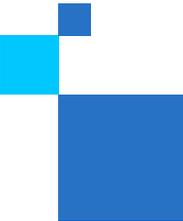# Intel® PROSet/Wireless Bluetooth® Software Version 22.160 PV Release

Wireless Solution Group

WW35' 22

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Release Overview

- Intel is pleased to announce the 22.160 Production Version (PV) release of the Intel® PROSet/Wireless Bluetooth® Software.

  - This driver version is a resigned version of 22.160.0.3 PV release to alleviate the 3rd party issue KB5017241 (See details in slide 7)

  - This version supports ADL, KBL, GLK, CNL, CFL, WHL, AML, CML, ICL, LKF, TGL, RKL, JSL platforms.

  - This software package includes drivers for the following devices: JnP2, GfP4, GfP2,TyP2, HrP2, CcP2, CcP2 UART, ThP2, JfP2, JfP1, SfP, WsP, SdP & StP.

  - This release contains certified drivers for RS5 (limited to TyP2/JfP/ThP2), Windows 10 and Windows 11 – **see details in** slide 5.

  Note: Intel releases OS compliant drivers only upon the availability of the RTM release. This version is intended to enable OEM testing on Windows 11 22H2 Update (aka SV2). OEMs should be aligned to MSFT Global Availability (GA) timeline

  Important: The <u>only</u> difference between this PV release (22.160.0.4) and the previous PV release (22.160.0.3) are the new driver signatures (.CAT files). Driver versions were increased for upgradeability. For more information, see KB5017241—Some hardware drivers are not properly signed (microsoft.com)

General Information

Driver Version

TIC	
File Name	PHBTW62363_22.160.0.4
	PHBTW62363_22.160.0.4G.zip
22.160.0.4	GfP4/GfP2/HrP2/TyP2/CcP/CcP2 UART/JfP1/JfP2/JnP2/ThP2/WsP/SfP
20.100.10.9	64-bit StP/SdP
20.100.9.7	32-bit StP/SdP

Supported Operating Systems
(Please see slide 5 for OS Version support per HW)

Windows 10 October 2018 Update (RS5)

Windows 10 May 2020 Update (20H1)

Windows 10 October 2020 Update (20H2)

Windows 10 May 2021 Update (21H1)

Windows 11 October 2021 (Cobalt)

Windows 11 22H2 Update (SV2)

Tested Platforms

Alder Lake

Tiger Lake (TGL)

Jasper Lake (JSL)

Rocket Lake (RKL)

Lakefield (LkF)

Kaby Lake (KbL) / Kaby Lake refresh (KbL-R)

Apollo Lake (ApL)

Sky Lake (SkL)

Broadwell (BDW)

Gemini Lake (GLK) / Gemini Lake Refresh (GLK-R)

Cannon Lake (CNL)

Coffee Lake (CFL)

Whiskey Lake (WHL)

Amber Lake (AML)

Ice Lake (ICL)

Comet Lake (CML)

Supported Hardware

Johnson Peak2 (GfP2)/AX203

Garfield Peak4 (GfP4)/AX411

Garfield Peak2 (GfP2)/AX211

Typhoon Peak 2 (TyP2)/AX210

Typhoon Peak 2 embedded (TyP2)/AX210-embedded

Harrison Peak2 (HrP2)/AX201

Cyclone Peak 2 (CcP2)/AX200

Cyclone Peak 2 UART (CcP2)/AX200

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

Oak Peak (OkP)/18265

Douglas Peak (DgP)/18260 (WiGig)

Maple Peak (MpL)/17265 (WiGig)

Stone Peak 2 D0 (StP2)/7265/Stone Peak 1 (StP1)/3165

22.160 PV Release – Bluetooth® POA Driver Matrix

- The starred(*) version numbers indicate the SW has an updated version in this release when compared with the previous PV Release, while the colors are used to group similar versions.

HW SKU	Win 10/11 UWD Version	Supported operating Systems			
		RS5	Win 10 20 H1/H2 and 21H1/H2	Windows 11 (Cobalt)	Windows 11 (SV2)
GfP4 AX411	22.160.0.4*	✗	✓	✓	✓
GfP2 AX211	22.160.0.4*	✗	✓	✓	✓
TyP2 AX210	22.160.0.4*	✓	✓	✓	✓
HrP2 AX201	22.160.0.4*	✗	✓	✓	✓
JnP2 AX203	22.160.0.4*	✗	✓	✓	✓
CcP2 AX200	22.160.0.4*	✗	✓	✓	✓
CCP2 AX200 UART†	22.160.0.4*	✗	✓	✓	✓
Quasar+JfP1/9461/9462	22.160.0.4*	✓	✓	✓	✓
Quasar+ JfP2/9560	22.160.0.4*	✓	✓	✓	✓
Pulsar + JfP1/9461/9462	22.160.0.4*	✓	✓	✓	✓
Pulsar + JfP2/9560	22.160.0.4*	✓	✓	✓	✓
ThP2/9260	22.160.0.4*	✓	✓	✓	✓
WsP/8265	22.160.0.4*	✗	✓	✓	✓
SfP/8260	22.160.0.4*	✗	✓	✓	✓
64-bit StP1/3165 , StP2-D/7265 , SdP/3168	20.100.10.9	✗	✓	✓	✓
32-bit StP1/3165 , StP2-D/7265 , SdP/3168	20.100.9.7	✗	✓	✗	✗

