

Hardware Troubleshooting for the Cisco MC3810 Multiservice Access Concentrator

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Introduction

This document helps troubleshoot basic potential hardware issues with the Cisco MC3810. It tells you how to identify which component is experiencing the hardware failure depending on the type of issue that the router is experiencing.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- Check for known hardware issues for the Cisco MC3810 Multiservice Access Concentrator.
- We recommend that you read *Troubleshooting Router Crashes* before proceeding with this document.

Components Used

The information in this document is not specific to any Cisco IOS® software release, but applies to all Cisco IOS software versions that run on the MC3810 series router.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to the *Cisco Technical Tips Conventions*.

How to Check the Digital Signal Processor (DSP) Status on the Router

How to Check if the Router has a Bad Multiflex Trunk (MFT) Module

If the MFT module is bad, it is not recognized when the router is reloaded. You would receive an error similar to the one below:

```
System Bootstrap, Version 12.0(1)XA4, EARLY DEPLOYMENT RELEASE
SOFTWARE (fc1)
Copyright (c) 1999 by cisco Systems, Inc.
TAC:Home:SW:IOS:Specials for info
Compiled Tue 19-Jan-99 15:47 by linda
MPC860 PowerQUICC, partnum 0x0000, version C01(0x0031)
MC3810 platform with 32768 Kbytes of main memory

program load complete, entry point: 0x23000, size: 0x1582b8
Self decompressing the image : #####
#####
##### [OK]
slot 3 Address 0x20004034 failed SB 0x1 Was 0x0
slot 3 Address 0x2000403C failed SB 0x3 Was 0x2
slot 3 Address 0x20004044 failed SB 0x5 Was 0x4
```

If the MFT is not recognized, check the Software Advisor to verify that the MFT module is supported in your current Cisco IOS Software version. If the MFT is still not recognized, then power down the router, remove the chassis cover and reseat the MFT module on slot 3. If the card is good, it will be recognized. If the card is bad, it will not be recognized in the **show version** and you will need to replace the card. Below is an example of the **show version** command output that shows the card being recognized:

```
cisco Internetwork Operating System Software
IOS (tm) MC3810 Software (MC3810-I5S-M), Version 12.2(4)T,
RELEASE SOFTWARE (fc1)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Fri 28-Sep-01 10:25 by ccai
Image text-base: 0x00023000, data-base: 0x00BF014C

Slot 3 OK. Configured as T1 TEB CSU Serial #16013929 Version 7.03
cisco MC3810 (MPC860) processor (revision 10.02)
with 28672K/4096K bytes of memory.
Processor board ID 17093686
PPC860 PowerQUICC, partnum 0x0000, version C01(0x0031)
Channelized E1, Version 1.0.
Bridging software.
X.25 software, Version 3.0.0.
MC3810 SCB board (v16.C0)
1 Multiflex T1(slot 3) RJ45 interface(v03.A0)
1 Six-Slot Analog Voice Module (v07.B0)
1 Analog FXO voice interface (v03.C0) port 1/1
1 Analog FXO voice interface (v03.C0) port 1/2
1 Analog E&M voice interface (v05.B0) port 1/3
1 Analog E&M voice interface (v05.B0) port 1/4
1 Analog FXS voice interface (v03.E0) port 1/5
1 Analog FXS voice interface (v03.E0) port 1/6
1 6-DSP(slot2) Voice Compression Module(v01.K0)
1 Ethernet/IEEE 802.3 interface(s)
2 Serial(sync/async) network interface(s)
1 Channelized T1/PRI port(s) *****
MFT module *****
256K bytes of non-volatile configuration memory.
8192K bytes of processor board System flash (AMD29F016)
```

How to Check if the Router has a Bad Analog Voice Module (AVM)

For AVM modules (for example, Foreign Exchange Station – FXS, Foreign Exchange Office – FXO, E&M), you need to connect the line to the port and turn on **debug vpm all**. After making a call, check the output. If you see debug output, then most likely the port is good. If you do not see any debug output, and you think the port functionality is not working, then the problem could be bad hardware and you need to replace the AVM module.

How to Check if the Router has a Bad Flash

If the router has a bad Flash, it will not be able to download the Cisco IOS software image. If you issue the **show flash** command, it will not be able to recognize the Flash. Below is an example of a bad Flash:

```
3810#show flash
8192K bytes of processor board System flash (Unknown flash)
Directory of flash:/
%Error opening flash:/ (Invalid argument)
No space information available
```

If the Flash is bad, it should be replaced.

An MC3810 router may also experience boot errors due to a router hang. A hang is where the router boots to a certain point and then does not accept any commands or keystrokes. Hangs are not necessarily hardware issues; most of the time they are software issues. If your router is experiencing a router hang, see [Troubleshooting Router Hangs](#).

Boot errors can also be a result of hardware not being supported by the Cisco IOS software version that is installed on the router. To make sure that your router is running the minimum required Cisco IOS software version that supports your hardware, use the [Cisco Software Advisor Tool](#).

Summary

If you have identified the issue, please contact your Cisco partner or reseller to request a replacement for the hardware component that is causing the issue. If you have a support contract directly with Cisco, please open a TAC service request and request a hardware replacement. Ensure that you attach all relevant information, such as troubleshooting logs, troubleshooting steps taken, and the component that failed, and an engineer will be able to assist you.

Related Information

- [Troubleshooting Router Crashes](#)
 - [Troubleshooting Router Hangs](#)
 - [Troubleshooting Bus Error Crashes](#)
 - [Watchdog Timeouts](#)
 - [Cisco Technical Support – Routers](#)
 - [Cisco MC3810 Series – Multiservice Access Concentrators Documentation](#)
 - [Multiservice Access Concentrators](#)
 - [Technical Support – Cisco Systems](#)
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