This document describes the firmware update procedure for MQDC-32.
The latest firmware file can be found at
http://mesytec.com/downloads/firmwareupdates/firmware_VME.html

Note that the latest software release can not be programmed onto older devices.
Please make sure that the hardware and software versions match.

Requirements

- XILINX Platform Cable USB II
- XILINX Lab Tools – 14.7 Utilities
- The latest MQDC-32 firmware file
- These steps are for Windows

Table of Contents

Download

Note: In order to download the software, it is necessary to register on the XILINX homepage.

Download the **"ISE Design Suite for Windows 10 - 14.7"** from the following link:
https://www.xilinx.com/support/download/index.html/content/xilinx/en/downloadNav/vivado-design-tools/archive-ise.html

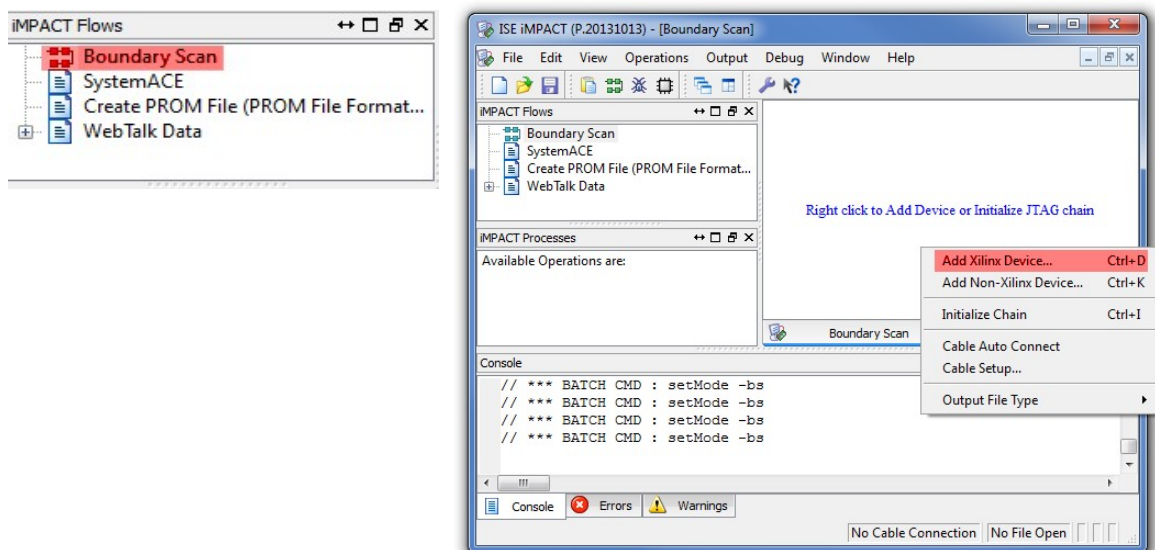An installation guide for the ISE package is available here:
https://www.xilinx.com/support/documentation/sw_manuals/xilinx14_7/ug1227-ise-vm-windows10.pdf

Start and Configuration

- Start **"iMPACT"** using the desktop shortcut that should have been created by the installer.
- Connect the **"XILINX Programming Device"** with the USB-Cable to your PC.
- The Status-LED of the programming device should turn yellow if the connection can be established. Otherwise use the USB-Passthrough settings of the VirtualBox to forward the device into the virtual machine (right-click the USB plug icon at the bottom of the VirtualBox screen).
- Connect the **"XILINX flat cable"** to the Programming Device.
- Follow the screenshots below for the correct setup.
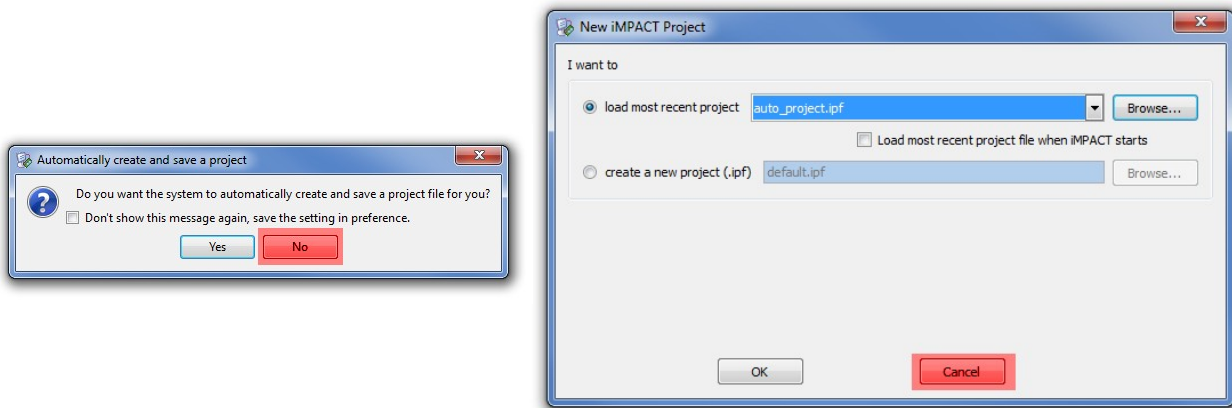
- Double Click on **"Boundary Scan"**
- Then right click into the right window and **"Add Xilinx Device..."**

