downloaded file**.
- (5) Enter **Local IP** (IP address of the switch), **Remote IP** (IP address of the PC), and **Filename** (name of the program file to be downloaded) based on prompts and press **Enter**.
- (6) Wait until the system displays a message indicating that the operation is complete.

### 1.1.4 Downloading X/Y/ZModem

This is a submenu. After you access the submenu, the following information is displayed:

```

===== BootLoader Menu("Ctrl+Z" to upper level) =====
      XModem utilities.
*****
      X/Y/ZModem utilities.
*****
      0. XModem utilities.
      1. YModem utilities.
      2. ZModem utilities.
      3. Local utilities.
*****
Press a key to run the command:
    
```

#### 1. Upgrading XModem

This function is used to download Uboot, BIOS, Rboot, main program, software package, or ROM through XMODEM and install it on the device.

- (1) On the menu interface, select **XModem utilities**.
- (2) The device displays the following submenus:

```

===== Rboot Menu (Ctrl+Z to upper level) =====
      XModem utilities.
*****
      0. Upgrade uboot/bios program.
      1. Upgrade rboot program.
      2. Upgrade main program.
      3. Upgrade the entire device by distribute package.
      4. Burn the total FlashROM by this downloaded file.
*****
Press a key to run the command:
    
```

- (3) Select a required upgrade type.
- (4) Select **Transfer > Send File** in HyperTerminal, select **XMODEM** for the protocol, and select a file to be downloaded by the upgrade type.
- (5) Click **Send**.
- (6) Wait until the system displays a message indicating that the operation is complete.

#### 2. Upgrading YModem

This function is used to download Uboot, BIOS, Rboot, main program, software package, or ROM through YMODEM and install it on the device.

- (1) On the menu interface, select **YModem utilities**.
- (2) The device displays the following submenus:

```

===== Rboot Menu (Ctrl+Z to upper level) =====
      YModem utilities.
    
```

```
*****
0. Upgrade uboot/bios program.
1. Upgrade rboot program.
2. Upgrade main program.
3. Upgrade the entire device by distribute package.
4. Burn the total FlashROM by this downloaded file.
*****
Press a key to run the command:
```

(3) Select a required upgrade type.

**Note**

This menu is similar to the TFTP menu. For details, see the TFTP menu.

(4) Select **Transfer > Send File** in HyperTerminal, select **YMODEM** for the protocol, and select a file to be downloaded by upgrade type.

(5) Click **Send**.

(6) Wait until the system displays a message indicating that the operation is complete.

**3. Upgrading ZModem**

This function is used to download Uboot, BIOS, Rboot, main program, software package, or ROM through ZMODEM and install them on the device.

(1) On the menu interface, select **ZModem utilities**.

(2) The device displays the following submenus:

```
===== Rboot Menu (Ctrl+Z to upper level) =====
ZModem utilities.
*****
0. Upgrade uboot/bios program.
1. Upgrade rboot program.
2. Upgrade main program.
3. Upgrade the entire device by distribute package.
4. Burn the total FlashROM by this downloaded file.
*****
Press a key to run the command:
```

(3) Select a required upgrade type.

(4) Select **Transfer > Send File** in HyperTerminal, select **ZMODEM** for the protocol, and select a file to be downloaded by upgrade type.

(5) Click **Send**.

(6) Wait until the system displays a message indicating that the operation is complete.

**4. Upgrading Local Utilities**

This function is used to download the Uboot, BIOS, Rboot, main program, software package, and ROM to a USB flash drive or flash memory partition and install them on the device.

(1) On the menu interface, select **Local utilities**.

(2) The device displays the following submenus:

```

===== Rboot Menu (Ctrl+Z to upper level) =====
  Local utilities.
*****
  0. Upgrade uboot/bios program.
  1. Upgrade rboot program.
  2. Upgrade main program.
  3. Upgrade the entire device by distribute package.
  4. Burn the total FlashROM by this downloaded file.
*****
Press a key to run the command:

```

(3) Select a required upgrade type.

(4) Based on the prompt, enter a file path.

a If a USB flash drive is used, the file path is the location of the **usb0:** file. If there are multiple USB flash drives or partitions, the file paths are usb1: file location, usb2: file location, and so on.

b If a flash memory partition is used, the file path is the location of the **flash:** file.

(5) Wait until the system displays a message indicating that the operation is complete.

### 1.1.5 Running the Main Program

On the menu interface, enter **3**. The program is booted to access the main program.

### 1.1.6 Querying and Setting Other Functions

This is a submenu. After you access the submenu, the following information is displayed:

```

===== Rboot Menu(Ctrl+Z to upper level) =====
  Scattered utilities.
*****
  0. Show Version.
  1. Reload System.
  2. Set Baudrate.
  3. Format Flash.
  4. Exit menu.
  5. Set debug mode.
  6. Run main without enable password.
  7. Set Download Gateway.
*****
Press a key to run the command:

```

#### **Note**

Options in the submenu increases with the update of the Rboot version but some Rboot items of some earlier products may not be listed.

#### 1. Displaying the Boot Version

This function is used to display the versions of Uboot/BIOS and Rboot on all flash memories.





## 5. Setting the Debugging Mode

This is a submenu. After you access the submenu, the following information is displayed:

```
===== Rboot Menu (Ctrl+Z to upper level) =====
Set debug mode.
*****
0. Debug switch On.
1. Debug switch Off.
*****
Press a key to run the command:
```

Select **Debug switch On** to enable the debugging mode or select **Debug switch Off** to disable the debugging mode.

The main program outputs more logs in debugging mode than those in normal mode.

## 6. Running the Main Program Without Enabling Password

On the menu interface, select **Run main without enable password**. Click **OK**. The main program is started. In the main program, you can enable the device without a password. This function is used when you forget the password. This function is effective for only the current operation. After reboot, the password is still required.

Some devices do not support startup without a password under Rboot (but supports startup without a password under Uboot). In this case, the following information is displayed:

```
Not supported in Rboot.
Please reload, press Ctrl+B to enter Uboot,
and select the same item in Uboot menu.
```

For such devices, access Uboot during startup and select the **Run main without enable password** menu.

## 7. Downloading TFTP Across Gateways

This function is used to configure a gateway and a mask so that TFTP can be downloaded across gateways.

On the menu interface, select **Set Download Gateway**. The following information is displayed:

```
Plz enter the Local GatewayIP [<NULL>]:
```

Enter the IP address of a gateway in the format of X.Y.Z.W. The following message is displayed:

```
Plz enter the IP Netmask [<NULL>]:
```

Enter a subnet mask in the format of X.Y.Z.W. The following message is displayed:

```
Set Local GatewayIP to <set IP address of the gateway>
Set IP Netmask to <set subnet mask>
```

Then return to the main menu and select items in **Tftp utilities**. The gateway and subnet mask are displayed during downloading and TFTP items are downloaded across gateways.

```
TFTP: Detect Gateway <set IP address of the gateway> ...
TFTP: Detect Netmask <set subnet mask> ...
```

The gateway configuration is not retained. After you leave Rboot, the configuration is lost.

To clear the gateway configuration in Rboot, enter a null address in **Set Download Gateway**.

```
Plz enter the Local GatewayIP [<NULL>]:
Plz enter the IP Netmask [<NULL>]:
```

```
Clear Local GatewayIP config.  
Clear IP Netmask config.
```