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## AN024 - Firmware update procedure on A1-HMI-QC104

			
<b>Document:</b>	<b>AN024</b>		
<b>Description:</b>	Firmware update procedure on A1-HMI-QC104		
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<b>Link:</b>	<a href="http://www.qem.eu/doku/doku.php/appnote/an024">http://www.qem.eu/doku/doku.php/appnote/an024</a>		
<b>Language:</b>	English		
Document Release	Description	Note	Date
01	New manual	Valid from hardware release 03, and from firmware release QC104-xx.5.1	10/02/2015

### 0.1 Introduction

The firmware update can be performed without affecting the operation of the application software. It is good rule, however, to have the application software and the machine data saved in a file available so that you can restore the operation

The operation can be done in three ways:

- [Through the TeraTerm program](#)
- [Using the Qem application, named Firmwaredownloader](#)
- [Through MMC/SD](#)

## 0.2 Update via TeraTerm

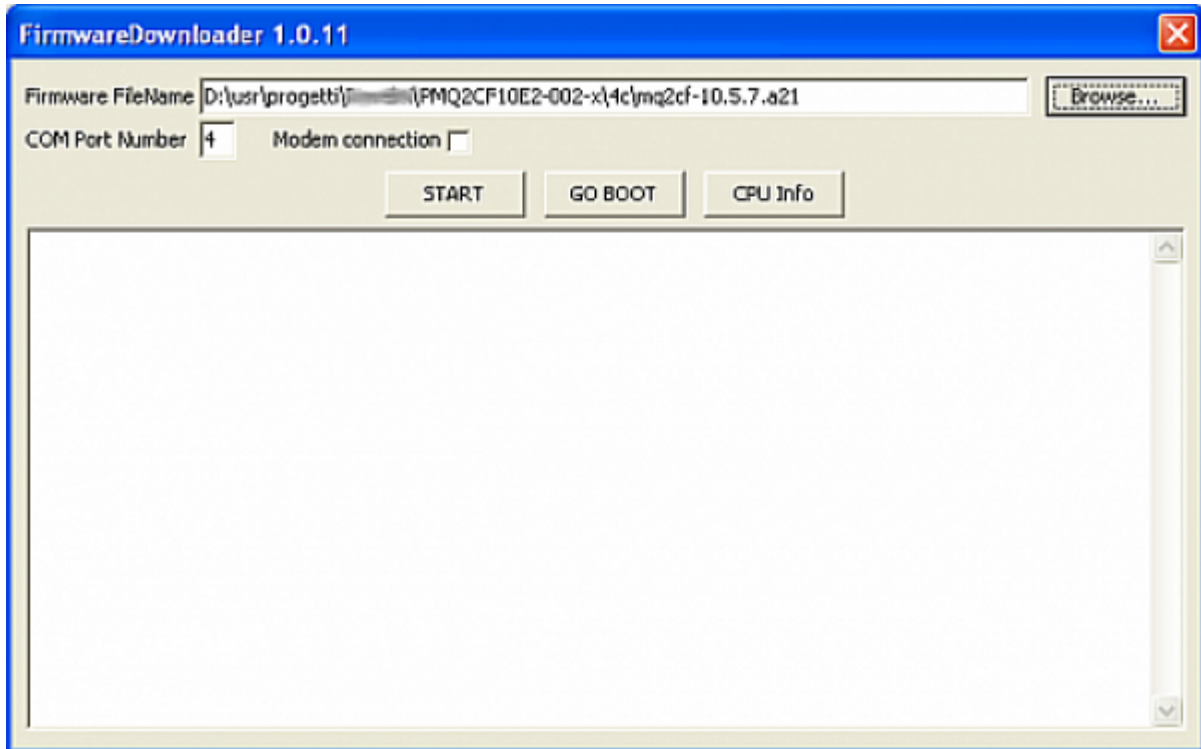
1. Download and install the [TeraTerm](#).
2. Connect the PC to the prog port of the instrument with the iq009 interface also used for normal programming with Qview.
3. Press and hold the BOOT key and simultaneously turn on the terminal.
4. Only the YELLOW STOP LED lights up (The CPU is in the BOOT state).
5. Start the Tera Term Pro program and set up a serial connection on the initial dialog with the COM number used for communication (the iq009 interface is connected to a USB port on your PC. The PC assigns a COM number to the interface. It is possible to know this number from the "Control Panel" of the PC).
6. Set from the "Setup-Serial Port" menu the following settings:

