Microsoft® Lync™ Server 2010

Survivable Branch Appliance

Mediant™ 1000B

Technical Note

Mediant™ 1000B SBA Hardware Upgrade for Microsoft Lync Server 2010

June 2011

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Notice

This document describes how to upgrade the hardware of Mediant 1000B Enhanced Gateway or Mediant 1000B R1/R2 Basic Gateway to Mediant 1000B SBA for the Microsoft® Lync™ Server 2010 solution.

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Related Documentation

Manual Name
Mediant 1000B SBA Quick Guide
Mediant 1000B SBA Installation Manual
AudioCodes SCOM MP User Guide
Mediant 1000B Enhanced Gateway and Analog Devices for Microsoft Lync Installation Manual
Mediant 1000B Software Upgrade for Microsoft Lync Configuration Note

1 Introduction

This document describes the instructions for upgrading the hardware of the Mediant 1000B Basic Gateway R1/R2 and Mediant 1000B Enhanced Gateway in the Microsoft Lync Server 2010 environment, to a Mediant 1000B Survivable Branch Appliance (SBA) gateway.

Note: Once you have successfully completed the hardware upgrade procedure described in this document:

- Upgrade the SBA software as described in the *Mediant™ 1000B SBA Software Upgrade and Recovery in the Microsoft Lync Server 2010 Environment Technical Note.*
- Ensure that the supplied **SBA Rescue USB Tool** is stored in a safe place.

1.1 Physical Description

The descriptions of the front and rear panels are described in the subsequent subsections.

1.1.1 Front Panel

The Mediant 1000B SBA front panel is shown below and described in the subsequent table.

Figure 1-1: Mediant 1000B SBA Front Panel

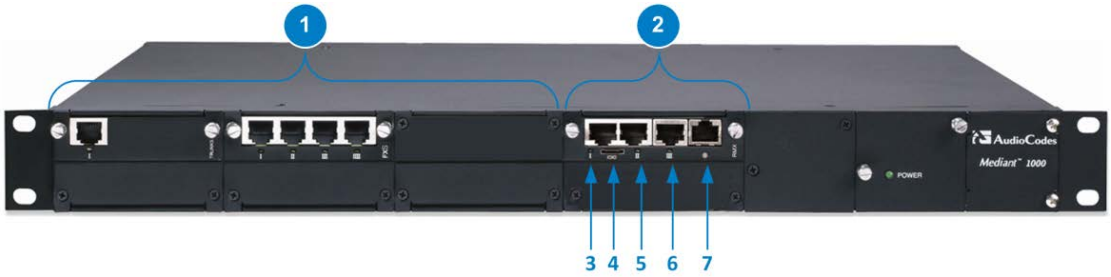

Table 1-1: Front-Panel Description

Item	Label	Description
1	**FXS / FXO/ BRI / TRUNKS**	Optional input / output modules (FXS, FXO, BRI, PRI interfaces).
2	**CRMX**	CRMX module providing WAN, LAN, and serial interfaces for data-routing functionality.
3	**I / II / III**	Three 10/100/1000Base-T LAN ports (RJ-45) for connection to PC's or switches. The LED description for these ports is as follows: ▪ **On (Green) –** Ethernet link established ▪ **Flashing (Green) –** data received or transmitted ▪ **Off (Green) –** no Ethernet link
4	**|O|O|**	RS-232 serial port for accessing the CLI, using the 9-pin DB cable adaptor.
5	**GE WAN e0/0**, **T1 WAN**, **SHDSL WAN**	WAN port (RJ-45) interface for connecting to Internet. The interface type depends on the ordered CRMX module: ▪ **CRMX-C:** RJ-45 port (4-twisted pair copper cabling) providing 1 Gigabit Ethernet (GbE) interface ▪ **CRMX-S:** 1000Base-SX optical fiber port (multi-mode fiber) ▪ **CRMX-L:** 1000Base-LX optical fiber port (single-mode fiber) ▪ **CRMX-T:** RJ-48c Data Service Unit/Channel Service Unit (DSU/CSU) dual T1 WAN port for connecting up to two T1 lines ▪ **CRMX-SD:** Symmetric High-Speed Digital Subscriber Line (SHDSL) RJ-45 port (4 wire pairs) The LED description for this port is as follows: ▪ **On (Green) –** WAN link established ▪ **Flashing (Green) –** data received or transmitted ▪ **Off (Green) –** no WAN link

1.1.2 Rear Panel

The Mediant 1000B SBA rear panel is shown below and described in the subsequent table.

