

Firmware Upload Tool and Device Software Upgrade and Installation and Guide

1.0 Introduction

This document provides the user information related to the installation and usage of the **FWUT** (Firmware Upgrade Tool). FWUT is used for upgrading the firmware on the RTS-OMNEO devices. FWUT supports firmware upgrade for the following RTS-OMNEO devices.

Nr.	Device	Description	Displayed in FWUT
1	OMI	OMNEO Matrix Interface card.	OMI Tab
2	OKI	OMNEO Keypanel Interface card. This is the option interface card used with KP-32 CLD, KP-12 CLD, KP- 32 Classic and RP-1000.	OKI Tab
3	OEI-2	OMNEO External Interface box. This box is used to provide an OMNEO interface to legacy keypanels.	OEI-2 Tab
4	ОКР	The new KP Series keypanels with a built-in OMNEO interface. This includes all KP Series models.	OKP Tab
5	OAP	 Upcoming Access Point devices used with ROAMEO beltpacks (BP) NOTE: The ROAMEO beltpack firmware is not supported by FWUT. However, the beltpack firmware can be uploaded via the USB port on the beltpack. 	OAP Tab
6	ARNI	Audio Routed Network Interface ARNI-S (standard) ARNI-E (enterprise)	ARNI-E/S

2.0 Overview

The updating process consists of five steps:

- 1. Download the OMNEO Suite from the RTS website
- 2. Run the Setup file ("Installation Steps" on page 5)
- 3. Verify IPedit and AZedit are on the PC being used for the upgrade
- 4. Run FWUT ("Example of Upgrade Steps" on page 12).
- 5. Verify the installation of the firmware is successful using IPedit or AZedit

3.0 FWUT Information

IMPORTANT: Verify the FWUT and the device upgrade files are installed on the PC or laptop before upgrading the firmware to the RTS-OMNEO devices.

3.1 Installation Files

The FWUT and the device upgrade files are available with the OMNEO Suite in the following folder at |OMNEOSuite < V.x.x > |Packages||.

The FWUT folder contains installation files for both 64- and 32-bit systems. Appropriate setup files must be chosen for installation.

Use Table 1 to determine the proper setup files needed to upgrade the RTS-OMNEO devices.

Nr.	File Name ^a	Description
1	SetupOMNEOFirmwareUploadTool64.msi	This setup installs the FWUT tool utility.
2	SetupOMNEONiosFirmware64.msi	This setup installs files required for OMI firmware upgrade.
3	SetupOMNEOOEI2Firmware64.msi	This setup installs files required for OEI-2 firmware upgrade.
4	SetupOMNEOOKPFirmware64.msi	This setup installs files required for KP Series firmware upgrade.
5	SetupOMNEOOAPFirmware64.msi (currently unavailable)	This setup installs files required for Access Point firmware upgrade.
6	SetupOMNEOArniFirmware64.msi	This setup installs files required for ARNI firmware upgrade.
7	SetupBoschDNS-SDService64.msi	This setup installs files required for Bosch DNS-SD service used for discovery of devices in the FWUT.

 TABLE 1. Setup Files

a. The file names for a 32-bit system.

3.1.1 Installation Folder

The FWUT setup files are installed under the following folder on the PC/Laptop:

C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool

The following sub-folder contains the FWUT files related to the devices (OMI, OKI, OEI-2, KP Series...):

C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool\Upload Plugins

3.1.2 Installation Steps

There are two options for installing the setup files:

Option 1 (Recommended) **Run the Setup.exe in the OMNEO Suite package**. *The OMNEO Setup (OCA) window appears.*

IMPORTANT: When the OMNEO Suite is installed, the main application plus all plug-ins installed automatically.

OMNEO Setup (OCA)	
	Please select the applications you wish to install:
RTS	AZedit V5.2.1 (with support for OMNEO devices)
	IPedit V3.3.2 (replaces RVONedit and supports OMNEO devices)
OMNEO	USB Driver for AZedit V1.0.0 (required for ZEUS-III or Cronus USB connections)
Software Suite	OMNEO Firmware Upload Tool V4.40 (required for OMNEO firmware upgrades)
E Selling	ARNI Configuration Tool V4.40 (required for ARNI configuration)
	Bosch DNS-SD Service V4,40 (required for OMNEO Device Discovery)
	This CD also includes MCII-e and Keypanel firmware required for OMNEO support, as well as current versions of firmware for OMNEO devices.
	Open Firmware Folder View Readme.txt
	Install Cancel

Option 2 Manually install the individual setup files.

