

Intel® Smart Sound Technology Driver

Release Notes: CFL_WHL_CNL_Intel® SST Release

July 2019

Revision 4.0

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Revision History

Revision Version	Revision History	Revision Date
0.5	• Intel® SST Coffee Lake Alpha Release	August 2017
1.0	• Intel® SST CoffeeLake PV Release	December 2017
1.1	• Intel® SST CoffeeLake PR1 Release	February 2018
1.2	• Intel® SST CoffeeLake PR1 Hotfix Release	March 2018
1.3	• Intel® SST CoffeeLake Maintenance Release #1	March 2018
1.4	• Intel® SST CoffeeLake Maintenance Release #1-2	March 2018
1.5	• Intel® SST CoffeeLake Maintenance Release #1 Hotfix1 Release	May 2018
1.6	• Intel® SST CoffeeLake Maintenance Release #1 Hotfix2-1 Release	May 2018
1.7	• Intel® SST CoffeeLake Maintenance Release #1 Hotfix2-2 Release	May 2018
1.8	• Intel® SST CFL PR3 Release	May 2018
1.9	• Intel® SST CNL/CFL/WHL RS4 PV build 10.23.00.1685	June 2018
2.0	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1717	July 2018
2.1	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1741	July 2018
2.2	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1768	July 2018
2.3	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1789	August 2018
2.4	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1802	August 2018
2.5	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1841	August 2018
2.6	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1878	September 2018
2.7	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.1980	October 2018
2.8	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.2077	November 2018

2.9	• Intel® SST CNL/CFL/WHL RS4 build 10.23.00.2110	November 2018
3.0	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2214	December 2018
3.1	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2353	January 2019
3.2	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2419	February 2019
3.3	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2427	February 2019
3.4	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2490	March 2019
3.5	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2577	April 2019
3.6	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2618	May 2019
3.7	• Intel® SST CNL/CFL/WHL RS4/RS5 certified build 10.23.00.2672	May 2019
3.8	• Intel® SST CNL/CFL/WHL RS4/RS5/RS6 certified build 10.23.00.2725	June 2019
3.9	• Intel® SST CNL/CFL/WHL RS4/RS5/RS6 certified build 10.23.00.2764	July 2019
4.0	• Intel® SST CNL/CFL/WHL RS4/RS5/RS6 certified build 10.23.00.2796	July 2019

1.1 Scope of Document

This document provides release information about the Intel® Smart Sound Technology (Intel® SST) Driver. It covers Release Kit summary, Important Notes, Known and Closed Issues.

This document is intended for OEMs and ODMs that are validating the Intel® Smart Sound Technology Driver on Coffee Lake (CFL), Whiskey Lake (WHL), Comet Lake (CML) platforms with Intel Audio DSP integrated

1.2 System Requirements

Intel® Smart Sound Technology Driver supports the following Intel CPU/Chipset:

- Coffee Lake processors
- Whiskey Lake Processors
- Cannon Lake Processors
- Comet Lake Processors

Platform Support:

- Coffee Lake Processors, Whiskey Lake (WHL), Comet Lake (CML) platforms with Intel Audio DSP integrated

Operating Systems support:

- Microsoft Windows* 10 64-bit

1.3 Acronyms and Terminology

Term	Description
ACPI	Advanced Configuration and Power Interface
BIOS	Basis Input/output System
BT	Bluetooth
CFL	Coffee Lake Processor

DMIC	Digital Microphone
DSP	Digital Signal Processor
EA	Enrollment Application
FDK	Firmware Development Kit
FW	Firmware
HDA or HD-Audio	High Definition Audio
HFP	Hands-Free Profile
IHV	Independent Hardware Vendor
ISV	Independent Software Vendor
Intel® SST	Intel® Smart Sound Technology
IPR	Ingredient Planned Release
LP	Low power
MCP	Multi-Chip Package
MCPS	Million Clocks Per Second
MCS	Modern Connected Standby Platform
Non-MCS	Non-Modern Connected Standby Platform
OED	Offload Engine Driver
OS	Operating System
PCH	Platforms Controller Hub
RVP	Reference Validation Platform
SUT	System under test
TBD	To be determined
ULT	Ultra-Thin
WOV	Wake on Voice.
PC	Production Candidate
PV	Production Version
PR	Planned Release



