



INTEL® PROSET/WIRELESS BLUETOOTH TECHNOLOGY 20.70 PV SOFTWARE RELEASE

ww28, 2018

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Release Overview

Intel is pleased to announce the Bluetooth 20.70 PV release.

The intended audience of this document is all OEM/ODMs.

- This release includes drivers for JfP1 (9461,9462), JfP2 (9560), ThP2 (9260) as well as WP-WsP. See list below.
- This release package (iBTW4305_20.70.0.4G.Zip) has different drivers per POA – The driver versions in the slide 5 matrix will appear in Device Manager.
- This release contains certified drivers for Windows 10 Fall Creators Update (RS3) and for Windows 10 April 2018 Update (RS4)

General Information

Bluetooth Software Build

- TIC # iBTW4305_20.70.0.4
- Intel Driver zip file: iBTW4305_20.70.0.4G.zip

Tested Platforms

- Sky Lake
- Kaby Lake
- Kaby Lake-R
- Kaby Lake-Y R
- Gemini Lake
- CNL-U
- CFL-S/H

Supported Hardware

- Thunder Peak2 (ThP2)/9260
- Jefferson Peak2 (JfP2)/9560
- Jefferson Peak1 (JfP1)/9461/9462
- Windstorm Peak(WsP)/8265
- Sandy Peak(SdP)/3168
- Snowfield Peak(SfP) / 8260
- Douglas Peak(DgP) / 18260 (WiGig)
- Maple Peak (MP)/17265 (WiGig)
- Stone Peak 2 (StP2) / 7265
- Stone Peak 1 (StP1) / 3165
- Wilkins Peak 2(WP2) / 7260
- Wilkins Peak 1(WP1) / 3160

Supported Operating Systems on Adapter

- WP/StP/7265-C0: Windows 7 - 32/64bit; Windows 8.1 - 32/64 bit; Windows 10 - 32/64 bit
- StP/7265-D0: Windows 7 - 32/64bit; Windows 8.1 32/64bit; Windows 10 - 32/64 bit
- SfP/8260: Windows 7 - 32/64bit; Windows 8.1 - 64 bit; Windows 10 - 64 bit
- SdP/3168: Windows 7- 32/64; Windows 8.1 -32/64 bit; Windows 10 - 32/64 bit
- WsP/8265: Windows 7 - 32/64bit; Windows 8.1 - 64 bit; Windows 10 - 64 bit
- ThP2/9260: Windows 10 - 64 bit
- JfP1/9461/9462: Windows 10 - 64 bit
- JfP2/9560: Windows 10 - 64 bit

POA Driver Matrix

(Colors indicate same driver version)

20.70.0.4 (TIC version)	Win7	Win8.1	Win10
ThP2	NA	NA	20.70.0.4
JfP	NA	NA	20.70.0.4
WSP	20.60.0.4	20.60.0.4	20.70.0.4
SfP	20.60.0.4	20.60.0.4	20.70.0.4
SdP	20.60.0.4	20.60.0.4	20.70.0.4
StP C0/D0/D1	20.60.0.4	20.60.0.4	20.70.0.4
WP	20.60.0.4	20.60.0.4	20.70.0.4

New Bluetooth Features

DCR 143 - Bluetooth USB Device Controller Remote Wake improvements

DCR 196 - WsP/ThP - Method to improve WIFI throughput when LE background scan is active

Important Notes about this Release

The IBTSIVA is ON by default for all HW/SW combinations except for the UWD releases.

Extension INF files are the method to enable services and install options in UWD releases.

Bluetooth extension INF files have already been resold to customers that requested them. Please see your Intel Wireless account manager for further information on this topic.

This release includes the below change:
Resolution for Security vulnerability CVE-2018-5383

Known Issues & Limitations – 20.70 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-2626	No HFP audio during Skype call using Apple AirPods & Disconnect with "LMP Response Timeout"	When using Apple AirPods there is no sound on skype calls.	Poor UX	ThP/Win10	None	Issue limited to Apple AirPods.
BT-3399	Poor HFP Skype quality when using Logitech H800 headset	Internal user experienced poor audio quality in HFP Skype calls, When recording a 2 minute session, we confirmed deep fades and lost of audio data	Poor UX	WsP/Win10	None	Not seen uniformly. May be more frequent with this headset. Not seen at all on a Bose headset.
BT-4054	During Miracast , use Bluetooth to send or receive big file (1GB) and sometimes the UI gets stuck	Steps: 1. Enable Miracast scenario on DUT 2. Send file via BT 3. Check whether file transfer status	Poor UX	WsP/Win10	None	Uncommon test case. Unlikely that end-user will send 1GB file via BT and also during a Miracast session
BT-4549	Short BLE HID lag every 5~10 sec	Short lag (~1 sec) observed every ~10 sec when WiFi is connected.	Poor UX	WsP/Win10	None	Affects certain mice only. Not seen uniformly.
BT-5253	Bluetooth device show two icons on settings after doing PC-PC pairing using Bluetooth with 20.60.0.4 iBTW4113	Issue is related to cross-pairing and is MSFT issue. Intel tracked until MSFT provides a defect ID	Might cause confusion	WsP/Win10	None	No functionality impact just an extra entry in the UI. [C]

Corrected Issues – 20.70 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-4100	No BLE mouse movement after waking from S3/S4	SdP/Win10	Root Cause: This is a ROM device and the patch file was being sent twice unnecessarily which caused an unexpected reset that resulted in a disconnect. Fix: Change was made to avoid this second unneeded download.
BT-4503	BT driver is lost (usb unknown device) after idle for a while with 20.40 HF	WsP/Win10	Root Cause: Race condition where controller is sending an event to the host and an early suspend is received. Fix: code change to eliminate the opportunity for this race condition.
BT-5016	Upgrade issue for a specific customer using UWD installer	JfP2/Win10	Installer issue fixed in 20.70
BT-5324	Frequent BSOD (3b.1a.0a...) when doing S4,S5,Hybridshutdown test	WsP/Win10	Root Cause: This issue is due to a side-effect of a correction that was in 20.60. That correction was intended for a specific customer. Fix: The correction was backed out. Once backed out the BSOD no longer occurs. [C]

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.70 PV

ID	Title	NIC OS Observed	Comments
BT-4138	Sometimes microphone is not working while using skype	WsP/Win10	No longer repros with latest software
BT-4532	It Takes half a minute to connect to A2DP after turn Speaker off/on	ThP/Win10	Microsoft issue confirmed fixed on RS5

Validation Guidance (WsP and earlier) – 20.70 PV

Functional Area	20.50 PV	20.50.1.2 HF PV	20.60 PV	20.70 PV	Notes for This Release (see known Issues and Limitations for more details)
OPP					
AVRCP					
A2DP					
ACPI					
SPP					
FTP					
HID					
HFP					Poor HFP Skype quality using certain headsets
Multi Profile					
BLE HID					Lag with certain BLE mice
PAN					
PBAP					
RF Kill					
Connected Stby					
Power Consumption					
Wake					
Sx transitions / Stability					
WiFi/BT Coex					
Installation / Upgrade					
Selective Suspend					
Device WHCK Pass Rate					

	Testable
	Testable, see notes
	Blocked

Validation Guidance (JfP/ThP) – 20.70 PV

Testable

Testable with comment

Blocked

Functional Area	20.50 PV	20.50.2.1HF PV	20.60 PV	20.70 PV	Notes for This Release (see known Issues and Limitations for more details)
OPP					
AVRCP					
A2DP					Reconnecting speakers takes longer than expected
ACPI					
SPP					
FTP					
HID					
HFP					Poor HFP Skype quality using certain headsets
Multi Profile					
BLE HID					
PAN					
PBAP					
RF Kill					
Connected Stby					
Power Consumption					Higher BLE idle power consumption
Wake					
Sx transitions / Stability					
WiFi/BT Coex					
Installation / Upgrade					
Selective Suspend					
Device WHCK Pass Rate					

