Programming using ISE Impact

For some reason, at least this is my experience, ISE impact is not recognizing the standard Xilinx programmer "Platform Cable USB II", while the Digilent JTAG - SMT-3 worked always. Check the lower left of the ISE Impact window. There should be visible:



If not use the menu: Output/Cable Auto Connect

Programming w/o ICM and mDAB

Note, for the mainboard Rev.2 it is possible to bypass the unplugged ICM and the unplugged mDAB. To establish the JTAG chain, the jumpers J5 and J13 must be set. To power the mainboard J6 (MBPWR_EN) must be set as well.



Run ISE, start the Impact programmer from Menu / Tools. Do a boundary scan first. With right mouse click in the device field do "Initialize Chain". You might be enforced to do Edit/Add Device. ISE does not know Spartan7 FPGAs (while Vivado does not know, how to program CPLDs, unfortunately). Using impact to generated a .bsd file for the mainboard FPGA as a workaround. Use right mouse click on the device icon to assign / program /../ files.

| lSE iMPACT (P.20131013) - [Boundary Scan] | | □ × |
|--|---|-------|
| 🛞 File Edit View Operations Output Debug Window Help | | - 8 × |
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| iMPACT Flows ↔ □ ₽ × | mb CPLD | |
| Boundary Scan SystemACE Create PROM File (PROM File Formatter) | | |
| iMPACT Processes ↔ □ | unknown_2_6 xc2c128 unknown_2_6.bsd mb_hv_ctrl_5.jed | |
| Available Operations are: | TDO | |
| Program | | |
| I Verify | Drogrom Cusseded | |
| 🔿 Erase | Program Succeeded | |
| Blank Check | | ' |
| Readback | | |
| Get Device ID | Boundary Scan | |
| Get Device Checksum | | |
| Console | | ↔□₽× |
| '2': Verifying device | | ^ |
| done. | | |
| '2': Setting ISC done bitsdone | | |
| '2': Programming completed successfully. | | |
| PROGRESS_END - End Operation. | | |
| Elapsed time = 1 sec. | | |
| | | |
| Console 😢 Errors 🔬 Warnings | | |
| | Configuration Digilent JTAG-SMT3 60 | 00000 |

With left / right mouse click assign the configuration files. With right mouse click on the CPLD-icon to initiate the programming.

Programming with ICM and mDAB being plugged

See above, the jumpers J6, J5 and J13 must be unset. First, run the following command sequence:

wp_on.py
icm_fpga_reboot.py -w 7 -i 2
lid_enable.py
./enable_calibration_power.py

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