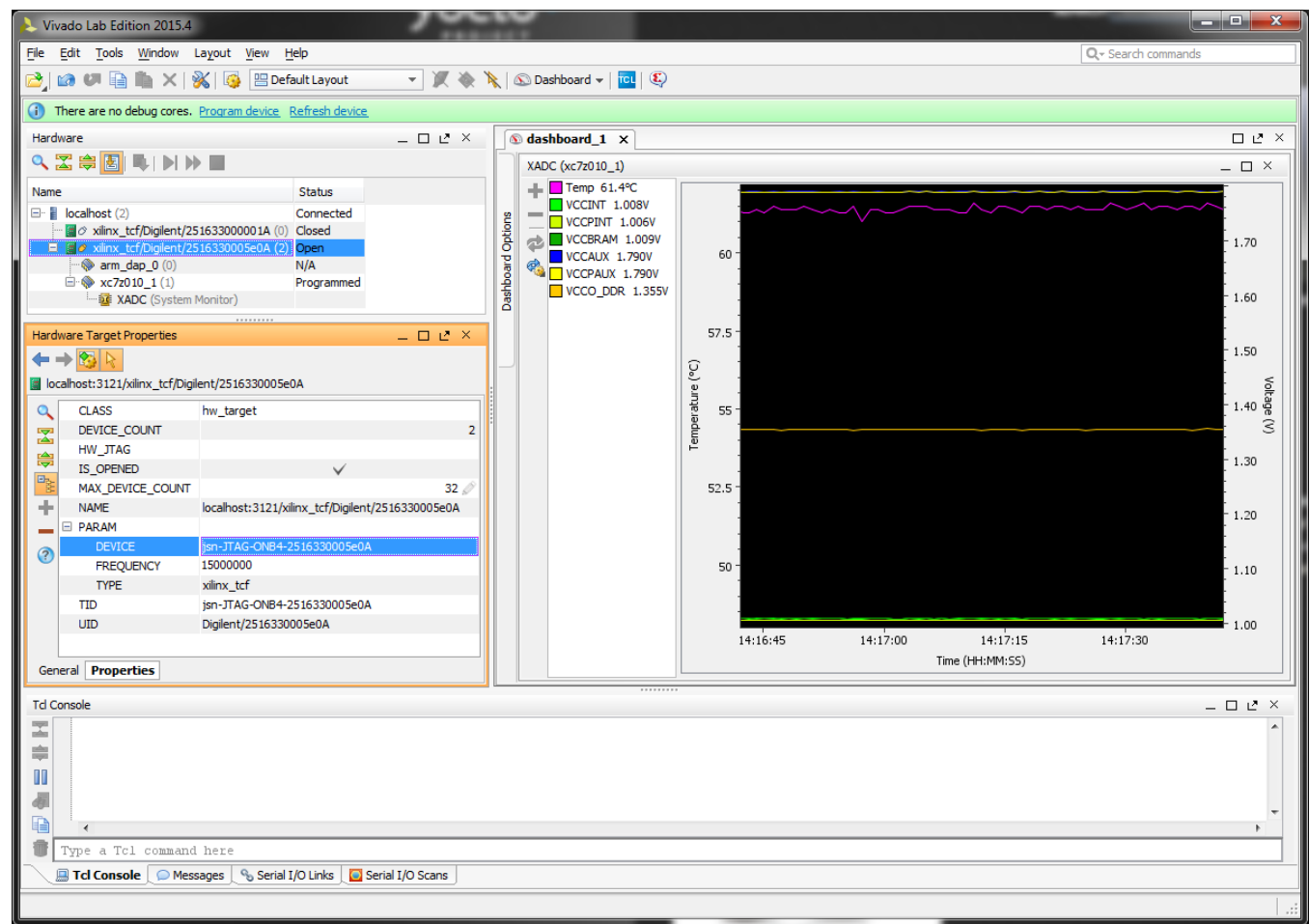


# Debug

## JTAG Access Vivado

Start Vivado or Vivado Labtools, and choose Hardware Manager.