BT Release History

This Release →

Milestone Release Name	Date	BT TIC	BT KIT
19.71 PV SP	Released ww26	iBTW2016	122927
19.80 PV SP	Released ww33	iBTW2200	123940
20.00 (Sustain Only) PV SP	Released ww37	iBTW2262	124342
20.00 (Sustain, ThP2, JfP2) PV SP	Released ww41	iBTW2354	124485
20.10 PV SP	Released ww47	iBTW2745	125423
20.20 PV SP	Released ww49	iBTW2888	125525
20.30 PV SP	Released ww02	iBTW3044	126044
20.30 HF PV SP	Released ww08	iBTW3553	126589
20.40 PV SP	Released ww08	iBTW3556	126803
20.50	Released ww13	iBTW3825	127355
20.50.1.2 HF PV	Released ww17	iBTW3935	127703
20.60 PV	Released ww20	iBTW4113	127921
20.70.0.4 PV	Released ww28	iBTW4305	128517

Tools Info

Find ibttrace tool below

<https://personal.filesanywhere.com/fs/v.aspx?v=8d7167886164727d6bae>

This zip file contains the following test tool:

ibttracetool_V2.1.10-2018Jun.zip

Password: **intel123**

Glossary

COEX = Coexistence. This refers to when Bluetooth and Wifi are both operating simultaneously in the 2.4Ghz band. Collisions between the radios can occur and degrade performance.

PC = Production Candidate – Part of the initial software series on a new adapter (e.g. alpha, beta, PC, PV)

PV = Production Version – Software that is approved for shipping

SP = Service Pack – an intermediate release between major release. It usually only has defect corrections.

MR = Major Release – Includes new features and defect corrections.

WA = Workaround

RN = Release Note

HF = Hot Fix – a software release with minimal change. Created to resolve a urgent customer need.

YB – Yellow exclamation mark in device manager. Indicates that a driver is not functioning properly

Ibtsiva – Software service that runs after certain sleep cycles and restarts the BT device upon YB detection

POA – Platform, OS, Adapter e.g. (Kaby lake, RS1, WsP) – usually refers to OS/Adapter combo.

ATS – Adaptive Time Share

Backup Section

Adapter w. BT/Number

Thunder Peak 2/ 9260
Thunder Peak 1/ 9162
Jefferson Peak 2/ 9560
Jefferson Peak 1 Single Antenna 9461
Jefferson Peak 1 Diversity 9462
Windstorm Peak / 8265
Oak Peak (WiGiG) / 18265
Snowfield Peak / 8260
Douglas Peak (WiGiG) / 18260
Sandy Peak / 3168
Stone Peak 2 / 7265
Maple Peak (WiGiG) / 17265
Stone Peak 1 / 3165
Wilkins Peak 2 / 7260
Wilkins Peak 1 / 3160
Jackson Peak 1 / 2230
Jackson Peak 2 / 6235
Crane Peak + BT /130
Canyon Peak + BT / 135
Rainbow Peak 1 / 1030*
Rainbow Peak 2 / 6230*

ATS (Adaptive Time Share) - Delivered in 20.20

ATS provides improved performance when both WiFi and BT are using the 2.4Ghz band (COEX)

ATS is a scheme for coordinated time-sharing between WiFi and Bluetooth. BT shall aggregate A2DP and OPP packets and transmit them in “clusters” while providing guaranteed and deterministic bandwidth for WiFi traffic. This feature allows for better coordination between the two radios when both are operating in the 2.4Ghz band. This results in fewer collisions between WiFi and BT and thus better performance, mainly on the WiFi side. Note included for informational purposes

ATS supported HW:

- JfP1/JfP2/ThP2/WsP – JfP1 support was added in 20.30
- ATS is OS agnostic, so it applies to all Windows versions
- Please note – BT and WiFi version alignment required for optimal ATS performance
 - BT version – 20.20 and later
 - If BT version older than 19.50 is used with WiFi 20.20 then BT may disappear from DM.
 - WiFi version – 20.20 and later
- Please see your local Intel Wireless Representative for more details

UWD-Ready software now included with BT package

UWD-ready Bluetooth software (support for Microsoft's* DCHU requirements) is now included with this Bluetooth release package

- This UWD-ready software is for validation purposes only
- UWD requirements are supported on StP2-D0 and newer wireless HW only
- UWD-ready software is provided for Windows* 10 64-bit only
- See slides 36-38 in the Backup section below for UWD layout related details.
- The Windows 10 UWD-ready driver package does not include IBTSIVA and it will not be installed by default. This was done to meet the MSFT DCHU requirements.
- For more information, see CDI doc# [575605](#). (Install info in the doc)

Old Release Info

20.50.1.2 HF added BT-4565 on top of 20.50.0.3. 20.50.1.2 was recommended over 20.50.0.3. 20.50.0.3 had some layout issues.

Corrected Issues – 20.60 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-3868	BT mouse not working suddenly and BT headset also stop output music.	WsP/Win10	Root cause: When HW exception is reported, Host used to send HARD RESET, however, HW was not able to recover on that. Fix: On HW Exception, Host will issue SOFT RESET along with USB Disconnect as parameter to SOFT RESET Cmd. With this HW is able to recover.
BT-3899	TargetOSVersion decoration is missing in Manufacturer Section in ibtusb INF for all OS	All HW Win10	Build issue not a functional issue
BT-4155	Not able to search nearby BT device and USB port is not working	WsP/Win10	Same RC as BT-3868
BT-4162	BT driver lost from Device Manager when adding BT device from PC settings/Devices/Bluetooth	JfP1/Win10	Root cause: Exception error seen in memory management. Fix: Null pointer check added.
BT-4175	BT headset is not working and BT scan is also not working	WsP/Win10	Same RC as BT-3868
BT-4279	Installation will auto restart even add /norestart	JfP2/WsP Win10	Build issue not a functional issue
BT-4185	Launching "setup.exe /qn /norestart" does not suppress automatic reboot on upgrade	StP2/Win7	Build issue not a functional issue
BT-4215	HFP (Hands Free Profile) experiences choppiness during standalone playback	JfP2/ThP2/ Win10	Root cause: Active Park exit was masking lower priority interrupts and when SCO playback occurs simultaneously it was causing some packet loss resulting in an audio glitch. Fix : Active Park is disabled when USB ISOC endpoint is configured for SCO.

