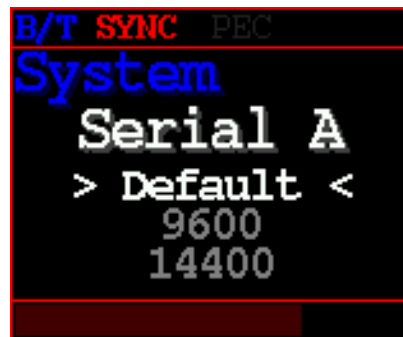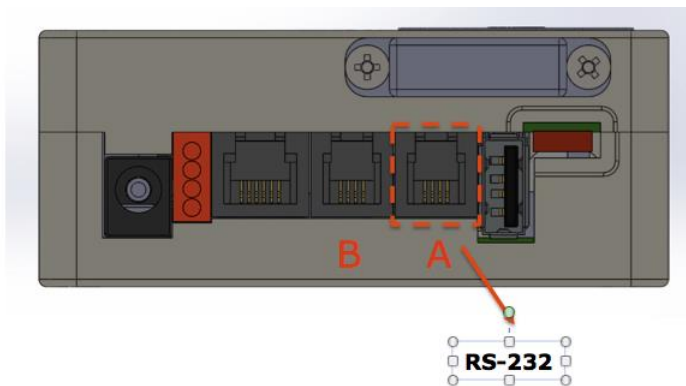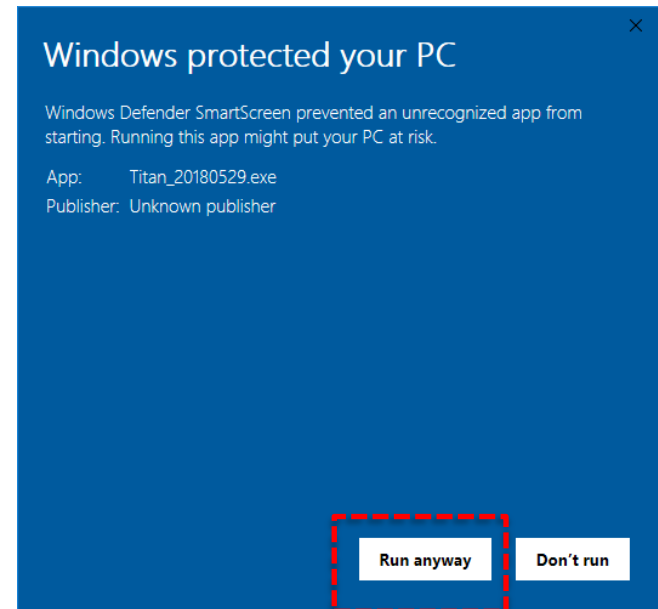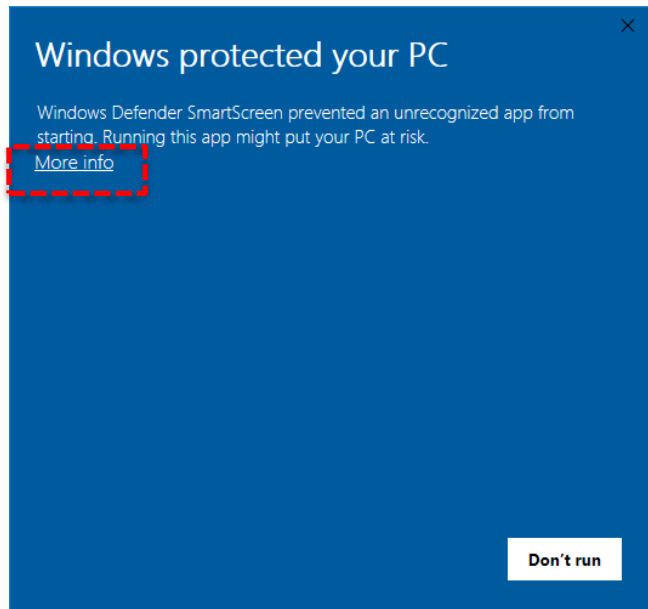# Preparations for Firmware Update

1. If a program with version 2.5.0 or lower is installed,
   be sure to uninstall the old version of the Firmware Update program from the control panel.