Port:		Used COM
Baud rate:		115200
Data:		8 bit
Parity:		none
Stop:		1 bit
Flow control:		Xon/Xoff
Transmit delay		
	0	msec/char
	0	msec/line

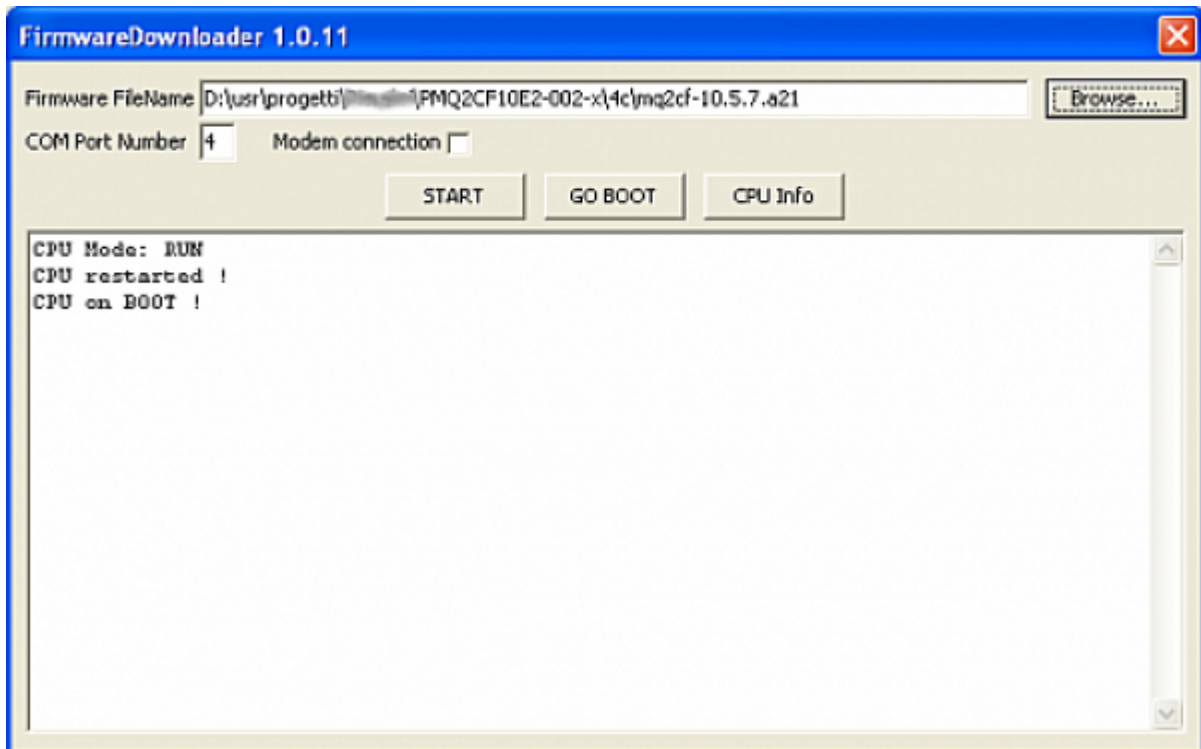
7. Sending a " \* " character The CPU should respond with " ?\* " and it means that communication is established. If this does not happen you have to check the cable or Check that there are no other programs that are using the same serial communication port.
8. Send the " E\* " string To clear the firmware in the CPU.
9. The CPU, after a few seconds, send the " e\* " answer.
10. Send the " F " string and select from the "File-Send file..." menu the file <firmware>.a21 (file provided with these instructions). This will start the firmware download.
11. At the end of the transfer send the " \* " character.
12. The CPU, after a few seconds, will respond with " OK firmware stored ".
13. Now you can turn off and turn on the terminal.