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.60 PV

ID	Title	NIC OS Observed	Comments
BT-1925	BT mouse is sluggish during skype call and becomes not operational	JfP2/ThP2/Win10	Was still occurring on 1 specific mouse but issue is no longer present with latest release
BT-4179	OEM Tools - CITU BRI tests fail	JfP2/Win10	Originally reported to Bluetooth but is in fact a tools issue that was fixed by CITU_1411_11_1818

Corrected Issues – 20.50.1.2 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-791	Inquiry misses devices about 10% of cycles	WsP/Win10	Root Cause: The controller was not always waiting for DM3(EIR) packet containing remote device name before sending HCI EIR event up to host system. This results in HCI EIR event with no remote device name, and a generic name being populated in UI by host system. Fix: Changes were made in FW to ensure proper waiting is done. It was noted that finding all the devices takes longer but that is a MSFT not Intel issue.
BT-2538	LE Mouse lags during Skype call; mouse movement very sluggish	WsP/Win10	Root Cause: The sluggishness was due to a race condition that prevented a slot management resource from being freed up properly. Fix: The correction was to eliminate this race condition so that devices would not have to contend for the same resource.
BT-2697	When paired Motion Controllers are powered on at the same time to reconnect to the PC, one reconnects quickly and the other takes much longer than expected to reconnect (about a minute)	StP/Win10	Root Cause: This issue was due to a connection timer that was deemed redundant. Fix: Redundant connection timer was removed.
BT-3238	Connection issue with CT1100 BLE smart card reader	StP/Win10	Root Cause: EP0 not returning to idle state if port reset was issued in the middle of a HCI command. Fix: Changes were made so that EP0 will return to the idle state properly. [C]
BT-3453	BT mouse is not working and there is YB of BT driver in device manager	WsP/Win10	Root Cause: Link Variable was not checked before accessing in a different thread. Fix: Proper check was added.
BT-3779	Intel BT driver(UWD) show YB in DM after reboot units with turn on airplane mode	StP/Win10	Root Cause: Driver failed to load due to missing default value for a registry key in some corner cases. Fix: missing default value was added.[C]
BT-3926	Intel 3165 bluetooth driver show yellow mark in device manager when run S3 long run	StP/Win10	Root Cause: USB was going to bad state during patch download. Fix: USB endpoints FIFO flush is been propagated during Soft Reset and Host iBT driver is changed to provide sufficient time (2ms delay) before sending the next command in patch download. [C]
BT-3914	BT driver is lost (usb unknown device) after idle for a while	WsP/Win10	Root Cause: BT lost due to race condition between DMA to USB and USB suspend interrupt handler. Changes were made to minimize the race condition so not considered a final fix [C]
BT-4020	Sound didn't come out from unit or BT headset when BT headset is taken out of connection region then approach the unit again.	StP/Win10	Root Cause: A variable was being updated incorrectly and this caused the number of completed packet events to stop being reported. This leads to A2DP traffic halting Fix: Handling of the above variable was corrected. [C]

Corrected Issues – 20.50.1.2 PV – Continued

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-4093	Intermittent BSOD on GLK	JfP1/win10	Root cause: XTAL tuning block caused disturbances of the GLK CLK that, in turn, caused the BSOD Fix: Modified the XTAL tuning block (via FW) for both WiFi and BT, so that it does not create CLK disturbances This change has a corresponding change on the WiFi side. [C]
BT-4094	After turn off BT from Settings and restart find DM BT item show"yellow mark" and Settings have no turn on item.	SdP/Win10	Same root cause as BT-3779 [C]
BT-4120	HID mouse lagging during HfP playback	SfP/WsP/JfP ThP2 Win10	Root Cause: This occurred because the priority of SCO packets were increased over HID packet priority when received simultaneously. Fix: The fix was to change the priority value to the previous setting.
BT-4136	[Intel 3165 bluetooth driver show yellow mark in device manager when run S3 long run	StP/Win10	Same root cause as BT-3926 [C]
BT-4145	Intel 3165 BT will yellow mark when we run S4 overnight	StP/Win10	Same root cause as BT-3926 [C]
BT-4284	BT device is hidden and then becomes Unknown USB device in DM while S3 Stress test on WLAN/BT combo 7265	StP/Win10	Same root cause af BT-3926 [C]
BT-4432	BT driver (UWD) show YB (Code 43) when resume from restart/S5 after turn off BT	SdP/Win10	Same root cause as BT-3779 [C]
BT-4565	Intel latest wireless 9560 driver + 4K monitor + Intel DP1 output will cause black screen (flicker)	JfP/ThP Win10	Root Cause: Signal noise caused the flicker. Fix: A HW register setting was changed to correct the issue [C]

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.50.1.2 PV

ID	Title	NIC OS Observed	Comments
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	StP/SfP/Wsp Win10	Root caused to BRCM BTOE
BT-981	HFP has low audio quality when inquiring during stream	SdP/StP Win7/Win10	Not reported on RS3 or newer
BT-2074	BSOD when LE peripherals are enabled on DUT and connected	JfP2/ThP2 Win10	Not reported on RS3 or newer
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	StP/SfP/Wsp Win10	Not reported on RS3 or newer
BT-2304	Existing connections disconnect when trying to add new LE connections	WsP/Win10	Not seen on RS3
BT-3051	No Bluetooth device appear under device manager , but WIFI is good	Jf{2/Win10	BIOS Fix
BT-3104	User can not pair a BLE Designer mouse	ThP2/Win10	Fixed in RS4
BT-3348	LE mice stop working after 10 cycles of S4	JfP2/Win10	Only seen on oreleases older than RS3
BT-3866	System hang up and black screen (Code:0x9F) occurs when run WHQL Teston Win10 RS3 16299.	SdP/Win10	MSFT Bug ID: 11283939 – very low failure rate, customer OK to close
BT-3901	Sometimes sound may output from DUT but BT headset after playing for 5 hrs or longer	WsP/Win10	Issue confirmed in Remote BT device, Not Intel issue
BT-3910	BT device keep enumerating without BT driver and BSOD occurs frequently at reboot	JfP2/Win10	BIOS Fix
BT-4161	BT headsets can't auto reconnect if device out of range and back to unit again.	StP/Win10	Issue confirmed in BT headset. Customer OK to close
BT-4180	BSOD 0X9F DRIVER_POWER_STATE_FAILURE while running WinPVT Standby critical only test (S3 stress test)	WsP/Win10	No longer reproduces

Known Issues & Limitations – 20.40 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	MOS score should be 3.5 or greater but in the test case score drops to 2.8	No impact	WsP/SfP/StP2/SdP/Win10	None	Observed during internal COEX stress testing only. Not noticeable to end-users
BT-791	[WSP] Inquiry misses devices about 10% of cycles	While running inquiry scan, not all nearby devices are found. On cycles where all devices are found, the inquiry times meet the KPI targets	Not all BT devices are found	WsP/Win10	None	Tested with BT 15 devices. FR about 10%. Fix planned for 20.40
BT-981	HFP has low audio quality when inquiring during stream	When streaming HFP audio and performing an inquiry the audio starts sporadically skipping	Audio sometimes degraded	WsP/SfP/StP/Win7/Win10	None	RS2 and Win 7 seeing HFP audio stutter when force search for surrounding BT devices. FR 60%
BT-1925	BT mouse is sluggish during skype call and becomes not operational	BT devices connected: HP classic BT mouse, Rapoo E6700 keyboard, Bose sound link headset. while having a skype call the mouse moves a little sluggish, and not operational.	Audio stops	JfP2/ThP2/Win10	None	Still seen but only with one specific mouse
BT-2074	BSOD when LE peripherals are enabled on DUT and connected	When DUT is acting as peripheral and connected from 5 central devices (using apps on smart phones), after about 1 to 3 minutes of being connected, the DUT will bluescreen.	ThP2/Win10	BSOD – Unusual use case	Reboot	Uncommon use case
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	Once 2 LE Peripheral connections are established, attempting to pair a LE device will result in the “That didn’t work” error message.	Poor UX	SdP/SfP/WsP	No workaround if a third LE connection required	Failure rate is high, ~75%
BT-2304	Existing connections disconnect when trying to add new LE connections	When trying to add 2nd LE connections, the existing connections get disconnected	Poor UX	WsP/Win10	Repair with fewer connections if will add 2 or more BLE connections	Low repro rate

Known Issues & Limitations – 20.40 PV (cont.)

