

TM5 / TM7 Firmware Update Guide

How to update TM5 & TM7 Input modules using
Drives Assistant

2017-10-23

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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Safety Information



Important Information

NOTICE

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

Product Related Information

For important hazardous location information, refer to the individual product descriptions contained in the individual hardware guides for the products concerned.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables, or wires except under the specific conditions specified in the appropriate hardware guide for this equipment.
- Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.
- Replace and secure all covers, accessories, hardware, cables, and wires and confirm that a proper ground connection exists before applying power to the unit.
- Use only the specified voltage when operating this equipment and any associated products.

Failure to follow these instructions will result in death or serious injury.

WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop, power outage and restart.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.
- Observe all accident prevention regulations and local safety guidelines.¹
- Each implementation of this equipment must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

¹ For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems" or their equivalent governing your particular location.

WARNING

UNINTENDED EQUIPMENT OPERATION

- Only use software approved by Schneider Electric for use with this equipment.
- Update your application program every time you change the physical hardware configuration.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Incomplete file transfers, such as data files, application files and/or firmware files, may have serious consequences for your machine or controller. If you remove power, or if there is a power outage or communication interruption during a file transfer, your machine may become inoperative, or your application may attempt to operate on a corrupted data file. If an interruption occurs, reattempt the transfer. Be sure to include in your risk analysis the impact of corrupted data files.

 **WARNING**

UNINTENDED EQUIPMENT OPERATION, DATA LOSS, OR FILE CORRUPTION

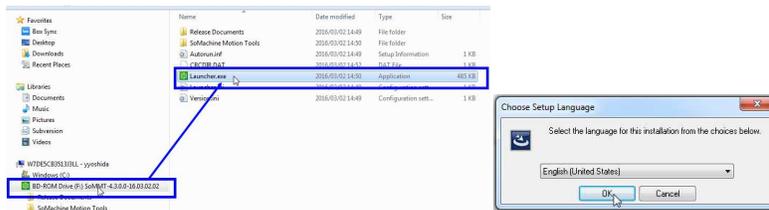
- Do not interrupt an ongoing data transfer.
- If the transfer is interrupted for any reason, re-initiate the transfer.
- Do not place your machine into service until the file transfer has completed successfully, unless you have accounted for corrupted files in your risk analysis and have taken appropriate steps to prevent any potentially serious consequences due to unsuccessful file transfers.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

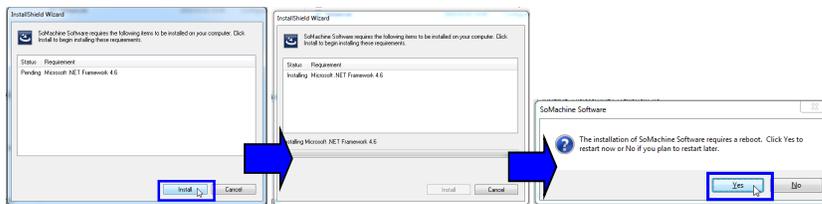
Installation of Configuration Manager and Device Assistant

Preparation: (If SoMachine Motion v4.3 or above is used, go to the chapter Proceed with the Update)

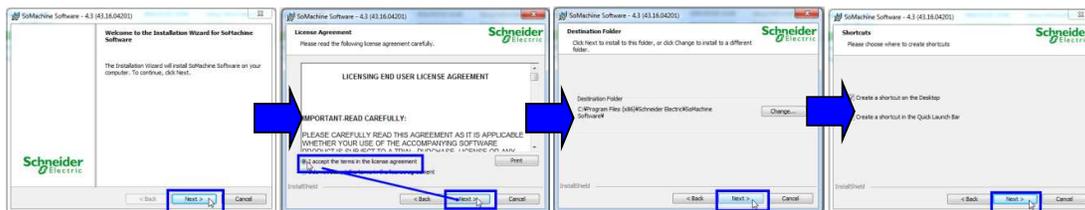
- 1) Download the appropriate Firmware version and the SoMachine Motion service disk ISO image from www.schneider-electric.com
- 2) Open the ISO image and execute **Launcher.exe**, select the installation language and click **OK**



