



Intel® Smart Sound Technology Driver

Release Notes: Intel SST Twin Lake Release

October 2024

Revision 1.1

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Revision History

Revision Version	Revision History	Revision Date
0.1	<ul style="list-style-type: none">Intel® SST Twin Lake Release 10.29.00.10273	April 2024
1.0	<ul style="list-style-type: none">Intel® SST Twin Lake Release 10.29.00.10981	June 2024

1 Introduction

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 Twin Lake (TWL) platforms with Intel Audio DSP integrated.

1.2 System Requirements

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

- Twin Lake Processors

Platform Support:

- Twin Lake processor-based platforms with Intel Audio DSP integrated

Operating Systems support:

- Microsoft Windows* 11 64-bit

1.3 Acronyms and Terminology

Term	Description
ACPI	Advanced Configuration and Power Interface
BIOS	Basis Input/output System
BT	Bluetooth
DMIC	Digital Microphone
DSP	Digital Signal Processor
FW	Firmware
HDA or HD-Audio	High Definition Audio
IADK	Intel Audio DSP Firmware Development Kit (old name: FDK)
IHV	Independent Hardware Vendor
ISV	Independent Software Vendor

Intel® SST	Intel® Smart Sound Technology
LP	Low power
MCPS	Million Clocks Per Second
MCS	Modern Connected Standby Platform
MR	Maintenance Release
Non-MCS	Non-Modern Connected Standby Platform
OED	Offload Engine Driver
OS	Operating System
PC	Production Candidate
PCH	Platforms Controller Hub
PR	Planned Release
PV	Production Version
RS	Redstone
RVP	Reference Validation Platform
SDW	SoundWire
TBD	To be determined
TWL	Twin Lake
WoV	Wake on Voice

2 *Release Kit Summary*

2.1 Release Kit

Kit Name: Intel® Smart Sound Technology Driver Twin Lake Release

Supported OS: Windows* 11 64-bit

Version: 10.29.00.11261

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
 - IntcOED – Intel SST Offload Engine Driver
 - Detection Verification Driver
 - Intel® DMIC driver
 - Intel® Bluetooth Audio Driver
 - Intel® Bluetooth LE Audio Driver
 - Intel® USB Audio Driver
 - Intel® SST I2S Driver
 - Intel® SoundWire Bus Driver
 - Intel® SoundWire Driver
- Module Version
 - Intel WoV version 2.9.1144.0_1362
 - Intel Audio Service version 01.00.3504.2
- Apps
 - Intel® Audio Service: Part of Intel SST OED Installation.
- Intel® Smart Sound Technology Driver – Release Notes



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	Included in every SST release package Intel CDI Doc #613171
Intel® Smart Sound Technology Customer - Validation and Debug Guide	Intel CDI Doc #613651

3.2 Platform Best Known Configuration

Please refer to Twin Lake BKC Release.

3.3 Focused Testing Area

Please refer to the Intel® Smart Sound Technology Validation and Debug Guide on Intel® CDI (Document # 613651) for the test cases to test the following Intel® SST features.

For Desktop Processors:

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

For 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® Audio Service	Intel® Audio Service	Intel® Audio Service installer is provided for to support Intel WoV.
Intel® SST Post-Processing		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	Intel Preprocessing FW is included. 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 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 Intel® SST 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 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:

6 *Known Issues*

Issue #	Description
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7 Closed Issues

Sighting	Title	Fixed version
22019948411	Mic Mute status is not synced on PC Sound Control Panel status by pressing Mute button on BT Headset.	10.29.00. 11261
14022578365	BSOD 0x7e occurred as restart (IntcBTau!IntcAudDispatchPnp)	
14022741949	BSOD 0x7E(SYSTEM_THREAD_EXCEPTION_NOT_HANDLE) pointing to IntcUSB driver during reboot longrun.	
22019850983	Bad USB microphone quality when some USB headsets directly connect to system.	
14022658454	Intel_SST_ver10.29.0.10273 submit WU fail.	
18037052159	DMIC HLK "DF - PNP Rebalance Fail Restart Device Test (Reliability)" fail.	10.29.00. 10981
22019642316	Remove Ultrasound pin for sideband endpoints (BT/USB).	
14022073496	Media Player shows error code 0x8889000F during simultaneous playback to two endpoints with dual-offload support.	
18037105882	"DF - PNP Rebalance Fail Restart Device Test (Reliability)" fail.	
22019674671	Unable to see "SRC module" when doing Offload-Pin playback on BT-LE device with 44.1kHz file.	
14021101265	Noise happens on beginning of audio queue if playing it during codec in D3.	
14021671008	[SDW] BSOD 0x7E - SYSTEM_THREAD_EXCEPTION_NOT_HANDLED with SST 10.29.00.10273.	
14020783432	Playback have noise after resuming from MS with Sound Control Panel UI kept open in background.	
14021218666	Playing music will occur noise when turn on the music rhythm mode.	
18036795624	"Audio Codec - KS Topology Test" fail.	
14018211762	No Sound from Bluetooth Headset Mic.	
14021284508	BSOD 0xA/0x9F appears when removing Bluetooth headset.	
22018465578	Failed to resume playback with BT headset after wakeup S4. App show error:0X80004002.	
14020700378	Error 7024 pointing to Intel Audio Service is found in System Events while installing ISST driver	
14021359138	BSOD 0xc2 during install ISST driver after downloading preload image in factory.	
14021227218	BSOD 0x7E/0x1E occurred after ask questions of PA with USB headset connected.	
14021236081	ISST OED YB (Code:43) in DM after asking questions of PA with USB headset connected.	
14020628866	Jabra Engage 65/75 headset cannot adjust Volume to 100% via headset's volume key.	
none	Support Twin Lake platform.	10.29.00.10273