2. Download and unzip the Firmware Update program & Firmware Files.
   https://drive.google.com/drive/folders/1_BjB_LxA97z9CrsWz_TQp3jLq_8yq58i
   Filename : Titan-201?????-Firmware.exe

3. Connect the TCS and the PC using the RS-232 (Serial) cable dedicated to TiTaN TCS.
   Be sure to connect to **serial port A** close to the USB port.

4. Make sure to specify the speed of TCS Serial Port A to Default or 115,200.
   If it is specified differently, you must change the setting to Default,
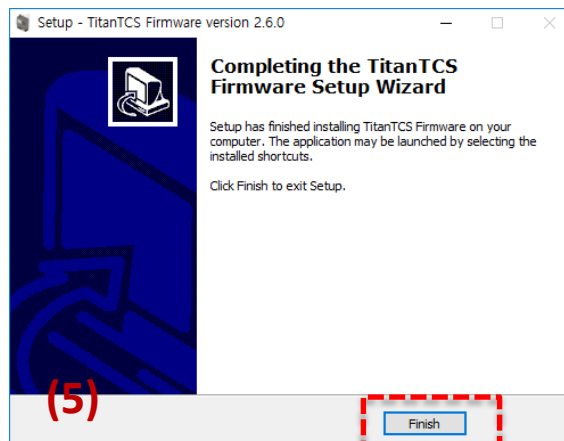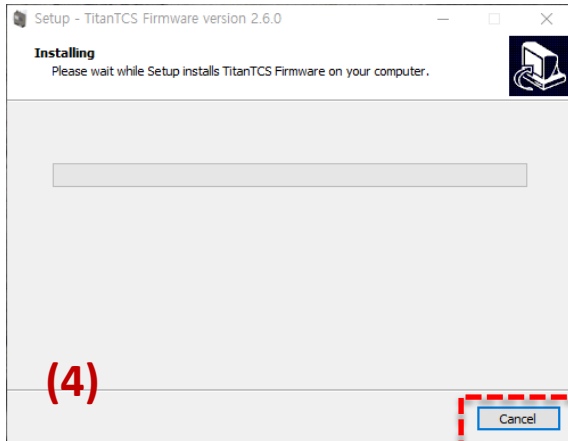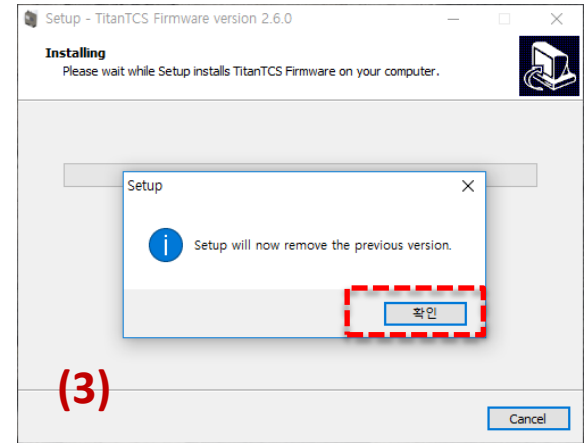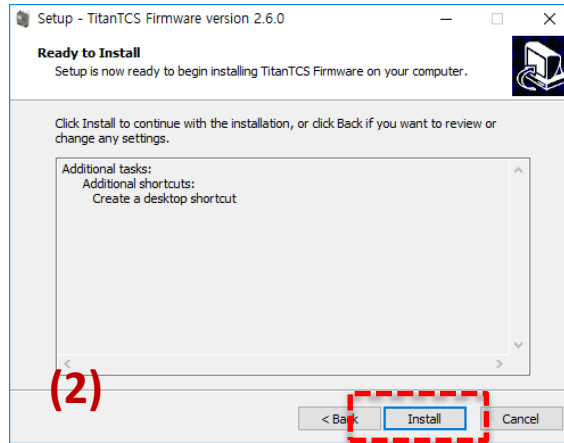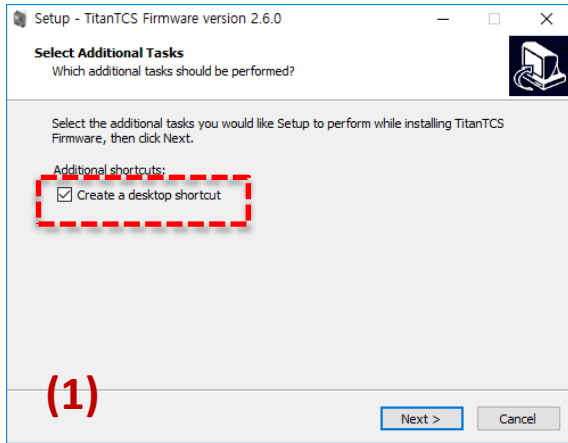   save it and turn it on again to check again.