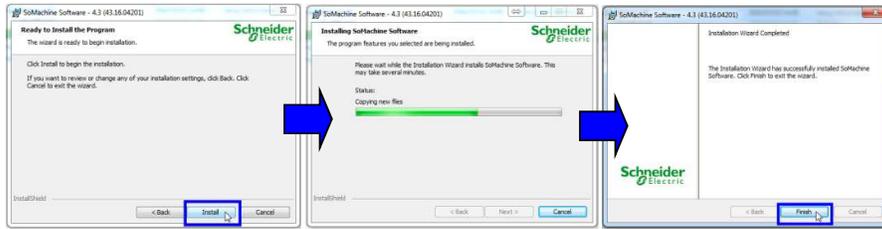
- 3) In the Installation wizard window, click on **Install** to start installation of required software. To continue installation rebooting may be required, click on **Yes** to start the reboot.



- 4) If the installation does not continue after the reboot, then repeat step 1 to restart the installation. When the Software installation window opens, click on **Next** to start or resume installation. The **License Agreement** window opens. Read the agreement and, if you agree, click on **Accept**, and then click on **Next** to continue. Verify the installation destination and click on **Next** to continue. At this point, you can then decide for the creation of a shortcut, and click on **Next** to continue.

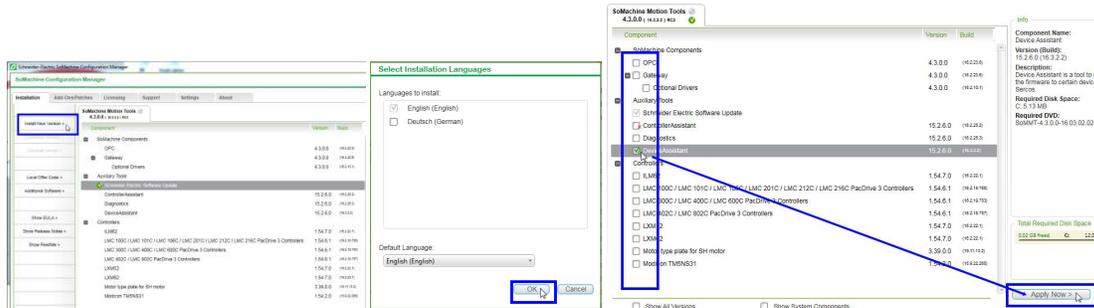


- 5) When the final confirmation for the installation appears, click on **Install** to start the installation. Wait while the installation is in progress, then, click on **Finish** to complete the installation of the **Configuration Manager**.

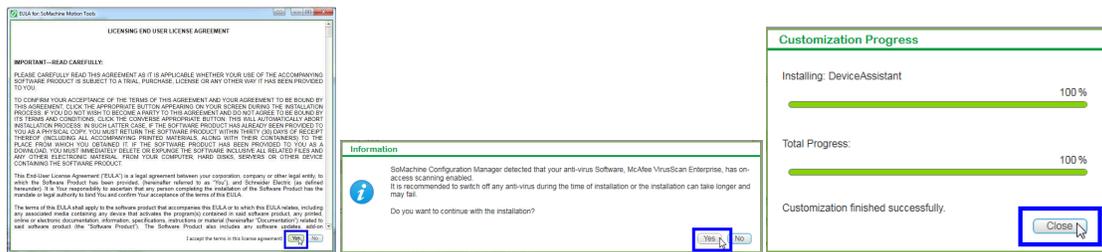


- 6) After the installation of the **Configuration Manager**, the software is automatically started. In the SoMachine Motion Tools tab, **Device Assistant** is listed for the installation. Click on **Install New Version**, select the language and click **OK**.

Clear the boxes leaving only the **Device Assistant** selected, and then click on **Apply Now** to start the installation.



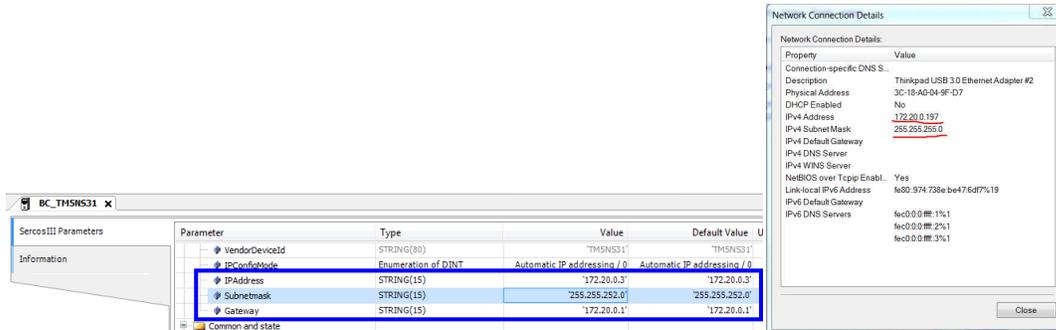
- 7) Read the User Agreement and, if you agree, click on **Yes** to continue, then the Information window may appear, click on **Yes** to proceed and wait until the installation is completed according to the progress window. After the process terminates, click **Close** to end the installation program.