TH	Threshold
RS	Redstone
MR	Maintenance Release
CNL	Cannon Lake
WHL	Whiskey Lake
CML	Comet Lake

2 Release Kit Summary

2.1 Release Kit

Kit Name: Intel® SST CNL/CFL/WHL RS3&RS4&RS5&19H1 certified build 10.23.00.2796

Supported OS: Windows* 10 64-bit RS3&RS4&RS5&19H1_Certified

Version: 10.23.00.2796

IMPORTANT NOTE: Due to recent changes in OEM Key Manifest (OEM KM) related to Intel CSME FW, Intel® SST CFL/CNL/WHL build version 10.23.00.2796 should be used only with CSME FW versions >= 1085 (More than or equal to version 1085).

2.2 Kit Contents

The contents of this release kit include:

- Drivers
  - DSP Firmware
  - Topology
  - WOV Artifacts
  - IntcAudiobus – Intel SST Audio Bus Driver for HD-A I/F
  - IntcDMic – Intel SST Digital Microphone Driver for platform with DMIC connected to PCH
  - IntcOED – Intel SST Offload Engine Driver
  - IntcSDW – Intel SST Soundwire Driver for Soundwire I/F
  - IntcSST – Intel SST I2S driver for I2S I/F
- Apps
  - Intel® Audio Service: Part of Intel SST OED Installation.
  - Intel WOV Client Application
- Intel® Smart Sound Technology Driver – Release Notes
- Intel® Smart Sound Technology Driver - Installation ReadMe
- Intel® Smart Sound Technology Driver - Bring Up Guide

Note:

1. The codec driver from Intel POR'ed audio codec vendors will not be included in the release package. Please contact your audio codec vendors for the integrated single package codec driver.

2. Intel® Display Audio Driver will be delivered as part of Intel® Graphics Driver. Please check the Intel® Graphics Driver release package for the Display Audio Driver.

3 Intel® SST Release Details

3.1 Intel® Smart Sound Technology Collaterals

Please refer to following Intel® SST collaterals for Intel® SST bring-up, validation and debug guidance.

Doc Number & Location	Doc Number & Location
Intel® Smart Sound Technology Driver - Bring-Up Guide	In the SST release kit
Intel® Smart Sound Technology Customer - Validation and Debug Guide	Intel CDI Doc #575270

3.2 Platform Best Known Configuration

Please refer to Coffee Lake H Alpha RC1 BKC Release

3.3 Focused Testing Area

Please refer to the Intel® Smart Sound Technology Validation and Debug Guide on Intel® CDI (Document # 575270) for the test cases to test the following Intel® SST features.

For Coffee Lake Desktop Processors:

- HD-Audio Playback
- HD-Audio Capture
- Digital Microphone Capture

For Coffee Lake Mobile Processors:

- HD-Audio Playback
- HD-Audio Capture
- Digital Microphone Capture
- Intel® Wake on Voice - Contact Intel FAE or Intel® SST AE for more details.
- Post-processing - Contact Intel FAE or Intel® SST AE for more details.
- Pre-processing - Contact Intel FAE or Intel® SST AE for more details.

4 Intel® SST Release Highlights

Intel® SST Features		*Highlights*
Intel® Wake on Voice	WOVSetupApplication	Intel® WakeOnVoice Setup Application for Intel WOV IP supports: ○ **Predefined Key Phrase on Win 10**: Supported on Intel® WOV. Keyphrase is "Hello Computer".
	WOVClientApplication	○ **User Defined Key Phrase:** Supported on Intel® WOV. ○ **Speaker Verification:** Supported on Intel® WoV **Note**: WOVClientApplication for testing WOV is included in the release package inside the "Apps" folder.
Intel® Audio Service	Intel® Audio Service	Intel® Audio Service installer is provided for to support Intel WOV via Intel Speech Pin
Intel® SST Post-Processing		**Note**: Post processing IP ISVs will integrate their audio IP FW modules using the Intel audio FDK tool and provide their FW to the IHV's for final audio driver and FW integration for OEM customer platforms.
Intel® SST Pre-Processing	Intel Preprocessing IP	**Note**: Pre-processing IP ISVs will integrate their audio IP FW modules using the Intel audio FDK tool and provide their FW to the IHV's for final audio driver and FW integration for OEM customer platforms.
HD Audio Interface	NA	HD Audio interface support has been implemented and included in CFL/CNL/WHL Intel® SST Release. **Disclaimer**: To test HD-A interface, a codec driver from audio codec vendor is required. Please contact your codec vendor to obtain the driver supporting this feature.
I2S Interface	NA	I2S Interface support has been implemented and included in the Release. **Disclaimer**: To test I2S interface, a codec driver from audio codec vendor is required. Please contact your codec vendor to obtain the driver supporting this feature.

