Release Notes

Intel PROSet/Wireless WiFi Software V22.70.0.6 PV Release

Wireless Solutions Group

WW29

TABLE OF CONTENTS

Release Overview

- Intel is announcing the 22.70.0.6 Production Version (PV) release of the Intel® PROSet/Wireless WiFi Software.
  - This version is a PV version to support KBL, GLK, CNL, CFL, WHL, AML, CML, ICL, LKF, TGL, JSL, RKL platforms. This version is a maintenance release that addresses known issues reported in previous software versions
  - This software package includes updates in the 22.70.0.6, 21.80.17.1, 20.70.25.2, 19.51.37.2 drivers for the following devices: TyP2, HrP2, CcP2, ThP2, JfP2, JfP1, SfP, WsP, SdP, StP
  - This release introduces certified drivers for Windows 11 October 2021 Update (aka Cobalt)
    - 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 October 2021 Update (aka Cobalt). OEMs should be aligned to MSFT Global Availability (GA) timeline
  - This release contains certified drivers for Windows 10/11 – see details in next slide

General Information

Driver Version		OS
TIC	PHWFW04078_22.70.0.6	**Win10** RS5,19H1/2, 20H1/2, 21H1 **Win11** October 2021
22.70.0.6	JfP1/JfP2/CcP2/ HrP2/TyP2	
21.80.17.1	JfP1/JfP2/ThP2	
20.70.25.2	WsP/SfP	**Win10** 19H1/2, 20H1/2, 21H1 **Win11** October 2021
19.51.37.2	StP/SdP	

Supported Operating Systems
Windows 10 October 2018 Update (RS5) NetWTw08/10 drivers only
Windows 10 April 2019 Update (19H1)
Windows 10 November 2019 Update (19H2)
Windows 10 May 2020 Update (20H1)
Windows 10 October 2020 Update (20H2)
Windows 10 May 2021 Update (21H1)
Windows 11 October 2021 Update (aka Cobalt)

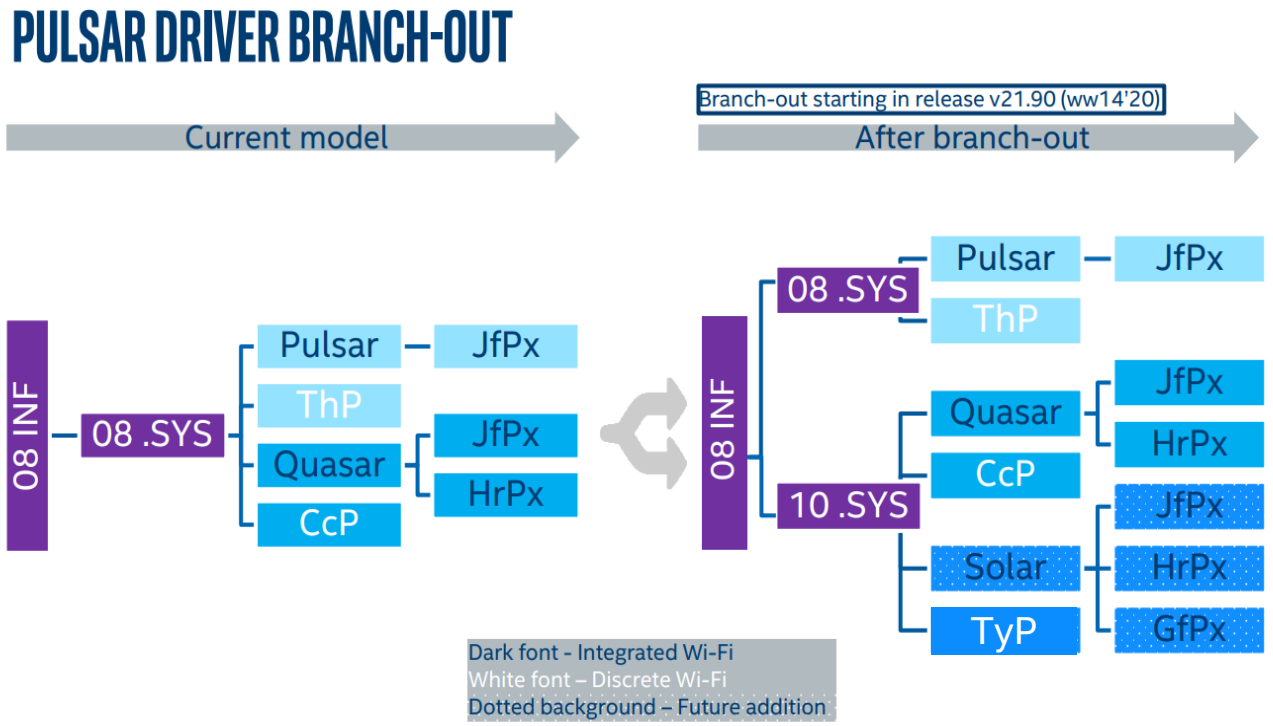
Tested Platforms
Tiger Lake(TGL)
Jasper Lake (JSL)
Rocket Lake (RKL)
Lakefield (LkF)
Kaby Lake (KbL) / Kaby Lake refresh (KbL-R)
Apollo Lake (ApL)
Sky Lake (SkL)
Broadwell (BDW)
Gemini Lake (GLK) / Gemini Lake Refresh (GLK-R)
Cannon Lake (CNL)
Coffee Lake (CFL)
Whiskey Lake (WHL)
Amber Lake (AML)
Ice Lake (ICL)
Comet Lake (CML)

Supported Hardware
Typhoon Peak 2 (TyP2)/AX210
Typhoon Peak 2 embedded (TyP2)/AX210-embedded
Harrison Peak2 (HrP2)/AX201
Cyclone Peak 2 (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

22.70 Version Release – WiFi Package Layout

- The Green areas indicate the new SW in this release (22.70.0.6).

