

Release Notes for the PicoSDR 2nd Generation Software Tools

Table of Contents

1	PicoSDR 2nd Generation Tools 1.1	3
1.1	General	3
1.2	FPGA BSDK	3
1.3	FPGA MBDK	3
1.4	Host BSDK	3
1.5	Documentation	3
2	PicoSDR 2nd Generation Tools 1.0	4
2.1	General	4
2.2	FPGA BSDK	4
2.3	FPGA MBDK	4
2.4	Host BSDK	4
2.5	Documentation	4

1 PicoSDR 2nd Generation Tools 1.1

1.1 General

New

- ✓ TitanMIMO6s Phase and Gain Calibration Reference Design

1.2 FPGA BSDK

No modifications

1.3 FPGA MBDK

New

- ✓ Added TitanMIMO6s Phase and Gain Calibration Reference Design model.

Updated

- ✓ Modified of the Perseus611x Radio640 models to correct gain on channel 1.

1.4 Host BSDK

New

- ✓ Added TitanMIMO6s Phase and Gain Calibration Reference Design script.

Updated

- ✓ Corrected threading in RTDExTestUtil app
- ✓ Modified core applications for Calibration Reference Design usage.
 - LoadDataToPlayback
 - PlaybackData
 - RxStreaming
 - SyncPulser
 - TriggerUtil
 - ComplexMultDelayRadio640
 - InitRadio640
 - CustomRegister_Write

1.5 Documentation

New

System

- ✓ TitanMIMO6s Calibration User's Guide
- ✓ RF Calibration Quick Setup Guide

Updated

System

- ✓ PicoSDR 2nd Generation Software Tools Installation Guide - to support new release
- ✓ PicoSDR 2nd Generation Software Tools Release Notes (this document)
- ✓ RTDEx and Record Playback Examples Guide – corrected example verbose
- ✓ PicoSDR 4x4 - 2nd Generation User's Guide
- ✓ PicoSDR 8x8 - 2nd Generation User's Guide

2 PicoSDR 2nd Generation Tools 1.0

2.1 General

New

- ✓ PicoSDR standalone installer for Windows and Linux

2.2 FPGA BSDK

New

- ✓ Support of Xilinx ISE 14.7
- ✓ Support of the following major FPGA IP cores for Perseus601x and Perseus611x
 - RTDEx
 - RTDExSync
 - Timestamp
 - Record/Playback
 - Radio640
 - Custom Registers
- ✓ Set of FPGA reference designs that demonstrate how to use Nutaq's FPGA IP cores together

2.3 FPGA MBDK

New

- ✓ Support of MATLAB 2013B
- ✓ Automatic compilation flow that allows designing *and* generating FPGA designs entirely from System Generator
- ✓ In System Generator, support of the following major cores for Perseus601x and Perseus611x (MBDK blocks)
 - RTDEx
 - RTDExSync
 - Timestamp
 - Record/Playback
 - Radio640
 - Custom Registers
- ✓ Set of MBDK reference designs that demonstrate how to use Nutaq's MBDK blocks together

2.4 Host BSDK

New

- ✓ Support of Visual Studio 2012
- ✓ Host Libraries (*EAPI*)
- ✓ Host Applications (*tools*) built on top of the EAPI
- ✓ Host examples that demonstrate how to use host applications tools and to interact with the FPGA reference designs
- ✓ Command Line Interface (CLI) for updating and monitoring the PicoSDR firmware
- ✓ Matlab scripts/tools to be used conjointly with host examples

2.5 Documentation

New

System

- ✓ PicoSDR 4x4 - 2nd Generation Quick Start Guide
- ✓ PicoSDR 4x4 - 2nd Generation User's Guide
- ✓ PicoSDR 8x8 - 2nd Generation Quick Start Guide
- ✓ PicoSDR 8x8 - 2nd Generation User's Guide
- ✓ PicoSDR 2nd Generation Software Tools Installation Guide

- ✓ PicoSDR 2nd Generation Software Tools Release Notes

Application Notes

- ✓ App Note - Configuring the Perseus IP address
- ✓ App Note - Parsing and Creating Configuration Files
- ✓ App Note - Perseus Firmware Update
- ✓ App Note - Perseus MBDK Guide
- ✓ App Note - Using PCI Express
- ✓ Board & Systems Software Tools - Command Line Interface API

FPGA Carrier Guides

- ✓ Perseus Programmer's Reference Guide
- ✓ Perseus601x User's Guide
- ✓ Perseus611x User's Guide

FMC Guides

- ✓ Radio640 Programmer's Reference Guide
- ✓ Radio640 User's Guide

Core Guides

- ✓ Aurora Examples Guide
- ✓ Aurora Programmer's Reference Guide
- ✓ PPS Sync Programmer's Reference Guide
- ✓ Record Playback Programmer's Reference Guide
- ✓ RTDEx and Record Playback Examples Guide
- ✓ RTDEx Programmer's Reference Guide
- ✓ RTDExSync Programmer's Reference Guide
- ✓ Timestamp Programmer's Reference Guide