SoundWire Interface	NA	SoundWire interface support has been implemented and included in CFL/CNL/WHL Intel® SST Release. **Disclaimer**: To test SoundWire interface, a sound wire driver from SoundWire device vendor is required. Please contact your sound wire device vendor to obtain the driver supporting this feature.

5 Important Notes:

1. SoundWire interface is the new Audio interface introduced on Coffee Lake platform. Intel® SST Alpha Release 10.23.00.759 provides SoundWire master driver support. Depending on SoundWire device customer put on the platform, SoundWire device vendor should provide their SoundWire device driver to work with Intel SoundWire master driver and support SoundWire features.

   Note: Please contact your SoundWire device vendor to support and test this feature.

2. **IMPORTANT NOTE**: Due to recent changes in OEM Key Manifest (OEM KM) related to Intel CSME FW, Intel® SST CFL/CNL/WHL build version 10.23.00.2796 should be used only with CSME FW versions >= 1085 (More than or equal to version 1085).

3. Intel® SST Driver v10.23.00.2077 and newer has support for A4PC UWP (Microsoft Universal Windows Platform) Support

4. Intel and Microsoft have jointly decided to disable SGPC (Shared Graphics Power Component) feature from Intel® Display Audio Driver (shared by Intel as part of Intel® Graphics Driver) and Intel® Smart Sound Technology (Intel® SST) driver due to insufficient validation results. Intel® SST v10.23.00.2214 has SGPC feature disabled.

5. Intel® SST v10.23.00.2214 has UK-English, GB-German, JP- Japanese, IE – Indian English support for A4PC (Alexa for PC)

6. Intel® SST v10.23.00.2353 has UK-English, GB-German, JP- Japanese, IE – Indian, AU-Australian English & CA-Canadian English support for A4PC (Alexa for PC)

7. Intel® SST driver has implemented an RcR starting from SST version 10.23.00.2241 (& newer) to allow platform to idle down to S3/S4 while Intel® WOV is armed as internal stream. This requires S3/S4 support changes in codec driver also. Please check with your codec vendor and get the relevant driver versions.

6 Known Issues

Issue #	Description
1407356448	[WHL]FW crash when platform waking up the platform from CS (C10, SLPS0) with WoV - platform VM issue
1806249531	Glitches on capture after disabling and enabling BUS, OED or CODEC driver
1306048617	Intel Audio service restart shows RPC server initialization error
2207223141	There's no sound recorded by MSFT Camera app camcorder function when Voice Recorder app is just opened in background

7 Closed Issues

Sighting	Title	Fixed version details
1805978642	SoundWire SW Issue: Capture Sync test fail stalling on Mic Capture after S4	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805891950	I2S SW Issue: Ks Position test fails	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805939431	I2S SW Issue: Wave Test Fail	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805939427	I2S SW Issue: Audio Logo test fail	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805947788	WOV Issue: VADAPIMode key management for CFL multi-PA support	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805881732	WOV Issue: Multiple glitches during system pin playback	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805884596	WOV issue: Sporadic key phrase not detected after LPAL migration	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805972109	FW Issue: Upgrade Intel WoV to version 1.11.562.0	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1805904554	Gain module - silence is being recorded for specific "curve_duration" values	Issue fixed in Intel SST CFL PR#1 version 10.23.00.1438
1806021106	Shortened directory names in the install path	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1805976136	Shortened AudioService installation path	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1805998032	OED will log errors to system event log	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1805885019	Yellow Bang on OED or Bus during capture after S3/S4 resume	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
2202460043	Wov is crashing with an error ErrorOther after confirmed recognition following rejected one	Issue fixed in Intel SST CFL PR#1 HF Release version