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2/6

- In the next window load the **"MQDC-32 Firmware File"** and click open.
- In the Window "Select Device Part Name" choose **xcf16p** and click OK.
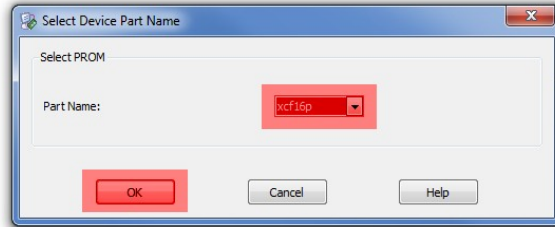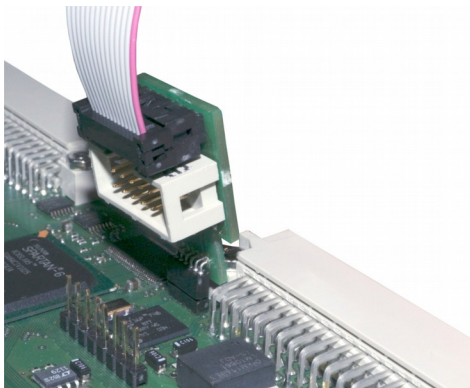

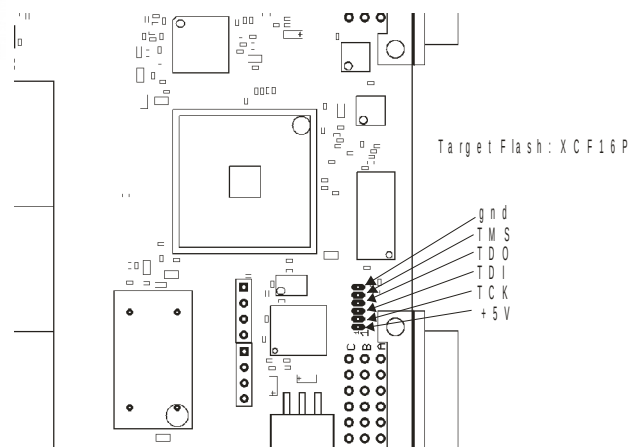- You can see the XILINX Device Icon with the MQDC-32 Firmware on the right window in the programmer tool.
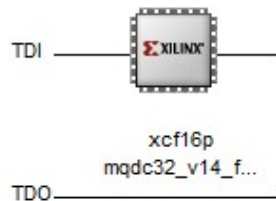
Connection
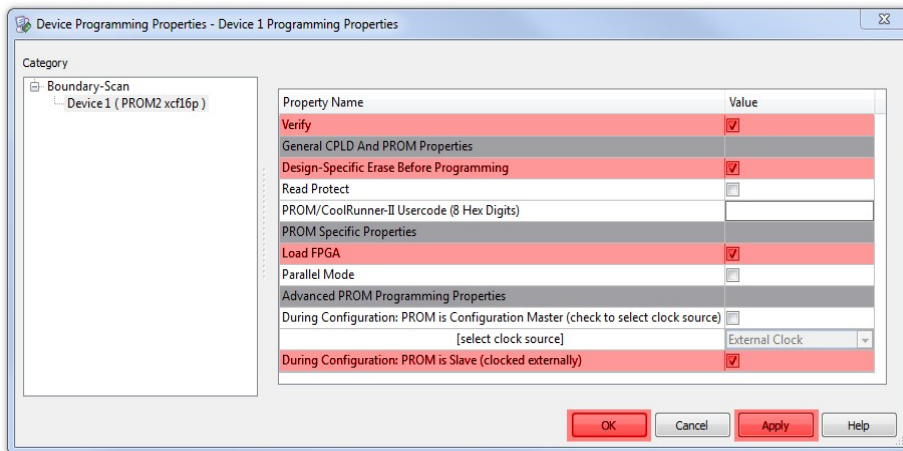
- Connect the flat cable with the mesytec adapter to the MQDC-32 and power on the MQDC-32.
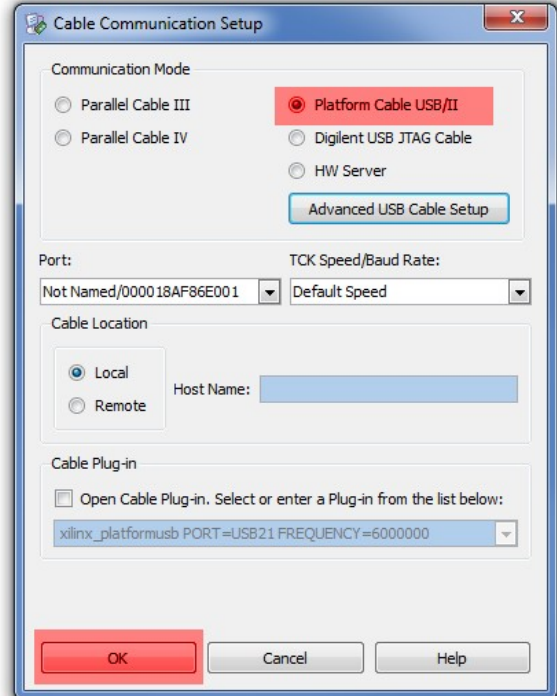- The Status-LED should turn green.

- Right Click on the Device and choose **"Set Programming Properties"**

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3/6

Device Programming Properties - Device 1 Programming Properties

Category

- Boundary-Scan
  - Device 1 (PROM2 xcf16p)

