



# INTEL PROSET/WIRELESS WIFI SOFTWARE V21.110.1.1 PV RELEASE

CCG Wireless Marketing

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# Release Overview

Intel is announcing the 21.110.1.1 Production Version (PV) release of the Intel® PROSet/Wireless WiFi Software.

- This version is a PV-HF version to support KBL, GLK, CNL, CFL, WHL, AML, CML, ICL, LKF platforms. This version is a maintenance release that addresses known issues reported in previous software versions
- This software package includes updates in the 21.110.1.1, 21.80.8.1, 20.70.18.2, 19.51.30.1 drivers for the following devices: StP, SdP, WsP, SfP, HrP2, CcP2, ThP2, JfP2, JfP1
- This release contains certified drivers for Windows 10 October 2018 Update (RS5), for Windows 10 April 2019 Update (19H1) and for Windows 10 May 2020 Update (20H1)
- This release was validated also for Windows 10 November Update (19H2)

# General Information

## WiFi Software Build -

- WiFi TIC PHWFW01690\_21.110.1.1
  - Includes 21.110.1.1 for Win10 20H1 (JfP1/JfP2/CcP2/HrP2)
  - Includes 21.80.8.1 for Win10 RS5/19H1/20H1 (JfP1/JfP2/ThP2)
  - Includes 20.70.18.2 for Win10 RS5/19H1/20H1 (WsP/SfP)
  - Includes 19.51.30.1 for Win10 RS5/19H1/20H1 (StP/SdP)

## Tested Platforms

- Lakefield (LkF)
- Sky Lake (SKL)
- Kaby Lake (KbL)
- Kaby Lake refresh (KbL-R)
- Apollo Lake (ApL)
- 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)
- Tiger Lake for testing purposes only

## Supported Operating Systems (see layout slide for more details)

- Windows 10

## Supported Hardware

(see layout slide for more details)

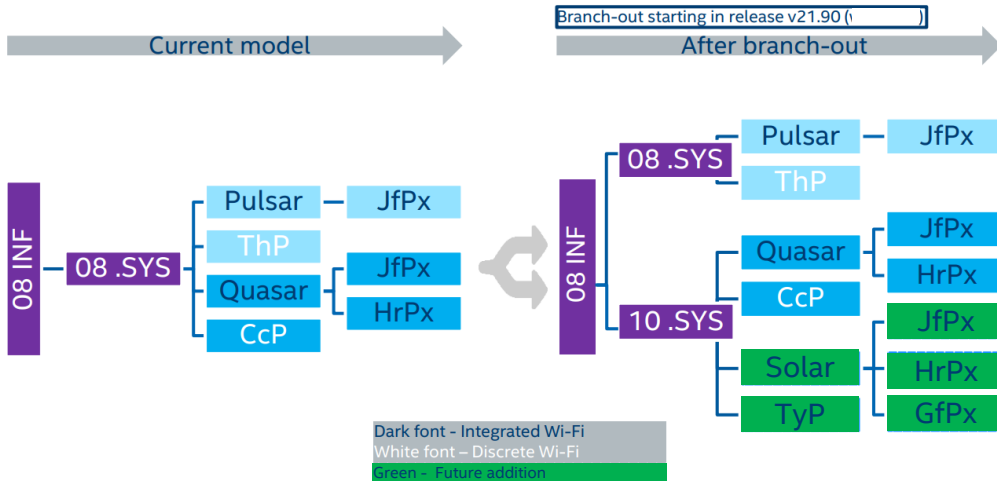
- Harrison Peak2 (HrP2)/AX201
- Cyclone Peak 2 (CcP2)/AX200
- Thunder Peak2 (ThP2)/9260
- Jefferson Peak2 (JfP2)/9560
- Jefferson Peak1 (JfP1)/9461/9462
- Windstorm Peak (WsP)/8265
- Sandy Peak (SdP)/3168
- Snowfield Peak (SfP) / 8260
- Oak Peak (OkP)/18265
- Douglas Peak (DgP)/18260 (WiGig)
- Maple Peak (MpL)/17265 (WiGig)
- Stone Peak 2 D0 (StP2)/7265
- Stone Peak 1 (StP1)/3165

# 21.110 Version Release – WiFi Package Layout

- The **blue** areas indicate the new SW in this release (21.110.1.1).

