

Release Notes

Intel PROSet/Wireless Wi-Fi Software V23.60.1.2 PV Hot Fix Release

Wireless Solutions Group

WW23'24



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Release Overview

- Intel is announcing the 23.60.1.2 Hot Fix Production Version PV release of the Intel® PROSet/Wireless Wi-Fi Software.
 - This version is a maintenance release that addresses known issues reported in previous software versions.
 - The complete list of supported platform/HW/OS appear in page #4.
 - The NetAdapter driver (NETwaw16.sys, NETwaw14.sys) for GaP2/MtP2/GfP4 works only with Windows 11.
 - **This release include certified drivers for Windows 11 2024 Update (aka Germanium). Please see slide 4**
 - Note: This version is intended to enable OEM testing on the Windows 11 2024 Update (aka Germanium). OEMs should align with the Microsoft Global Availability (GA) timeline.
 - Intel's Wi-Fi 7 product (GaP2) supports Wi-Fi6E + 320MHz/4K QAM by default when connecting to a Wi-Fi7 AP. An Extension INF file can disable Wi-Fi6E + 320MHz/4K QAM (EHT) rates.

General Information

Driver Version		OS
TIC	SBHFWF011112_23.60.1.2	
23.60.1.2	GaP2, MtP2, TyP2, GfP2	Win10 RS5, 20H1/2, 21H1/2, 22H2 Win11 October 2021, 22H2 Update (SV2), Windows 11 22H2 May CI, 23H2, 24H2
23.50.0.7	GfP4, HrP1/2, JnP2, TyP2(Solar), GfP2(Solar)	
22.180.24.2	JfP1/2, CcP2, HrP1/2, JnP2	
21.80.38.3	JfP1, JfP2, ThP2	

Supported Operating Systems

Windows 10 October 2018 Update (RS5)
NetWTw08/10 drivers only

Windows 10 May 2020 Update (20H1)

Windows 10 October 2020 Update (20H2)

Windows 10 Update (22H2)

Windows 11 October 2021 Update (aka Cobalt)

Windows 11 22H2 Update (aka Sun Valley 2)

Windows 11 22H2 May CI

Windows 11 23H2 Update

Windows 11 24H2 Update (aka Germanium)

Supported Hardware	Platform
Gale Peak 2 (GaP2)/BE200	According to POR as described in 601177 5Q CCG Wireless Roadmap Platform Matrix
Misty Peak 2 (MtP2)/BE202	
Garfield Peak 4 (GfP4)/AX411	
Garfield Peak 2 (GfP2)/AX211	
Typhoon Peak 2 (TyP2)/AX210	
Typhoon Peak 2 embedded (TyP2)/AX210-embedded	
Typhoon Peak 2 industrial (TyP2)/AX210-industrial	
Harrison Peak1 (HrP1)/AX101	
Harrison Peak2 (HrP2)/AX201	
Johnson Peak2 (JnP2)/AX203	
Cyclone Peak 2 (CcP2)/AX200	
Thunder Peak2 (ThP2)/9260	
Jefferson Peak2 (JfP2)/9560	
Jefferson Peak1 (JfP1)/9461/9462	

23.60.1.2 Hot Fix Release – Wi-Fi Package Layout

- The **Green** areas indicate the new SW in this release (23.60.1.2).

Inf	Module	Windows* 11
Netwtw6e.INF	GaP2 BE200 MtP2 BE202	23.60.1.2 NETwaw16.sys (NetAdapter)
Netwtw6e.INF	GfP2 AX211 TyP2 AX210	23.60.1.2 NETwtw16.sys (WDI)
Netwtw6e.INF	Solar GfP4 AX411	23.60.1.2 NETwaw14.sys (NetAdapter) (23.50.0.7)
Netwtw6e.INF	Solar GfP2 AX211 Solar TyP2 AX210	23.60.1.2 NETwtw14.sys (WDI) (23.50.0.7)
Netwtw08.INF	HrP1 AX101 HrP2 AX201 JnP2 AX203	
Netwtw08.INF	CcP2 AX200	23.60.1.2 NETwtw10.sys (22.180.24.2)
	Quasar+HrP1 AX101/ HrP2 AX201/ JnP2 AX203	
	Solar / Quasar JfP1 9461/9462/ JfP2 9560	
	Pulsar+ JfP1 9461/9462/ JfP2 9560 ThP2 9260	23.60.1.2 NETwtw08.sys (21.80.38.3)