3.1.3 FWUT Usage

A help file, named FirmwareUploadTool.chm, is installed along with the FWUT file. It contains information on the FWUT and its usage. It also has instructions on how to complete some of the more necessary operational procedures, such as how to run the FWUT in advanced mode from a command line.

3.2 Firmware Upgrade

When the FWUT is launched, it automatically displays all the RTS-OMNEO devices discovered in the system. The devices are listed on the separate tabs based on the Model ID. Use Table 2 to determine the Model ID of the RTS-OMNEO devices and their user-identifiable names. For more information, see "Example of Upgrade Steps" on page 12.

Nr.	Model ID	As displayed on FWUT Tab	Description
1	2049	OMI-Audio Device	OMI-Audio Device
2	2050	OKI	OKI
3	2051	OMI-Controller	OMI-Controller Device
6	2060	OEI-2	OEI-2
7	2070	OKP	KP Series (OMNEO keypanel)
8	2080	OAP	OMNEO Access Point

TABLE 2. Model ID Description

3.2.1 Firmware Upgrade Files

NOTE: FWUT only recognizes and supports files which have a .capfw extension. No other file formats (mot, bin, hex) are supported.

Each device has set of .capfw files used for upgrading the firmware. The naming convention *<DeviceName Firmware Version>.capfw* is used in naming the files.

Table 3 displays the currently released .capfw files for RTS-OMNEO devices. For more information, see the individual device's release notes.

 IMPORTANT:
 The selection of RSTP or noRSTP .capfw firmware file is determined by the network configuration. For more information, see the OMNEO Resource Guide available on the RTS website.

#	Device	Firmware Files	Description
1	OMI	OMI-Firmware_RSTP_V6.x.x.capfw OMI-Firmware_noRSTP_V6.x.x.capfw	Firmware files which upgrade the OMI card
1	OMI	OMI-Firmware_FPGA_0.75.capfw	Firmware files which upgrade the FPGA on the OMI card
2	OKI	OKI-Firmware_RSTP_V6.x.x.capfw OKI-Firmware_noRSTP_V6.x.x.capfw	Firmware files which upgrade the OKI card
3	OEI-2	OEI-Firmware_RSTP_V6.x.x.capfw OEI-Firmware_noRSTP_V6.x.x.capfw	Firmware files which upgrade the OEI-2 card
used	•	files give details for the different OKP (KP Series) firms a particular component. This is to provide flexibility wh	
4A	OKP_A	udinate_v5.xx.yyyy_Client_v2.xx-OCA.capfw	RSTP version of firmware and should be used to update all the KP Series components
4B	OKP_A OCA.ca	udinate_NoRSTP_v5.xx.yyyy_Client_v2.xx- pfw	Non-RSTP version of firmware and should be used to update all the KP Series components
4C	OKP FP	GA v5.0.0.capfw	This firmware file contains the Intercom FPGA component

TABLE 3. Firmware Files

NOTE: Refer to the KP Series release notes in case there is a change in the client or FPGA image.

AZedit Upgrade (Optional)

This section is specifically for the KP Series keypanels. Table 4 gives details about the files that can be upgraded via AZedit tool.

NOTE: It is recommended to run the most current version of the bootloader. The keypanel must be connected to Intercom via either an OMI card or an AIO card.

#	Filename	Description
1	KP-Series_client_z_v2.x.x-OCA.mot	This file updates the client component of the KP Series keypanels. It does not contain the Dante component.
2	KP-Series-FPGA_v5.0.0.mot	This file contains the Intercom FPGA component of the KP Series keypanels. This is not Dante component
3	KP-Series_boot_v1.3.0.mot ^a	This is the firmware file for the boot loader of the keypanels. The boot loader component cannot be updated using the FWUT.
4	VM-chimes.mot	This file contains the default voice mail chimes.
5	VM-icons.mot	This file contains the default voice mail icons.