	Win10/ DCH
HrP2 AX201	<b>21.110.1.1</b> NetWTw10
CcP2 AX200	
Quasar+ JfP1/9461/9462	
Quasar+ JfP2/9560	
Pulsar + JfP1/9461/9462	<b>21.110.1.1<sup>1</sup></b> NetWTw08 (21.80.8.1)
Pulsar + JfP2/9560	
ThP2/9260	
WsP/8265	<b>20.70.18.2</b> NetWTw06
SfP/8260	
SdP/3168	<b>19.51.30.1</b> NetWT(n/w)04
StP1/3165	
StP2-D/7265	

## PULSAR DRIVER BRANCH-OUT



<sup>1</sup>. Please note: Since 21.110 and 21.80 drivers use same inf, device manager properties will show 21.110.1.1 driver. Relevant sys file (netwtw08.sys-21.80.8.1) shown at "driver file details". See example slide in backup

# Corrected Customer Issues since 21.90.3.2

## 21.110.1.1 driver only

Key	Summary	HW	Issue Type
WIFI-55152	[CML-U][19H2]In PCManager to reload the customer specific sharing app with cell phone, the PC side reload take long and after finish, to check the log include SoftAP create twice, one fail, another create in 2.4G.	CcP,HrP	Functionality
WIFI-36256	[CML][19H1]The WiFi direct connection transmission speed drops to 1/4 of that before the connection when the mobile phone is connected to the 2.4G AP.	CcP,HrP	Performance
WIFI-54740	[TGL] BSOD 0x50 occurred during power on	CcP,HrP	Assert/BSOD
WIFI-54647	[AX200] "Fast Startup" test result fail measured by MSFT "Windows Assessment and Development Kit"	CcP,HrP	Functionality
WIFI-54642	[TGL-U][BSOD 0xd1] [Netwtw08!DeviceControlLayer::ImageLoaderPciBase::onChunkLoaded+0xb0] BSOD occurred after system enter MS via closed lid more than 1 hour.	CcP,HrP	Assert/BSOD
WIFI-38613	[BSoD_0xD1][Netwtw08!DeviceControlLayer]BSoD occur while press F8 to turn on/off Airplane mode test	CcP,HrP	Assert/BSOD
WIFI-56861	[TGL][20H1][BSoD_0xD1][Netwtw10!DeviceControlLayer]system hangup and BSoD Dump point to wifi while MS stress ping test	CcP,HrP	Assert/BSOD
WIFI-54630	[CML] The wlan upload speed is slow after resume from S0i3	CcP,HrP	Performance
WIFI-55249	Cannot enable D3Cold by WifiDrv08Customizations.inf	CcP,HrP	Functionality
WIFI-56107	[AX201.D2WG.SNVW] Driver install fail of RSE SKU	CcP,HrP	Functionality
WIFI-54505	[PIE Migration]Undefined value is set in the Wireless Mode of the registry	ThP,JfP,CcP,HrP	Functionality
WIFI-36589	[DRTU] Can't Calibrate Tx for a long time	CcP,HrP	Functionality
WIFI-56135	[CML][19H1]WIFI connect auto disconnect after connect wireless route AP 5G and Idle system	CcP,HrP	Functionality
WIFI-38503	[CML][19H2] [FW Assert 0x4208]User encountered many WIFI disconnections as using Internet	CcP,HrP	Functionality
WIFI-56699	CLONE - [CML] [19H2] Disconnect internet suddenly during connect 2.4G AP to play Live broadcast or video files. -- uCode ASSERT (lmacID = 0x1, rtStatus = 0x91 [Move to Tx error during mpapd])	ThP,JfP,CcP,HrP	Functionality
	The following security issues are resolved in this release: see INTEL-TA-00402 which will be posted on Tuesday, August 4th 2020.	ThP,JfP,CcP,HrP	Security

