



Intel[®] System Debugger 2020

Release Notes for Linux host*

7 November 2019

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1 Introduction

This document covers release specific information of all components Intel® System Debugger 2020 for Linux* host including

- Intel® System Debugger
 - System Debug (new fully Eclipse* integrated debugger)
 - System Debug Legacy (legacy debugger that is provided in previous releases)
- Intel® System Debugger - System Trace

2 Supported Operating Systems

Intel® System Debugger 2020 for Linux* host supports the following operating systems:

- Fedora* 30
- Ubuntu* 18.04 LTS

3 Supported Platforms

Each Intel® System Debugger tool has its own supported platforms. Furthermore, the tools can provide several probe options for a connection that are

- Intel® In-Target Probe (Intel® ITP) XDP3
- Intel® Silicon View Technology (Intel® SVT) Closed Chassis Adapter (CCA)
- Intel® Direct Connect Interface (Intel® DCI) Debug Class (DbC) cable

The table below lists the platforms and probes supported by each tool of Intel® System Debugger 2020 (Initial Release) for Linux* host.

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
6th Gen Intel® Core™ Processor (Skylake) / 6th Gen Intel® Core™ Platform I/O (SunrisePoint PCH-LP)	✓	✓			✓	
6th Gen Intel® Core™ Processor (Skylake) / Intel® 100 Series Chipset (SunrisePoint PCH-H)	✓	✓			✓	
7th Gen Intel® Core™ Processor (Kaby Lake) / Intel® 100 Series Chipset (SunrisePoint PCH-H)	✓	✓			✓	
7th Gen Intel® Core™ Processor (Kaby Lake) / Intel® 200 Series Chipset (Kaby Lake PCH-H)	✓	✓	✓		✓	✓
8th Gen Intel® Core™ Processor (Amber Lake-Y 2+2)	✓	✓			✓	
8th Gen Intel® Core™ Processors (Coffee Lake-S) / Intel® H370 Chipset, Intel® H310 Chipset, Intel® B360 Chipset for Consumer (Cannon Lake PCH)	✓	✓	✓		✓	✓
8th Gen Intel® Core™ Processor (Coffee Lake-S) / Intel® Z370 Series Chipset (Kaby Lake PCH-H)	✓	✓	✓		✓	✓
8th Gen Intel® Core™ Processor (Kaby Lake R) / 6th Gen Intel® Core™ Platform I/O (SunrisePoint PCH-LP)	✓	✓			✓	
8th Gen Intel® Core™ (Whiskey Lake U)	✓	✓	✓		✓	✓

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
9th Gen Intel® Core™ Processor (Coffee Lake H) / Cannon Lake PCH-H	✓	✓	✓		✓	✓
9th Gen Intel® Core™ Processor (Coffee Lake S Refresh) / Cannon Lake PCH-H	✓	✓	✓		✓	✓
10th Gen Intel® Core™ Processor (Amber Lake Y 4+2) / Sunrise Point PCH-LP	✓	✓	✓		✓	✓
10th Gen Intel® Core™ Processor (Comet Lake) / Comet Lake PCH-LP	✓	✓	✓		✓	✓
10th Gen Intel® Core™ Processor (Ice Lake) / Ice Lake PCH-LP	✓	✓	✓		✓	✓
Intel Atom® Processor (Apollo Lake)			✓			✓
Intel Atom® Processor (Baytrail / MinnowBoard MAX)	✓					
Intel Atom® Processor (Denverton)			✓			✓
Intel Atom® Processor (Tunnel Creek)	✓					
Intel® Celeron® Processor (Whiskey Lake U)	✓	✓	✓		✓	✓
Intel® Core™ X-series Processor (Basin Falls Refresh)	✓	✓	✓		✓	✓
Intel® Pentium® and Intel® Celeron® Processor (Coffee Lake S) / Cannon Lake PCH-H	✓	✓	✓		✓	✓
Intel® Pentium® and Intel® Celeron® Processor (KBL-R platform based)	✓	✓			✓	

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
Intel® Pentium® Processor (Whiskey Lake U)	✓	✓	✓		✓	✓
Intel® Pentium® Silver Processor or Intel® Celeron® Processor (Gemini Lake)			✓			✓
Intel® Xeon® Processor (Cascade Lake) / Lewisburg PCH	✓	✓	✓		✓	✓
Intel® Xeon® Processor (Coffee Lake-S) / Cannon Lake PCH-H	✓	✓	✓		✓	✓
Intel® Xeon® Scalable Processor (Skylake-SP) / Intel® C620 Series Chipset (Lewisburg)	✓	✓	✓		✓	✓