DCRs and New Features – 22.160 PV

DCR #	Description	Improvements/Feature Benefits	Relevant HWs
		No Changes as compared to PHBTW62363_22.160.0.4	

Key Corrected Issues in 22.160 PV Release

Key	Headline	Reported HW	Description	Domain of the Issue
NA	New signature. Driver version increased.	All	Mitigation for MSFT KB: KB5017241—Some hardware drivers are not properly signed (microsoft.com)	3rd party issue

[c]indicate issues reported by *customers.*

Known Issues and Limitations – 22.160.0.4 PV

ID	Applicable for		Summary	Is a 3rd Party Issue?	Impact on the user	NIC /OS Observed	Workaround Recovery procedure	Comments	Impacted Functional Area
	USB	UART							
BT-63176	✓	NO	Sometimes a BTOE LE device may suddenly disconnect.	NO	UX	CcP2/HrP2/ Win 10	Device recovers automatically		HID

[c] Issues reported by customers   [N] Issues reported for the first time in this release note

Additional Notes

Changes applicable from 22.90 PV and later

- Layout Changes:
- Non-UWD drivers are removed.
- iBTSIVA is no longer included.
- 32-bit Stp/SdP UWD drivers are introduced in lieu of 32-bit non-UWD drivers.

Changes applicable from 22.50 PV and later

- Intel Wireless (Wi-Fi and Bluetooth®) Connectivity layout will include all third-party licensing information, which may include wireless software components, from one or more third parties, including third party copyright information addressing any specific terms to be transferred to Intel partners.

<u>Impact on OEMs:</u>
- No impact. The Layouts will include a dedicated folder containing all Non-Intel licenses

<u>Layout update reason</u>
- This change was done based on Intel legal requirement

Additional Notes (Cont.)

For Customers using UART Solution, Following is applicable from 22.20 PV and later

- Ibtserialbus.inf will be merged into Ibtuart.inf, and hence there would be only one INF file from the 22.20 PV release onwards.
- UART drivers will no longer be part of the non-UWD folders. Subsequently, UART drivers will only be delivered as part of UWD folders in Generic Layout Package.

Older Notes

- Please note that starting from 21.120 PV release Remote Wakeup Extension File is no more resold to customers. Please refer to the TA titled: "REMOVAL OF Remote Wakeup Extension INF from Intel® Bluetooth® Software release" dated July 2020.
- The IBTSIVA is ON by default for all HW/SW combinations except for the DCH releases.
- Extension INF files are the method to enable services and install options in DCH 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.

Intel Bluetooth® SW Release Kit Contents

File Name	Description	
PHBTW62363_22.160.0.4G.zip	BT SW installation files for Generic Layout	
	Utilities/Ibterverify (==Version 1.3.0==)	Tool for verification of BT Error recovery (Refer TA Document No: 616292).
	Intel Bluetooth OEM Tools.msi	*Bluetooth® Test mode driver Installer for DRTU Installation. Please refer latest version of DRTU Install manual.*
Others	1. Release note 2. Installation guide 3. License agreements	

==**Ibterverify version compatibility:**== Bluetooth® 22.160.0.4 requires ibterverify ==*Version 1.3.0*== to evaluate PLDR support/implementation included in this package.

Abbreviations

Acronym	Codename	Intel product name
GfP4	Garfield Peak 4	Intel® Wi-Fi 6E AX411
GfP2	Garfield Peak 2	Intel® Wi-Fi 6E AX211
TyP2	Typhoon Peak 2	Intel® Wi-Fi 6E AX210
CcP2	Cyclone Peak 2	Intel® Wi-Fi 6 AX200
HrP2	Harrison Peak 2	Intel® Wi-Fi 6 AX201
JfP1- DA	Jefferson Peak 1 Diversity antenna	Intel® Wireless-AC 9462
JfP1- SA	Jefferson Peak 1 Single antenna	Intel® Wireless-AC 9461
JfP2	Jefferson Peak 2	Intel® Wireless-AC 9560
ThP2	Thunder Peak 2	Intel® Wireless-AC 9260
WsP	Windstorm peak	Intel(R) Dual Band Wireless-AC 8265
SdP	Sandy Peak	Intel(R) Dual Band Wireless-AC 3168
StP2	Stone Peak 2	Intel(R) Dual Band Wireless-AC 7265
StP1	Stone Peak 1	Intel(R) Dual Band Wireless-AC 3165
SfP	Snowfield Peak	Intel(R) Dual Band Wireless-AC 8260
WkP2	Wilkins Peak 2	Intel(R) Dual Band Wireless-AC 7260
WkP1	Wilkins Peak 1	Intel(R) Dual Band Wireless-AC 3160

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

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

- ATS – ACL Time Share

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Estimated results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as "Spectre" and "Meltdown". Implementation of these updates may make these results inapplicable to your device or system.

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