



Intel[®] SoC FPGA Embedded Development Suite (SoC EDS) Standard Version 20.1 Release Notes

Updated for Intel[®] Quartus[®] Prime Design Suite: **20.1 Standard**



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Intel® SoC FPGA Embedded Development Suite (SoC EDS) Standard Version 20.1 Release Notes

This document provides up-to-date information about the SoC EDS Standard Edition version 20.1 release for the of the Intel® SoC FPGA Embedded Development Suite (SoC EDS) software.

The SoC EDS Standard Edition targets the Cyclone® V, Arria® V, and Intel Arria 10 devices and must be used only with FPGA projects created in Intel Quartus® Prime Standard Edition.

For more information, refer to the *Intel SoC FPGA Embedded Development Suite User Guide*.

For earlier versions of these release notes, refer to the *Intel SoC FPGA Embedded Development Suite Archives* section.

Related Information

- [Intel SoC FPGA Embedded Development Suite Archives](#) on page 5
Provides a list of user guides for previous versions of the SoC FPGA EDS IP core.
- [Intel SoC FPGA Embedded Development Suite User Guide](#)
- [SoC EDS and Arm* Development Studio](#)

New Features and Enhancements

Table 1. New Features and Enhancements for SoC EDS Standard Edition version 20.1

Area	Description
Arm* Development Studio* for Intel SoC FPGA Edition	Arm DS-5* for Intel SoC FPGA Edition is not part of the SoC EDS package. Instead, it is replaced by Arm DS* for Intel SoC FPGA Edition which can be downloaded from the Download Center for FPGAs website.
Hardware Library (HWLib)	<ul style="list-style-type: none"> • Added the ability to use: <ul style="list-style-type: none"> – Linaro* GCC compiler – Standard C library for embedded systems: <code>newlib</code> • Removed Mentor Graphics* CS3 dependency • Added hardware init source
Python and OpenJDK	<ul style="list-style-type: none"> • All software examples have been updated to use the Linaro toolchain by default • OpenJDK upgraded to match Intel Quartus Prime Standard Edition version 20.1 • Host tools scripts upgraded to Python 3.8.1, including a rewrite for some of the secure boot tools

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Related Information

- [SoC EDS and Arm Development Studio](#)
- [Download Center for FPGAs](#)

Tool Versions

Table 2. SoC EDS Standard Edition Tool Version Updates

Tools	Version
Python	3.8.1, with CVE patches

Known Issues

Table 3. Error when performing memory to memory transfer with non-flat virtual memory

Description:	BareMetal application failed to perform memory to memory transfer with non-flat virtual memory.
Workaround:	None

Table 4. snprintf from newlib failed to print correctly on specifier with format %-*llu

Description:	When using the function <code>snprintf</code> from <code>newlib</code> , the print out was not printed correctly when using the specifier with format <code>%-*llu</code> .
Workaround:	None

Table 5. L2 ECC not triggering after error is injected when new U-Boot is used

Description:	This issue happens when we load the latest U-Boot to calibrate RAM before loading the BareMetal application; and ECC is not triggered when error is injected.
Workaround:	None

Table 6. alt_cache.c failed to write the control register 0xFFFEF108 when loaded with new U-Boot

Description:	This issue happens when we load the latest U-Boot to calibrate RAM before loading the BareMetal application. The BareMetal application fails to write the control register (<code>regl_control</code> , 0xFFFEF108) and causes the program to go into Abort Mode (ABT) mode.
Workaround:	None

Table 7. alt_cache.c failed to disable L1 data cache properly

Description:	BareMetal application failed to disable L1 data cache.
Workaround:	None



Intel SoC FPGA Embedded Development Suite Archives

Intel Quartus Prime Version	Release Notes (PDF)
19.1 Standard	Intel SoC FPGA Embedded Development Suite (SoC EDS) Standard Version 19.1 Release Notes These release notes cover Intel Quartus Prime version 19.1 Standard.
18.1	Intel SoC FPGA Embedded Development Suite Release Notes (18.1) These release notes cover Intel Quartus Prime versions 18.0 through 18.1.
18.0	Intel SoC FPGA Embedded Development Suite Release Notes (18.0) These release notes cover Intel Quartus Prime versions 17.0 through 18.0.

Revision History for Intel SoC FPGA Embedded Development Suite (SoC EDS) Release Notes

Document Version	Changes
2020.06.12	Updates for the Intel Quartus Prime Design Software version 20.1 Std Edition: <ul style="list-style-type: none"> • Updated the Python version • Removed information about tools that are no longer part of SoC EDS • Added known issues for this release
2020.02.07	Updated the Known Issues table
19.09.30	<ul style="list-style-type: none"> • Separated the SoC EDS Standard Edition and SoC EDS Professional Edition release notes. • Updated tool versions and added known issues.
2018.09.24	<ul style="list-style-type: none"> • Updated the Arm Development Studio 5* (DS-5) for Intel SoC FPGA Edition version. • Added "Enhancements" and "Issues Resolved" for these areas in : <ul style="list-style-type: none"> – Golden Hardware Reference Designs for SoC FPGA Development Kits (GHRD) – Arm DS-5 for Intel SoC FPGA Edition – Bootloader Generator and Bootloader
2018.05.07	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 18.0 release of the SoC FPGA EDS software - Standard and Pro editions.
2017.12.05	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 17.1 release of the SoC FPGA EDS software - Standard and Pro editions.
2017.05.08	Release Notes divided into a Pro and Standard section.
2016.11.07	Added clarity to the early IO release feature.
2016.05.09	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 16.0 release updates
2016.01.22	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 15.1.1 release updates
2015.11.02	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 15.1 release updates
2015.06.05	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 15.0.1 release updates
2015.05.01	Added new features, bug fixes, enhancements, and known issues during the Intel Quartus Prime 15.0 release updates