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-3051	No Bluetooth device appear under device manager , but WIFI is good	On power up before SW install Intel generic BT driver should be shown in DM but instead it shows as unknown device.	Poor UX	JfP2/Win10	Install BT driver	Only seen on GLK. Under investigation [C]
BT-3104	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	Poor UX	ThP/Win10	Switch WiFi to another channel	Only seen with fresh OS install
BT-3348	LE mice stop working after 10 cycles of S4	When using LE mice and going into an S4 state, coming back after less than 10 cycles the LE mouse will stop functioning.	Poor UX	JfP2/Win10	Power cycle mouse	Seen in lab testing. End-user unlikely to experience.
BT-3399	Poor HFP Skype quality when using Logitech H800 headset	Internal user experienced poor audio quality in HFP Skype calls, When recording a 2 minute session, we confirmed deep fades and lost of audio data	Poor UX	WsP/Win10	None	Not seen uniformly. May be more frequent with this headset
BT-3453	BT mouse is not working and there is YB of BT driver in device manager	BT mouse is not working and there is YB of BT driver in device manager. DUT had 3 links (2 BR/EDR, 1 LE link)	Poor UX	WsP/Win10	Recovers automatically	Seen within 2 hours [C]
BT-3926	Intel 3165 bluetooth driver show yellow mark in device manager when run S3 long run	Intel AC 3165 Bluetooth show yellow mark in device manager when S3 longrun with ATS.FR:2/3 EUT 2/400 cycles	Poor UX	StP/Win10	None	Only seen on some modules (4 out of 20) [C]
BT-4161	BT headsets can't auto reconnect if device out of range and back to unit again.	Pairing BT headset/speaker and away the unit for a while. When come back to unit, found BT headsets didn't reconnect automatically.	Poor UX	JfP1/Win10	Reconnect manually	May be compatibility issue with a particular headset [C]
BT-4162	BT driver lost from Device Manager when adding BT device from PC settings/Devices/Bluetooth(JP1)	Open PCsettings/Devices/Bluetooth and add a BT device, find BT device disappear from Device Manager.	Poor UX	JfP1/Win10	Restart device, sometimes recovers without intervention	Seems to occur in busy RF environment[C]
BT-4120	HID mouse lagging during HfP playback	After pairing headphones, initiating HfP audio playback, pairing HID mouse - mouse experiences noticeable lag	Poor UX	StP/WsP win10	None	Expecting fix in 20.50

Known Issues & Limitations – 20.40 PV (cont.)

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-4175	BT headset is not working and BT scan is also not working	BT headset is not working and BT scan is also not working.	Poor UX	WsP/Win10	Unclear	Seen about 10% of the time [C]
BT-4180	BSOD 0X9F DRIVER_POWER_STATE_FAILURE while running WinPVT Standby critical only test (S3 stress test)	Fail at the 4th cycle. 2 out of 2 units. 2 out of 16 cycles	N/A	WsP/Win10	Reboot	Not a end-user use case [C]

Corrected Issues – 20.40 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-3571	Get Intel Bluetooth yellow bang in DM after resume from S4 on DC mode.	WsP/Win10	Problem (firmware download failure) is caused by either Microsoft USB driver stack or by AMD hardware. Corrective action was taken: hard reset is sent to the controller and STATUS_NO_SUCH_DEVICE to force system to reload device. [C]
BT-3815	Bluetooth device lost during BT on/off test	JfP2/Win10	Root cause: Race condition between host initiated wakeup and locally generated suspend interrupt. The fix is to ignore and clear the suspend interrupt when host wakeup and suspend interrupts are detected by firmware during interrupt processing. [C]
BT-3943	Clean installation by setup.exe can reproduce non-signed error message pop-up issue	SfP/StP/Win7	Customer specific release layout issue [C]

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.40 PV

ID	Title	NIC OS Observed	Comments
BT-3181	BT Mouse not able to wake system from S4 using WoBT	JfP1/JfP2/Win10	No longer occurs with updated BIOS
BT-3455	Bluetooth headset keeps connecting/disconnecting	WsP/Win10	3 rd party fix
BT-3543	Stress_CB SUT will device lost (8265 BT) when running stress test	WsP/Win10	No longer occurs with updated BIOS
BT-3560	Bluetooth Paring has high failure rate to get fail (FR 50%)	SfP/Win10	3 rd party fix (MSFT)
BT-3582	The machine will BSOD when do normal test in sometimes such as wlan/BT/video call/wifi hotspot test	JfP1/Win10	No longer reproduces
BT-3641	Intel BT lost when running reboot aging	WsP/Win10	Does not reproduce after moving to RS3
BT-3660	BT headset is not working and BT scan is also not working	WsP/Win10	Does not repro with 20.30 at customer
BT-3661	BT scan is not working in UI	WsP/Win10	No longer repros
BT-4106	BT off when turn airplane mode on/off (F12) with BT mouse and wireless AP connected (Intel 9461)	JfP1/w1n10	No longer repros at customer nor in Intel lab

Add 20.30 HF info here

Known Issues & Limitations – 20.30 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	MOS score should be 3.5 or greater but in the test case score drops to 2.8	No impact	WsP/SfP/StP2/SdP/Win10	None	Observed during internal COEX stress testing only. Not noticeable to end-users
BT-791	[WSP] Inquiry misses devices about 10% of cycles	While running inquiry scan, not all nearby devices are found. On cycles where all devices are found, the inquiry times meet the KPI targets	Not all BT devices are found	WsP/Win10	None	Tested with BT 15 devices. FR about 10%. Fix planned for 20.30
BT-981	HFP has low audio quality when inquiring during stream	When streaming HFP audio and performing an inquiry the audio starts sporadically skipping	Audio sometimes degraded	WsP/SfP/StP/Win7/Win10	None	RS2 and Win 7 seeing HFP audio stutter when force search for surrounding BT devices. FR 60%
BT-1925	BT mouse is sluggish during skype call and becomes not operational	BT devices connected: HP classic BT mouse, Rapoo E6700 keyboard, Bose sound link headset. while having a skype call the mouse moves a little sluggish, and not operational.	Audio stops	JfP2/ThP2/Win10	None	Still seen but only with one specific mouse
BT-2074	BSOD when LE peripherals are enabled on DUT and connected	When DUT is acting as peripheral and connected from 5 central devices (using apps on smart phones), after about 1 to 3 minutes of being connected, the DUT will bluescreen.	ThP2/Win10	BSOD – Unusual use case	Reboot	Uncommon use case
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	Once 2 LE Peripheral connections are established, attempting to pair a LE device will result in the “That didn’t work” error message.	Poor UX	SdP/SfP/WsP	No workaround if a third LE connection required	Failure rate is high, ~75%
BT-2304	Existing connections disconnect when trying to add new LE connections	When trying to add 2nd LE connections, the existing connections get disconnected	Poor UX	WsP/Win10	Repair with fewer connections if will add 2 or more BLE connections	Low repro rate

Known Issues & Limitations – 20.30 PV (cont.)