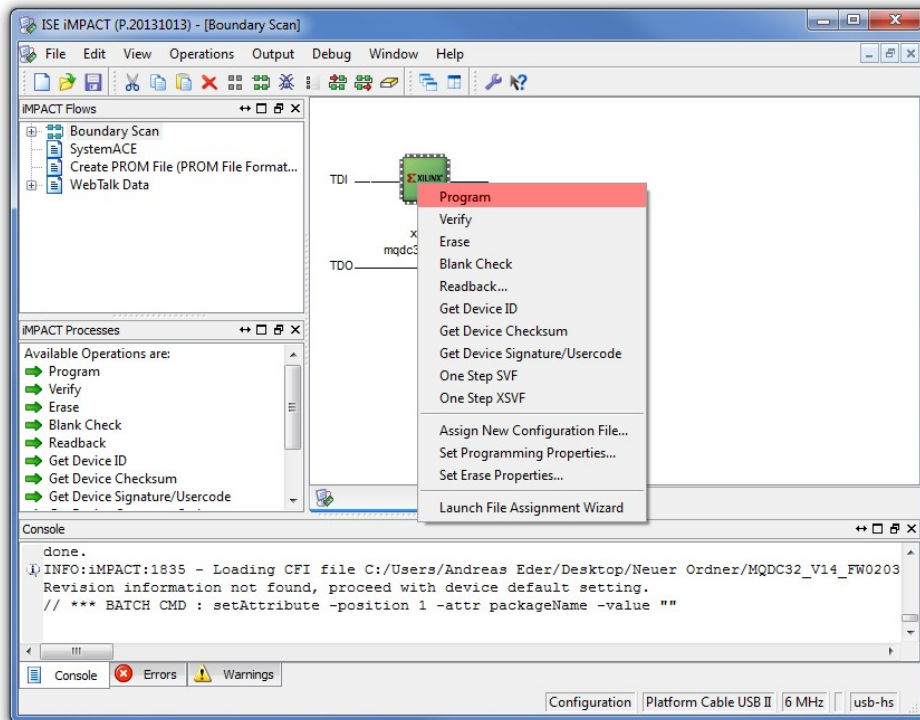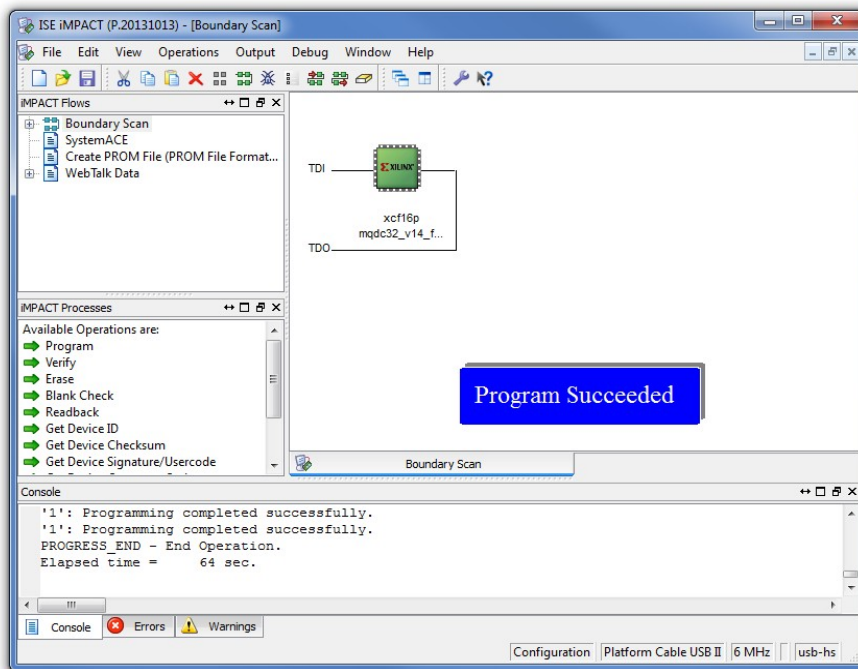| Property Name	Value
Verify	☑
General CPLD And PROM Properties	
Design-Specific Erase Before Programming	☑
Read Protect	☐
PROM/CoolRunner-II Usercode (8 Hex Digits)	
PROM Specific Properties	
Load FPGA	☑
Parallel Mode	☐
Advanced PROM Programming Properties	
During Configuration: PROM is Configuration Master (check to select clock source)	☐
[select clock source]	External Clock