Figure 1-2: Mediant 1000B SBA Rear Panel Showing OSN3 Server

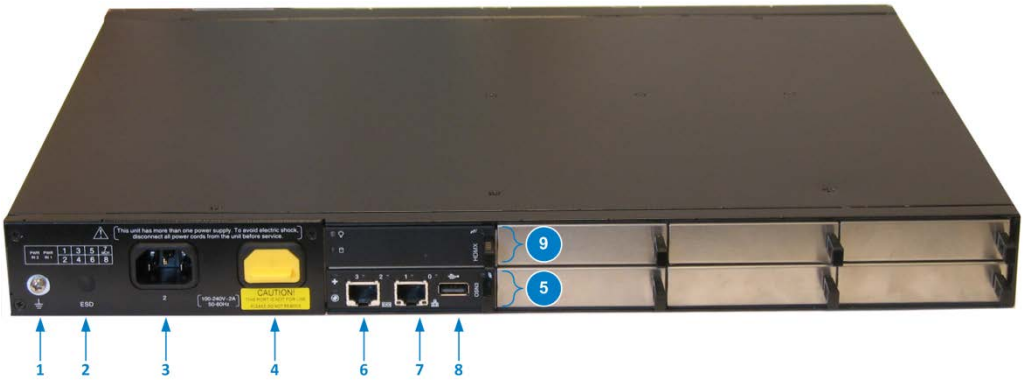

Table 1-2: Rear-Panel Description

Item	Label	Description
1	⏚	Protective earthing (grounding) screw
2	**ESD**	Electrostatic Discharge (ESD) socket
3	**100-240V~2A 50-60 Hz**	Main AC power supply outlet
4	**100-240V~2A 50-60 Hz**	Optional, redundant AC power supply outlet
5	**OSN3**	OSN3 module (on which the SBA is installed)
6	**|O|O|**	Serial interface port (RJ-45)
7		Gigabit Ethernet interface port (RJ-45) - automatic detection and switching between 10Base-T, 100Base-TX and 1000Base-T data transmissions (Auto-Negotiation), as well as auto-wire switching for crossed cables (Auto-MDI/X)
8		USB 2.0 port
9	**HDMX**	Hard disk drive module for OSN3 platform

1.2 OSN3 Platform

The OSN3 platform, on which the SBA software is installed, includes the following modules:

- OSN3 - see Section 1.2.1 on page 10
- HDMX - see Section 1.2.2 on page 13

1.2.1 OSN3 Module

The OSN3 module provides the port connector interfaces and is housed in Slot #2 on the Mediant 1000B SBA rear panel.

The table below lists the OSN3 module specifications:

Table 1-3: OSN3 Module Specifications

Parameter	Specification
CPU	Intel® Core™ 2 Duo 1.5 GHz processors L7400 with Intel 3100 Chipset (64-bit)
RAM Memory	2 G or 4 G DDR2 with ECC
Hard Drives	Up to 2 hard drives (HDMX modules)
Bus/Chipset	64 Bit
L2 Cache	2 M
Interfaces	▪ Gigabit Ethernet ▪ USB 2.0 via Connection Module ▪ RS-232 COM

Figure 1-3: OSN3 Module Ports

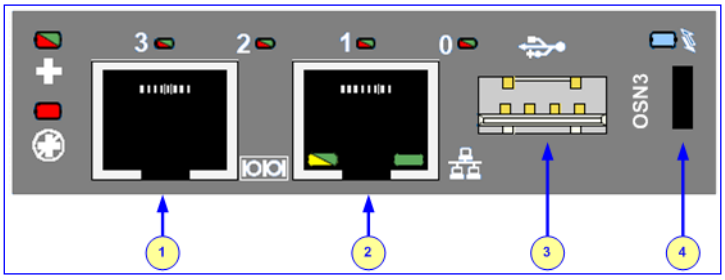

Table 1-4: OSN3 Module Description

Item #	Label	Description
1		RJ-45 port for RS-232 serial interface (COM1).
2		RJ-45 port for Gigabit Ethernet. The interface provides automatic detection and switching between 10Base-T, 100Base-TX and 1000Base-T data transmission (Auto-Negotiation). Auto-wire switching for crossed cables is also supported (Auto-MDI/X).
3		USB 2.0 port.
4	-	Handle for inserting and extracting module from slot.

