# Release Note for the
# 8250 Ethernet Management Module
# Version v4.30 Software

**IBM Corporation**
**Part Number 29H4486**

**September 19, 1995**

This release note applies to the IBM 8250 Ethernet Management Modules (EMM) for Version v4.30 (Feature Codes 3819, 3788, 4010), including Model Numbers:

- EMM Basic (Feature Code 3819)
- EMM Advanced (Feature Code 3788)
- EMM Starter (Feature Code 4010).

Add this note to the binder containing your *8250 Ethernet Management Module Installation and Operation Guide* (Document Number SA33-0209).

This release note contains the following sections:

- New Module Support
- New Features in Version v4.30
- Description of EMM Starter
- Corrected Problems
- Operating Considerations
- Known Problems
- Known Problems in Advanced EMM Version v4.30
- Additional Filtering Information.

## New Module Support

This section lists module support according to the version of EMM in which it was added.

### New Module Support in EMM Version v4.30

EMM Version v4.30 provides support for the following modules:

- 8250 Token Ring Active Media Module (Feature Code 7400)
- 8250 Token Ring Copper Repeater Module (Feature Code 7386)
- 8250 Token Ring Carrier Module, Base motherboard for the following Token Ring modules:
  - 8235 DIALs module (Feature Code 3155)
  - 8229 Bridge modules (Feature Codes 3182 and 3179)
- 8250 Token Ring Workstation Networking Module (Feature Code 3174)
- 8260 10-Slot Switching Hub.

### New Module Support as of EMM Version v4.20

EMM Version v4.20 added support for the following module:

- 8250 Ethernet RMON Probe Module (Feature Code 5894).

EMM Version v4.20 did not support the following modules:

- 8250 Token Ring Workstation Networking Module
- 8250 Token Ring Copper Repeater Module
- 8260 10-Slot Switching Hub.

### New Module Support as of EMM Version v4.10

EMM Version v4.10 provided support for the following 8250 modules:

- Ethernet Interconnect Modules
  - Switch version (Feature Code 6767)
  - Bridge version (Feature Code 6768)
  - Router version (Feature Code 6769).
- FDDI Copper Module (Feature Code 6718)
- 8235 Module (Feature Code 3160) based on the Ethernet Carrier Module
- FDDI Management Module Single Mode (Feature Code 6717).

## New Features in Version v4.30

You can now execute in-band downloads in the EMM Starter and Basic versions. Previously this feature was available only in the Advanced EMM version. You can execute in-band downloads from either:

- The Terminal Console
- Hub management programs, using SNMP.

## Description of EMM Starter

The following description of the EMM Starter module does not appear in the *8250 Ethernet Management Module Installation and Operation Guide*.

**Note:** The EMM Starter module (Feature Code 4010) may not be available in all countries.

The EMM Starter module manages modules that are assigned to the same network as the EMM. In addition, the EMM Starter module provides:

- Trivial File Transfer Protocol (TFTP) for local inband software upgrades in maintenance mode
- Out-of-band software upgrades
- Modem support (up to 9600 baud)
- Master/slave network management
- Automatic statistics reporting
- SNMP support
- TELNET support for remotely managing the EMM using an inband connection.

## Corrected Problems

The following problems have been corrected in EMM Version v4.30:

1. The EMM now prevents false partition traps from being reported for port 11 on the 8250 Ethernet 50-Pin Port-Switching Module (Model Number 3802E). To prevent false partition traps from being reported, enter the following commands:
   - SET PORT <slot>.11 ALERT DISABLE (where slot is the slot number)
   - SET ALERT PORT_UP_DOWN FILTER
   - SAVE MODULE_PORT
2. The SHOW MODULE ALL command now displays all characters correctly.

3. The EMM now properly assigns itself to the previously-saved network after resetting when the DEVICE DIP CONFIGURATION option is enabled.

4. The IHMP/6000 ECHO option under the Management Module Menu is now functional. Performing SNMP access to the chipEcho MIB group is also functional.

5. Executing an SNMP GET on the MIB variable olPortNetworkType now returns the proper value of 5 for the 8250 Ethernet Terminal Server Module (Model Number E32TS1).

