Steps to make an Arrow USB Programmer 2 work properly on a PC running Windows 7, 64 Bit or Windows 10, 64 Bit

V1.0, March7, 2018

<u>Step 1</u>: Connect the board equipped with an Arrow USB Programmer 2 to a USB port of your PC and wait some seconds.

<u>Step 2</u>: Check the correct installation of the FTDI USB driver. Have a look at the device manager of your PC. Search the three entries listed below. In the section Universal Serial Bus controllers USB Serial Converter A

USB Serial Converter B In section Ports (COM & LPT) USB Serial Port (COMxy)

If these entries cannot be found then most probably two unknown devices are listed instead. Windows should retrieve the driver files automatically so wait some more seconds or even minutes. In case Windows does not retrieve the drivers, go to the web site of FTDI (<u>www.ftdichip.com</u>), download the D2XX drivers and apply them manually to the unknown devices.

Please check whether the tree entries disappear and appear when the programmer hardware is disconnected and connected, again.

<u>Step 3</u>: Check if the Arrow USB Programmer DLL is installed properly. Get the most recent setup executable for the Arrow USB Programmer software and execute it.

<u>Step 4</u>: Check the PC's registry.

Start regedit.exe from the start menu command line and look for the key:

HKEY_LOCAL_MACHINE\SOFTWARE\Altera Corporation\JTAGServer\Hardware_Arrow_USB_Blaster

This key must contain at least three values:

Name	Туре	Content
(Standard)	REG_SZ	none, this is an empty value
ImagePath	REG_SZ	absolute file path of the programmer DLL
TckFrequency	REG_SZ	numeric value of the TCK frequency in Hertz

The registry key and the values are created by the Arrow USB Programmer's setup executable. In case you cannot find the entries your windows account may lack the access rights to apply modification to the registry.

Step 5: Check if the Altera JTAG server is running.

Have a look at the services running on the PC. There must be a service with the display name "Altera JTAG Server". This service must be running. Its start type must be "automatic". The "Altera JTAG Server" it installed during the installation of IntelFPGA Quartus or IntelFPGA Quartus Stand-alone Programmer. In case the service is not present at all, it is advisable to install the most recent version of the Quartus Stand-alone Programmer.

<u>Step 6</u>: Re-start the Altera JTAG server.

Use the services panel to stop and re-start the Altera JTAG server.