Vivado Labtools screen PCB Revision 2, DDR Voltage is measured 1.35V for DDR3L, Digilent is displayed in JTAG Cable properties.

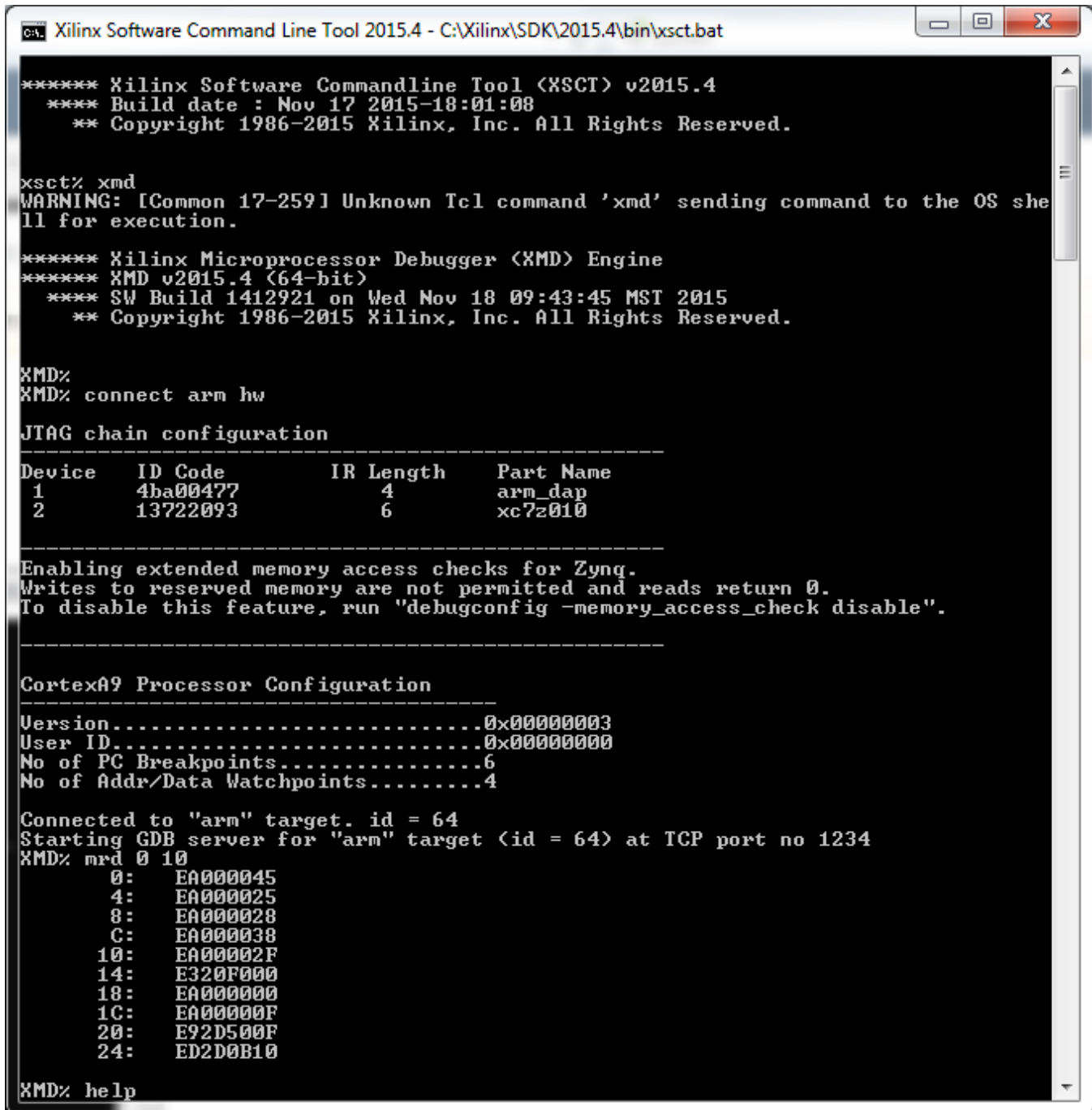


If Linux has been booted it may happen that XADC monitor readback is disabled, in that case all the temperature and voltage readings would be invalid.