6. The values of 3 or 4 are now properly returned when you execute an SNMP GET on the MIB variable ennPSFBPortDipAdminState (module E04PS-FB or E02PS-FB) or the MIB variable ennMFBPortDipAdminState (module E04PS-FBP or E02PS-FBP) when a port is assigned a redundant setting.

7. If you enter a SHOW NETWORK MAP TOKEN_RING from an EMM slave, the EMM now returns a more accurate error message.

8. The timeout value for the warning message displayed when changing the network for the EMM Starter version has been increased from 5 to 15 seconds.

9. The timeout value for the DOWNLOAD INBAND command has been increased from 10 to 15 seconds.

10. The warning prompt that is displayed when changing the network for the EMM Starter version is now properly displayed across a TELNET session.

11. The EMM banner and copyright statement is now displayed at login during a TELNET or REMOTE_LOGIN session.

12. The SHOW ERROR LOG and SHOW COMMUNITY commands are now accessible only when you are logged in to the terminal console with administrator privileges. These commands are no longer accessible when you are logged in with user privileges.

13. The EMM now terminates a TELNET connection after 3 consecutive failed login attempts.

**14.** If you enter a SET DEVICE PASSWORD command using a TELNET session and you allow the command to time out, the EMM no longer interprets the timeout as a carriage return.

**15.** The EMM now allows the chipEchoAddr MIB object to be set to the loopback address of 127.0.0.1 through an SNMP SET.

**16.** The EMM now handles high levels of broadcast traffic without locking up the SNMP, PING, TELNET, or local terminal session as follows:

**a)** Whenever the broadcast traffic rate exceeds 200 frames per second, the EMM switches into a filtering mode automatically. Once the filtering is switched on, only ARP requests targeted to the IP address of the EMM are processed. All other broadcast packets are not processed.

**b)** Once the broadcast traffic rate decreases to less than 200 frames per second, full processing of all broadcast packets is switched back on automatically.

**17.** EMM now keeps all functions active during periods of heavy network activity, preventing one or more functions from suspending indefinitely.

## Operating Considerations

The following operating considerations apply to the EMM:

1. You must use a master EMM to configure an EMM slave module to networks 1, 2, or 3. Configuring a slave module through the slave RS-232 port or through SNMP only allows the slave to be configured to isolated mode.

2. Certain modules (for example, Ethernet Interconnect Module, Ethernet 10BASE-FB Module) report a Port Up trap when the EMM disables a port that had a cable connection problem. These modules also report a Port Down trap when the EMM enables a port that had a cable connection problem. The traps are accurate and indicate a problem with either the cable connection or indicate that no cable is connected to the port.

3. If EMMs and TRMMs exist in the same hub, the TRMM must be configured as master so that it can perform beaconing recovery. To allow the TRMM to perform beaconing recovery:

   **a)** Set one TRMM to mastership priority 10.

   **b)** Set other TRMMs to a mastership priority of 9.

   **c)** Set all EMMs to priority 1.

   **d)** Enter the RESET MASTERSHIP command from the master management module.

4. The REMOTE_LOGIN IP_ADDRESS command is not designed to support connections across routers. If you use Remote_login IP_address to connect to devices across routers, ensure that the IP address you use is on the same IP network as the EMM.

5. Chipcom MIB II change traps are not sent for changes in terminal settings.

6. PING functionality in EMM V4.00 and greater perform more slowly than in previous EMM versions.

**7.** Use caution when issuing certain commands while logged into an EMM remotely. For example, the following actions cause the remote session to disconnect:

- Changing the EMM IP address or subnet mask
- Resetting the hub or EMM
- Performing an inband download.

**8.** The E32TS1 Module does not support the port alert feature. Therefore, you cannot use the SET PORT ALERT command for this module.

**9.** Switching the per_port_counter_connector setting on the Ethernet 10BASE-T 24-Port module (3829E)automatically clears the statistic counters for all 24 ports. If you switch the setting during active periods of network traffic, the EMM may report inaccurate packet counts and invalid values for the last source address field. You should enter the CLEAR COUNTERS MODULE command to erase any extraneous statistics gathered during the switchover.

## Known Problems

This section lists known problems and important information you need to know prior to installing or upgrading the EMM:

**1.** EMMs that are managing 8250 Multiprotocol Intelligent Hubs containing a large number of modules and ports may experience slower display times when you:

- Use the REMOTE_LOGIN or TELNET options
- Access the EMM terminal console directly during periods of high traffic loads.