Download from internet & Install 1/2

1. Download and extract the Firmware Update program from the homepage.
   https://drive.google.com/drive/folders/1_BjB_LxA97z9CrsWz_TQp3jLq_8yq58i
   Filename : Titan-201?????-Firmware.exe
2. Run the downloaded file to install the updater program.
3. When the installation is completed successfully,
   [TitanTCS Firmware] / [TitanTCS Firmware] menu will be created in Windows Start menu.
   Run "TitanUpdater" please.
4. If you are using Windows 10, the following screen may appear.
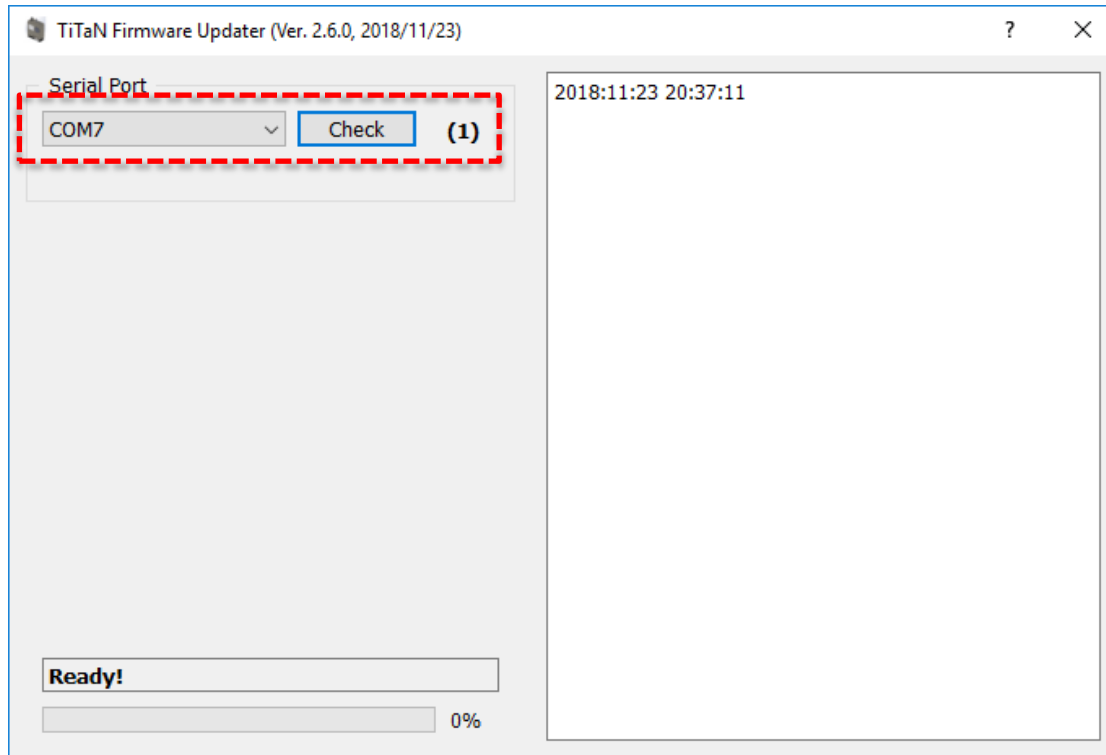   Select "More Info", [Run anyway] to continue the installation.

Download from internet & Install 2/2

Follow the steps below to continue the installation.