 TABLE 4. Firmware Upgrades

 a. To check versions on the device, press and hold **both shaft encoders** and then press the **Menu** button on the keypad. Service menu appears.
 Select **Boot Code**.

The Boot Code version appears on the panel display.

4.0 Migration from OCP to OCA

Beginning with V6.x.x, all RTS-OMNEO device firmware has been migrated to the new OCA Platform. Previous versions up to and including V5.2.12 have been discontinued.

V6.x.x provides following features

- Adjustable Receiver Latency
- Switch between RSTP/no RSTP mode from IPedit
- Show audio connection status in IPedit between RTS-OMNEO devices and other Dante devices

IMPORTANT: These instructions need to be followed exactly for a successful migration of the RTS-OMNEO devices. Refer to the release notes provided in the OMNEOSuiteV6.x.x for details.

All devices in the system must be updated for devices to work with each other. OCA devices cannot be used with non-OCA devices.

4.1 Mandatory Instruction

IMPORTANT: It is crucial to uninstall the existing FWUT package and reinstall the update.

- 1. Uninstall the existing version of the FWUT and its associated plug-ins.
 - a. From the Start Menu, select Control Panel | Programs.
 - b. Click Uninstall a program.



c. Uninstall the OMNEO FWUT, NIOS, OEI2, and OKP Firmware packages.

OMNEO Firmware Upload Tool 64-bit V4.40.4085
OMNEO NIOS Firmware 64-bit V4.30.3712

OMNEO OEI2 Firmware 64-bit V4.30.3711

OMNEO OKP Firmware 64-bit V4.40.4086

OMNEO PC Tools 64-bit V4.40.4085

- d. Verify the following **directories are present and that they are empty**. If there are files in the directory, then delete them.
 - C:\Program Files\Bosch\OMNEO\Firmware Upload Tool
 - C:\Program Files\Bosch\OMNEO\Firmware Upload Tool\UploadPlugins
- 2. Using the latest version provided in the OMNEO Suite V6.1.x or higher, upgrade the FWUT and the associated plug-ins.

NOTE: For the latest version of the OMNEO Suite, visit www.rtsintercoms.com.

- 3. Verify files are present in the following directories:
 - a. C:\Program Files\Bosch\OMNEO\Firmware Upload Tool
 - OAPOCAFWUTProxy.dll
 - FpgaNiosFWUProxy.dll
 - MCUFWUTProxy.dll

b. C:\Program Files\Bosch\OMNEO\Firmware Upload Tool\UploadPlugins

- UploadFpgaNIOS.dll
- UploadOKP.dll
- UploadOEI2.dll
- 4. Using the following graphics, determine the correct migration sequence and .capfw file to use.

IMPORTANT: To avoid firmware upgrade failures and incorrect firmware being installed on the devices, use the illustration below lists the path for different devices.





The following migration path determines the firmware files required for the KP Series panels.



4.2 Example of Upgrade Steps

The following example shows upgrading OMI device, but this example is applicable for other device types.

1. Open the FWUT.



Once the FWUT is opened it displays a list of devices (shown). If this displays, it means the image folder path does not contain the firmware upgrade files (.capfw files).

Devices								
	odel 2051 Model 2050 Model 2080 A	Model 2070						
Device name	Serial number	Role	IP address	NAC address	Version	Sate	Progress	
OMI-SLOT-B-OCP	58180w1731101006		10.200 108.94	001C440084FC	5.02.0012	lde	-	
048-SL07-10-DCP	5819342004111003		10,200,108,113	001044008524	5.02.0012	lde	-	
ITS	045819341813101001		10,200,108,118	001C-44:0085:0E	6.01.0010	ide	-	
OMI-SLOT-5-TM	045819330510021006		10.200 108.78	001044008423	6.01.0010	lde	-	
SLOT11	0458193300515021003		10 200 108 22	001044008431	6.01.0010	ide	-	_
						N		
						10		

2. From the File menu, select **Options**.

The Firmware Upload Tool Options window appears.

3. Enter the **image folder path** which contain the .capfw file. OR

Click the Change button to navigate to the file.