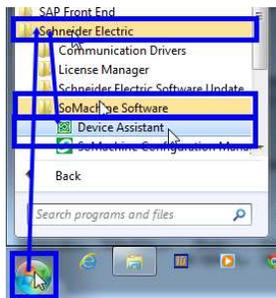
Proceed with the Update

To proceed with the update, or if you are using SoMachine Motion v4.3 or above and are starting the update process from the present point:

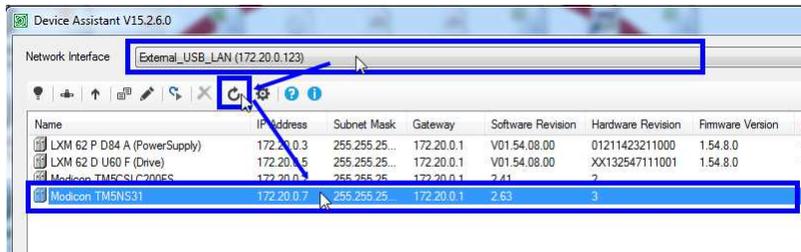
- 1) Download and unzip the Firmware file on your PC.
- 2) Connect your PC with the Ethernet cable to the Bus Coupler with targeted Input module to update. (You can use either the P1 or the P2 slot)
- 3) Set the PC IP address to 172.20.0.xxx (xxx being an unique address on the local network) and set the subnet mask to 255.255.255.0



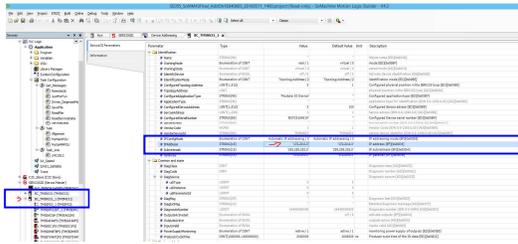
- 4) Start Device Assistant from the **Start -> Schneider Electric -> SoMachine Software -> Device Assistant**.



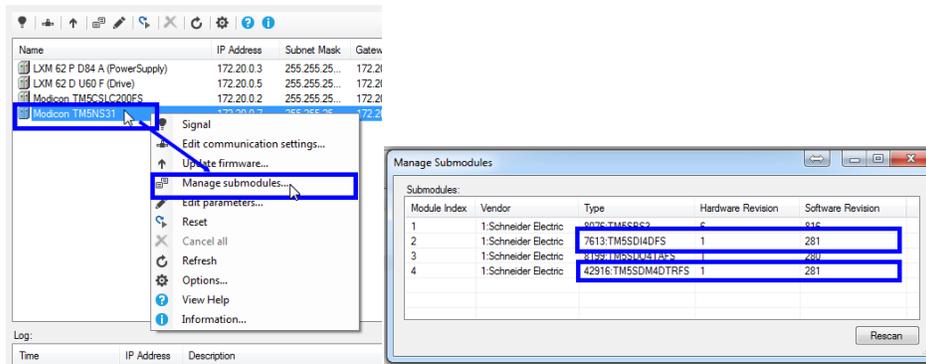
- 5) Choose the **Network Interface** connected to the Bus Coupler, click on **Refresh** icon to scan the devices connected in the network. Select the target Bus Coupler.



