# YAMAHA

# RMio64-D Firmware Update Guide

Thank you for choosing a Yamaha product.
This guide explains how to update the RMio64-D firmware and its built-in Dante module firmware.
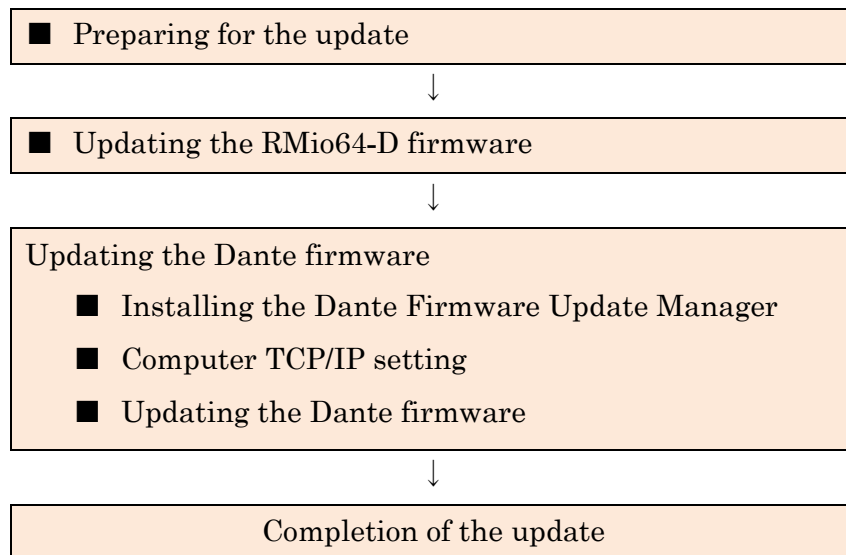
**NOTE**
From the Firmware V4.10, you can also update the firmware via the R Remote. Refer to the "R Series Firmware Update Guide" and the "R Remote User Guide" for details.

## ■ Precautions (Please be sure to read this section first!)

- The user assumes full responsibility for the update.
- Please note that the device may be damaged if you fail to follow these instructions properly, or turn off the device or disconnect the cable while the update is in progress.
- If the update fails, and the device still does not operate correctly even after you execute the update once again, please contact your Yamaha dealer.
- Yamaha Corporation owns exclusive copyrights for the RMio64-D firmware, its update program, and the update guide.
- Audinate owns exclusive copyrights for the Dante firmware and its update program.
- It is prohibited to duplicate or modify the firmware, software or guides, in part or in their entirety, without permission from the copyright owner.
- The screen shots in this guide are for use with this update procedure only and may be different from the actual screen shots.
- Dante is a registered trademark of Audinate.
- Windows is a registered trademark of Microsoft® Corporation in the United States and other countries.
- Mac, Macintosh, and Bonjour are trademarks of Apple Inc. registered in the U.S. and other countries.
- The company names and product names in this document are the trademarks or registered trademarks of their respective companies.
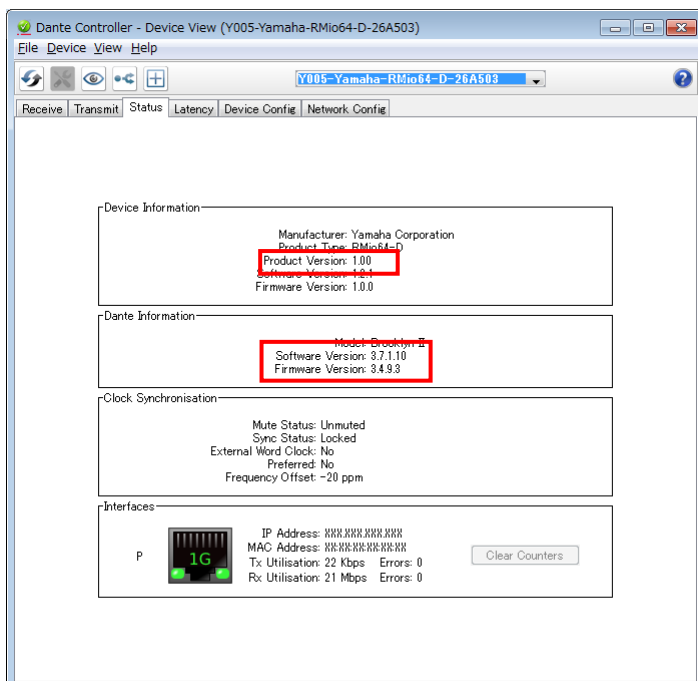
## ■ Update procedure sequence

