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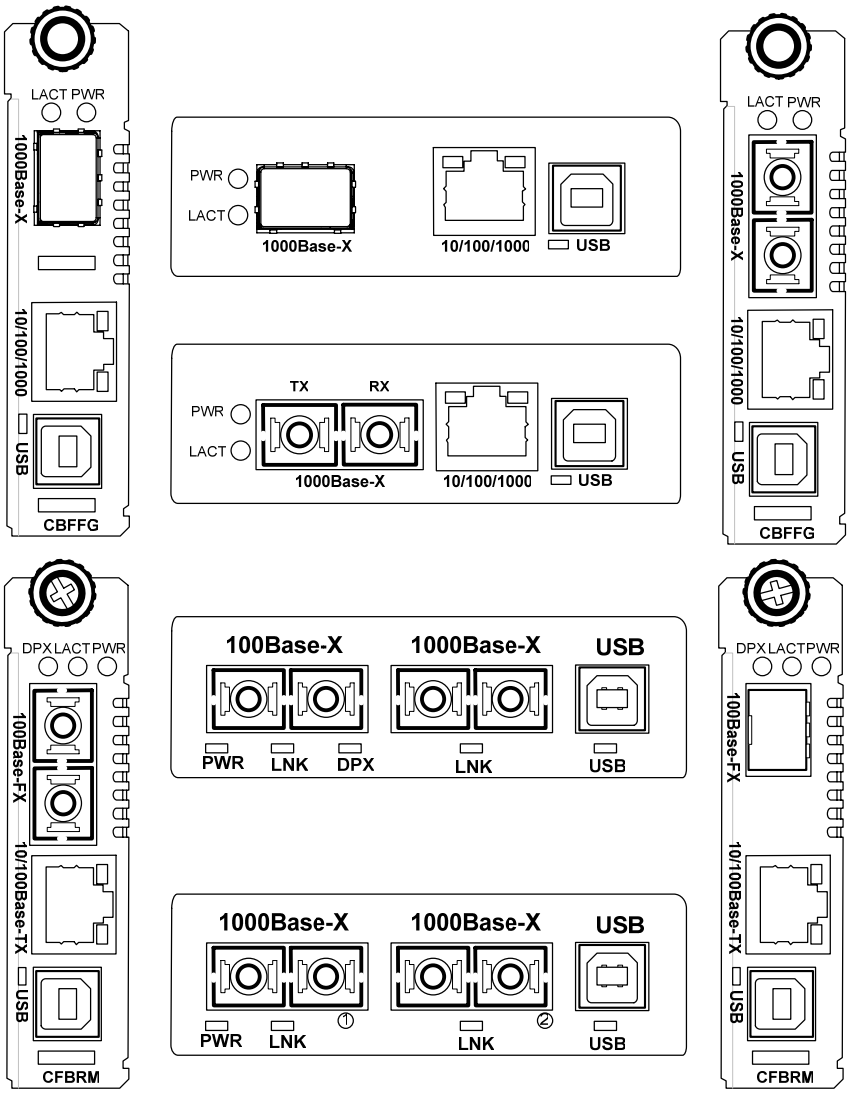

FBRM1xxx-1xx & BFFG1xxx-1xx

Media Converter

Quick Reference Guide

33378.C

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Introduction

This quick start guide presents information and instructions about the FBRM/BFFG media converter. The topics are as follows:

- Shipping box contents
- Installing the hardware and USB driver
  - Installing USB driver
  - Default username and password and
  - Default IP configuration
  - Chassis card model
  - Standalone model
- Setting IP network configuration
- Setting the username and password
- Upgrading firmware
- Setting up OAM

For the full version of the FBRM/BFFG manual, #33345, visit the website @ www.transition.com

Shipping box contents

- FBRM/BFFG converter (*chassis or standalone model)*
- Quick reference guide
- Power supply *(standalone model only)*

USB driver installation

Installing USB driver

The driver installation instructions are for Windows XP. Installing the drivers using Windows 2000 is similar, but not necessarily identical to this XP procedure.

Note: The following USB drivers are available at www.transition.com; also available at www.ftdichip.com: WinXP64, Win Server 2003, Win 2002, Win ME/98, Mac OS X, 9, 8, Linux.

1. Extract the driver and place it in an accessible folder on the local drive.
2. Plug the FBRM/BFFG converter into the PC's USB port to bring up the "found new hardware" wizard dialog box.
3. Select RADIO button, "No, not this time.
4. Click the NEXT button and follow the instruction in the dialog boxes to complete the USB driver installation.

After drive installation:

5. Configure the COM port.
6. Set up the terminal emulator:
   - Bits per second: 57600
   - Data bits: 8
   - Parity: none
   - Stop bit: 1
   - Flow Control none

Default username, password, and IP configuration

Default user name and password

The FBRM/BFFG comes from the factory with the following default usernames and passwords.

- USB CLI/Telnet: root, root
- IP interface: private

Default IP configuration

The FBRM/BFFG comes from the factory with the following default IP configuration.