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-3051	No Bluetooth device appear under device manager , but WIFI is good	On power up before SW install Intel generic BT driver should be shown in DM but instead it shows as unknown device.	Poor UX	JfP2/Win10	Install BT driver	Only seen on GLK. Under investigation [C]
BT-3104	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	Poor UX	ThP/Win10	Switch WiFi to another channel	Only seen with fresh OS install
BT-3181	BT Mouse not able to wake system from S4 using WoBT	Mouse not able to wake system from S4(WoBT) on GLK platform using JfP2. Issue happens with just LE mice	Poor UX	JfP1/JfP2/Win10	None	Only observed on GLK
BT-3348	LE mice stop working after 10 cycles of S4	When using LE mice and going into an S4 state, coming back after less than 10 cycles the LE mouse will stop functioning.	Poor UX	JfP2/Win10	Power cycle mouse	Seen in lab testing. End-user unlikely to experience.
BT-3399	Poor HFP Skype quality when using Logitech H800 headset	Internal user experienced poor audio quality in HFP Skype calls, When recording a 2 minute session, we confirmed deep fades and lost of audio data	Poor UX	WsP/Win10	None	Not seen uniformly. May be more frequent with this headset
BT-3455	Bluetooth headset keeps connecting/disconnecting	Bluetooth headset keeps connecting/disconnecting	Poor UX	WsP/Win10	N/A	Rare <10% [C]
BT-3543	Stress_CB SUT will device lost (8265 BT) when running stress test	Stress_CB SUT will device lost (8265 BT) when running stress test	Poor UX	WsP/Win10	Cold Boot	Only seen with customer test tool [C]

Corrected Issues – 20.30 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-2739	Security Vulnerability: DLL Hijacking	All	Resolved elevation of privilege vulnerability in Autorun.exe and Setup.exe for Intel® Wireless products (Intel® Dual-Band Wireless-AC, Intel® Tri-Band Wireless-AC, Intel® Wireless-AC products). CVSSv3 AV:L/AC:L/PR:L/UI:R/S:U/C:H/I:H/A:HSee PSIRT-TA-201711-003, doc id 575910 for more information.
BT-2787	BT would lost or yellow band during Warmboot	JfP2/Win10	Back to back USB wake race condition was making USB to go in bad state. There was timer for 2ms , which was not working as expected. This timer is fixed by putting a HW delay timer. [C]
BT-3142	BT lost when function test	JfP1/Win10	When there is a USB suspend, the UTMI bridge requires the Firmware to provide a 2ms delay before any resume is triggered from the controller. The timer used was not sufficient so the fix was to change to a different timer [C]
BT-3143	BT fail to pair active pen	WsP/Win10	Data length update procedure flag was not getting cleared which was blocking further transactions and connection was failing, which will caused pairing failure. Clearing this flag fixed this issue [C]
BT-3249	Device Compare tool get 3165/ 7265 BT yellow bang when run WB stress test	StP/Win10	Fix was to wake up the USB if it was suspended while doing reset. [C]
BT-3336	BT connected to LE mouse will disappear after S4	JfP1/JfP2 Win10	Same RC as BT-2787 [C]
BT-3471	BT LE Keyboard Does Not Function When Paired After Two Other LE Devices	SfP/Win10	Same RC as BT-3143 [C]
BT-3486	Cannot pair customer Active Stylus Pen	WsP/Win10	Same RC as BT-3143 [C]
BT-3544	Intel 9560 BT show yellow bang after warm boot stress test	JfP2/Win10	Same RC as BT-3142 [C]
BT-3570	Intel 9461_9560 Bluetooth device lost	JfP2/Win10	Same RC as BT-3336 [C]

Corrected Issues – 20.30 PV

ID	Title	NIC OS Observed	Root Cause/Comments [C] customer found
BT-3625	BT shows Yellow Bang in Device Manager while using BT keyboard/mouse	JfP1/win10	Same RC as BT-3143 [C]
BT-3626	Connect MSFT BT 3600 BLE mouse timeout	WsP/win10	Same RC as BT-3142 [C]
BT-3645	Stress_S3/S4_Bluetooth Device disappear during run S3/S4 cycle test	StP/Win10	Correction is to wake up USB if suspended while doing Sx cycles. [C]
BT-3692	Intel Wireless Bluetooth 7265 yellow bang when running S3 stress test	StP/Win10	Same RC as BT-3645 [C]

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.30 PV

ID	Title	Description	NIC OS Observed	Comments

Corrected Issues – 20.20 HF PV

ID	Summary
BT-2739	Resolved elevation of privilege vulnerability in Autorun.exe and Setup.exe for Intel® Wireless products (Intel® Dual-Band Wireless-AC, Intel® Tri-Band Wireless-AC, Intel® Wireless-AC products). CVSSv3 AV:L/AC:L/PR:L/UI:R/S:U/C:H/I:H/A:H – Severity: High. See PSIRT-TA-201711-003, doc id 575910 for more information.

Important Note:

The Bluetooth® driver versions did not have to change from the previous PV release (20.20)

The Autorun.exe and Setup.exe are shared across all drivers for all wireless HW (WkP and newer) in all supported OSes.

Known Issues & Limitations – 20.20 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	MOS score should be 3.5 or greater but in the test case score drops to 2.8	No impact	WsP/SfP/StP2/SdP/Win10	None	Observed during internal COEX stress testing only. Not noticeable to end-users
BT-791	[WSP] Inquiry misses devices about 10% of cycles	While running inquiry scan, not all nearby devices are found. On cycles where all devices are found, the inquiry times meet the KPI targets	Not all BT devices are found	WsP/Win10	None	Tested with BT 15 devices. FR about 10%. Fix planned for 20.30
BT-981	HFP has low audio quality when inquiring during stream	When streaming HFP audio and performing an inquiry the audio starts sporadically skipping	Audio sometimes degraded	WsP/SfP/StP/Win7/Win10	None	RS2 and Win 7 seeing HFP audio stutter when force search for surrounding BT devices. FR 60%
BT-1925	BT mouse is sluggish during skype call and becomes not operational	BT devices connected: HP classic BT mouse, Rapoo E6700 keyboard, Bose sound link headset. while having a skype call the mouse moves a little sluggish, and not operational.	Audio stops	JfP2/ThP2/Win10	None	Still seen but only with one specific mouse
BT-2074	BSOD when LE peripherals are enabled on DUT and connected	When DUT is acting as peripheral and connected from 5 central devices (using apps on smart phones), after about 1 to 3 minutes of being connected, the DUT will bluescreen.	ThP2/Win10	BSOD – Unusual use case	Reboot	Uncommon use case
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	Once 2 LE Peripheral connections are established, attempting to pair a LE device will result in the "That didn't work" error message.	Poor UX	SdP/SfP/WsP	No workaround if a third LE connection required	Failure rate is high, ~75%
BT-2304	Existing connections disconnect when trying to add new LE connections	When trying to add 2nd LE connections, the existing connections get disconnected	Poor UX	WsP/Win10	Repair with fewer connections if will add 2 or more BLE connections	Low repro rate
BT-2787	BT lost or yellow band during Warmboot	BT Lost" and "BT Yellow Band" symptom could duplicate after resume from warm boot/ S3/ S4	Poor UX	JfP2/Win10	Reboot system	Failure observed after the 100 th iteration [C]

Known Issues & Limitations – 20.20 PV (cont.)

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments [C] customer found
BT-3051	No Bluetooth device appear under device manager , but WIFI is good	Power on GLK ;Check the device manager; Cannot find BT device from device manager , but wifi is ok	Poor UX	JfP2/Win10	None	Only seen on GLK. Under investigation [C]
BT-3104	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	When WiFi is connected to low band (CH1) user can not connect a BLE mouse	Poor UX		Switch WiFi to another channel	Only seen with fresh OS install
BT-3142	BT lost when function test	After installation and begin BT functional testing BT will be lost, we find taskbar no BT icon; BT settings no turn on/off item; DMhave no BT HW and Universal Serial Bus controllers have one unknown USB YM	Poor UX	JfP1/Win10	Re-pair mouse	Relatively low FR 10% [C] Disabling selective suspend can avoid the issue but this is only a temp. solution.
BT-3143	BT fail to pair active pen	Can't pair successfully and show error	Poor UX	WsP/Win10	Reconnect Pen	Root caused and planned for 20.30 [C]
BT-3181	BT Mouse not able to wake system from S4 using WoBT	Mouse not able to wake system from S4(WoBT) on GLK platform using JfP2. Issue happens with just LE mice	Poor UX	JfP1/JfP2/Win10	None	Only observed on GLK
BT-3336	BT connected to LE mouse will disappear after S4	BT connected to LE mouse will disappear after S4	Poor UX	JfP1/JfP2 Win10 RS3	Reboot system	Only seen on JfP1 with MSFT Arc touch Mouse with RS3 on GLK.
BT-3348	LE mice stop working after 10 cycles of S4	When using LE mice and going into an S4 state, coming back after less than 10 cycles the LE mouse will stop functioning.	Poor UX	JfP2/Win10	Power cycle mouse	Seen in lab testing. End-user unlikely to experience.
BT-3399	Poor HFP Skype quality when using Logitech H800 headset	Internal user experienced poor audio quality in HFP Skype calls, When recording a 2 minute session, we confirmed deep fades and lost of audio data	Poor UX	WsP/Win10	None	Not seen uniformly. May be more frequent with this headset
BT-3457	BT lost when running reboot aging	also cannot find BT device in BIOS setup menu	Poor UX	WsP/Win10	None	Testing ongoing. Source of issue unclear [C]