Update each firmware component in the following sequence.

| ■  Preparing for the update |
| --- |

↓

| ■  Updating the RMio64-D firmware |
| --- |

↓

| Updating the Dante firmware<br>　　■  Installing the Dante Firmware Update Manager<br>　　■  Computer TCP/IP setting<br>　　■  Updating the Dante firmware |
| --- |

↓

| Completion of the update |
| --- |

Refer to the firmware compatibility chart available on the following Yamaha Pro Audio website as to whether Dante firmware update is required or not.
http://www.yamahaproaudio.com/downloads/

## ■ Checking the version number



The RMio64-D firmware and the Dante firmware version number can be confirmed on the Device View window in Dante Controller.

## ■ Preparing for the update

1. Download the latest firmware from the following URL.
   http://www.yamahaproaudio.com/downloads/

2. Decompress the downloaded file.


## ● Computer requirements for firmware updates

### Windows

| OS | Windows 7 SP1 (32-bit/64-bit) Windows 8 (32-bit/64-bit) Windows 8.1 (32-bit/64-bit) Windows 10 (32-bit/64-bit) |
| --- | --- |
| CPU | Intel or AMD dual core processor |
| Memory | 2 GB or more |
| Interface | Equipped with an Ethernet connector |
| HDD | Free disk space of 100 MB or more; high-speed hard disk |

### Mac

| OS | OS X 10.7.5, OS X 10.8.x, OS X 10.9.x, OS X 10.10.x, OS X 10.11.x, OS X 10.12.x |
| --- | --- |
| CPU | Intel dual core processor |
| Memory | 2 GB or more |
| Interface | Equipped with an Ethernet connector |
| HDD | Free disk space of 130 MB or more; high-speed hard disk |

- An Ethernet cable (CAT5e or higher recommended. Straight or cross.)

## ■ Updating the RMio64-D firmware

This section explains how to update the RMio64-D firmware.

*NOTE*
- Before you start updating the firmware, decompress the downloaded compressed file.
- Place the following files in the same folder.
  Windows: "RMio64-D_firmXXX.prg" and "RMio64-D Update Program.exe"
  Mac:　　 "RMio64-D_firmXXX.prg" and "RMio64-D Update Program"
  The characters "XXX" represent the firmware version number which will be updated.
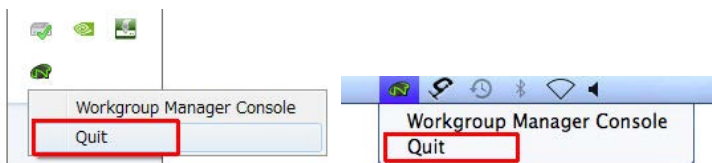
1. **Connect the computer to the network which RMio64-D is connected.**

2. **Turn on the power of all RMio64-D devices which are to be updated.**

3. **Quit the NUAGE Workgroup Manager if it is running.**

   *NOTE*
   It is necessary to quit the NUAGE Workgroup manager beforehand since the RMio64-D Update Program cannot be launched while NUAGE Workgroup Manager is running.

   **Windows:** Right-click the NUAGE Workgroup Manager icon in the system tray and select Quit.
   **Mac:**　　 Click the NUAGE Workgroup Manager icon in the menu bar and select Quit.



4. **Double-click "RMio64-D Update Program."**
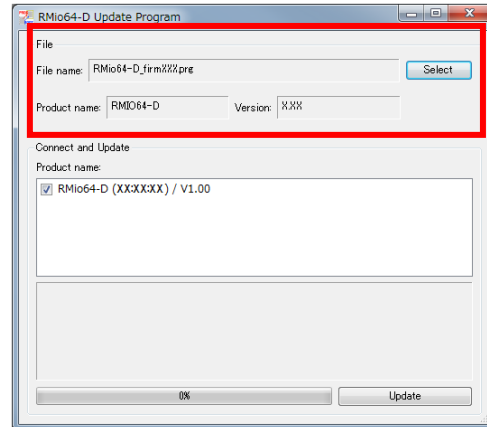   The RMio64-D Update Program will start up.