The OSN3 LEDs are shown in the figure below and described in the subsequent table.

Figure 1-4: OSN3 Module LEDs

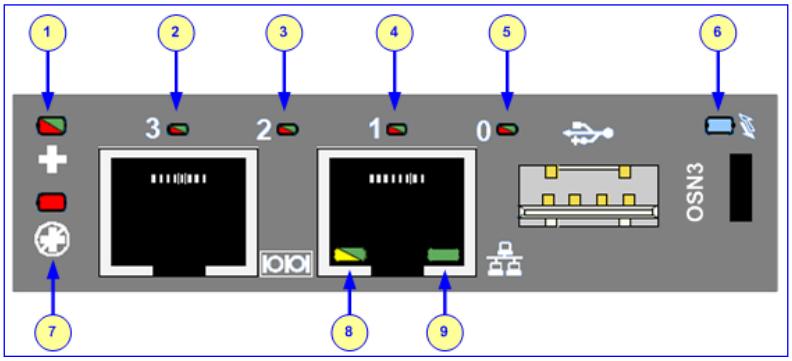

Table 1-5: OSN3 Module LED Description

Item #	Label	Color	State	Description
1	✚	**Green**	Flashing	Hardware normal operation.
		Red	On	Hardware fault (over-temperature or excess voltage feed).
2	**3**	**Red**	On	Power failure if lit during boot-up.
			Flashing	Processor over-temperature above 100°C. If LEDs **0**, **1**, and **2** are also flashing, then there is a processor over-temperature above 125°C and as a result, the module shuts down.
		-	Off	Normal operation.
3	**2**	**Red**	On	Clock failure if lit during boot-up.
			Flashing	Chipset over-temperature above 105°C. If LEDs **0**, **1**, and **3** are also flashing, then there is a processor over-temperature above 125°C and as a result, the module shuts down.
		-	Off	Normal operation.
4	**1**	**Red**	On	Hardware reset if lit during boot-up.
			Flashing	Processor over-temperature above 125°C and as a result, OSN3 shuts down (if LEDs **0**, **2**, and **3** are also flashing).
		-	Off	Normal operation.
5	**0**	**Red**	On	BIOS boot failure if lit during boot-up.
			Flashing	Processor over-temperature above 125°C and as a result, OSN3 shuts down (if LEDs **1**, **2**, and **3** are also flashing).
		-	Off	Normal operation.
6		**Blue**	Flashing	Module undergoing shutdown sequence when module pulled out to first extraction position.
			On	Module shutdown sequence complete and the module can be extracted from the chassis slot.
			Off	Module correctly inserted in chassis slot.

Item #	Label	Color	State	Description
7	⊕	**Red**	On	Hardware failure (supplied voltage is not within normal operating range – ensure CRMX is installed in chassis).
			Flashing	Upgrade in progress.
		-	Off	Normal operation.
8	**SPEED**	**Green**	On	100Base-TX connection.
		Yellow	On	1000Base-T connection.
		-	Off	10Base-T connection if **ACT** LED active.
9	**ACT**	**Green**	On	Valid Ethernet link (cable connection) has been established.
		-	Off	The LED goes off temporarily if network packets are sent or received. When the LED remains off, a valid link has not been established due to a missing or a faulty cable connection.

1.2.2 HDMX (Hard-Disk Drive) Module

The HDMX module provides the hard-disk drive functionality for the OSN3 platform, providing storage capacity of 160 GB. This module is housed in Slot #1 on the Mediant 1000B SBA rear panel.

Notes:

- For additional storage capacity per HDMX module, contact your AudioCodes representative.
- The OSN3 can optionally be ordered with dual hard-disk drives (i.e., two HDMX modules). This second module is housed in Slot #8 on the rear panel of the chassis.

The HDMX module is shown below and described in the subsequent table.

Figure 1-5: HDMX Module Components

Table 1-6: HDMX Module LED Description

Item #	Label	Color	State	Description
1		Green	On	Power received by module.
		-	Off	No power received by module.
2		Blue	On	Module can be extracted from chassis slot once dismounted from the OSN3 operating system.
			Off	Module correctly inserted in chassis slot
1		Red	On	Hard disk drive in use (active).
		-	Off	Hard disk drive not in use.