Corrected Issues – 20.20 PV

ID	Title	Description	NIC OS Observed	Root Cause/Comments [C] customer found
BT-2159	HFP stops working after several tests in playback devices	This problem was found when user received a Skype call during playing a video on YouTube	SdP Win10	The resource timer that was used during the eSCO connection creation was expiring prematurely because the sniff-substrate mode was not taken into account while calculating the timeout value. Sniff-substrate mode now taken into account to fix this
BT-2552	BT/WiFi COEX TPT fail on bluetooth	Still open in Jira	WsP Win10	Addressed by DCR 5168 [C]
BT-2941	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion	SdP Win10	The variable used was sometimes not updated in the scheduler properly, causing the file transfer to halt prematurely. A code change was made so that the variable was updated properly
BT-2993	Bluetooth yellowbangs with code 43 during wake-on-BT test	Bluetooth disappears while waking the system from S4 using a BT mouse	JfP1/ThP2 Win10	Insufficient memory allocated. Fixed by increasing allocated memory. Also fixed with same root cause (BT-2972)
BT-3119	BT driver reloads and YB on devices paired in Device manager after RfKill,S4,S5W,S5C	BT driver reloads in Device manager and YB on Devices after Power cycles. Not all the devices paired work properly	ThP2 Win10	Memory allocation issue during a copy procedure. Fix was to correct the allocation. Also fixed with same root cause (BT-3112, BT-2962,BT-306)
BT-3420	Wrong TIC # is shown in the control panel	Details: The TIC # which is shown in the bottom of control panel is different from actual SW package's TIC #.	Win10	Build related issue due to manual change

Issues no longer observed/Closed for other reasons/Non-Intel BT - 20.20 PV

ID	Title	Description	NIC OS Observed	Comments
BT-3196	BT driver lose from Device Manager after restarting unit.	GM and OOBE, boot to OS; Restarting unit; Find BT driver is missing from DM.	StP Win10	No longer observed by customer[C]
BT-3249	Device Compare tool get 3165/ 7265 BT yellow bang when run WB stress test	Device Compare tool get 3165 BT yellow bang when run WB stress.	StP Win10	Information points to a non-Intel issue. Waiting for customer feedback [C]
BT-3217	BT disappear and WiFi YB during S3 aging	We find a BT YB issue when we run S3 aging.	JfP2 win10	Source is not within Intel BT. Issue went to Intel ME [C]
BT-3232	Bluetooth Yellow bang occurs after turning bluetooth off and on	Yellow bang occurs on BT device after turn BT off and on	JfP2 Win10	Issue not seen on QS sample [C]

Corrected Issues – 20.10 HF PV

ID	Title	Description	NIC OS Observed	Root Cause/Comments
BT-2766	v20.10.0.2 BT driver uninstall is abnormal	BT driver uninstall is abnormal, it requires more than 3 minutes to complete, and sometimes cannot uninstall successfully from the device manager	StP/Win10	EPO not returning to idle state if port reset was issued in the middle of a HCI command

Known Issues & Limitations – 20.10 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	MOS score should be 3.5 or greater but in the test case score drops to 2.8	No impact	WsP/SfP/StP2/SdP/Win10	N/A	Observed during internal COEX stress testing only. Not noticeable to end-users
BT-981	HFP has low audio quality when inquiring during stream	When streaming HFP audio and performing an inquiry the audio starts sporadically skipping	Audio sometimes degraded	WsP/SfP/StP/Win7/Win10	N/A	RS2 and Win 7 seeing HFP audio stutter when force search for surrounding BT devices. Failure rate 60%
BT-1925	BT mouse is sluggish during skype call and becomes not operational	BT devices connected: HP classic BT mouse, rapoo E6700 keyboard, bose sound link headset. while having a skype call the mouse moves a little sluggish, and not operational. The call can't be hung up (even if the other user hangs up). further more, about 5 sec after the call stated, Audio (HFP) stopped working.	Audio stops	JfP2/ThP2/Win10	N/A	Still seen but only with one mouse
BT-2074	BSOD when LE peripherals are enabled on DUT and connected	When DUT is acting as peripheral and connected from 5 central devices (using apps on smart phones), after about 1 to 3 minutes of being connected, the DUT will bluescreen.	ThP2/Win10	BSOD – Unusual use case	Reboot	Uncommon use case
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	Once 2 LE Peripheral connections are established, attempting to pair a LE device will result in the “That didn’t work” error message.	Poor UX	SdP/SfP/WsP	No workaround if a third LE connection required	Failure rate is high, ~75%
BT-2159	HFP stops working after several tests in playback devices	This problem was found when user receive Skype call during playing YouTube	Audio stops	SdP/Win10	Restart HID device	Need to switch back and forth between playback devices in order for this to occur. Less likely use scenario. Will be fixed in 20.20

Known Issues & Limitations – 20.10 PV (cont.)

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments
BT-2304	Existing connections disconnect when trying to add new LE connections	When trying to add 2nd LE connections, the existing connections get disconnected	Poor UX	WsP/Win10	Repair with fewer connections if will add 2 or more BLE connections	Low repro rate
BT-2941	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion.	Poor UX	SdP/Win10	N/A	Same RC as BT-1673. Will be fixed in 20.20 for SdP
BT-3181	BT Mouse not able to wake system from S4 using WoBT	Mouse not able to wake system from S4(WoBT) on GLK platform using JfP2. Issue happens with just LE mice	Poor UX	JfP1/JfP2/Win10	N/A	Only observed on GLK- Bios fix coming from platform team
BT-3336	BT connected to LE mouse will disappear after S4	BT connected to LE mouse will disappear after S4	Poor UX	JfP1/JfP2 Win10 RS3	Reboot system	Only seen on JfP1 with MSFT Arc touch Mouse with RS3 on GLK. Planned for 20.20 and/or HF
BT-3348	LE mice stop working after 10 cycles of S4	When using LE mice and going into an S4 state, coming back after less than 10 cycles the LE mouse will stop functioning.	Poor UX	JfP2/Win10	Power cycle mouse	Seen in lab testing. End-user unlikely to experience.