## JTAG Access SDK

## Console/XMD

Launch Xilinx SDK prompt, then start XMD and connect to ARM DAP



```
***** Xilinx Software Commandline Tool (XSCT) v2015.4
***** Build date : Nov 17 2015-18:01:08
***** Copyright 1986-2015 Xilinx, Inc. All Rights Reserved.

xsct% xmd
WARNING: [Common 17-259] Unknown Tcl command 'xmd' sending command to the OS shell for execution.

***** Xilinx Microprocessor Debugger (XMD) Engine
***** XMD v2015.4 (64-bit)
***** SW Build 1412921 on Wed Nov 18 09:43:45 MST 2015
***** Copyright 1986-2015 Xilinx, Inc. All Rights Reserved.

XMD%
XMD% connect arm hw

JTAG chain configuration
-----
Device      ID Code      IR Length    Part Name
  1          4ba00477          4      arm_dap
  2          13722093          6      xc7z010
-----

Enabling extended memory access checks for Zynq.
Writes to reserved memory are not permitted and reads return 0.
To disable this feature, run "debugconfig -memory_access_check disable".

-----

CortexA9 Processor Configuration
-----
Version.....0x00000003
User ID.....0x00000000
No of PC Breakpoints.....6
No of Addr/Data Watchpoints.....4

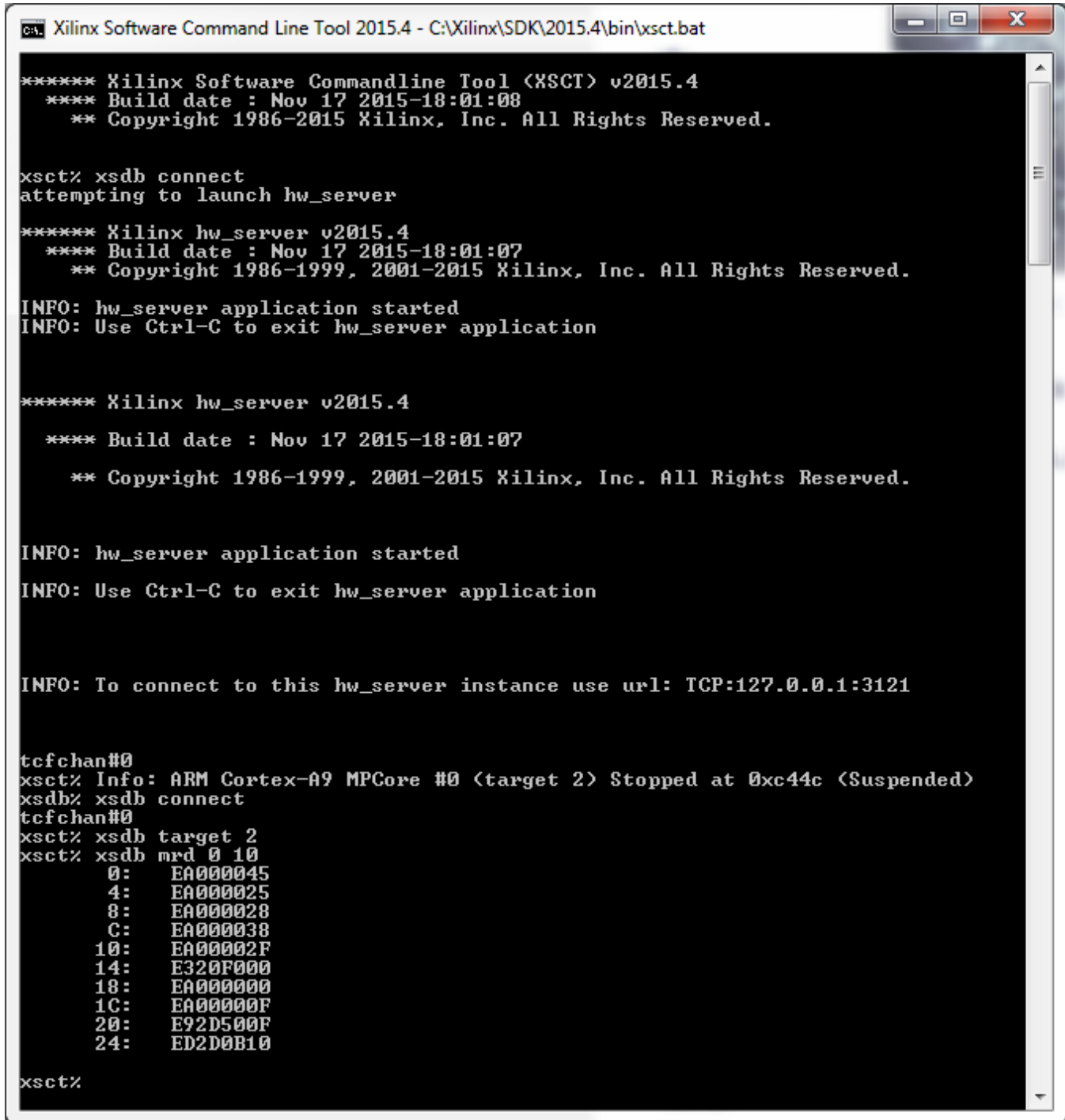
Connected to "arm" target. id = 64
Starting GDB server for "arm" target (id = 64) at TCP port no 1234
XMD% mrd 0 10
      0: EA000045
      4: EA000025
      8: EA000028
      C: EA000038
     10: EA00002F
     14: E320F000
     18: EA000000
     1C: EA00000F
     20: E92D500F
     24: ED2D0B10

XMD% help
```

