



ALPHA DATA

ADM-XRC Gen 3 SDK 1.1.0 for Linux Release Note

Introduction

This release note accompanies the ADM-XRC Gen 3 SDK for Linux. The latest version of this SDK can be found at:

<ftp://ftp.alpha-data.com/pub/admxrcg3/linux>

For support, send e-mail to support@alpha-data.com

Operating systems supported

This release of the ADM-XRC Gen 3 SDK supports the following operating systems:

- Linux
- GNU/Linux distribution with 2.6.x kernel

Hardware supported

This release of the ADM-XRC Gen 3 SDK supports the following Alpha Data hardware:

- ADM-XRC-6TL
- ADM-XRC-6T1

Related products

ADB3 Driver 1.1.0 for Linux, or a later version, is required to run the examples in this SDK.

License Agreement

The license agreement for this software is available in the folder where the software is unpacked, in the file **license.txt**. Please contact Alpha Data if alternative licensing conditions are required.

Alpha Data reserves the right to use a different license agreement for future releases of this software.

Installation instructions

This release of the SDK is distributed in source code form as a tarball (.tar.gz file extension). Please refer to the README file inside the tarball for instructions on how to configure and build the examples within.

Known issues

Incomplete documentation

Documentation of the SDK is incomplete: example applications are not fully documented; documentation for common HDL components is missing.

ISE Project Navigator projects not included

Project Navigator projects are not included in this release, but in order to accommodate users who are accustomed to using the Project Navigator GUI for FPGA development, they will be added in a future release.

Example code for on-board memory

Example C code, HDL code and documentation for using the on-board memory banks on third generation Alpha Data hardware is not included. Xilinx™ Memory Interface Generator (MIG) can be used; contact support@alpha-data.com for details.

ADM-XRC-6T1 MPTL core is not finalized

The cores in \$ADMXRC3_SDK/hdl/vhdl/common/mptl/admxrc6t1 and its subdirectories in release 1.1.0 of this SDK are subject to change. Alpha Data will provide a finalized version of these cores in a future release of the SDK. When the finalized versions are available, target FPGA bitstreams must be rebuilt.

Hardware monitoring may require 'pumping'

In PCI-E firmware revisions 0x00 - 0x01 of the ADM-XRC-6TL and ADM-XRC-6T1, the hardware monitoring logic does not automatically trigger conversion cycles in the LM87 system monitor chip. As a result, the values displayed by the 'monitor' and 'sysmon' utilities will always be zero. As a workaround, a script can be run in the background to 'pump' the LM87 interface at intervals of one second.

Linux **bash** script

```
#!/bin/bash
for ((i=1)); do
    echo 0x42D0000 | $ADMXRC3_SDK/apps/linux/dump/dump $* wd 2 0x400 4
    sleep 1
done
```

Windows batch file:

```
@ECHO ON
:loop
ECHO 0x42D0000 | "%ADMXRC3_SDK%\bin\win32\x86\dump.exe" %* wd 2 0x400 4
CHOICE /N /D Y /C YN /T 1 >NUL
GOTO loop
```

These scripts periodically write the value 0x42D0000 to offset 0x400 in window 2 (Model-specific registers), which commands an LM87 conversion cycle to be performed. Changing the interval to be less than one second is not recommended as the LM87 requires approximately 0.5s to complete a conversion cycle.

PCI-E firmware revision 0x02 and later of the ADM-XRC-6TL and ADM-XRC-6T1 do not require this workaround.

Release history

Release 1.1.0

This is the first release of the ADM-XRC Gen 3 SDK for Linux.