(1)

(2)

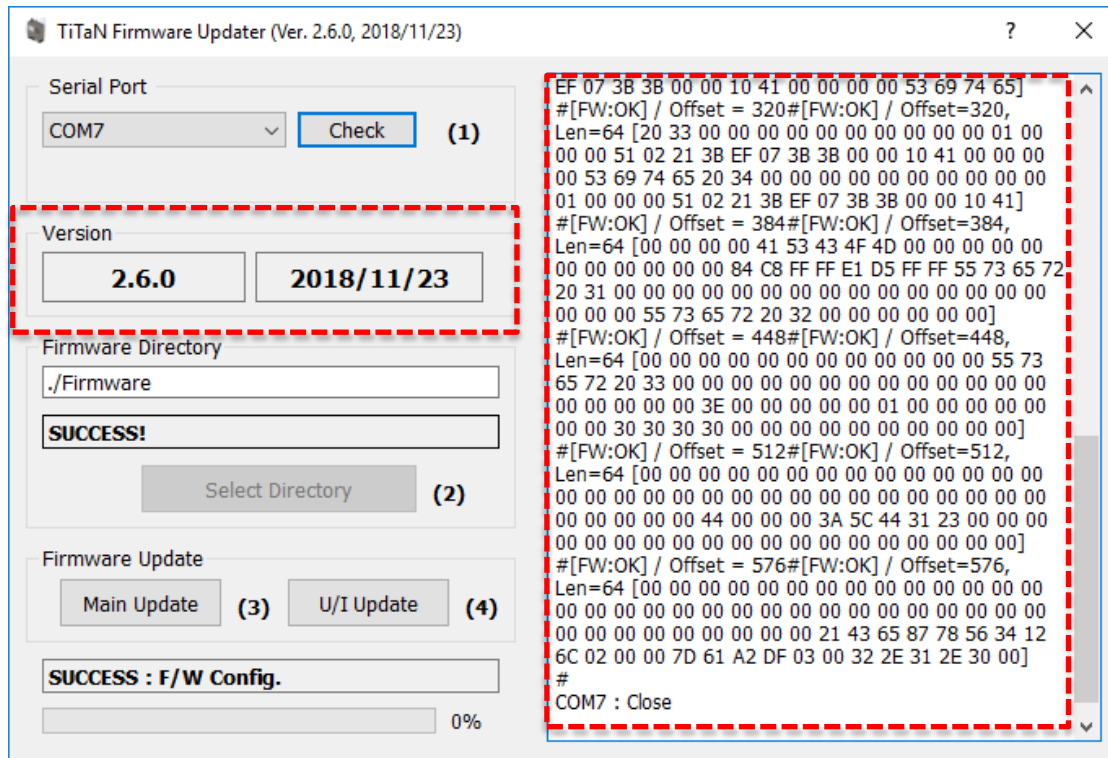**(3)**

(4)

(5)

Firmware Update

1. When the installation is completed normally,
   [TitanTCS] / [TitanUpdater] menu will be found in Windows Start menu.
2. Run the [TitanUpdater] program.
3. Turn on the TiTaN TCS.
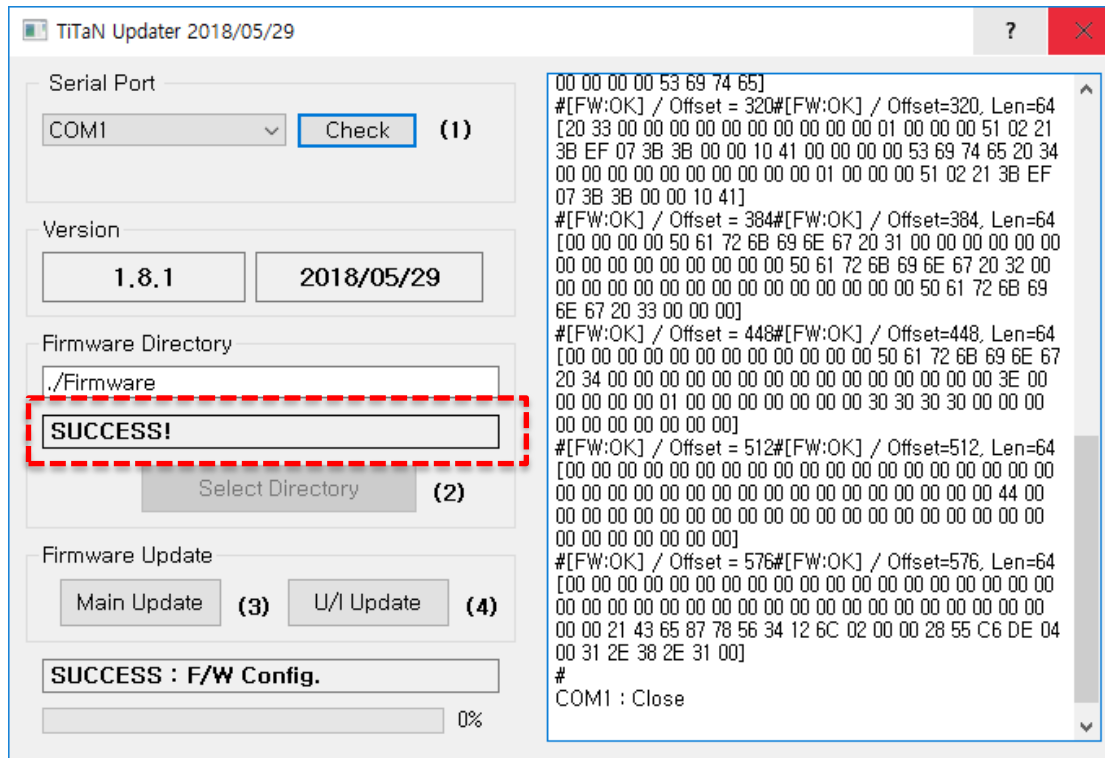4. Select the serial port connected to the TCS and click the **[Check]** button.