During Configuration: PROM is Slave (clocked externally)	☑

OK   Cancel   Apply   Help

Cable Setup

- These settings must be performed only once.
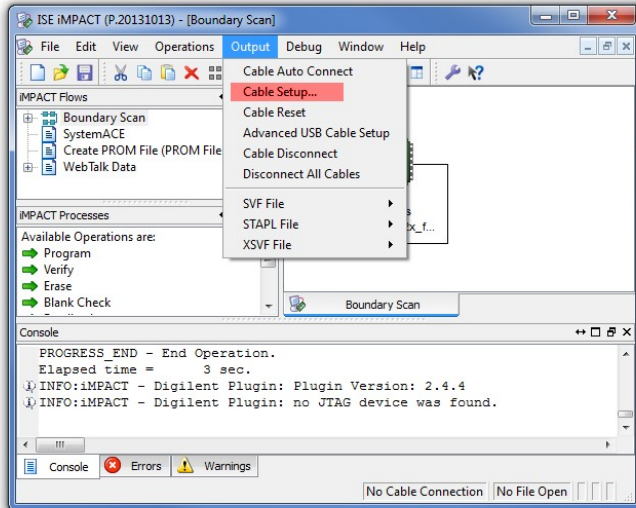
Programming

- Right click on the XILINX Device and click Program.

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5/6

The MQDC-32 Firmware is now updated

Project saving

• All settings can be stored to update other MQDC-32 at a later time.

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6/6