   *NOTE*
   - The "User Account Control" dialog box may appear. Click [Continue] or [Yes].
   - RMio64-D Update Program may be blocked by the Windows Firewall. Check the all check boxes, and click [Allow access].
   - In Mac, the confirmation dialog box which accepts incoming network connections from an application may appear. Click [Allow].

5.  **Make sure that the fields in the "File" section indicate as follows:**

    File name:          RMio64-D_firmXXX.prg

    Product name:       RMio64-D

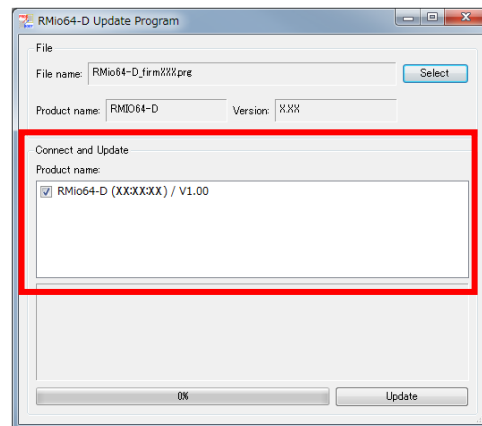    Version:            X.XX

    ┌ *NOTE* ┃
    - The characters "XXX" and "X.XX" represent the firmware version number which will be updated.
    - If these fields are empty, click [Select], and select the "RMio64-D_firmXXX.prg."

6.  **Select the target RMio64-D for updating in "Product name" in the "Connect and Update" field.**

    ┌ *NOTE* ┃
    - If this field is empty, your computer may not be properly connected to the RMio64-D. Please check the following points.
      - Make sure that the cable is not disconnected or damaged.
      - Make sure that the program is not blocked by a firewall.
      - Make sure that IPv6 is enabled.

    - Each RMio64-D that is operating in NUAGE system is displayed in gray. To update the RMio64-D, check NUAGE Workgroup Manager running on another computer, and remove the RMio64-D from the Workgroup.

7.  **Click [Update].**
    The progress log and progress bar are displayed on the lower area in "Connect and Update."

8.  **An "Updated successfully" message will be displayed once update is completed, and the RMio64-D restarts automatically.**

After all the RMio64-D updates are completed, check that the firmware version has been updated.(→P.2)


## ■ Installing the Dante Firmware Update Manager

The Dante Firmware Update Manager is software for updating the Dante firmware. The Dante Firmware Update Manager installer is stored in the same compressed file as RMio64-D firmware.


    Windows:   DanteFirmwareUpdateManager-x.x.x.exe

        Mac:   DanteFirmwareUpdateManager_x-x-x.dmg

            The characters "x.x.x" and "x-x-x" represent the Dante Firmware Update Manager version number.

Double-click the Dante Firmware Update Manager installer, and follow the on-screen instructions to install the firmware.

┌ **NOTE** ┤
- The "Windows Security" dialog box may appear. In such case, follow the on-screen instruction to continue.
- The Dante firmware does not operate normally if its path contains any multi-byte character (including Japanese characters). If you use a directory name containing any multi-byte character in your computer, store the firmware update files in a directory that consists only of ASCII characters. (e.g. C:\temp).
- When installing the Dante Firmware Update Manager, temporarily disable any running anti-virus software.
- You may be required to install the Bonjour in the middle of installing the Dante Firmware Update Manager. If so, download Bonjour from the URL specified by the Bonjour installer, and install it.
- You may be prompted to restart the computer after the installation is complete. Before proceeding to update, restart the computer.

## ■ Computer TCP/IP setting

To update Dante firmware, configure computer TCP/IP settings.
After the firmware update procedure is complete, return the TCP/IP settings to their original settings.

### Windows

1.  **Open the Network and Sharing Center as described below.**

    Windows 7
    Select [Start] → [Control Panel], then click or double-click [Network and Sharing Center] or [View network status and tasks].

    Windows 8, Windows 8.1 or Windows 10
    [Windows]+[X] → [Control Panel], then click or double-click [Network and Sharing Center] or [View network status and tasks].