Corrected Customer Issues since 23.60.0.10

23.60.1.2(NETwaw16.sys/NETwtw16.sys) driver only

Key	Headline (as reported)	Reported HW	Description	Issue type
WIFI-415750	Unexpected issue resulting with no traffic recovery after FW assert was found	GaP2/MtP2	For details, please refer to 824203 Intel Wi Fi 23 60 PV Critical Issues Call to Action T A WW22 2024	Performance

DCRs and New Features – 23.60.1.2 PV

DCR #	Description	Improvements	Relevant HWs	Type of improvement
DCR-2752	China (CN/CB profile) & South Korea BIOS possibility to enable 11be	<p>Following DCR-2724 that disabled 11be by default on CN/CB profile, this DCR adding capability to enable 11be CN/CB profile</p> <p>For additional information please see RDC documents : 823344</p> <p>Document Title: Intel® Wireless: Wi-Fi 11be Enablement for China and South Korea Customer Communication</p> <p>Description: Intel® Wireless: Wi-Fi 11be Enablement for China and South Korea</p>	GaP2	Functionality to control country band regulations

Corrected Customer Issues OEM Tools

Key	Headline (as reported)	Description
N/A	N/A	N/A

Extension INF/ Component INF

INF	Version	Summary	HW
PieComponent.inf	23.1060.0.2	PIE is now compiled with EWDK 26100.	See page #4 for supported HW
PieExtension.inf	23.1040.0.1	No changes.	See page #4 for supported HW

Software Known Issues and Limitations – 23.60.1.2

Key	Headline	OS/HW	Notes
N/A	N/A	N/A	N/A

Product Health

Domain	23.60.1.2	Details
Connectivity		
Platform		
Data Path \ TpT		
Miracast		
SoftAP		
BT-Coex		
Wi-Fi Device Power		
Cert (WHQL)		

Legend:

Broken, Not usable

Usable, major issues exist

Usable

Notes on the DDD Debug Layout Usage

- Included with the user distributed layouts is also a DDD debug layout. This layout incorporates debug capabilities to be used by OEM validation teams to provide logs and information about an issue to Intel engineering.
- This layout is not to be included on production systems or to be shared with end-user customers.
- To use the DDD layout, follow the instructions below:
 - 1) Clean the Windows event log by the following commands with administrator prompt.
 - wevtutilcl system
 - wevtutilcl application
 - wevtutilcl Microsoft-Windows-WLAN-AutoConfig/Operational
 - 2) Install DDD release.
 - 3) Perform test until issue reproduction.
 - 4) Note down the exact time when issue reproduced.
 - 5) Disable WiFidevice in the device manager.
 - 6) Copy all files below to share with Intel:
 - I. "System.evtx" under C:\Windows\System32\winevt\Logs
 - II. "Application.evtx" under C:\Windows\System32\winevt\Logs
 - III. "Microsoft-Windows-WLAN-AutoConfig%4Operational.evtx" under C:\Windows\System32\winevt\Logs
 - IV. "dddLog_XXX.bin" for ThP/JfP/CcP/HrP is under C:\Windows\Temp\DDDLogs\ (for RS3/RS4) and under C:\Windows\System32\Drivers\DriverData\Intel\Wlan\Out\DDD (for RS5 or later). For legacy devices "dddLog_XXX.bin" is under C:\Windows\Temp\DDDLogs\ (for RS5 or later)
 - V. "MurocLog.log" under C:\Program Files\Intel\WiFi\UnifiedLogging\
 - VI. "MEMORY.DMP" under C:\Windows\System32

Abbreviations

Acronym	Codename	Intel product name
GaP2	Gale Peak 2	Intel® Wi-Fi 7 BE200
MtP2	Misty Peak 2	Intel® Wi-Fi 7 BE202
JnP2	Johnson Peak 2	Intel® Wi-Fi 6 AX203
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
HrP1	Harrison Peak 1	Intel® Wi-Fi 6 AX101
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
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

Glossary

- COEX = Coexistence. This refers to when Bluetooth and Wi-Fi 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 an urgent customer need.
- YB – Yellow exclamation mark in device manager. Indicates that a driver is not functioning properly
- POA – Platform, OS, Adapter e.g. (Meteor lake, win11, GaP) – 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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