In this example the image path contains folder which has OMI .capfw files.

Firmware images	μ <u>3</u>	
Image folder	E:\Fimware\V6.1.10\OMI_Images	Change
V Include s	ub folders	
Uploading		
Uploading Maximum num	ber of concurrent uploads 20 -	
Maximum num		

Once the image folder path is set the FWUT displays the OMI tab which contains the discovered OMI devices (shown).

4. From the OMI tab page, select the **OMI device or devices**.

le View Help							
	Upland Tool						
MNEO Firmware	Upload Tool						
Devices							
Devices	lodel 2080 OMI Model 2070						
Model 2060 Model 2050 M	lodel 2080 OMI Model 2070						
Device name	Serial number	Role	IP address	MAC address	Version	State	Progres
RTS	045819341813101001		10.200.108.118	00:1C:44:00:85:0E	6.01.0010	Idle	
OMI-SLOT-5-TIM	045819330510021006		10.200.108.78	00:10:44:00:84:23	6.01.0010	Idle	
SLOT13	045819330515021005		10.200.108.83	00:1C:44:00:84:3B	6.01.0010	Idle	
SLOT11	045819330515021003		10.200.108.22	00:10:44:00:84:31	6.01.0010	Idle	
SLOT17	045819330510021016		10.200.108.74	00:1C:44:00:84:2C	6.01.0010	Idle	
OMI-SLOT-10-OCP	5819342004111003		10.200.108.113	00:10:44:00:85:24	5.02.0012	Idle	
	5819341731101006		10,200,108,94	00:1C:44:00:84:FC	5.02.0012	Idle	
OMI-SLOT-8-OCP							

5. Click the **Upload button**.

The Select Firmware for upload window appears displaying a list of OMI .capfw files.

el 2060	Model 2050	Model 208	30 OMI Model 2070									
rice nar	ie .		Setal number	Role	IP address	MAC	sóðress	Version	State	Progress		
5			045819341813101001		10.200.108.118	00:10	44.00 85.0E	6.01.0010	lde			
-SLOT-	-5-TIM		045819330510021006		10,200,108,78	00:1C	44:00:84:23	6.01.0010	lde			
T13			045819330515021005		10.200.108.83	00:10	44.00.84.38	6.01.0010	ide	_		
T11			045819330515021003		10.200.108.22		44:00:84:31		lde	_		
117			045819330510021016		10.200.108.74	00:10	44:00:84:20	6.01.0010	Ide			
	-10-OCP		5819342004111003		10,200,108,113		44:00:85:24		lde			
SLOT	-8-0CP		5819341731101006		10,200,108,94	00.10	44:00:84 FC	5.02.0012	Ide	-		
Sele	ct firmware fo	v upload										×
Available firmware					_							
	Model name	Version	Description			Sze	Fie name					
	OMI	0.75.00	FPGA file for the OMI Card			1 MB	E-Virroware	W6.1.10-0ML	mages\OM-Ferriva	re_FPGA.capfw		
	OMI	6.1.10	Firmware files for the OMI Card			17 MB	E:Vimware	VS.1.10-OM	mages\OMI-Firmwa	e_noRSTP.captw		
	OMI	6.1.10	Firmware files for the OMI Card			17 MB			mages \OMI-Firmwa			
	OMI	0.75.00	FPGA file for the OMI Card			1 MB					OM-Fimware_FPGA_175.capfw	
	OMI	0.50.00	FPGA file for the OMI Card			1 MB	EVPenware	VS.1.10-OM_	mages BnaryFiles	Nos/New_ad_50_mageV	ONE-Femware_FPGA.caphe	

6. From the Available firmware list, select the correct **OMI .capfw file**. *The Start button activates*.

7. Click the **Start button**.

A progression bar displays showing the progress of the firmware upgrade.

