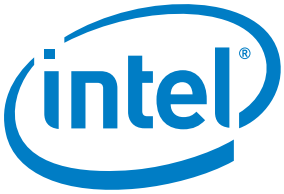

Intel® System Debugger 2019

Release Notes for Windows host*

5 September 2019

Contents

1 Introduction

This document covers release specific information of all components of Intel® System Debugger 2019 for Windows* host which includes following tools

- Intel® System Debugger - System Debug
- Intel® System Debugger - System Trace
- Intel® Debug Extensions for WinDbg* (for Windows* targets)

2 Supported Operating Systems

Intel® System Debugger 2019 for Windows* host supports the following operating systems:

- Microsoft Windows* 10

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) USB Debug Class (DbC) cable

The table below lists the platforms and probes supported by each tool of Intel® System Debugger 2019 (Update 5) for Windows* host.

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
Intel Atom® Processor Z36xx, Z37xx - 2 cores (Baytrail / MinnowBoard MAX)	√					
Intel Atom® Processor C2xxx (Avoton)	√					
Intel Atom® Processor C3xxx (Denverton)			√			√
Intel Atom® Processor E3805, E382x, Z3680 - 2 cores (Valleyview)	√					
Intel Atom® Processor E384x, Z37xx - 4 cores (Valleyview)	√					
Intel Atom® Processor E6xx (Tunnel Creek)	√					
Intel Atom® Processor N3xxx, J3xxx (Braswell)	√					
Intel Atom® Processor Z35xx (Anniedale/Moorefield)	√					
Intel Atom® Processor x5-Z8xxx, x7-Z8700 (Cherry Trail)	√					

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
Intel Atom® Processors N4200, N3350, x7-E3950, x5-39xx (Apollo Lake)			√			√
Intel® Pentium® Silver Processor N5XXX, J5XXX or Celeron® Processor N4XXX, J4XXX (Gemini Lake)			√			√
4th Gen Intel® Core™ Processor (Haswell)	√					
4th Gen Intel® Core™ U-Processor (Haswell ULT)	√					
5th Gen Intel® Core™ Processor (Broadwell)	√					
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, 5W) for Consumer: i7-8500Y, i5-8200Y, m3-8100Y	√	√			√	
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™ Processor i7-8565U, i5-8265U, i3-8145U (Whiskey Lake-U)	√	√	√		√	√

	System Debug			System Trace		
	XDP3	CCA	DbC	XDP3	CCA	DbC
8th Gen Intel® Core™ Processors (Coffee Lake-S) / Intel® H370 Chipset, Intel® H310 Chipset, Intel® B360 Chipset for Consumer (Cannon Lake PCH)	√	√	√		√	√
9th Gen Intel® Core™ Processor: i9-9900KF, i7-9700KF, i5-9600KF, i5-9400, i5-9400F, i3-9350KF	√	√	√		√	√
Intel® Celeron® processors: 3867U (KBL-R platform based)	√	√			√	
Intel® Celeron® processors: 4205U (WHL-U platform based)	√	√	√		√	√
Intel® Core™ X-series Processor (Basin Falls Refresh): i9-9980XE, i9-9960X, i9-9940X, i9-9920X, i9-9900X, i9-9820X, i7-9800X	√	√	√		√	√
Intel® Pentium® Gold processors: 4417U (KBL-R platform based)	√	√			√	
Intel® Pentium® Gold processors: 5405U (WHL-U platform based)	√	√	√		√	√
Intel® Xeon® Processor D-15xx (Grangeville)	√					
Intel® Xeon® Scalable Processor (Skylake-SP) / Intel® C620 Series Chipset (Lewisburg)	√	√	√		√	√
Intel® Xeon® E Processor (Coffee Lake-S) Server	√	√	√		√	√

4 New in This Release – 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
- Intel® DFx Abstraction Layer (Intel® DAL) version is updated as 1.1934.918.110

