

# TE0729 CPLD Firmware

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## CPLD Access

With TEB0729:

- Connect MiniUSB cable to XMOD programm
- Set DIP S2-1 to OFF
- Power ON the board
- Run "Lattice Diamond Programmer"
- Select "Create new project from JTAG chain" and press "OK"

## Available CPLD Firmware

- [TE0729 CPLD](#) - Firmware description with different Variants
  - TEB0729-REV02\_Plus is default delivered Firmware for modified TEB0729-REV02 and newer TEB0729 Revisions.
  - TEB0729-REV02 is optional Firmware variant, for older B2B Connector assignment.

## Download

- [TE0729/<PCB Revision>/Firmware/](#)
  - Use files from the subfolders of your PCB revision

## General instructions

### CPLD Firmware Update - General Requirements

- Lattice Diamond or Lattice Diamond Programmer is available for free on <http://www.latticesemi.com/>
- Lattice compatible JTAG Programmer, for example:
  - Trenz TE0790 or Carrier with FTDI for JTAG
  - Most JTAG programmer, which used FTDI Chip to translate USB to JTAG
    - Diligent FTDI based programmer are not compatible with Lattice.
- JTAG must be connected to CPLD JTAG
- JTAG Enable Pin of CPLD must be selectable and set to VDD
- Correct CPLD Firmware (JED-File) from Trenz Electronic Download

### CPLD Firmware Update - General Procedure

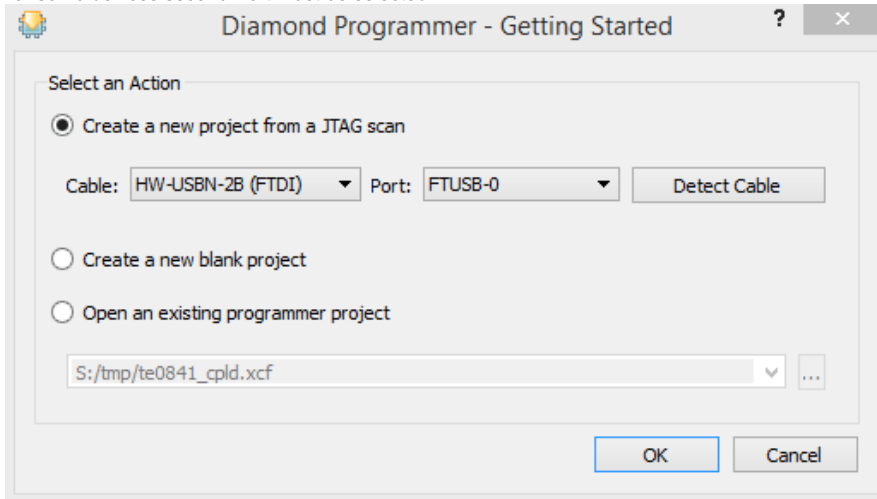
**Important:**


- Connect only one JTAG device to host PC.
- Close all other JTAG programs, like Xilinx tools (on WinOS check hw\_server.exe is terminated).

Procedure:

1. **Enable CPLD JTAG access** (See JTAG section on CPLD Firmware description)
2. Connect JTAG
3. Power on System
4. Open Lattice Diamond Programmer
5. Detect Cable and click "Ok"

For some devices second Port must be selected:



6. Select Device (See CPLD Firmware overview description).  
In the most cases select the correct detected device one time (it's yellow at first on the menu)
7. Select correct Firmware from Download Area (JED File)
8. Program CPLD: 
9. **Disable CPLD JTAG access** (See JTAG section on CPLD Firmware description)
10. Restart System

More Information are available on the CPLD Firmware description and on the readme.txt included into the download zip.