INEO FIITIWare	Upload Tool						
Pevices							
Model 2060 Model 2050 M	odel 2080 OMI Model 2070						
Device name	Serial number	Role	IP address	MAC address	Version	State	Progress
RTS	045819341813101001		10.200.108.118	00:1C:44:00:85:0E	6.01.0010	Active	
OMI-SLOT-5-TIM	045819330510021006		10.200.108.78	00:10:44:00:84:23	6.01.0010	Active	
SLOT13	045819330515021005		10.200.108.83	00:10:44:00:84:38	6.01.0010	Active	
SLOT11	045819330515021003		10.200.108.22	00:10:44:00:84:31	6.01.0010	Active	
SLOT17	045819330510021016		10.200.108.74	00:10:44:00:84:20	6.01.0010	Active	
OMI-SLOT-10-OCP	5819342004111003		10.200.108.113	00:10:44:00:85:24	5.02.0012	Idle	
OMI-SLOT-8-OCP	5819341731101006		10.200.108.94	00-1C-44-00-84-FC	5 02 0012	Idle	

The version string for IO card in AZedit alternates between version and Firmware Download In Progress (shown).

009	n/a
010	n/a
011	FIRMWARE DOWNLOAD IN PROGRESS
012	n/a
013	FIRMWARE DOWNLOAD IN PROGRESS
014	n/a

The State column displays Finished.

le View Help							
	Haland Tool						
MNEO Firmwar	e opioad 1001						
Devices							
Model 2060 Model 2050 1	Aodel 2080 OMI Model 2070						
Device name	Serial number	Role	IP address	MAC address	Version	State	Progress
RTS	045819341813101001		10.200.108.118	00:1C:44:00:85:0E	6.01.0010	Finished	_
OMI-SLOT-5-TIM	045819330510021006		10.200.108.78	00:10:44:00:84:23	6.01.0010	Finished	-
SLOT13	045819330515021005		10.200.108.83	00:10:44:00:84:38	6.01.0010	Finished	_
SLOT11	045819330515021003		10.200.108.22	00:10:44:00:84:31	6.01.0010	Finished	
	045819330510021016		10.200.108.74	00:1C:44:00:84:2C	6.01.0010	Finished	_
SLOT17					F 00 0040	Idle	
SLOT17 OMI-SLOT-10-OCP	5819342004111003		10.200.108.113	00:1C:44:00:85:24	5.02.0012	ICI6	

8. Verify the version is updated in AZedit or IPedit.

5.0 Troubleshooting Guide

Q1. I see the device discovered in the FWUT, but when I select the file and click update, it displays *Failed* immediately.

- A1. Verify the IP Address of the PC/Laptop running FWUT is in the same subnet as the devices being upgraded. Even though FWUT can discover devices in other subnets, it will fail to connect.
- A2. Verify the correct adapter is selected when the FWUT is launched.



A3. Verify two IP Addresses have not been assigned to the same adapter.

IP addresses			
IP address		Subnet mask	
169.254.0.250 192.168.0.250		255.255.0.0 255.255.255.0	
	Add	Edit	Remove
Gateway		Metric	
	Add	Edit	Remove
Automatic metri	c		

Q2. FWUT is in the same subnet as the devices, but when I select the file and click update, nothing happens.

A2. Verify the device upgrade files have been installed for that device. These files are available in the following directory: *C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool\UploadPlugins*

Q3. How do I refresh the FWUT so it shows the updated status?

A3. From the File menu, select **Options**, and then click **OK**.

File	View	Hel	р
5	Option	IS	
	Exit /	Alt+F4	a
_			
Devi	ces		

The Options window appears. Click **OK**. *The Options window closes.*

Q4. How do I abort a Firmware upgrade to a device from the FWUT?

A4. The FWUT does not have an Abort button. Use the Windows Task Manager to force the Firmware Upload Tool to close.

NOTE: All devices have a fail-safe mechanism implemented in them.

Q5. I see the device in the FWUT, but when I select the file and click update, it displays a green progress bar, but then shows *Failed* after some time.

A5. Verify the TFTP ports / application are blocked on the network or by the firewall. FWUT uses TFTP to transfer files to the devices.

Q6. How do I get additional information on why the upgrade to the device failed?

- A6. FWUT log files are available in two places:
 - From the View menu, select Logging. The Logging window appears and displays the currently logged messages. The log messages in this window are lost when FWUT is closed. OR

Navigate in Windows Explorer to *C:\ProgramData\Bosch\OMNEO\FirmwareUploadLog. This folder contains log file. A new log file is created every time FWUT is opened. For troubleshooting the information in the log file is helpful.*

File	View		
	A	vailable firmware	
ОМ	D	evices in failsafe mode	F3
	N ^L	ogging	F4
Devi	νŝ	elect columns	

Q7.What is advanced mode of the FWUT?