- IP address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.2

Hardware installation

IMPORTANT

The CFBRM/CBFFG media-converter product family IS NOT compatible with the CPSMM-200 and CPSMM-210 MGMT modules when they are used in a cascaded application. The CFBRM/CBFFG can be installed in the "master" chassis with the CPSMM-200 MGMT module, but they cannot be installed in a cascaded chassis that employees a CPSMM-210 MGMT module.

Alternatively, the CFBRM/CBFFG can be used with the CPSMM120 MGMT module, which does not support chassis cascading.

Installing a FBRM/BFFG chassis module

1. Locate an empty slot in the Point System chassis.
2. *(Proper grounding for ESD)* grasp the edges of the card by its front panel.
3. Carefully insert the card into the slot, aligning it with the slot guides.
4. Firmly seat the card against the chassis back panel.
5. Push IN and ROTATE the panel-fastener screw to secure the card.
6. To set up the FBRM/BFFG for operation use the chassis management module (MMU) via a Web browser.

OAM setup peer management

Note: By default, OAM is enabled on the fiber port.

1. Connect a fiber cable from the active local device *(chassis)* to the passive remote device. The active local device manages its passive remote peer. The relationship between the active local device and its passive remote peer is established via OAM automatically.
2. Once OAM is established, all configuration changes to the remote device can be done via the chassis agent.

Installing a FBRM/BFFG standalone module

Note: By default, OAM is enabled on the fiber port.

1. Install the FBRM/BFFG converter's provided external power supply to power up the device.
2. Connect the FBRM/BFFG converter to the PC/Laptop via the USB or Ethernet port.
3. Configure the FBRM/BFFG converter via the USB CLI or the Web, using the Default IP address.

Note: If you change the default IP via Web-based configuration, the connection will be lost; therefore, reconnect using the new IP address.

Setting IP network configuration

The IP network configuration can be assigned manually or gotten via DHCP *(Dynamic Host Configuration Protocol),* using the following methods:

- USB CLI
- Chassis agent *(MMU)*
- Telnet
- IP-based *(Web)*

USB CLI method

To set the IP configuration via the CLI, do the following:

1. Connect the FBRM/BFFG converter to the computer via the USB port.
2. Activate the terminal emulator software to launch the emulator screen.
3. Press the ENTER key to bring up the "password" prompt.
4. Enter the password and then the login *(default is "root" in both cases)* to bring up the device console> prompt
5. To access the commands list, at the console> prompt type **help** or **?**
6. Press the ENTER key to show the "commands."

Note: Type "**help set <command>**" to display the format for setting any command.

DHCP method:

Note: A DHCP server must be on the network and accessible.

1. To set the IP via DHCP, at the console> prompt type **set dhcp=enable**
2. Press the ENTER key.
3. Type reboot.
4. Press the ENTER key to reboot, enabling DHCP.

Manual method:

1. To set the IP, at the console> prompt type **set ip=nnn.nnn.nnn.nnn**
2. Press the ENTER key to establish the new IP address.
3. Repeat Steps 1 and 2 for setting the subnet mask and gateway, if required.

Point System chassis agent (MMU) method Web-based

To set the IP configuration via the MMU, do the following:

1. Open a Web browser.
2. At the URL, type the IP address *(nnn.nnn.nnn.nnn)* of the chassis MMU.
3. Press the ENTER key to launch the MMU interface.
4. Enter a password (*default is private)*.
5. Click the LOGIN button to launch the main menu.
6. Click on the VIEW button to display the cards in the chassis.
7. Locate the desired FBRM/BFFG card.
8. Click the VIEW button to show local switch parameters
   a. If you want to set the IP, subnet mask, and gateway manually type the value in the appropriate box.
   b. If you want to the set the IP configuration dynamically, a DHCP server most be on the network and accessible, then enable DHCP and reboot the module.
9. Click the SAVE/EXECUTE button to save the changes. *(Changes take effect immediately.)*

Telnet method

To configure IP via telnet, do the following:

1. At the command line type: Telnet
2. Press the SPACE BAR then
3. Type the FBRM/BFFG IP address *(nnn.nnn.nnn.nnn)*.
4. Press the OK button to launch the Telnet login screen.
5. Login *(default login and password is root)*

Note: The interface for Telnet is the same as the USB CLI.

Directly to FBRM/BFFG method (web-based)

To configure IP via the Web, do the following:

1. Open a Web browser.
2. At the URL, type the default IP address *(nnn.nnn.nnn.nnn)* of the FBRM/BFFG converter.
3. Press the ENTER key to launch the device interface.
4. Enter a password (*default is private)*.
5. Click the LOGIN button to launch the converter main menu.
6. Click Local System Configuration VIEW button to display the device configuration screen *(IP, subnet mask, and gateway are configured on this screen)*.

Setting username and password

Note: The username and password can only be changed via the USB CLI *(command line interface)*.

