

Intel® WiDi 4.2.19.0

4.2 PV Readme File

The Intel WiDi is enabled through the following Intel software components: Intel WiDi, Intel® HD Graphics Driver, Intel® PROSet/Wireless Driver with Intel® My WiFi Technology enabled.

Intel WiDi 4.2 Production Version Build, 64-bit and 32-bit, version 4.2.19.0

TV Adapter Firmware for Intel WiDi Build version 3.5.42.0

July 2013

Disclaimer

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, DAMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or go to: <http://www.intel.com/design/literature.htm>

Intel® MyWiFi Technology (Intel® MWT) is an optional feature and requires additional software and an Intel® Centrino® wireless adapter. WiFi devices must be certified by the WiFi Alliance for 802.11b/g/a in order to connect. See www.intel.com/network/connectivity/products/wireless/mywifi.htm for more details.

Requires an Intel® Wireless Display enabled PC, compatible adapter, and TV. 1080p and Blu-Ray* or other protected content playback only available on 2nd generation Intel® Core™ processor-based PCs with built-in visuals enabled. Consult your PC manufacturer. For more information, see www.intel.com/go/widi

Intel, Intel Core, Intel MWT, and Intel logo are trademarks of Intel Corporation in the U.S. and other countries.

*Other names and brands may be claimed as the property of others.

Copyright (c) Intel Corporation, 2013. All rights reserved.

Contents

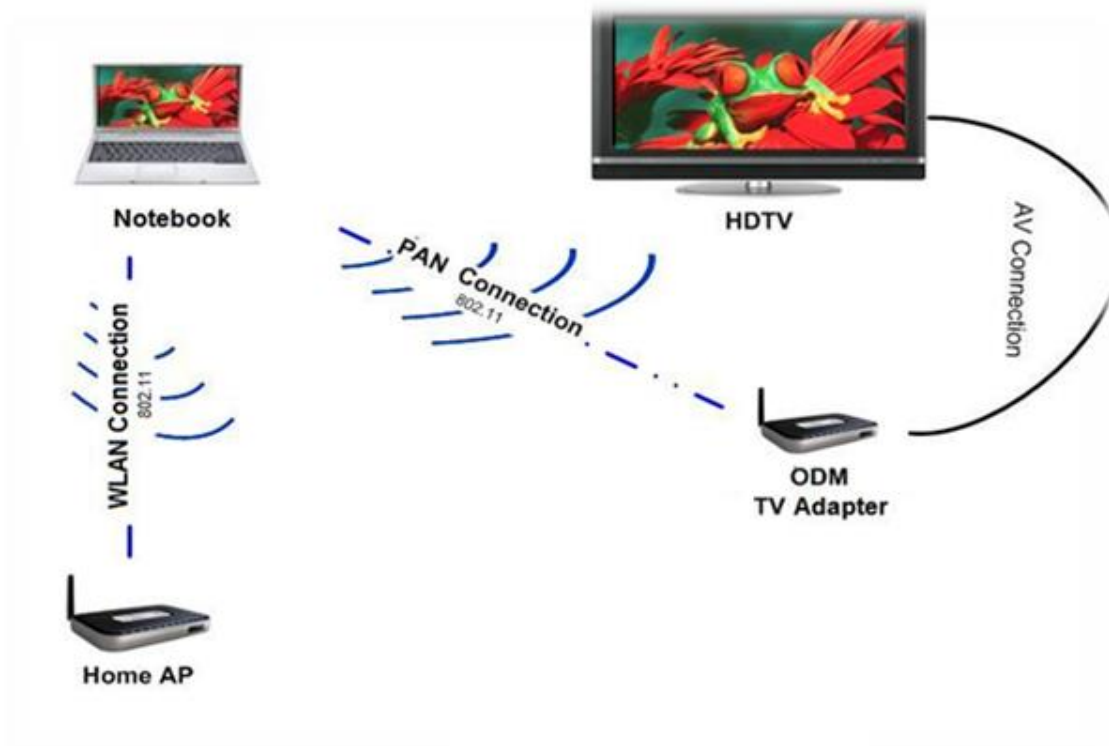
1	Overview	3
2	System Requirements	4
3	Supported Languages	6
4	Installing & Configuring Intel® WiDi Software	7
4.1	Software Command Line Installation Switches	7
4.2	Uninstalling Intel WiDi Software.....	7
4.3	Adapter Requirements.....	8
4.4	Installing TV Adapter Firmware.....	8
4.5	3 rd Party Intel WiDi Enabled Receivers/Adapters	8
4.6	Features	8
4.7	Known Errata and Limitations.....	10
4.8	Known Issues.....	12
4.9	Issues Resolved.....	13
5	Licensing	14