A7. Advanced mode of the FWUT is exactly same as the normal mode as far as the upgrade process is concerned. In Advanced Mode, additional menu items are displayed. For more information, see the FWUT help file.



Q8. How do I run the advanced mode of the FWUT?

A8. Open the **DOS CMD Prompt** window. Go to the **directory** (shown). Type in the command **FirmwareUploadGUI.exe** /advanced true.

	C:\Users>cd
l	C:\>cd "Program Files"
I	C:\Program Files>cd BOSCH
I	C:\Program Files\BOSCH>cd OMNEO
I	C:\Program Files\BOSCH\OMNEO>cd "Firmware Upload Tool"
I	C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool>FirmwareUploadGUI.exe /advanced true
	C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool>FirmwareUploadGUI.exe /advanced true
I	C:\Program Files\BOSCH\OMNEO\Firmware Upload Tool>

Q9. Why do I see numbers like 2050, 2049, and 2070 on the FWUT Tabs instead of the OKI, OMI, and OKP?

- A9. FWUT discovers devices using Bosch DNS-SD service. The discovered devices and their names are displayed as Model ID's of the devices. For more information on Model ID, see Table 2 on page 6. The user defined names are displayed based on the firmware upgrade .capfw files. The .capfw files should be present as defined in the following path.
 - 1. Click File | Options

The Firmware Upload Tool Options window appears.

File View Help Options Exit Alt+F4		
Devices		
Firmware Upload Tool Options		×
Firmware images Image folder E:\Firmware\\V6.1.10\OKP Include sub folders Uploading		Change
Maximum number of concurrent uploads 20 Use secure connection Security key default	Manage securi	rity keys
		ок

Q10. What happens if the Firmware Upgrade process is interrupted because of one of the following two conditions?

- Network Disconnection
- Accidental shutdown of devices
- A10. All RTS-OMNEO devices implement a fail-safe mechanism. After timeout, the FWUT displays a *Failed* status. The devices themselves reset and reboot to the previous version or if they are in the boot loader mode, they stay in the boot loader mode. The recovery options are shut down the FWUT and reopen it, so that the devices are discovered again. Send the upgrade files again.

Q11. What is OMI-Controller and OMI-Audio Device? How do I upgrade them?

A11. The OMI IO card has two upgradable components – OMI-Controller and OMI-Audio Device. These components have different roles and communicate internally with each other over the SPI bus. The OMI-Controller manages the Intercom functionality and audio routes. The OMI-Audio manages all the audio.

Q12. The OMI-Controller version is different from the Audio device version, how do I sync it?

- A12. The simplest way is upgrade/downgrade the Audio Device version to that of the OMI-Controller. The steps to do this is as follows.
 - 1. Open the **FWUT**.
 - 2. From the File menu, select **Options** and then select the **image folder path which contains only the OMI_AudioDevice<version>.cap**.
 - 3. Click **OK**. *The OMI-Audio Device tab appears.*
 - 4. Select the **OMI device** for which there is a mismatch.
 - 5. Click the **Upgrade button**.
 - 6. Click the **Send button**. Once the upgrade is successfully completed, both versions are synced.

Q13.I have selected OMI-Firmware .capfw, the controller is showing new version on AZEdit/IPEdit but the FWUT stills shows updating?

A13. As mentioned earlier OMI has 2 components OMI-Controller and OMI-Audio Device, the FWUT upgrades the OMI-Controller first. Once the OMI-Controller is updated, the OMI card resets. The FWUT reconnects with the OMI card and then starts the upgrade of the OMI-Audio Device. Till the OMI-Audio device upgrade is not completed the FWUT will show as updating.

Q14. I have selected OMI-Firmware.capfw, the upgrade was successful but only Audio Device got updated and not the OMI-Controller?

A14. The primary reason for this is the SetupOMNEONiosFirmware64.msi is not installed. Verify the OMI Plug-in files are correctly installed. For more information, see "Firmware Upgrade Files" on page 7.