To set the username and password do the following:

1. At the console prompt type **set username="new name"** *(include the quotes)*
2. Press the ENTER key and the new username will appear at the console prompt.
3. Press the ENTER key.
4. Type **set password="new password"** *(include the quotes)*.
5. Press the ENTER key and the new password will appear at the console prompt.
6. Press the ENTER key.
7. Type **reboot.**
8. Press the ENTER key to reboot and set the new username and password.

Upgrading firmware

The firmware image on the converter can be upgraded by these methods:

- XModem
- TFTP protocol
- OAM

When enabled, OAM is done automatically when the active peer detects that its remotely managed peer is running on an older firmware version. TFTP and XModem are initiated by the user. All firmware upgrades are done by the "bootloader."

Note: The bootloader recognizes incompatible FBRM/BFFG BIN files when upgrading. Since there are different FBRM/BFFG board types, it is possible to download the wrong BIN file. When the converter receives an incorrect bin file through TFTP or XMODEM, the following message will appear on the screen:

```
Bootloader: Hardware and BIN file mismatch,
upgrade aborted.
```

Xmodem method

To upgrade the firmware via Xmodem do the following:

1. At the console prompt> type **xmodemupgrade**
2. Press the ENTER key and an upgrade decision Yes/No prompt will appear.

Note: If you select "Y," the memory of the targeted device will be erased.

3. Type "Y" at the prompt.
4. Press the ENTER key to launch the firmware download process.
5. Upon request, choose the 'send file' option from Hyperterminal with 'XModem' as the protocol *(a time out is activated for this step)*. After the download, the bootloader verifies the CRC of the file and resets itself to start the user application.

TFTP method

The device can be upgraded remotely using TFTP. A valid IP address, subnet, gateway, tftp server IP address, and filename must be configured before starting the upgrade process.

TFTP can be started in the following ways:

- 'tftpupgrade' command at the CLI
- On the web using → "Local System Configuration' → 'TFTP upgrade' [perform(1)]
- Using SNMP, set on 'sfbrm100SysTFTPCmd' to '1' *(perform)*

After initiating the command, the system resets to start the bootloader; then the tftp upgrade will start. After successful upgrading the firmware, the application will start up.

OAM method

OAM firmware upgrades are done from the active local device to the passive remote device. This occurs when the active local device finds that its remote peer has a firmware revision different from its own. The active local device sends a bootloader command to its remote peer. When the firmware upgrade on the remote peer is completed, it performs a reboot to activate the new firmware—no user intervention is required. *(Active and passive peer relationships are established automatically when OAM is enabled.)*

OAM configuration

The OAM can be configured via:

- USB CLI
- Telnet
- IP based *(directly to the FBRM/BFFG converter)*
- Point System chassis agent *(MMU)*

USB CLI method

To configure OAM via CLI, do the following:

1. Connect the FBRM/BFFG converter to the computer via the USB port.
2. Activate the terminal emulator software to launch the emulator screen.
3. Press the ENTER key to bring up the "password" prompt.
4. Enter the password and then the login *(default is "root" in both cases)* to bring up the device console> prompt
5. To access the commands list, at the console> prompt type **help** or **?**
6. Press the ENTER key to show the "commands."
7. At the console> prompt type command **ifoam**
8. Press the ENTER key to show the OAM commands.
9. For command format help, at the console> prompt type **help ifoam**
10. Press the ENTER to display the command format for setting OAM parameters.

Formatting a command:

11. For example, to make port 2 OAM active, at the console> prompt type **ifoam port=2 oammode=active**
12. Press the ENTER key to establish the change.

View the change:

13. At the console> prompt type **show ifoam**
14. Press the ENTER key to display current status.

Telnet method

To configure OAM via telnet, do the following:

6. At the command line type: Telnet
7. Press the SPACE BAR then type the device IP address *(nnn.nnn.nnn.nnn)*.
8. Press the OK button to launch the Telnet login screen.
9. Login *(default login and password is root)*

Note: The interface for Telnet is the same as the USB CLI.

IP based (directly to the FBRM/BFFG converter) method

To configure OAM via IP, do the following:

1. Open a Web browser
2. At the URL, type the IP address *(nnn.nnn.nnn.nnn)* of the FBRM/BFFG converter.
3. Press the ENTER key to launch the device interface.
4. Enter a password (*default is private)*.
5. Click the LOGIN button to launch the converter main menu.
6. Click on a PORT button to display the port configuration screen *(OAM is configured on this screen)*.
7. Click the SAVE/EXECUTE button to save the changes.

Point System chassis agent (MMU) method web-based

To configure OAM via the MMU, do the following:

1. Open a Web browser.
2. At the URL, type the IP address *(nnn.nnn.nnn.nnn)* of the chassis MMU.
3. Press the ENTER key to launch the MMU interface.
4. Enter a password (*default is private)*.
5. Click the LOGIN button to launch the main menu.
6. Click on a VIEW button to display the modules in the chassis.
7. Locate the desired FBRM/BFFG converter card.
8. Click the VIEW button to show the FBRM/BFFG local switch display.
9. To enable OAM, click on the desired port to display its configuration parameters *(OAM configuration is done on this screen)*.
10. Click the SAVE/EXECUTE button to save the changes.