### 0.3 Update via Firmwaredownloader

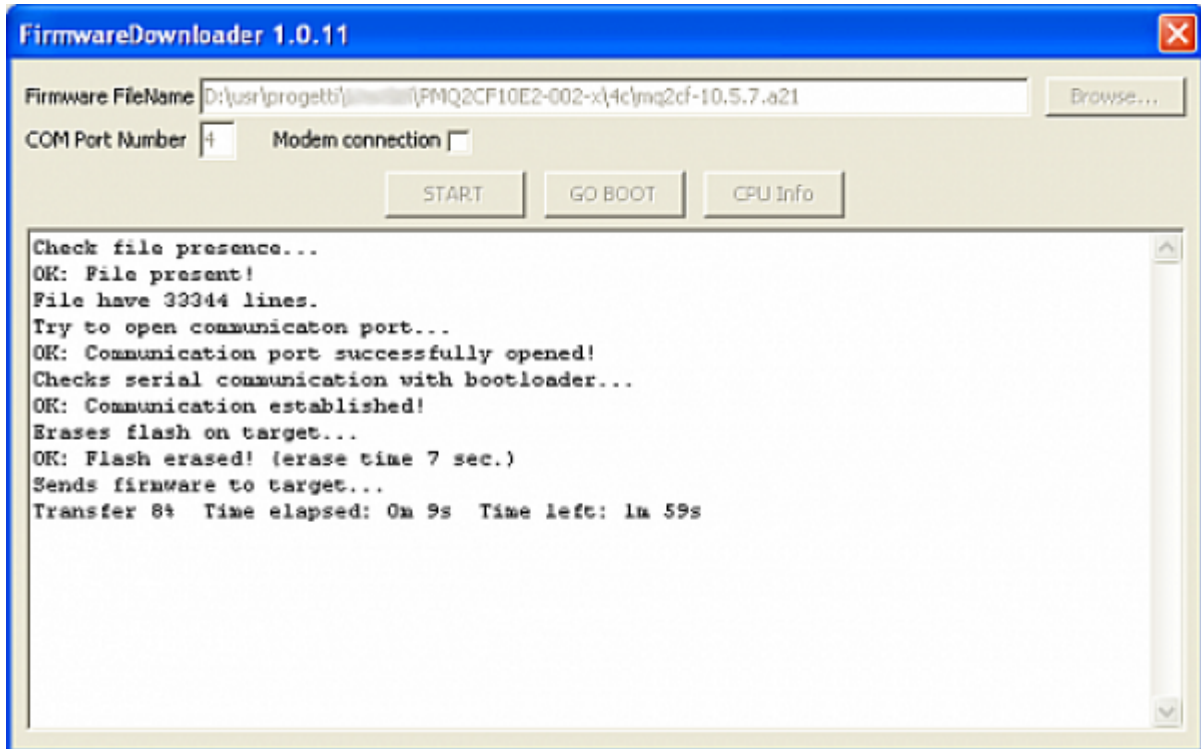
1. Install [QWorkBench](#).
2. Connect the PC to the terminal via the iq009 interface.
3. Start the Firmwaredownloader that is located in QEM - QWorkBench - Utilities - Firmwaredownloader.
4. Set the COM in the *COM Port Number*.