Simplest way to check ARM JTAG Debug connection, in the screenshot memory content from address 0 is dumped in hex.

## Console/XSDB

Launch Xilinx SDK prompt, then use xsdb commands



```
Xilinx Software Command Line Tool 2015.4 - C:\Xilinx\SDK\2015.4\bin\xsct.bat

***** Xilinx Software Commandline Tool (XSCT) v2015.4
***** Build date : Nov 17 2015-18:01:08
***** Copyright 1986-2015 Xilinx, Inc. All Rights Reserved.

xsct% xsdb connect
attempting to launch hw_server

***** Xilinx hw_server v2015.4
***** Build date : Nov 17 2015-18:01:07
***** Copyright 1986-1999, 2001-2015 Xilinx, Inc. All Rights Reserved.

INFO: hw_server application started
INFO: Use Ctrl-C to exit hw_server application

***** Xilinx hw_server v2015.4
***** Build date : Nov 17 2015-18:01:07
***** Copyright 1986-1999, 2001-2015 Xilinx, Inc. All Rights Reserved.

INFO: hw_server application started
INFO: Use Ctrl-C to exit hw_server application

INFO: To connect to this hw_server instance use url: TCP:127.0.0.1:3121

tcfchan#0
xsct% Info: ARM Cortex-A9 MPCore #0 (target 2) Stopped at 0xc44c (Suspended)
xsdb% xsdb connect
tcfchan#0
xsct% xsdb target 2
xsct% xsdb mrd 0 10
0: EA000045
4: EA000025
8: EA000028
C: EA000038
10: EA00002F
14: E320F000
18: EA000000
1C: EA00000F
20: E92D500F
24: ED2D0B10

xsct%
```

Reading 10 words from memory location 0