5. If the connection is successful, the TCS version information is displayed on the screen.
   Also, the contents of communication between TCS and PC are displayed on the screen on the right.
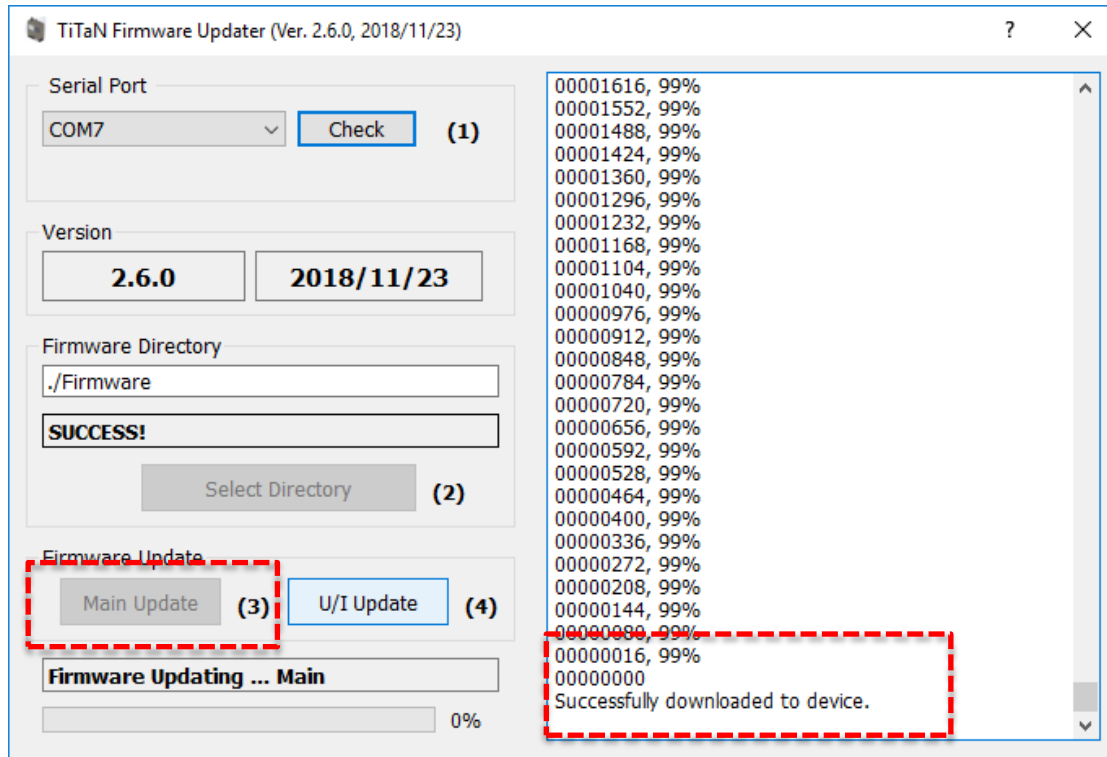
Firmware Update 3/5