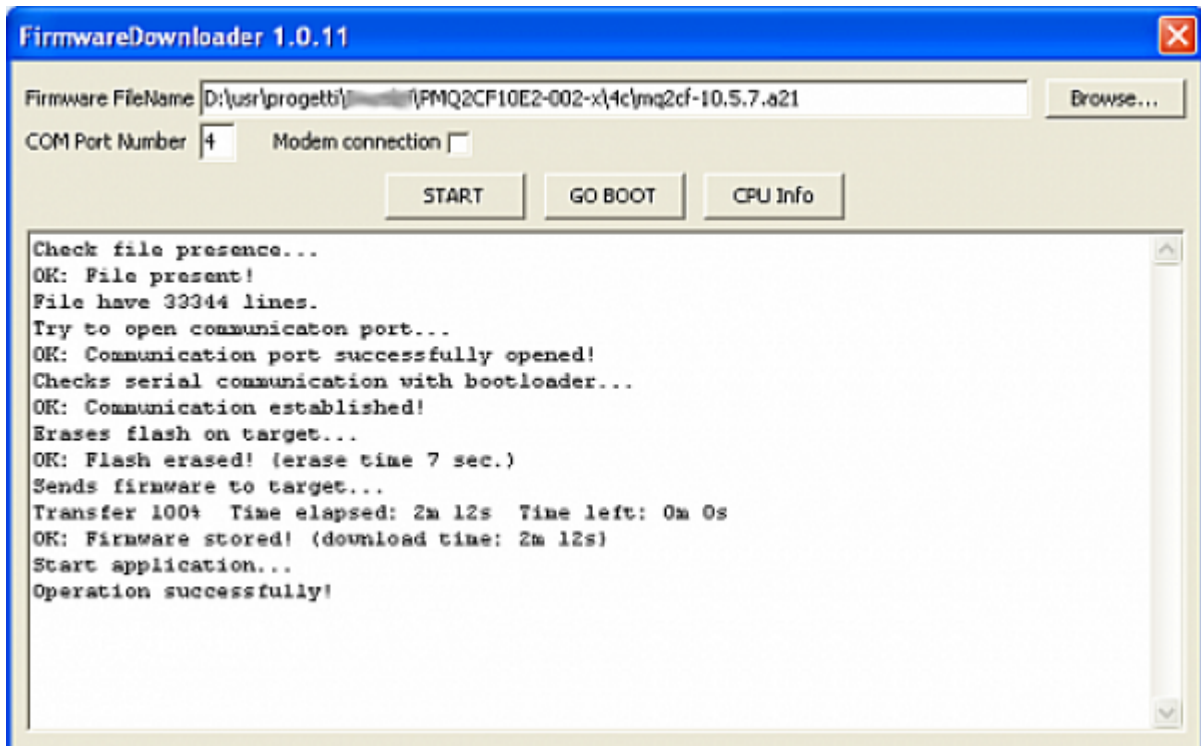
5. Select the **firmware.a21** file.
6. Press Go Boot.



7. Press Start.

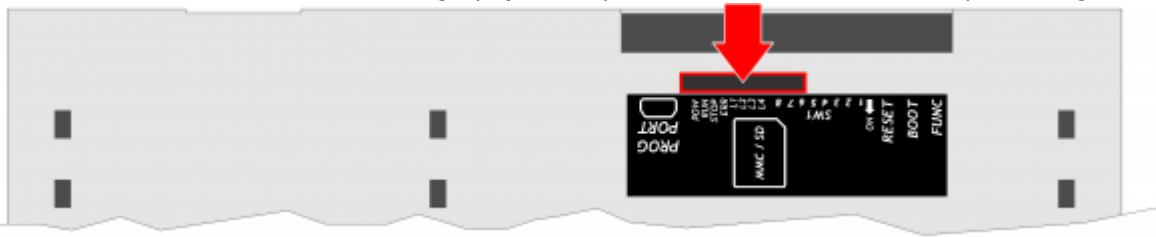


8. Wait for the transfer to end.

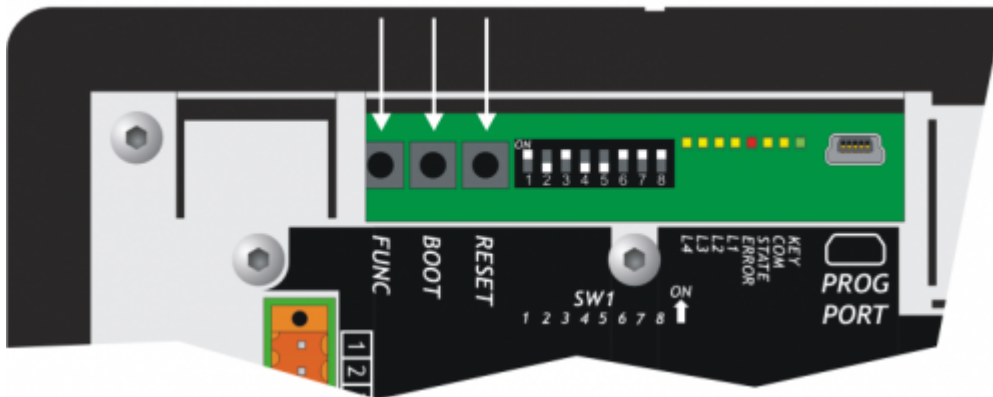


## 0.4 Update via MMC/SD

1. The file containing the new firmware, for example qc104-03.5.4.a21 must be renamed in `firmware.a21`
2. Format the MMC/SD and copy the `firmware.a21` file inside
3. Turn off the instrument.
4. Insert the MMC/SD As shown on the serigraphy in the picture (The MMC/SD remains protruding).