1 Overview

Intel WiDi is a solution that enables a user to wirelessly project his or her PC display to a TV across the living room or conference room. The experience is similar to a consumer connecting his or her Notebook PC to a TV via an HDMI cable. Full desktop (including text, presentations, pictures, web content, commercial video discs such as DVD and Blu-ray, and online premium content services like Intel® Insider video) are sent to the TV and audio, up to 6-channel 16-bit/48 kHz LPCM multi-channel audio is rendered in-sync with up to 1080p HD video. This is made possible through a TV adapter that is connected to the TV via a standard HDMI connection or integrated into the HDTV. The TV adapter or integrated receivers wirelessly communicates over 802.11g/n with the WiDi enabled PC and receives its display information in a standard video format.

The usage model is simple: a user with an Intel WiDi Technology-enabled laptop is in the same room as a TV (e.g., living room) with a TV adapter attached or integrated in to the TV. The user selects the adapter/receiver as the source in the TV input selection, and initiates wireless connection from PC. The PC display and audio, if present, will be sent over the wireless connection. Though it is generally useful for desktop remoting, applications requiring very low latency interactions may not be usable.

The adapter setup (first time use) is secure & simple. At the first power on and connection attempt, the adapter displays a security code on the TV screen. The user enters this security code during the initial launch of the WiDi host software, thereby pairing the adapter and host.



2 System Requirements

1. Intel® WiDi 4.2 64-bit and 32-bit requires a Personal Computer (PC) configured with one of the following Intel supported configurations:

Note: Haswell Traditional & Ultrabook validation is only performed on 64bit OS. 32bit coverage is performed on SNB/IVB per Intel Platform POR.

Supported Platform Configurations

- Processors
 - 2nd Generation Intel® Core™¹ processor family: - All Intel Core i3/i5/i7 mobile processor
 - 3rd Generation Intel® Core™² processor family: - All Intel Core i3/i5/i7 processor (Mobile & Desktop)
 - 4th Generation Intel® Core™³ processor family: - All Intel Core i3/i5/i7 processor (Mobile & Desktop)
 - Graphics Controller
 - Intel® HD Graphics 2nd Gen Core Mobile
 - Intel® HD Graphics 3rd Gen Core Mobile & Desktop
 - Intel® HD Graphics 4th Gen Core Mobile & Desktop
 - Intel® 8 Series Chipset - Desktop/Mobile Q87/QM87/HM87/HM86 Express Chipsets
 - Intel® 7 Series Chipset - Desktop/Mobile QS77/QM77/HM77/UM77/HM76/HM75/Q77/Q75/B75/Z77/Z75/H77 Express Chipsets
 - Intel® 6 Series Chipset - Mobile Intel Q67/Q65/B65/Z68/H67/H61/QS67/QM67/HM67/UM67/HM65 Express Chipsets
2. Intel WiDi requires the following software components to be installed and configured on one of the supported operating systems listed above:
 - a. Microsoft* .Net 4.0 Framework is required for installation of Intel WiDi on Win*8/ 7
 - b. Intel WiDi-compatible version of the Intel® HD Graphics Driver 15.28 for Win*7/8 on Gen 2/3 based Processors.
 - c. Intel WiDi-compatible version of the Intel® HD Graphics Driver 15.31. For Win*7/8 on Gen 4 based Processors.
 - d. Intel WiDi-compatible version of the Intel® PROSet/Wireless Driver and Intel My WiFi Technology software. WiFi 15.6 or later is required for Win*7/Win*8 for Intel legacy Wi-Fi modules
 - e. Intel WiDi-compatible version of the Intel® Dual Band Wireless-AC Driver 16.0 for (Wilkins Peak2-7260 Wi-Fi modules) Win8 Only.
 - f. Intel WiDi-compatible version of The Broadcom* Wireless Driver 6.30.223.x for BCM4352

Supported Operating System

- Windows* 7 Home Premium / Ultimate / Professional-Enterprise / Home Basic 64bit & 32-bit editions
- Windows* 8 64bit & 32-bit editions

Intel® WiDi support for premium content requires the following:

- Intel® 2nd/3rd or 4th Generation Core™ processor
- Intel HD Graphics driver 15.28 for 2nd Gen 15.31 or later baseline version on 3rd/4th on Win* 7/8

¹ 2nd Generation Intel Core are trademarks of Intel Corporation in the U.S. and other countries.