2.  **Click [Manage network connection] or [Change Adapter settings] from the "Tasks" list located in the left side of "Network and Sharing Center" window, then double-click [Local Area Connection].**
    The "Local Area Connection Status" dialog box will be displayed.

    `⌐ NOTE ⌐`
    - The "User Account Control" dialog box may appear. Click [Continue] or [Yes].
    - If the "Local Area Connection properties" dialog box appears, skip ahead to step 4.

3.  **Click [Properties].**
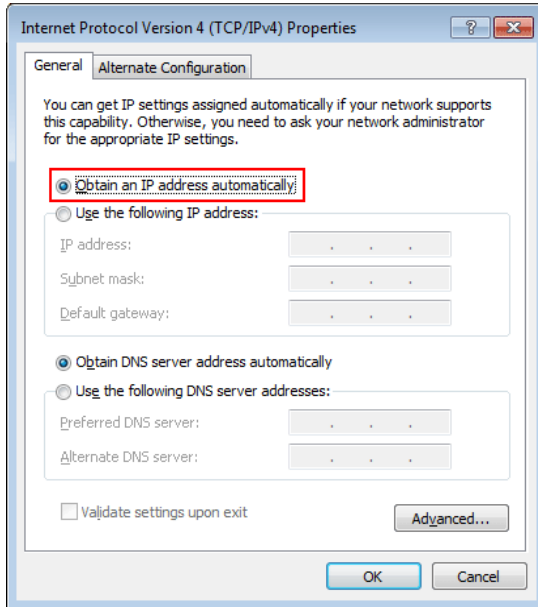    The "Local Area Connection properties" dialog box will be displayed.

    `⌐ NOTE ⌐`
    The "User Account Control" dialog box may appear. Click [Continue] or [Yes].

4.  **Select [Internet Protocol Version 4 (TCP/IPv4)], then click [Properties].**
    The "Internet Protocol Version 4(TCP/IPv4) Properties" dialog box will be displayed.

7

5.  Click [Obtain an IP address automatically].



6.  Click [OK].

**Mac**

1. **Click the "System Preferences" icon on Dock.**
   The "System Preferences" window appears.

2. **Click the [Network] icon.**
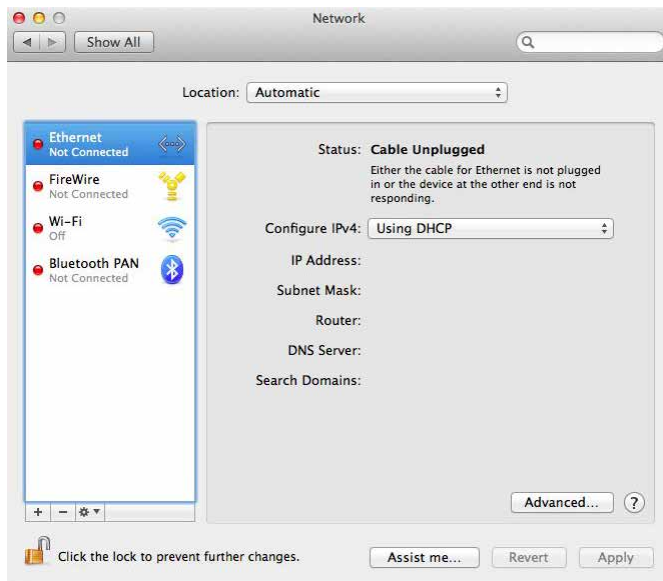   The "Network" window appears.

3. **Click [Ethernet].**
   The Ethernet settings window appears.

   ☐ **NOTE** ☐
   If there are multiple Ethernet choices, select the one that is connected to the device.

4. **Confirm that "Using DHCP" is selected in "Configure IPv4" or "Configuration."**



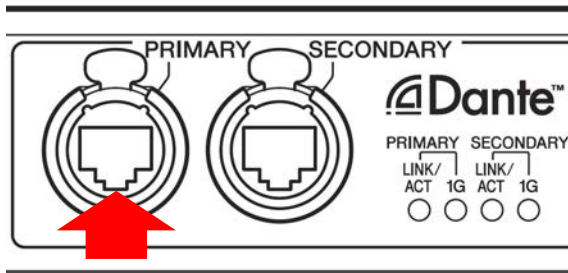5. **Click "Apply" if you have changed the setting, then close the window.**
   If you haven't changed the setting, close the window.