5. Turn on the instrument with the BOOT key pressed



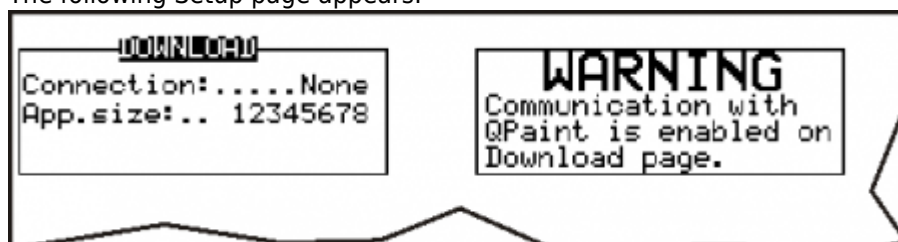
6. The **STATE** led lights up and starts blinking, while the display remains off. The **STATE** led flashes until the update is finished (1 minute about).
7. Alla fine dell'aggiornamento lo strumento si riavvia automaticamente.
8. Turn off the instrument and extract the MMC/SD

## 0.5 Check

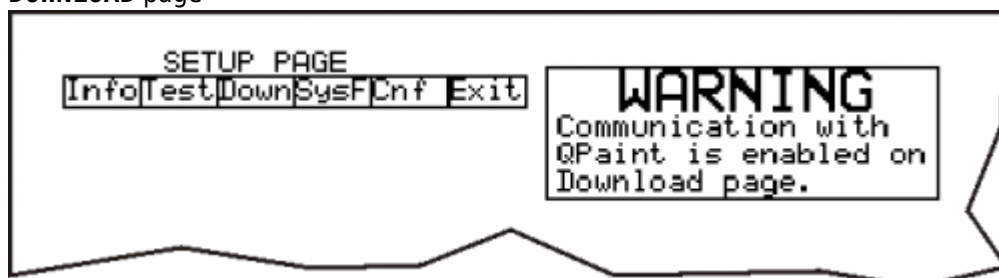
1. Turn on the instrument

2. Press the **BOOT** key  for 3 seconds or press both the **F2**  + **F4**  + **F6**  keys to access the **Setup**.


3. The following Setup page appears:



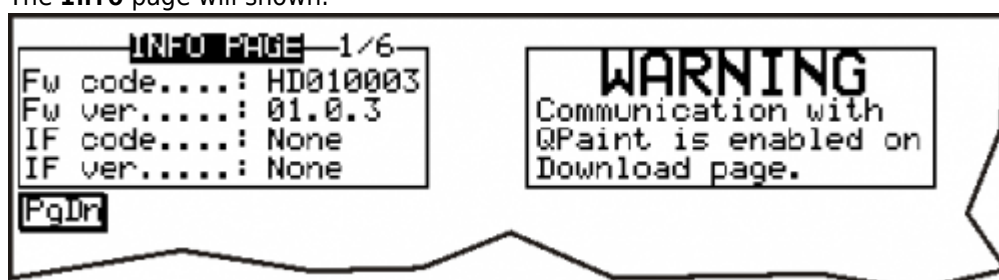
4. Press **esc**  in the virtual keyboard  to exit from the **DOWNLOAD** page





5. Select **Info** from the menu using the arrows   of the virtual keyboard, then press the **Enter**

key  to show the selected function.

6. The **Info** page will shown.



7. Verify that **FW ver.....**: Match the firmware version you just loaded.

8. Press **esc**  and using the virtual keyboard Get on the menu in **Exit** item and press **Enter**  to exit from the SETUP.

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