		10.23.00.1488
1805881732	Multiple glitches during system pin playback	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1805884596	Sporadic KPD issues during LPAL migration	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1406922845	Intel WOV Alexa: FA performance issue.	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
NA	Intel Audio Service not running due to timeout issue	Issue fixed in Intel SST CFL PR#1 HF Release version 10.23.00.1488
1806035734	Driver to support RS4 seamlessly	Issue fixed in Intel SST CFL MR1-1 Release 10.23.00.1520
1806032587	Path Priority Fix	Issue fixed in Intel SST CFL MR1-1 Release 10.23.00.1520
1406919687	Difference between host and link DMA is increasing during pause→resume sequences on Chain DMA	Issue fixed in Intel SST CFL MR1-1 Release 10.23.00.1520
2202578036	Intel® WOV AEC performance improvement	Issue fixed in Intel SST CFL MR1-1 Release 10.23.00.1520
1806035734	Driver to support RS4 seamlessly	Issue fixed in Intel SST CFL MR1-2 Release 10.23.00.1522
1806032587	Path Priority Fix	Issue fixed in Intel SST CFL MR1-2 Release 10.23.00.1522
1406919687	Difference between host and link DMA is increasing during pause→resume sequences on Chain DMA	Issue fixed in Intel SST CFL MR1-2 Release 10.23.00.1522
2202578036	Intel® WOV AEC performance improvement	Issue fixed in Intel SST CFL MR1-2 Release 10.23.00.1522
1806126488	Intel® WOV: Remove SPEECH_ONLY dependence on WOV path creation	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
18061231951	Multiple glitches after resume from pause after d3	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1806088086	Playback doesn't start when user deploy EFX module to the target platform	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1806120003	FDK does not support displaying 2 connected MFX modules in the topology.	Issue fixed in Intel SST CFL MR1 HotFix1 Release

		10.23.00.1609
1806149088	BSOD 9f during s3/s4 stress test	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1806124346	Noise in second capture stream via Voice Recorder (24bit)	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1806126601	Adding fix for increased buffer size for capture chain preventing glitches	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1407112852	BSOD 0x139 during S4 cycling	Issue fixed in Intel SST CFL MR1 HotFix1 Release 10.23.00.1609
1806150845	Delay in endpoint enumeration causing issue with arming WoV/Alexa	Issue fixed in Intel SST CFL MR1 HotFix2-1 Release 10.23.00.1615 & MR1 HotFix2-2 Release v10.23.00.1616
1806151871	BSOD 7e on OED during sx stress test	Issue fixed in Intel SST CFL MR1 HotFix2-1 Release 10.23.00.1615 & MR1 HotFix2-2 Release v10.23.00.1616
1806209462	Fix _s naming	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1685
1806213235	BSOD D5 caused by IntcOed during test sound on speaker's endpoint with Alexa injection in loop	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1685
1805807540	Fix exposing data ranges and device formats	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1685
1806186575	Multichannel WoV on reference path in 2nd pass detection verification driver - OED changes	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1685
1806228587	[CNL][HLK] WDMAudio::KsPosTest::TAEF_Render_WritePacket#RenderDefaultStereoFormat last packet is not confirmed within 150% of allowed time	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1685
1806251870	DMIC APO-based Volume Support - fix for loopback stream volume	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1717
1806264786	OED YB during playback	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1741
1806265838	Not getting back the display audio end point after waking from Sx state	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1741
1305719287	24bit depth support by LPAL and VAD streams	Issue Fixed in CFL/CNL/WHL SST driver