**2.** Performing inband downloads on a network with heavy traffic may cause TFTP transfer errors. These errors terminate the download. If this occurs:

**a)** Retry the download during periods of lighter network traffic.

**b)** Initiate the download within the same IP network.

**3.** The EMM may display extraneous characters if you enter commands while the EMM is rebooting. This character display does not affect the EMM login process.

4. Swapping out a module and replacing it with a module of the same type, but of an earlier software version, may result in the previous module configuration not being saved. Before swapping out a module, note the existing module configuration. If necessary, reconfigure the new module.

5. Mastership priority settings may not be saved if you move an EMM to another slot.

6. You cannot clear counters for FDDI modules.

7. When performing an out-of-band download, do not configure the EMM terminal baud rate to 300. Out-of-band downloads fail with rejected blocks when the terminal baud rate for the EMM is set to 300.

8. When two or more terminal sessions are logged into the EMM using Telnet, Remote_login, or through the RS-232 port, and one of the sessions logs out, the remaining sessions do not accept keyboard input until you press [ENTER].

9. The EMM does not allow you to use the dash character (-) when setting:
   - Device names
   - Device passwords
   - Community names.

   If you use a dash, the EMM replaces it with a space.

10. The EMM enables you to set Token Ring modules that are on the same network to different ring speeds, which takes down the ring. Always verify the ring speed for a particular network before adding a new module to the ring.

11. If you issue the MONITOR command during a Telnet session and press any key to terminate the statistics display 1 second before the next statistic display begins, the EMM may re-initialize. This causes the Telnet session (or any remote session) to disconnect from the EMM.

12. If you display large files or perform other activities which display extensive screen text during a Telnet session from an EMM to a device on a different IP subnet, the displays may misalign and the following message appears:

    ```
    Process input: esballoc failed: pkt dropped.
    ```

**13.** The EMM does not generate traps for the following configuration changes:

- Alert settings
- Clock settings
- Community changes
- Device diagnostics enable/disable
- Device dip configuration enable/disable
- Device password changes
- Port alert filter changes
- Reverted port security settings
- Reverted terminal settings
- TFTP settings.

**14.** If you use the MIB variable PortNetwork to assign a port to a network on the 3802E Module that already has ports assigned to three different networks, all ports on the 3802E Module that are assigned to isolated are re-assigned to ETHERNET_1.

**15.** The EMM inaccurately reports:

- All counter statistics for port 12 on the Ethernet 50-Pin Module as port 14. Consequently, when you request counter statistics for port 12 using the SHOW COUNTER PORT command, you must instead request port 14.
- 8250 Bridge modules showing network statistics originating on port 1.

**16.** You must disable redundancy between two ports on different modules using the SET PORT MODE NON_REDUNDANT command on one module port prior to removing one of the modules from the hub. If you remove one of the modules without issuing the command, the remaining redundant port is forced to remain in a redundant configuration.

To remove the redundant configuration from the remaining port:

**a)** Install another module in the empty slot.

**b)** Issue the SET PORT MODE NON_REDUNDANT command for the remaining port.

**17.** If you perform any activity that generates more than 50 traps simultaneously, the EMM may run out of dynamic memory and reboot with a fatal error. An example of this scenario would be if you removed the 50-pin cables from 5 Ethernet 50-Pin modules at the same time. This would cause 12 port down traps to be generated for *each module*, thereby causing a total of 60 traps to be sent to the EMM.

If you remove the 50-pin cables from the 5 modules one at a time (in sequence), the EMM processes the traps with no errors.

To prevent traps for all ports from being transmitted from the EMM to the designated trap receiver, issue the SET ALERT PORT_UP_DOWN DISABLE command.

**18.** Switching the EMM to or from a network experiencing a heavy traffic load may cause the EMM to reset and display the following message:

```
msgserver: INVALID SLOT EBADF
```

**19.** A Telnet session into an EMM may temporarily lock up and then terminate. The session locks up for about 4 minutes and then the Telnet session terminates. The following message appears indicating that the Telnet session has properly timed out and closed the connection:

```
Connection Closed
```

The local EMM console becomes accessible and you can re-establish a Telnet session to the same EMM.