7. Make sure "SUCCESS!" Is displayed.

8. Firmware update is now possible.
   Firmware update is executed first Main CPU, second U/I CPU.

Firmware Update 4/5

9. Click the **[Main Update]** button to perform the Main CPU update.
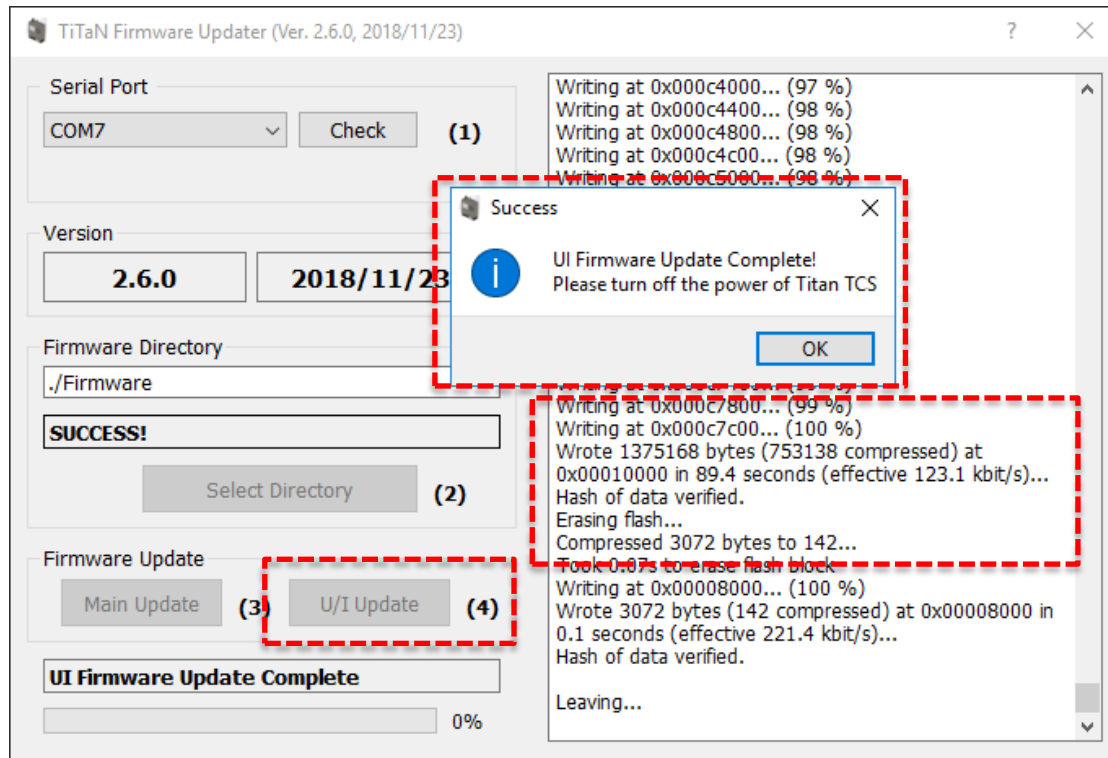   Firmware update takes about 1 ~ 2 minutes.

In the log window after the update is finished
"00000000
Successfully downloaded to device." make sure you see the message