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		version 10.23.00.1741
2204321996	Notification Sounds or Volume Bar Drag high/low causes pop sound	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1741
1806239922	Implement gain compensation for Intel speech	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1741
1806300647	Change SRC queue from 2ms to 1ms	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1768
1806299248	(WoV) Key phrase not detected on I2S endpoint	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1768
1806323317	KsPosition subtest TAEF_Render_WritePacket fail	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1768
1806323328	Alexa key phrase not detected when phrase is played also on fourth channel	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1768
1407433652	Intel® WOV Alexa Key Phrase detection rate is low on SST v1741	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1768
1806333230	KsPosition subtest TAEF_Capture_ReadPacket fail to create host pin to loopback	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1789
1806333951	SUT occur BSOD when resume from Modern Standby	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1789
1806333903	Wrong Cortana bust pin MaximumChannels - no loopback channels as expected	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1789
1806346720	Playback fail to resume after s3/s4 cycles due to FW exception	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1789
1806355328	Intel can't trigger system from MS to S0 by Cortana HW KWS on CFL-H RVP	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1789
1407553348	MAT supported Audio format file is not playing in HBR player with Agillent analyzer (DA)	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1806377216	Disable DMA buffer dump in production	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1806373097	Force YB on not supported HW without retries	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1806374661	Playback sound with noise after wake with WOV from CS	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802

1806297783	Fix FW_binary_rules to build binary for old CSME and work fine with FDK	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1806320838	Disable ADSP functionality on CNL H310 PCH SKU (CNP-H)	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1806356797	Update WOV to ver. 1.11.612	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1802
1407579379	SystemAudio-KS Position Test (System) & SystemAudio-Wave Test (System) fail	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1841
1407610286	Alexa test with reboot will causing audio speaker function not work in Intel SST version 10.23.0.1789	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1841
1407579305	Playback with S4 aging will stop music play in Intel SST version 10.23.00.1789	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1841
2205314357	Noise appeared when S3/S4 and play web online music, groove app at the same time	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1841
2205370183	Speaker endpoint will disappear when Alexa APP is launched and then call “Hey Cortana”	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
1806170250	24bit depth support added by Low Power Audio Client and Voice Activity detection streams	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
1407431317	Playback fail to resume after resuming from the s3/s4 cycles due to Intel SST FW exception	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
1407785989	Intel® SST does not restore Smart AMP EFX module parameter after S4 wakeup.	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
1806199400	Noise in Alexa responses after the keyphrase trigger	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
2007538013	Intel® WOV causing Hardware Drips to be 0% causing SLP_S0 not to assert on Modern Standby enabled platforms.	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1878
1407800626	[CNL][ICL] Fix Reference codec driver to handle properly PnP NewResource Rebalance IRPs sequence from PnP manager	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806437419	Endpoints are visible but not usable with Amplifier SFX module	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1407864851	Noise appeared when S3/S4 and play web online music,QQ music app,Wangyiyun music app,Kugou app ,groove app at the same time	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806265578	BSOD Bug check 3B or 50 caused by OED after playback on offload pin with	Issue Fixed in

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	Amplifier MFX module	CFL/CNL/WHL SST driver version 10.23.00.1980
1407907518	[CNL] Fix capture reference output format for speech pipe to 16(16) when capture link format is 24(32)	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806464849	Move windows registry read to separate class	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806469939	(WoV) Fw crash after s4 in mutltiPa scenario	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806442963	AEC malfunctioned with SST 1878 because of lacking the reference feedback signal	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1806464964	Upgrade WOV to 1.11.624	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.1980
1407625390	'zi' noise can be heard when playback recorded file	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
2205615011	Close all playback streams and reopen again. You can see “can’t play error message” window pops up. One needs to reload Intel OED driver to restore to get playback working.	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
1506769711	Blue Screen with code 0xCE happen when s3 resume with HDMI connected	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
2205468128	Play music by Groove music app & resume from S3, you can see that Groove can't play. Also, Audio icon show red cross, speaker endpoints lost in device manager	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
1407993313	Audio End points yellow bang observed in Device manager after wake from S3/S4 while doing Amazon Alexa, this follows by BSOD when recovering via Restart	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
1407975016	Sound distortion when enable Cortana from Windows setting	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
1407977502	ISST driver would cause WHCK test case KS Position test fail with high failure rate	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2077
1806548062	Update Dolby Library to version 1.3	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2110
1806548062	Fix load_offsets for dolby	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2110
1408287927	LTR override in IPC task	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2110