# Corrected Customer Issues since 21.80.6.2

## 21.80.8.1 driver only

Key	Summary	HW	Issue Type
<a href="#">WIFI-38800</a>	[19H1] Client unable to establish AnyConnect VPN when Hyper-V and Virtual Switch enabled.	ThP,JfP	Functionality
<a href="#">WIFI-54505</a>	[PIE Migration]Undefined value is set in the Wireless Mode of the registry	ThP,JfP	Functionality
<a href="#">WIFI-56084</a>	[20H1] The wireless network connect fail to the AP with Encryption Type by TKIP	ThP,JfP	Functionality
<a href="#">WIFI-56699</a>	CLONE - [CML] [19H2] Disconnect internet suddenly during connect 2.4G AP to play Live broadcast or video files. -- uCode ASSERT (ImacID = 0x1, rtStatus = 0x91 [Move to Tx error during mpapd])	ThP,JfP	Functionality
	The following security issues are resolved in this release: see INTEL-TA-00402 which will be posted on Tuesday, August 4th 2020.	ThP,JfP	Security

# Corrected Customer Issues since 20.70.17.2

## 20.70.18.2 driver only

Key	Summary	HW	Issue Type
<a href="#">WIFI-39059</a>	[WHL] The value of MCC was keep on 0x3030 after resume from S4	WsP, SfP	Functionality
<a href="#">WIFI-56699</a>	CLONE - [CML] [19H2] Disconnect internet suddenly during connect 2.4G AP to play Live broadcast or video files. -- uCode ASSERT (ImacID = 0x1, rtStatus = 0x91 [Move to Tx error during mpapd])	WsP, SfP	Functionality
	The following security issues are resolved in this release: see INTEL-TA-00402 which will be posted on Tuesday, August 4th 2020.	WsP, SfP	Security



# Corrected Customer Issues since 19.51.29.1

## 19.51.30.1 driver only

Key	Summary	HW	Issue Type
	The following security issues are resolved in this release: see INTEL-TA-00402 which will be posted on Tuesday, August 4th 2020.	StP / SdP	Security

# Extension INF/ Component INF

INF	Version	Summary	HW
PieComponent.inf	21.1110.0.1	Time and date update	HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP
PieExtension.inf	21.1090.0.1	No change	HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP

# DCRs – 21.110.1.1

Key	Summary
DCR 168	Complete support for wake patterns on Windows
DCR-480	GTK Rekeying in D3 for GCMP-128/256
DCR-627	Robust solution for 2.4GHz 40MHz noisy environment and long and frequent busy CCA
DCR-748	Customer specific DCR

# Software Known Issues and Limitations – 21.110

Key related	Description	OS	Notes
	No known issues		

# Product Health

Domain	21.110	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\WlanOut\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
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

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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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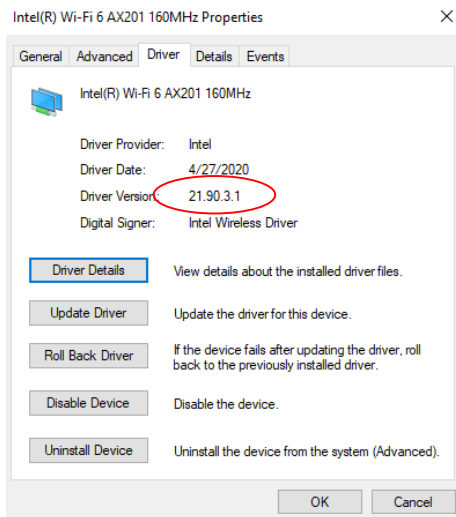


# BACKUP

# BRANCH-OUT — 1 INF FILE WITH 2 SYS FILES

- Both drivers (Netwtw08.sys and Netwtw10.sys) will have the same Driver Version but different file names and file versions.

There is only 1 “DriverVer” string allowed in an INF file, so both drivers will report the same Driver Version in Device Manager



Examples of the Driver Version binary name and File version.

The 'Driver File Details' dialog will show the different binary name and different File version for the 2 driver binaries