Reader's Notes

2 Ordering the SBA Kit

Before you can upgrade the hardware of Mediant 1000B, you need to order the following hardware upgrade kit: **M1K B-OSN3-SBA SBA hardware upgrade kit (Part No. GTPM00589)**

To order this kit, contact your AudioCodes sales representative.

Reader's Notes

3 Verifying the SBA Kit Items

Before you begin the SBA hardware upgrade, ensure that your SBA kit for upgrading the Mediant 1000B hardware is shipped with the following items:

OSN3 Module (FASU00625)

HDMX Module (FASU00669)

SBA Rescue USB Tool (FASF00001)

License Stickers and Agreements for Microsoft Windows 2008 Server R2 (XSWZ00091) and Microsoft Lync Server Std 2010 64Bit EMB (XSWZ00095)

RS-232 Serial Cable Adaptor

If any items are missing or damaged, contact your AudioCodes sales representative.

Reader's Notes

4 Inserting the OSN3 Platform Modules

This section describes how to install the OSN3 platform modules. The OSN3 modules are hot-swappable and can be inserted and extracted without disrupting other non-related OSN3 services running on the device. Therefore, you can insert the OSN3 modules without powering down the device.

Inserting OSN3 modules includes the following main steps:

1. Removing chassis slot covers – see Section 4.1
2. Inserting the HDMX module – see Section 4.2.1
3. Inserting the OSN3 module – see Section 4.2.2

4.1 Removing Chassis Slot Covers

Before you can insert the OSN3 modules, you need to remove the AMC protective covers (called AMC Filler Units) from the chassis slots in which you will insert the OSN3 platform modules:

- **Slot #1** (intended to house the HDMX module)
- **Slot #2** (intended to house the OSN3 module)

➢ **To remove the chassis slot covers:**

1. Gently pull the AMC insertion/extraction handle until you hear the first “click” or the handle is fully extended, as shown in the figure below:

Figure 4-1: Gripping AMC Insertion/Extraction Handle

2. Continue pulling the handle until the module is fully extracted from the slot.

Figure 4-2: Extracting AMC Slot Cover

3. Repeat steps 1 and 2 for the second slot.

4.2 Inserting the Modules

Once you have removed the protective slot covers, (as described in Section 4.1) you can insert the OSN3 modules.

4.2.1 Inserting the HDMX Module

The procedure below describes how to insert the HDMX module into the chassis. This module is inserted in **Slot #1** (as shown in Figure 4-3).

➢ **To insert the HDMX module:**

1. Hold the HDMX module in the orientation as shown in Figure 4-3 (where the AMC insertion/extraction handle is on your right side).

Note: Ensure the correct orientation of the HDMX module when inserting it into the slot; otherwise, severe damage may be caused to the device.

2. Carefully slide the HDMX module into Slot #1, as shown in the figure below, until it makes contact with the AMC card-edge connector located on the chassis backplane.

Figure 4-3: Inserting HDMX Module

3. Ensure that the module has been fully inserted in the slot and is securely in place, by pushing on it with your fingers, as shown in the figure below.

Figure 4-4: Ensuring HDMX Module Contained in Slot

4. Engage the module with the chassis backplane, by pushing the AMC insertion/extraction handle into the module to lock the handle.

Figure 4-5: Locking AMC Insertion/Extraction Handle on HDMX Module

4.2.2 Inserting the OSN3 Module

The procedure below describes how to insert the OSN3 module into the chassis. This module is inserted in **Slot #2** (as shown in Figure 4-6).

➢ **To insert the OSN3 module:**

1. Hold the OSN3 module in the orientation as shown in Figure 4-6 (where the AMC insertion/extraction handle is on your right side).

Note: Ensure the correct orientation of the OSN3 module when inserting it into the slot; otherwise, severe damage may be caused to the device.

2. Carefully slide the OSN3 module into Slot #2, as shown in the figure below, until it makes contact with the AMC card-edge connector located on the chassis backplane.

Figure 4-6: Inserting OSN3 Module

3. Ensure that the module has been fully inserted in the slot and is securely in place, by pushing on it with your fingers, as shown in the figure below.

Figure 4-7: Ensuring OSN3 Module Contained in Slot

4. Engage the module with the chassis backplane, by pushing the AMC insertion/extraction handle into the module to lock the handle.

Figure 4-8: Locking AMC Insertion/Extraction Handle on OSN3 Module

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