1408350375	Intermittent DSP FW Crash Issue with SST v2077	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2214
1408642969	BSOD 7E on OED during Alexa stress test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2241
1408589000	Audio icon shows red cross and Speaker endpoints lost in device manager	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2241
1606893175	Device can't be awakened up by "Hey Cortana" from MS if Alexa wake word option is enabled	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2353
1408649572	Alexa low KPD during Alexa Stress test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2353
1806906104	SST Firmware crash after unregistering from notification with useDetectionMode enabled	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2353
1806591008	SoundWire: BSOD while BUS/OED/ALC700/SST devices disabled during playback	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2353
1806934656	Intel® WOV: Fix possible BSOD due to incorrect packet size calculation	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2419
1806216832	Intel® WOV: OED did not enter RTD3 after unregistering from notification	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2419
1806950835	During Warm boot stress test, the machine appears blue screen, blue screen code: DRIVER_POWER_STATE_FAILURE	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2419
1407625390	'zi' noise can be heard when play recording file	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2419
1807064813	Rebalancing final fix	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2427
1806950835	fix downmixing 8 channels - use MicSel instead of UpDownMixer	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1507077696	exception from driver while running stability test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1409022717	Playback data underrun and causes noise after plugging in/out devices thru TBT ports	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1408643938	PPAPI application can't query any modules if adding any of modules on system pin (Pin 0)	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1409057055	Alexa stress test fail with BSOD (0x50) (PAGE_FAULT_IN_NONPAGED_AREA,	Issue Fixed in

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	IntcOED.sys)ports	CFL/CNL/WHL SST driver version 10.23.00.2490
1807142770	Offload playback 5.1 contains only stream from 2 channels	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1408833930	Choppy noise occurred after long run "Movies &TV" video 20~30 mins then un-checking the "Wake word" via Alexa at the same time	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2490
1408643938	[CFL][SST OED] PPAPI application can't query any modules if adding any of modules on system pin (Pin 0)	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2577
1408976106	[SNDW] Request to change clk stop handling sequence	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2577
1409047397	No sound output during playing music by Groove	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2577
1807424217	WHL RS3 HLK. WaveTest and KsPosition	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2577
1409290571	Changing calculation methodology for pipeline latency	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2618
1409211453	HWKWS Event Polling when Cortana and Alexa are both enabled	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2618
1409334873	Cortana triggers periodically after cortela stress test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2618
1409217661	IntelAudioService Crash After Reboot or System Idle	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2618
1306411981	[SDW] Clock stop sequence disable	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
1409344977	0x3b BSOD when S3+Local music stress test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
1409325946	AutoTest S3_S4+ audio/video playback & recording，Intel SST OED YB with DSP crash file	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
1409199649	The precursor time on Cortana HWKWS burst pin is fluctuated.	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
1409250714	Speaker Noise distortion with Smart Amp when enabled "wake word" in Alexa app.	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
1409334873	Cortana triggers periodically after cortela stress test	Issue Fixed in CFL/CNL/WHL SST driver

		version 10.23.00.2672
1409401661	Observed DRIVER_POWER_STATE_FAILURE cause: "IntcSDW.sys" BSOD during OS installation	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2672
2207223141	There's no sound recorded by MSFT Camera app camcorder function when Voice Recorder app is just opened in background	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2725
1807775668	Add CML-H ID to CNL branch	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2725
1807808523	Add w/a for smartamp pop noise	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2725
1806591448	Sdw slave codec add subsystem to HWID	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2725
1807816231	Update cavs_ff to AVSIntelSST_FF_gen2.0_2.0.0.188	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2725
1409509098	When BIOS DSP WOV win10 enabled, OS Cortana is OFF, ISST SW offender 26sec to impact SW DRIPS<98% in modern standby	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2764
1806591448	[CNL][Sndw] port aggregated endpoint type	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2764
1807885593	Disable L1SEN if capture DMA is allocated	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2764
1409508204	System occasionally can't output sound by speaker when do manual S4 test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2764
2207708280	Unplugging USB device (USB bluetooth dongle or USB headset) during Alexa response causes DSP crash	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2764
1409562831	DM show duplicate audio device issue in S740IIL when do CB Stress test	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2772
1807971392	Integrate with new WOV externals WoV_Externals_CNL_IntelWoV_1.14.596.10_433	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2796
2207708280	Unplugging USB device (USB bluetooth dongle or USB headset) during Alexa response causes DSP crash	Issue Fixed in CFL/CNL/WHL SST driver version 10.23.00.2796