4 New in This Release – 2020 Initial Release

- Intel® System Debugger started transition phase from Python* 2.7 to Python* 3. The transition to Python* 3 will be finalized by end of year 2019. Intel® System Debugger ships both Python* 2.7 and Python* 3.6 versions during the transition phase until 2020.
- Added support for
 - 10th Gen Intel® Core™ Processor (Ice Lake) / Ice Lake PCH-LP
 - 10th Gen Intel® Core™ Processor (Comet Lake) / Comet Lake PCH-LP
 - 10th Gen Intel® Core™ Processor (Amber Lake Y 4+2) / Sunrise Point PCH-LP
 - Intel® Xeon® Processor (Cascade Lake) / Lewisburg PCH
- Target Indicator is added.
 - It is a cross-platform tool that indicates the status of an Intel® DCI debug connection to a target platform.
- OpenIPC version is updated as 1.1942.4128.100

4.1 Intel® System Debugger – System Debug

- Added a new Eclipse*-integrated source-level debugger, providing, among others, reworked support for platform registers, improved support for the PCI configuration space, better debug information support and a Python*-based scripting console.

5 Known Issues

- **Installation fails with errors**
 - **Issue:** Installation on Linux* fails with an error message "<install_dir>/etc/python-tracecli/post-install.sh completed with error".
 - **Workaround:** Install pip2 using the command "apt-get install python-pip" on Ubuntu* or a similar command on other distros and re-run the installation.
- **With OpenRC configuration warm reset does not work properly on Apollo Lake and Denverton platforms**
 - **Issue:** Warm reset on Apollo Lake and Denverton with OpenRC run control puts the target in an undefined state (cores cannot be released). User needs to manually reset the target to regain control.
 - **Workaround:** N/A
- **On Linux* hosts with GNOME 3.26 and above, Target Indicator is not visible when being started**
 - **Issue:** On Linux* hosts with GNOME 3.26 and above, the Target Indicator is not visible when being started because GNOME 3.26 removes the system tray that the Target Indicator heavily relies upon.
 - **Workaround:** The Target Indicator executable can be started with the "--window-only" (or short "-w") flag, which causes the Target Indicator not to use the system tray.
- **Issues when starting the Target Indicator from a file explorer with older package versions**
 - **Issue:** Starting the Target Indicator executable from a file explorer (e.g. Nautilus) does not work, since it is not recognized as an executable file.
 - **Workaround:** This can be fixed by upgrading the "file" package to a version above than 5.36. Starting the Target Indicator from the command line or via the provided application link is not affected. See also <https://bugs.launchpad.net/ubuntu/+source/file/+bug/1747711> for the original bug.
- **Platform security policy may inhibit debugger operation**
 - **Issue:** In some platforms, the security policy may disable JTAG access to the CPU. This is intended to prevent reverse-engineering. In this case the Intel® System Debugger will successfully connect to the target, however it will not be able to discover any CPUs on the JTAG bus and will warn the user that no CPUs are available.

- **Workaround:** To resolve this issue please ensure that that platform firmware has enabled access to the CPUs via JTAG. This is typically done by flashing a special “debug” firmware into the target. Also note that in some cases CPU or CPU module may have physically disabled JTAG access, especially in production or near-production versions. In this case please work with the platform business unit to obtain a JTAG-enabled hardware.

5.1 Intel® System Debugger – System Debug

- **Target is unresponsive after reset breakpoint is hit on Apollo Lake and Gemini Lake platforms**
 - **Issue:** On Apollo Lake and Gemini Lake platforms, a target becomes unresponsive in System Debug Legacy after reset breakpoint is hit
 - **Workaround:** Use the new fully Eclipse* integrated System Debug

6 Change History

6.1 2019 Update 5

- Intel® System Debugger started transition phase from Python* 2.7 to Python* 3. The transition to Python* 3 will be finalized by end of year 2019. Intel® System Debugger ships both Python* 2.7 and Python* 3.6 versions during the transition phase until 2020
- OpenIPC version is updated as 1.1932.3995.100

6.2 2019 Update 4

- OpenIPC version is updated as 1.1913.3651.100

6.3 2019 Update 3

- OpenIPC version is updated as 1.1905.3499.100

6.3.1 Intel® System Debugger – System Debug

- Issues with the key shortcuts in Eclipse user interface are fixed

6.4 2019 Update 2

- Intel® System Debugger 2019 Update 2 includes functional and security updates. Users should update to the latest version.

6.4.1 Intel® System Debugger – System Debug

- Migration to new Eclipse (simrel2018-12) and Java11
- Simics demo target is removed

6.5 2019 Update 1

- Target connection editor page is improved, and the size and appearance of the connection dialog wizard are optimized
- OpenIPC version is updated as 1.1839.3251.100

6.5.1 Intel® System Debugger – System Debug

- Implementation of a save button in PCI Tool dialog window
- Fix the bug where user is not able to re-connect to target due to previous session files in the system

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