## ■ Updating the Dante firmware

Described below are the procedures to update the Dante module firmware integrated in the RMio64-D unit.

*NOTE*
- To update the Dante firmware, you need to connect an RMio64-D to the computer one at a time, and repeat the update procedure for each device.
- For details of the Dante Firmware Update Manager, refer to "AUD-MAN-Firmware Update Manager" stored in the compressed file folder.

1. **Connect the Dante [PRIMARY] connector on the rear panel of the RMio64-D unit to the Ethernet connector on the computer using an Ethernet cable.**
   Be sure to directly connect the computer and the RMio64-D unit, and do not connect any other Dante device to the computer.



2. **Turn on the power to the RMio64-D.**

3. **Run the Dante Firmware Update Manager as described below.**

   **Windows**
   Select [All programs] or [All apps] → [Audinate] → [Dante Firmware Update Manager] → [Dante Firmware Update Manager], then right-click and select "Run as Administrator."

   **Mac**
   Double-click "Applications" → "Dante Firmware Update Manager."

   *NOTE*
   - Confirm in the title bar that the version number is 1.4.7.1 or higher (Windows) or 1.4.5 or higher (Mac).
   - The "User Account Control" dialog box may appear. Click [Continue] or [Yes].

4. **If you see the interface selection screen, select the interface card to connect the Dante device.**

10

5. **Click [Update Dante Firmware].**

6. **Click [Browse] and select "FWUpdate_RMio64D-vxxx-swyyy.dnt," then click [Open].**
   The characters "xxx" and "yyy" represent the firmware version number.

   ⌐ **NOTE** ⌐
   The Dante firmware does not operate normally if its path contains any multi-byte character (including Japanese characters). If you use a directory name containing any multi-byte character in your computer, store the firmware update files in a directory that consists only of ASCII characters. (e.g. C:\temp).

   Notice:
   If update files other than RMio64-D are applied, the device will become inoperable. Be sure to ensure compatibility of the update files with RMio64-D. To ensure that updating the device with invalid or wrong files is prevented, do not check the [Override Device Matching] option. If this option is left unchecked, you can select only supported devices with the update file.
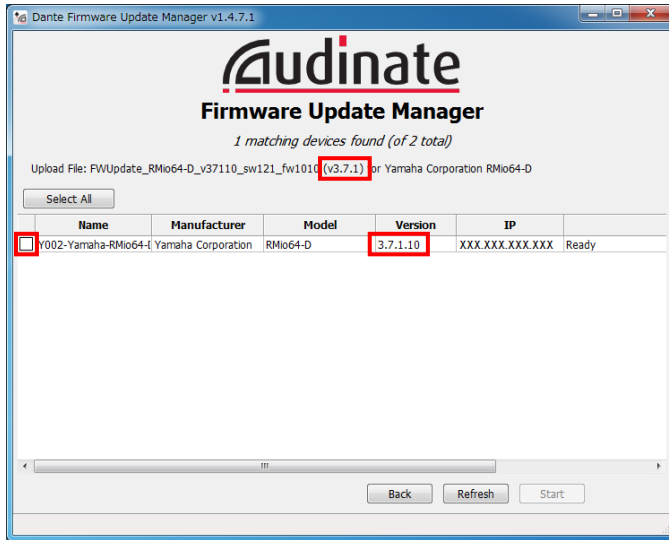
7. **Click [Next].**

   ⌐ **NOTE** ⌐
   - Dante Firmware Update Manager may be blocked by the Windows Firewall. Check the all check boxes, and click [Allow access].
   - In Mac, the confirmation dialog box which accepts incoming network connections from an application may appear. Click [Allow].

8. **Check the RMio64-D to update.**
   Check the version of the update files and the version number indicated in the RMio64-D line.

> **NOTE**
>
> If the RMio64-D is not indicated, click [Refresh]. If this field is empty, your computer may not be properly connected to the RMio64-D. Check that the cable is not loose or disconnected, that TCP/IP is properly configured, and that the RMio64-D is turned on.

9. **Click [Start].**

The update operation will begin.
"Updating" appears in the Status field during updating. "Done" is displayed once update is completed.