Q15. I have installed all the FWUT packages correctly, still I do not see any devices

A15. Check if the Bosch DNS-SD service is installed. If installed, is it running?

To verify the Bosch DNS-SD, do the following:

- 1. Verify the Bosch DNS-SD files are available in the folder: C:\Program Files\BOSCH\DNS-SD.
- 2. Verify the Bosch DNS-SD service status is displayed as Started.

Action View Help								
🔿 🖄 🗔 🖸 💿 🔺	2 🗊 🕨 🔳 II IÞ							
Computer Management (Local	O. Services							Actions
System Tools	Bosch DNS-SD Service	Name	Description	Status	Startup Type	Log On As	*	Services
De Task Scheduler Ise Event Viewer		ActiveX Installer (AxInstSV)	Provides Us		Manual	Local Syste		More Actions
Shared Folders	Stop the service	Adaptive Brightness	Monitors a		Manual	Local Service		
	Restart the service	Adobe Acrobat Update Service	Adobe Acro	Started	Automatic	Local Syste	=	Bosch DNS-SD Service
> (N) Performance		Adobe Flash Player Update Service	This service		Manual	Local Syste		More Actions
A Device Manager	Description:	Adobe Genuine Software Integrity Service	Adobe Gen	Started	Automatic	Local Syste		
🔄 Storage	Offers DNS-SD service.	AeXAgentSrvHost	Provides th		Manual	Local Syste		
😁 Disk Management		AltirisAgentProvider	Provides Wi		Manual	Local Syste		
Services and Applications		Application Experience	Processes a	Started	Manual	Local Syste		
Services		Application Identity	Determines		Manual	Local Service		
🗃 WMI Control		Application Information	Facilitates t	Started	Manual	Local Syste		
		Application Layer Gateway Service	Provides su		Manual	Local Service		
		Application Management	Processes in		Manual	Local Syste		
		ASP.NET State Service	Provides su		Disabled	Network S		
		Background Intelligent Transfer Service	Transfers fil	Started	Automatic (D	Local Syste		
		Base Filtering Engine	The Base Fil	Started	Automatic	Local Service		
		BitLocker Drive Encryption Service	BDESVC hos	Started	Manual	Local Syste		
		BitLocker Management Client Service	BitLocker M	Started	Automatic	Local Syste		
		Block Level Backup Engine Service	The WBENG		Manual	Local Syste		
		Bluetooth Device Monitor	A process t	Started	Automatic (D	Local Syste		
		Bluetooth Media Service	Provides Bl	Started	Automatic (D	Local Syste		
		Bluetooth OBEX Service	Provides Bl	Started	Automatic (D	Local Syste		
L's		Bluetooth Support Service	The Bluetoo	Started	Manual	Local Service		
		G Bosch DNS-SD Service	Offers DNS	Started	Automatic	Local Syste		
		Bosch NeighborDiscovery Service	Offers Neig	Started	Automatic	Local Syste		
		BranchCache	This service		Manual	Network S		
		Broadcom Management Agent	Monitors an	Started	Automatic	Local Syste		
		G Certificate Propagation	Copies user		Manual	Local Syste		
		Cisco AnyConnect Secure Mobility Agent	Cisco AnyC	Started	Automatic	Local Syste		
		CMST Service	CMST Service	Started	Automatic	Local Syste		
		CNG Key Isolation	The CNG ke	Started	Manual	Local Syste		
		G COM+ Event System	Supports Sy	Started	Automatic	Local Service		
		COM+ System Application	Manages th		Manual	Local Syste		
		Computer Browser	Maintains a		Manual	Local Syste		
		ConfigMgr Task Sequence Agent	ConfigMgr		Manual	Local Syste		
		Configuration Manager Remote Control	Provides th		Disabled	Local Syste		
		Credential Manager	Provides se		Manual	Local Syste	-	

Q16: The OMI card Version string shows Hardware Failure? Is the OMI card not working?

A16: No, this means that OMI-Controller is not able to communicate with the OMI-Audio Device. This could be because of Version Mismatch, mismatch of IP address of OMI-Controller and OMI-Audio Device.