**20.** EMM Telnet sessions cannot detect when the device to which the EMM is connected becomes disabled. When the device to which the EMM is connected becomes disabled, the EMM console becomes non-functional.

When using Telnet to connect to devices, the following situations can cause the EMM console to become non-functional:

- Turning off a workstation
- Resetting or removing an 8250 or 8260 management module from a hub
- Performing an inband download.

If the disabled agent becomes enabled, the EMM may close out of the Telnet connection normally and the console becomes functional. To restore functionality to the console, press the Reset button on the EMM.

**21.** When you reset a slave TRMM, the module may reconfigure to the isolated network setting. To return the slave TRMM to its last saved network setting, issue the REVERT MODULE_PORT command from the master EMM.

**22.** If you switch the per_port_counter_connector setting on the 8250 24-Port 10BASE-T Module during active periods of network traffic, the EMM may report inaccurate packet counts and invalid values for the last source address field.

**23.** When the EMM is accessing an IP subnet that has multiple routers configured, ensure that the EMM default gateway is set to the primary router. If you do not set the EMM default gateway to the primary router, the EMM may fail to respond to requests from another IP network.

If you cannot change the default gateway to the primary router, enable the ICMP redirect option on the router specified as the EMM default gateway.

**24.** When you issue the SHOW MODULE command for any daughtercard attached to the Ethernet Carrier Module, the daughtercard does not display the correct version number. To display the correct version number, issue the SHOW MODULE VERBOSE command.

**25.** The EMM may temporarily fail to respond to SNMP, Telnet, and Ping requests, and the following message may appear on the console:

```
No timeouts
```

To reset the EMM if this occurs, issue the RESET DEVICE command.

**26.** If an DOWNLOAD INBAND command fails during the TFTP file transfer when the EMM is installed in an 8260 Switching Hub, the EMM will not function until you place it into an 8250 concentrator. After you insert the EMM into the 8250 concentrator, the EMM initializes to maintenance mode, in which you can execute the DOWNLOAD INBAND command.

**27.** If you execute the MONITOR command across a TELNET session and use Ctrl-] to terminate the TELNET session, subsequent inbound TELNET attempts are rejected until the EMM is reset. Do not use Ctrl-] to terminate the TELNET session while the MONITOR command is executing. Instead:

**a)** Press any key to terminate the MONITOR command

**b)** Issue the LOGOUT command at the EMM prompt

## Known Problems in Advanced EMM 4.30

This section lists known problems and important information you need to know prior to installing or upgrading your Advanced EMM:

**1.** The FDDI Management Moduel (FMM or 3827FM) and the 10BASE-2 BNC module (3817EB) do not support security features.

**2.** Port security settings can be configured from a master EMM only. Configuring port security settings from a slave EMM may result in invalid modules or empty slots being configured with security settings.

**3.** You cannot use IHMP/6000 to set cross-module redundancy from a port on the 8250 24-Port 10BASE-T Module (Feature Code 3829) to a port on the 8250 Ethernet 10BASE-FL Modules (Feature Codes 5895, 5896, 5897).

To set cross-module redundancy from a port on the 3829 module to a port on the 589x modules, issue the SET PORT MODE REDUNDANT command from the EMM terminal console.

## Additional Filtering Information

This section augments the port filtering information in the 8250 Ethernet Management Module Installation and Operation Guide.

### Filtering Unwanted Port Up/Port Down Alerts

To filter out only unwanted port up and port down messages, enter the SET ALERT PORT_UP_DOWN FILTER command. Enter the SET PORT ALERT ENABLE command for ports that you want to receive port up/down traps from (for example, file servers).

Use these commands to prevent disruptive routine trap messages, while remaining informed of the status of your critical stations.

The combination of these two commands:

- Lets you eliminate the unimportant port up and port down traps sent by user PCs
- Allows you to disable the filtering feature on crucial stations like file servers

### Filtering Command Examples

To disable most port up and down alerts, while maintaining alerts to crucial stations, enter the following command:

```
8250>> set alert port_up_down filter
```

By default, port alert filter on most ports is set to disable.

To enable traps for a critical node on port 1 of a module in slot 1, enter the following command:

```
8250>> set port 1.1 alert enable

Port 01.01 Alert Filter set to ENABLE.
```