5 Known Issues

- ***Connection status indicated by the tool might be incorrect when Intel® DAL is used as an IPC provider***
    - ***Issue:*** Target connection assistant relies on Intel® DAL to verify the connection status. However, Intel® DAL implementation does not provide all functionality to verify whether a target is connected thus it is possible that the target connection assistant might indicate the connection incorrectly as connected.
    - ***Workaround:*** In case Intel® DAL is used as an IPC configuration, a manual validation by the user is required.
- ***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.
- ***Usage of Probes***
    - ***Issue:*** Intel® SVT CCA and Intel® ITP XDP3 probes are supporting hot plug/unplug from a target, whereas for Intel® DCI DbC the connection is bidirectional. In case of losing connection with a probe, the debugger will post a Power Loss event.
    - ***Workaround:*** If the target was running, probe disconnect would have no effect on the target and for these cases please reconnect the probe to continue debugging. In case target was halted, debugger will lose debug context, which leads to a crashing target.
    - ***Issue:*** Any accidental probe removals during halt would crash the target
    - ***Workaround:*** Please reboot target and restart the debugging session.
- ***Intel® System Debugger help content cannot be viewed with Microsoft* Edge* browser***
    - ***Issue:*** Users might face difficulties with viewing Intel® System Debugger documentation in the Microsoft* Edge* browser
    - ***Workaround:*** Switch to the Internet Explorer* or Google* Chrome* browser.

5.1 Intel® System Debugger – System Trace

- ***Various error messages referring to "Interview_Decoder" or "visa64.dll" (e.g. Failed to load library <path_to_isd>\system_trace\bin\Interview_Decoder.dll)***
    - ***Issue:*** If the host has IVI tools (http://www.ivifoundation.org/shared_components/) installed, then Intel® System Studio erroneously loads visa64.dll from C:\Windows\System32.
    - ***Workaround:*** There are two possible workarounds:
        - Temporarily remove C:\Windows\System32\visa64.dll or uninstall the IVI tools
        - Follow https://docs.microsoft.com/en-us/windows/desktop/dlls/dynamic-link-library-search-order but be aware of the potential security implications

5.2 Intel® Debug Extensions for WinDbg*

- ***Compatibility issues of Intel® Debug Extensions for WinDbg* for Windows* 10 SDK***
    - ***Issue:*** Windbg* over Intel® DCI plugin is currently not compatible for Windows* 10 SDK starting from version 1809 (10.0.17763).
    - ***Workaround:*** Install Windows* 10 SDK 1803 (10.0.17134) or older versions.

6 Change History

6.1 2019 Update 4

- Added support for
  - Intel® Xeon® E Processor (Coffee Lake-S) Server
  - Intel® Pentium® Gold processors: 5405U (WHL-U platform based), 4417U (KBL-R platform based)
  - Intel® Celeron® processors: 4205U (WHL-U platform based), 3867U (KBL-R platform based)
  - 9th Gen Intel® Core™ Processor: i9-9900KF, i7-9700KF, i5-9600KF, i5-9400, i5-9400F, i3-9350KF
  - Intel® Core™ X-series Processor (Basin Falls Refresh): i9-9980XE, i9-9960X, i9-9940X, i9-9920X, i9-9900X, i9-9820X, i7-9800X
- OpenIPC version is updated as 1.1913.3651.100
- Intel® DFx Abstraction Layer (Intel® DAL) version is updated as 1.1917.727.110
- Migration of Intel® DAL to OpenIPC for 14nm platforms is finalized

6.2 2019 Update 3

- OpenIPC version is updated as 1.1905.3499.100
- Intel® DAL version is updated as 1.1905.602.110

6.2.1 Intel® System Debugger – System Debug

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

6.3 2019 Update 2

- Intel® System Debugger 2019 Update 2 includes functional and security updates. Users should update to the latest version.
- Python* version distributed by Python.org is replaced with Intel® Distribution for Python* based on Python* version 2.7.15. Space requirement for Intel® Distribution for Python* is approximately 570 MB

6.3.1 Intel® System Debugger – System Debug

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

6.4 2019 Update 1

- 8th Gen Intel® Core™ Processor (Amber Lake-Y, 2+2, 5W) for Consumer: i7-8500Y, i5-8200Y, m3-8100Y support is added
- 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
- Intel® DAL version is updated as 1.1839.428.110

6.4.1 Intel® System Debugger – System Debug

- Implementation of a save button in PCI Tool dialog window

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