Corrected Issues – 20.10 PV

ID	Title	Description	NIC OS Observed	Root Cause/Comments
BT-1673	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion.	ThP2/WsP SfP/SdP Win10	The variable used was sometimes not updated in the scheduler properly causing file transfer to halt prematurely. A code change was made so that the variable was updated properly.
BT-1687	Poor Audio quality in Skype HFP calls	Audio interference is sometimes such that user has to switch to a USB headset	WsP/SfP StP2/SdP Win10	Channel mapping changes (AFH) made in FW were not propagated correctly within the system. Code was changed to fix the propagation issue. Found in internal test.
BT-1673 BT-1517	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion.	WsP/SfP SdP/Win10	Coding error in scheduler caused the incorrect ARQN bit to be updated. Coding error was corrected. Found in internal test.
BT-1737	Bad audio (A2DP) quality when user works with BLE mouse	Sometimes impossible to hear music at all. If user close BLE mouse, A2DP profile works properly.	WsP/SfP Win10	Priority contention between LE mouse packets and A2DP packets in poor RF environment. A modification was made to ensure both connections get processed in a timely manner under all RF conditions. Found in internal test.
BT-1872	Typing words delays when connecting both Logitech K780 Keyboard and Logitech M337 mouse	The issue can only be reproduced when connecting both below bluetooth devices: Logitech K780 Multi-Device Wireless Keyboard https://www.logitech.com/zh-tw/product/k780-multi-device-wireless-keyboard Logitech M337 mouse https://www.logitech.com/zh-tw/product/bluetooth-mouse-m337	SfP/Win10	Priority handling of LE and BR/EDR was set so that sometimes BR/EDR would not get processed in a timely fashion. Fix was to change the this priority handling so that BR/EDR would get processed reliably. Found in internal test.
BT-1939	Unknown USB device under device manager after reboot system then disable/enable BT	Unknown USB device under Device Manager after reboot system or disable/enable BT	WsP/SdP Win10	USB EP0 not returning to idle state if port reset was issued in the middle of a HCI command. Code changed to correct. Customer found.
BT-2034	HFP+HID Audio choppy or HID Mouse lags	HFP audio is distorted while playing audio through Hands free playback option and using HID mouse. This setup does not use Skype or Wifi	SfP Win7/win10	CVSD re-transmission bit was getting set for the first SCO packet that was sent in the re-transmission slot. This was corrected. Found in internal test.
BT-2143	Bluetooth LE mouse is sluggish or non-responsive when SCO active	LE connection is dropped some time after A2DP streaming starts. After this point, despite several connectable advertisements and connection requests, the LE connection fails to be re-established.	WsP/Win10	Near Synch was cancelling the LE job. SW changed to correct. Found in Internal test.

Corrected Issues – 20.10 PV (cont.)

ID	Title	Description	NIC OS Observed	Root Cause/Comments
BT-2169	Classic HID and LE devices fail to reconnect after idle during Skype call	When classic HID or LE devices are left to go idle during a skype call, they cannot reconnect from idle until the skype call is ended	SdP/StP Win7/Win10	Scanning algorithm in this scenario was insufficient. SW changed to a more effective scan. Found in Internal test.
BT-2333	Bluetooth turns on automatically after RFKill with Audio streaming	Bluetooth spontaneously returns after RF Kill when streaming A2DP audio. After ~5 seconds, bluetooth will turn on automatically and begin streaming. RF Kill cannot be used again for a minute or two after BT returns.	SfP/Win10	Memory exception was due missing NULL check. Fix was to add the check. Found in Internal test.
BT-2990 BT-2604	Bluetooth disappears when connected to LE devices during idle	When leaving LE mouse (Microsoft Arc Touch) & LE keyboard (Microsoft Surface) idle, as soon as devices enter low-energy mode during idleness (status showing paired instead of connected) - devices become unresponsive and Bluetooth disappears	JfP1/Win10	This was caused by a race condition between remote wake up during USB partial power down. The code has been changed so that the race condition is avoided.
BT-2993	Bluetooth yellowbangs with code 43 during wake-on-BT test	Bluetooth disappears while waking the system from S4 using a BT mouse	ThP2/Win10	Incorrect handling of event buffers. Logic issue was corrected
BT-3034 BT-2504	LE devices having issues pairing/connecting	BLE devices are frequently unable to pair, and when they do pair the mouse cursor doesn't move.	JfP1/ThP/ Win10	Race condition where the LE link parameters were not cleared properly during disconnection before the next connection takes place.
BT-3054 BT-2344	BT shows YB in DM and malfunction after BT switch off/on	Verify device can be turned OFF by native application or system network setting. While OFF, verify device is removed from device manager. Turn device ON and check DM, YB is displayed.	JfP2/Win10	Issue was traced to unnecessary calibration of an external crystal. The crystal had already been calibrated by the WiFi side and the BT calibration was causing clock drift. The fix was to remove this BT calibration step.
BT-2034 BT-2504	HFP+HID Audio choppy or HID Mouse lags	HFP audio is distorted while playing audio through Hands free playback option and using HID mouse. This setup does not use Skype or Wifi	JP2/ThP2/SfP Win7/win10	A bit related to retransmission was getting set incorrectly and this caused the state machine to misbehave. The code was changed so that this incorrect bit setting no longer happens.

Corrected Issues – 20.10 PV (cont.)

ID	Title	Description	NIC OS Observed	Root Cause
BT-1985 BT-2004	Customer application sometimes can't receive any ADV packets for over one minute while doing file transfer through WiFi/ BLE scanner is hard to receive advertisement packets from remote DUT for 1 min	Multi-advertise packets sometimes hard to be received in very noisy environment	WsP/Win10	Fixed by WIFIWIN-3544
BT-3310	BT LED fail to work (when BT enable + WIFI disable , HP Wireless button still show amber)	The LED is not properly reflecting the customer requirements when BT is off.	WsP/Win10	Merge error. Logic was corrected.

Issues no longer observed/Closed for other reasons/Non-Intel - 20.20 PV

ID	Title	Description	NIC OS Observed	Comments
BT-1684	Platform usb hid devices stuck after LE keyboard keys stopped responding	While watching YouTube movies, and all other devices connected. From time to time using LE keyboard. At some point keyboard volume up and down stopped responding.	WsP/SfP/ Win10	Only seen on some platforms. Likely MSFT issue
BT-1714	A2DP will be laggy during WiFi Tx Traffic on 2.4Ghz Band	Glitches/audio gaps happen randomly during the WiFi download	StP2/WsP/ Win10	About 3 or 4 glitches per minute
BT-2200	BSOD while switching between two paired/connected headphones	Sometimes the switch between headsets will require multiple tries before the BSOD occurs	WsP/SfP/ Win10	Seen roughly 20% of the time
BT-2301	Unable to send a file to unpaired devices	When trying to send a file from the DUT to an unpaired BTOE, the devices will pair however the file will fail to send.	Can't send file as expected	
BT-2344 BT-2226	Bluetooth disappears after returning from Hibernate with Mouse Active/Idle/BT devices stop working after being idle	Bluetooth disappeared when mouse was left idle for a few minutes. The platform had gone into a few hibernate cycles just before BT disappeared	ThP2/JfP2/ Win10	Seen randomly during S5 and connected standby testing
BT-3308	Intel JFP BT installation issue on RS3	Intel BT installation issue on RS3driver 20.0.0.10SBIOS: 002.T24	JfP2/Win10	

Known Issues & Limitations – 20.10 PV

ID	Title	Description	Impact on the user	NIC OS Observed	Workaround / Recovery procedure	Comments
BT-143	HID lag/MOS degradation/WiFi tput under some conditions	MOS score should be 3.5 or greater but in the test case score drops to 2.8	No impact	WsP/SfP/StP2/SdP/Win10	N/A	Observed during internal COEX stress testing only. Not noticeable to end-users
BT-981	HFP has low audio quality when inquiring during stream	When streaming HFP audio and performing an inquiry the audio starts sporadically skipping	Audio sometimes degraded	WsP/SfP/StP/Win7/Win10	N/A	RS2 and Win 7 seeing HFP audio stutter when force search for surrounding BT devices. Failure rate 60%
BT-2159	HFP stops working after several tests in playback devices	This problem was found when user receive Skype call during playing YouTube	Audio stops	SdP/Win10	Restart HID device	Need to switch back and forth between playback devices in order for this to occur. Less likely use scenario.
BT-2304	Existing connections disconnect when trying to add new LE connections	When trying to add 2nd LE connections, the existing connections get disconnected	Poor UX	WsP/Win10	Repair with fewer connections if will add 2 or more BLE connections	Low repro rate
BT-2138	LE devices fail to pair after 2 LE Peripheral connections have been established	Once 2 LE Peripheral connections are established, attempting to pair a LE device will result in the "That didn't work" error message.	Poor UX	SdP/SfP/WsP	No workaround if a third LE connection required	Failure rate is high, ~75%
BT-2941	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion.	Poor UX	SdP	N/A	Same RC as BT-1673. Will be fixed in 20.20 for SdP