Firmware Update 5/5

10. Click the **[U/I Update]** button to perform the U / I CPU update.
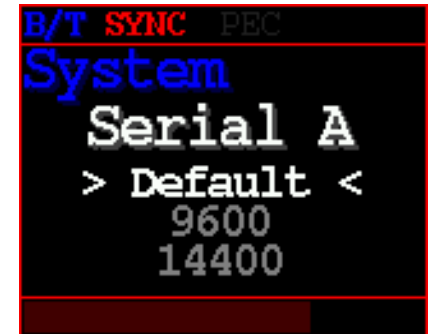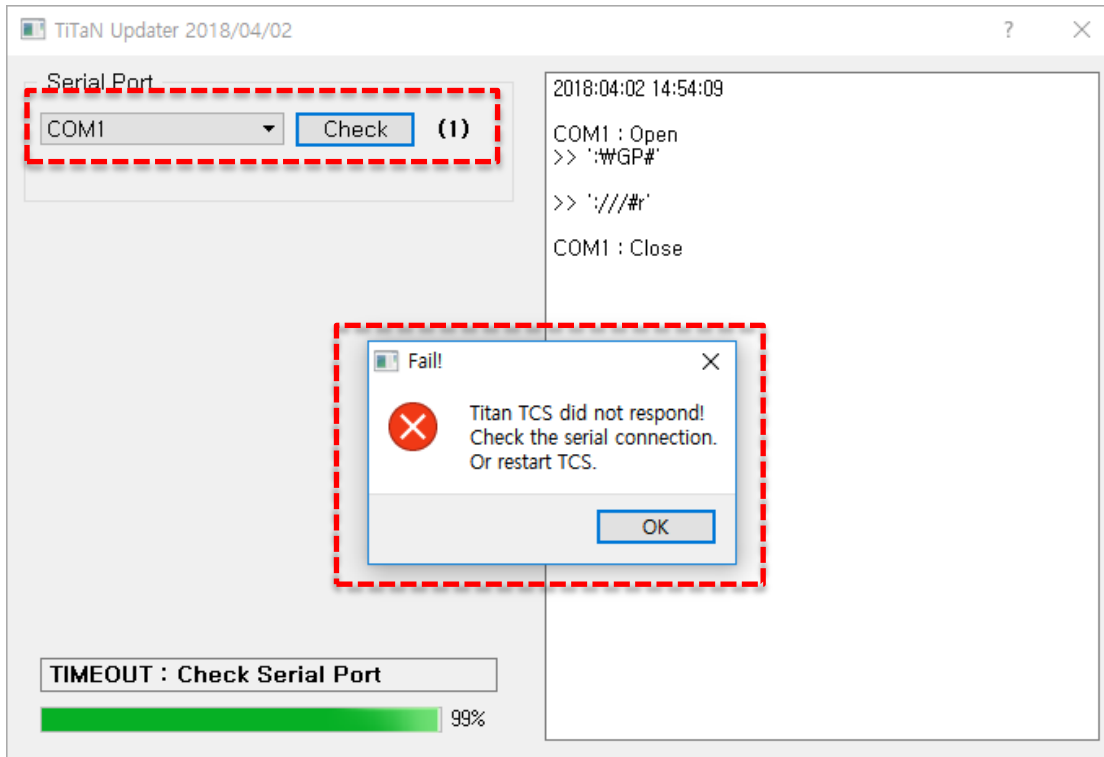   Firmware update takes about 1 ~ 2 minutes.

In the log window make sure your see the 100% successful.
Power cycle TCS for reboot.

Firmware update process is completed!

When an error occurs during connection

Cause 1. There is a problem with the communication connection between TCS and PC.
    Action 1. Make sure that the communication cable dedicated to TiTaN.
    Action 2. Make sure that you are connected to Serial Port A.
    Action 3. Check if the communication speed is set to Default or 115,200 bps in TCS.

Cause 2. Main CPU does not boot due to a problem in firmware update.
    See Emergency Recovery Function for Main CPU F/W Update

Emergency Recovery for Main CPU F/W Update   1/2

Check Point

    Only the version number is displayed on the screen,

    or

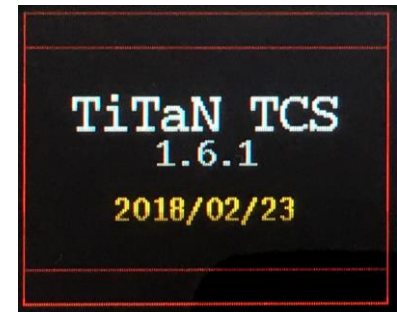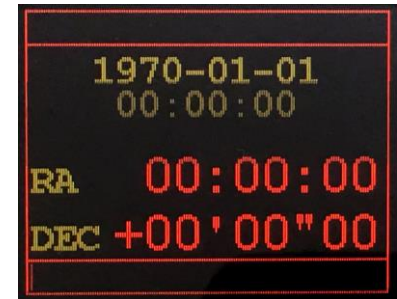   Date is displayed as 1970-01-01 00:00:00 and does not change