	Win10/11
TyP2 AX210	22.70.0.6 NetWTw10
HrP2 AX201	
CcP2 AX200	
Quasar+ JfP1/9461/9462	
Quasar+ JfP2/9560	
Pulsar + JfP1/9461/9462	22.70.0.6[1] NetWTw08 (21.80.17.1)
Pulsar + JfP2/9560	
ThP2/9260	
WsP/8265	20.70.25.2 NetWTw06
SfP/8260	
SdP/3168	19.51.37.2 NetWT(n/w)04
StP1/3165	
StP2-D/7265	



- [1]. Please note: Since 22.70 and 21.80 drivers use same inf, device manager properties will show 22.70.0.6 driver. Relevant sys file (netwtw08.sys-21.80.17.1) shown at "driver file details".

Corrected Customer Issues since 22.60.1.2

22.70.0.6 driver only

Key	Headline	Reported HW	Description	Issue type
WIFI-119886	[TGL/AX201/20H2] Miracast use CH165 which is not supported by the TV	TGL+ HrP2	**Root cause :** first GO connection was in parallel to BSS - thus certain channel was chosen. second connection - we wrongly kept the channel from previous connection, so non-supported channel is wrongly chosen **Fix:** do not preserve any info between connections	Functionality
	certified driver for Windows 11 October 2021 Update (aka Cobalt)			

Corrected Customer Issues since 21.80.16.1

21.80.17.1driver only

Key	Headline	Reported HW	Description	Issue type
	certified driver for Windows 11 October 2021 Update (aka Cobalt)			

Corrected Customer Issues since 20.70.24.1

20.70.25.1driver only

Key	Headline	Reported HW	Description	Issue type
	certified driver for Windows 11 October 2021 Update (aka Cobalt)			

Corrected Customer Issues since 19.51.36.1

19.51.37.2driver only

Key	Headline	Reported HW	Description	Issue type
	certified driver for Windows 11 October 2021 Update (aka Cobalt)			

Corrected PIE and Tools Issues since 22.60.1.2

Key	Headline	Reported HW	Description	Issue type
DBGT-5264	WRT tool can not function for Killer Module	Killer AX1675i		Functionality
WOT-3220	DRTU - the opened program is not the same as the displayed program, F5 to reload will 404 Not Found			Functionality
WIFI-125079	PC Manager log show PIE port call fail			Functionality

Extension INF/ Component INF

INF	Version	Summary	HW
PieComponent.inf	22.1070.0.2	Time and date update	TyP2/HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP
PieExtension.inf	22.1070.0.1	Time and date update + dcr-934	TyP2/HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP

DCRs and New Features – 22.70 PV

DCR #	Description	Improvements	Relevant HWs
DCR-740	Enabling UHB for Wi-Fi 6E support (already in 22.60.1.2 version)	Adding a new NCPA capability to activate/deactivate 6GHz band	TyP2
DCR-1028	6GHz Band Preference	DCR target is to improve the priority and scan behavior of 6GHz LPI APs due to the lower Tx-Power when working in 20MHz mode compared to 160MHz mode, as well as due to the fact that 6GHz channels are expected to be less loaded compared to the other bands.	CcP2, HrP1/2, TyP2
DCR-914	Broadcast TWT		TyP2
DCR-925	Tx Power Reduction Qatar 3dB 5470-5725MHz Legacy Devices (net04 driver– other drivers released in previous versions)	While operating in Qatar in 5GHz band, Wi-Fi firmware limit the Tx power as described below: SISO = 20 – 5dBi – Power accuracy (1dB WsP, 0.5dB JfP-ThP & HrP) MIMO = 20 -3 – 5dBi – Power accuracy (1dB WsP, 0.5dB JfP-ThP & HrP)	JfP1/2, CcP2, HrP2, TyP2, WsP, SfP
DCR-1030	Extend Egypt 5.8GHz Passive Scan to HrP/CcP	Change in Egypt from Active Scan to Passive scan in 5.8GHz for HrP/CcP (similar as was done in the past for TyP)	HrP2,CcP2
DCR-986	Customer specific DCR		
~~DCR-721~~ ~~DCR-722~~	Roll back of DCR-721/722 remove support of UNII-4 partial support (5.9GHz)	remove of 4 channels: 177 (20Mhz), 175 (40Mhz), 171 (80Mhz), 163 (160Mhz). Will be opened for usage by FCC (US) only. BIOS enable/disable for OEM	HrP2, CcP2, TyP2

Software Known Issues and Limitations – 22.70

Key related	Description	OS	Notes
TyP2 HW support	This release supports only QS and SRA samples for TyP2	Windows 10	

Product Health

Domain	22.70	Details
Connectivity		
Platform		
Data Path \ TpT		
Miracast		
SoftAP		
BT-Coex		
WiFi Device Power		
Cert (WHQL)		

Legend:

- Broken, Not usable
- Usable, major issues exist
- Usable

<Color Guidelines>

Critical bug(s) or critical usability issues

minimum 1 High P1. if >=5 High P1 – mandatory. Also If > 20 High - mandatory

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. "WiFiLog-XXX.log" for ThP/JfP/CcP/HrP is under* **C:** ***(for RS3/RS4) and*** **C:\Windows\System32\Drivers\DriverData\Intel\Wlan Out\RLG\WiFiLog** and for legacy devices it is under **C:** *(for RS5 or later)*
     - *V. "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)**
     - *VI. "MurocLog.log" under C:\Program Files\Intel\WiFi\UnifiedLogging*
     - *VII. "MEMORY.DMP" under C:\Windows\System32*

Abbreviations

Acronym	Codename	Intel product name
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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