Corrected Issues – 20.10 PV

ID	Title	Description	NIC OS Observed	Root Cause/Comments
BT-1687	Poor Audio quality in Skype HFP calls	Audio interference is sometimes such that user has to switch to a USB headset	WsP/SfP StP2/SdP Win10	Channel mapping changes (AFH) made in FW were not propagated correctly within the system. Code was changed to fix the propagation issue. Found in internal test.
BT-1673	OPP(recv) fails to complete when streaming HFP audio from DUT	When receiving files on DUT with HFP audio streaming, file transfer progress halts roughly half-way through completion.	WsP/SfP SdP/Win10	Coding error in scheduler caused the incorrect ARQN bit to be updated. Coding error was corrected. Found in internal test.
BT-1737	Bad audio (A2DP) quality when user works with BLE mouse	Sometimes impossible to hear music at all. If user close BLE mouse, A2DP profile works properly.	WsP/SfP Win10	Priority contention between LE mouse packets and A2DP packets in poor RF environment. A modification was made to ensure both connections get processed in a timely manner under all RF conditions. Found in internal test.
BT-1872	Typing words delays when connecting both Logitech K780 Keyboard and Logitech M337 mouse	The issue can only be reproduced when connecting both below bluetooth devices: Logitech K780 Multi-Device Wireless Keyboard https://www.logitech.com/zh-tw/product/k780-multi-device-wireless-keyboard Logitech M337 mouse https://www.logitech.com/zh-tw/product/bluetooth-mouse-m337	SfP/Win10	Priority handling of LE and BR/EDR was set so that sometimes BR/EDR would not get processed in a timely fashion. Fix was to change the this priority handling so that BR/EDR would get processed reliably. Found in internal test.
BT-1939	Unknown USB device under device manager after reboot system then disable/enable BT	Unknown USB device under Device Manager after reboot system or disable/enable BT	WsP/SdP Win10	USB EP0 not returning to idle state if port reset was issued in the middle of a HCI command. Code changed to correct. Customer found.
BT-2034	HFP+HID Audio choppy or HID Mouse lags	HFP audio is distorted while playing audio through Hands free playback option and using HID mouse. This setup does not use Skype or Wifi	SfP Win7/win10	CVSD re-transmission bit was getting set for the first SCO packet that was sent in the re-transmission slot. This was corrected. Found in internal test.
BT-2143	Bluetooth LE mouse is sluggish or non-responsive when SCO active	LE connection is dropped some time after A2DP streaming starts. After this point, despite several connectable advertisements and connection requests, the LE connection fails to be re-established.	WsP/Win10	Near Synch was cancelling the LE job. SW changed to correct. Found in Internal test.

Corrected Issues – 20.10 PV










ID	Title	Description	NIC OS Observed	Root Cause/Comments
BT-2169	Classic HID and LE devices fail to reconnect after idle during Skype call	When classic HID or LE devices are left to go idle during a skype call, they cannot reconnect from idle until the skype call is ended	SdP/StP Win7/Win10	Scanning algorithm in this scenario was insufficient. SW changed to a more effective scan. Found in Internal test.
BT-2333	Bluetooth turns on automatically after RFKill with Audio streaming	Bluetooth spontaneously returns after RF Kill when streaming A2DP audio. After ~5 seconds, bluetooth will turn on automatically and begin streaming. RF Kill cannot be used again for a minute or two after BT returns.	SfP/Win10	Memory exception was due missing NULL check. Fix was to add the check. Found in Internal test.

Issues no longer observed/Closed for other reasons/Non-Intel - 20.10 PV






ID	Title	Description	NIC OS Observed	Comments
BT-1684	Platform usb hid devices stuck after LE keyboard keys stopped responding	While watching YouTube movies, and all other devices connected. From time to time using LE keyboard. At some point keyboard volume up and down stopped responding.	WsP/SfP/ Win10	Closed as MSFT issue.
BT-1714	A2DP will be laggy during WiFi Tx Traffic on 2.4Ghz Band	Glitches/audio gaps happen randomly during the WiFi download	StP2/WsP Win10	No longer observed. Still seen on StP2 (ROM part), not a regression. Will not fix on StP2 due to no patch space and no root cause on WsP.
BT-1985	Customer application sometimes can't receive any ADV packets for over one minute while application doing file transfer through WiFi	Multi-advertise packets sometimes hard to be received in very noisy environment	WsP/Win10	This was fixed by a change in the Intel WiFi SW (WiFIWIN-3544) Not a BT issue.
BT-2200	BSOD while switching between two paired/connected headphones	Sometimes the switch between headsets will require multiple tries before the BSOD occurs	WsP/SfP/ Win10	MSFT issue to be fixed in RS4. Closed as 3 rd party.
BT-2301	Unable to send a file to unpaired devices	When trying to send a file from the DUT to an unpaired BTOE, the devices will pair however the file will fail to send.	SfP/Win10	No longer seen with latest RS3

UWD Installation Information – Where to find it











Directory structure after unzipping the VIP software zip file

<input type="checkbox"/> Name	Date modified	Type
 INF_INSTALL	11/18/2017 11:27 AM	File folder
 Win7	11/18/2017 11:27 AM	File folder
 Win8.1	11/18/2017 11:27 AM	File folder
 Win10	11/18/2017 11:27 AM	File folder
 Autorun.exe	11/14/2017 11:03 AM	Application
<input type="checkbox"/>  Autorun.inf	11/18/2017 11:17 AM	Setup Information
 Manifest.json	11/18/2017 11:11 AM	JSON File
 MWG_ProductionOutBoundLicense11-2-17-...	11/14/2017 10:56 AM	PDF File
 verfile.tic	11/18/2017 11:32 AM	TIC File

Win10_UWD directory structure below INF_Install

<input type="checkbox"/> Name	Date modified
 Win10	11/18/2017 11:27 AM
<input checked="" type="checkbox"/>  Win10_UWD	11/18/2017 11:27 AM
<input type="checkbox"/> Name	Date modified
 x64	11/18/2017 11:27 AM
 x86	11/18/2017 11:27 AM
<input type="checkbox"/> Name	Date modified
 ibtusb	11/18/2017 11:27 AM

Choose the relevant directory and select ibtusb.inf

<input type="checkbox"/> Name	Date modified	Type
 JFP	11/18/2017 11:27 AM	File folder
 SDP	11/18/2017 11:27 AM	File folder
 SFP	11/18/2017 11:27 AM	File folder
 STP	11/18/2017 11:27 AM	File folder
 THP	11/18/2017 11:27 AM	File folder
 WSP	11/18/2017 11:27 AM	File folder
<input type="checkbox"/> Name	Date modified	
 ibtfw.dat	11/17/2017 4:53 PM	
 ibtusb.cat	11/17/2017 4:53 PM	
 ibtusb.inf	11/17/2017 4:53 PM	
 ibtusb.sys	11/17/2017 4:53 PM	



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