**Notice:**

Update takes 2 to 4 minutes. During the update operation, do not turn off the power to the unit or disconnect the cable. If update fails due to disconnection of the power cable during the update, or due to other reasons, the device may become inoperative.

> **NOTE**
>
> If update is not completed after 5 minutes, or update failure indication appears, click X at the upper right corner of Dante Firmware Update Manager to exit the program without turning the RMio64-D power off, and restart the procedure from the step 3. If update still fails, follow the instructions stated in "About Failsafe Mode" to perform the recovery process.

10. **Restart the RMio64-D.**

The firmware update is now complete.
Check that the firmware version has been updated.(→P.2)

## ■ About Failsafe Mode

During normal operation, software must be loaded from a flash memory drive during operations to use the Dante module integrated in the RMio64-D. However, data in a flash memory drive may occasionally become corrupted, as with any other storage device.

In many cases, such data corruption is caused by turning the RMio64-D power off during firmware upgrading.
The Dante module has a specially protected flash drive section in order to recover from such a condition. When the main section is damaged, the program stored in the protected area is activated and the Dante module goes into "failsafe mode."
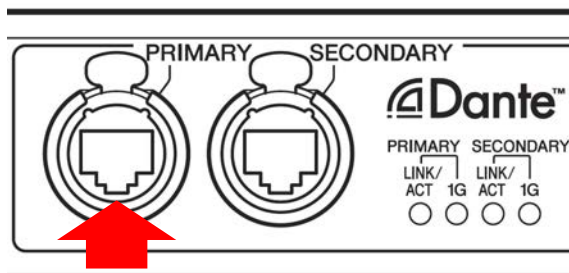
To restore a Dante module in failsafe mode, a recovery image needs to be sent from the Dante Firmware Update Manager.

To check if the Dante module is in failsafe mode, use Dante Controller: the respective device is displayed in red in the Network View of the Dante Controller (version 3.1.x or higher).
Furthermore, the red [SYSTEM] indicator on the RMio64-D unit will periodically flash twice.

Described below are the procedures to recover the Dante module integrated in the RMio64-D unit.

1. Turn off the power to the computer and the RMio64-D.

2. Separate the RMio64-D from the Dante network.

3. Connect the Dante [PRIMARY] connector on the rear panel of the RMio64-D unit to the Ethernet connector on the computer using an Ethernet cable.



4. Turn the computer power on and logon to Windows with administrative privileges.

5. Turn on the power to the RMio64-D.

6. **Disable all but one of the network interfaces on your computer.**

7. **Run the Dante Firmware Update Manager as described below.**

   **Windows**
   Select [All programs] or [All apps] → [Audinate] → [Dante Firmware Update Manager] → [Dante Firmware Update Manager], then right-click and select "Run as Administrator."

   NOTE
   - The "User Account Control" dialog box or the "Windows Security" dialog box may appear. In such case, follow the on-screen instruction to continue.

   **Mac**
   Double-click "Applications" → "Dante Firmware Update Manager."

   NOTE
   - In Mac, the confirmation dialog box which accepts incoming network connections from an application may appear. Click [Allow].

8. **If you see the interface selection screen, select the interface card to connect the Dante device.**

9. **Click [Failsafe Recovery].**

10. **Check the detected RMio64-D.**

11. **Click [Start].**
    A pop-up is displayed confirming that you wish to proceed.

12. **Click [OK] to start the recovery.**
    Dante Firmware Update Manager will display "Processing Safe Recovery," and then "Safe recovery Done" when the device(s) are recovered.

13. **Exit the Dante Firmware Update Manager, and wait for two minutes before turning off the power to the RMio64-D unit.**

14. **Update the Dante firmware.**
    Follow steps 2 through 10 described in "Updating the Dante firmware."

Now recovery and firmware update are completed.

## ■ Error Message List (RMio64-D Update Program)

Error messages for the RMio64-D Update Program may be displayed on the computer. This section explains the error messages, and the appropriate action to take.

◸ NOTE ◿
If the same error message appears each time you try to update, the device may need repairing, in which case you should contact your Yamaha dealer.

| Message | Possible Solution |
|---|---|
| Invalid file. | The update file has broken. Download the file again. |
| Update failed. | Make sure that the computer is connected to the RMio64-D correctly, then update the firmware again. |