    There is no beeper melody.
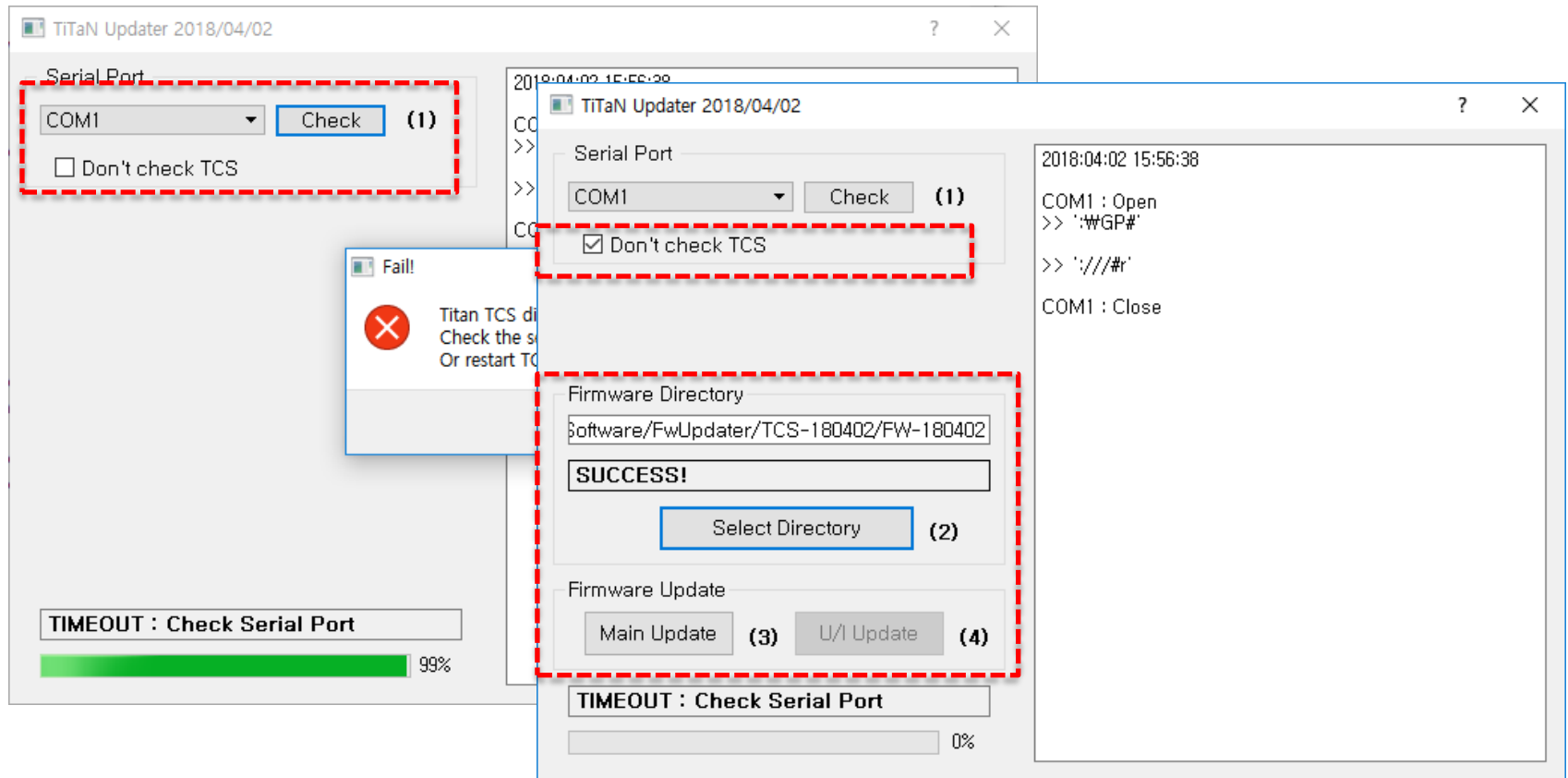
Cause

    Main CPU does not boot due to Firmware update problem.

Action

    Emergency Recovery for Main CPU F/W Update

Emergency Recovery for Main CPU F/W Update   2/2

1. Hold down Shift Key on the keyboard and click the **[Check]** button.
   It is necessary to keep pressing Shift Key until communication error message is displayed.
2. When a communication error occurs, **[ ] Don't check TCS** hidden menu is displayed.
3. **[V] Don't check TCS**.
4. Select the firmware directory and execute **[Main Update]**.
5. When the repair is completed, exit the program and restart program, Redo firmware update.