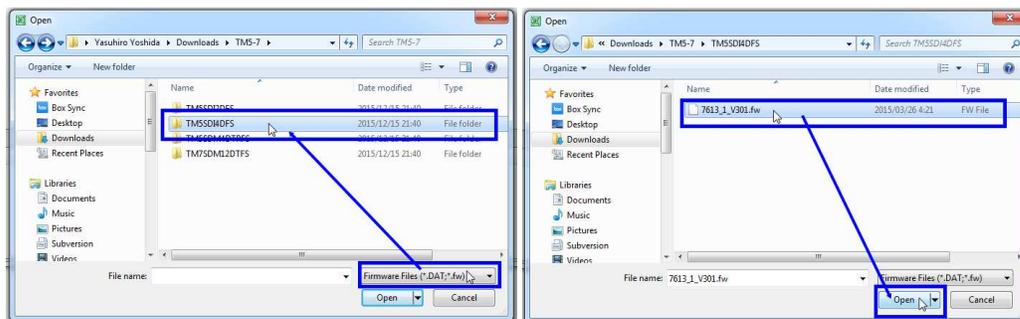
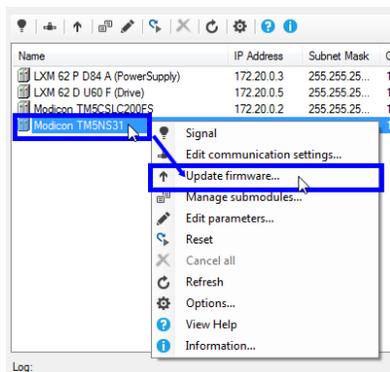
NOTE: If you have more than one bus coupler, then IP address can be found from the device tree in SoMachine Motion or found manually with Device Assistant.



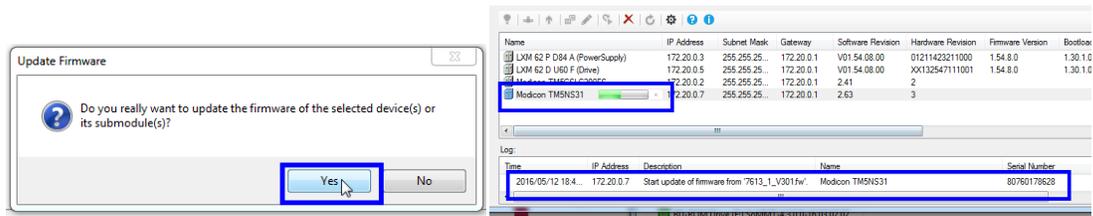
Find the Bus Coupler in the Device Assistant and right click on the device. Select **Manage Submodules...** to see the devices connected and their firmware versions



6) If the intended bus coupler was found, right click on it, and then click on **Update FW**. Select the file type Firmware Files, and then the file of the target device. In this case TM5SDI4DFS. Choose the firmware file of the device, and then click on **Open** to start the update.



7) Click on **Yes** for the confirmation, then update status can be followed on the device assistant.



Allow the update to continue undisturbed.

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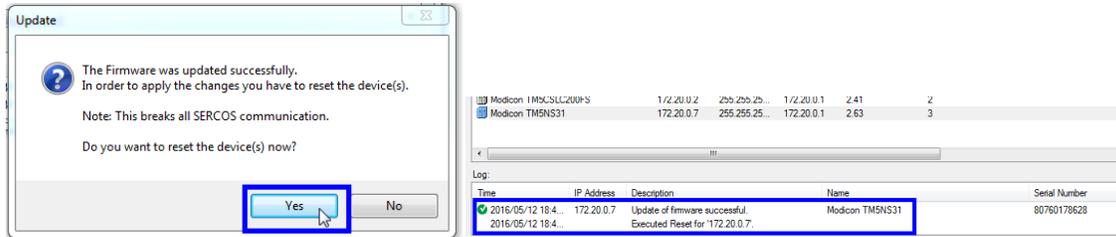
⚠ WARNING

UNINTENDED EQUIPMENT OPERATION, DATA LOSS, OR FILE CORRUPTION

- Do not interrupt an ongoing data transfer.
- If the transfer is interrupted for any reason, re-initiate the transfer.
- Do not place your machine into service until the file transfer has completed successfully, unless you have accounted for corrupted files in your risk analysis and have taken appropriate steps to prevent any potentially serious consequences due to unsuccessful file transfers.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

- 8) If the update is successful, a corresponding message will appear. Click on **Yes** to restart the device. After the restart, the Motion Controller needs to restart as well to recognize the firmware update by the Safety Logic Controller (SLC). Acknowledge the update on the SLC to complete the process



NOTE: If the target Input module is not found, an error message will appear. You may have chosen an incorrect bus coupler. Reselect the intended bus coupler and return to Step 5