² 3rd Generation Intel Core are trademarks of Intel Corporation in the U.S. and other countries.

³ 4th Generation Intel Core are trademarks of Intel Corporation in the U.S. and other countries.

- Production (QS) fused CPU and fused PCH components
- Protected AV Path (PAVP) must be enabled at the BIOS level through the ME
- Production ME firmware 7 CPT, 8 PPT or 9 Lynx Point respectively for the PCH being used
- MEI driver (using MEI setup.exe installer for HDCP2.x support)
- Gen 2/3 Adapter/Receivers for Intel WiDi with Firmware update applied to DUT
- DVD/Blu-ray playback application that has been enabled for Intel 4th Generation Core processor graphics and Intel WiDi. Contact your respective media player ISV to obtain their latest Intel WiDi HDCP 2.x compliant version of their application.

Note: Intel® HD Graphics Driver & the Intel PROSet/Wireless Driver software must be installed prior to installing Intel WiDi software to meet platform detection requirements in the Intel WiDi software.

3 Supported Languages

- Arabic
- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French (Canada)
- French
- German
- Greek
- Hebrew
- Hungarian
- Italian
- Japanese
- Korean
- Latvian
- Lithuanian
- Norwegian
- Polish
- Portuguese (Brazil)
- Portuguese (Portugal)
- Romanian
- Russian
- Serbian
- Simplified Chinese
- Slovenian
- Slovakian
- Spanish
- Swedish
- Thai
- Traditional Chinese
- Turkish

4 Installing & Configuring Intel® WiDi Software

General Installation Notes for Intel WiDi software and Firmware: Intel WiDi software release is a single-file based installer.

1. Exit all other programs before installing the Intel WiDi software.
 - a. Copy the Intel WiDi "Setup.exe" to an accessible drive. Navigate to the location of the setup.exe file and double click on the setup.exe file, to initiate the software install.
 - b. Click 'Next' to continue.
 - c. Read License Agreement and select "I accept the terms in the license agreement" and click 'Next' to continue.
 - d. Select 'Install' to start installing the Intel WiDi software.
 - e. Follow the installer prompts to complete the installation.

4.1 Software Command Line Installation Switches

Silent Installations & Uninstall

Silent install mode and uninstall is used to run the setup.exe from the command line, in a non verbose mode, with all default options selected and all licenses accepted.

Install Command line: `setup.exe /s /v/qn`
Uninstall command line `setup.exe /x /s /v/qn`

Desktop Shortcut

Desktop Shortcut is used to enable or disable the creation of a desktop shortcut for all users

Command line: `setup /v"WIDIAPP_DESKTOP_SHORTCUT=x"`
Enable: `setup.exe /v"WIDIAPP_DESKTOP_SHORTCUT=1"`
Disable: `setup.exe /v"WIDIAPP_DESKTOP_SHORTCUT=0"`

Help

Help is used to display the supported command line options

Command line: `setup.exe /v/help`

4.2 Uninstalling Intel WiDi Software

Note: This procedure assumes the above installation process was successful. The uninstall procedure is specific to the version of the driver and application files included in this release package.

1. Click the start button then select the "Control Panel" icon, and then click on the "Programs and Features" icon.
2. Select Intel WiDi.
3. Click the "Uninstall" option button to uninstall the Intel WiDi
4. Reboot the system to complete the uninstall process.

4.3 Adapter Requirements

Intel® WiDi requires an Intel WiDi enabled receiver configured or updated with the latest firmware for Intel WiDi.

4.4 Installing TV Adapter Firmware

Note: This firmware installation procedure is specific only to Intel based reference adapters and this release of Intel WiDi.

Step 1: Install Intel WiDi software release on the computer.

Step 2: Start Intel WiDi to establish a connection with the adapter to be updated.

Step 3: Shortly after a connection is established, a dialog box will appear informing you that there is a "Firmware Update" available. Select "Yes" to proceed to the Firmware Update page and click "Update"

Step 4: Follow the prompts to complete the update process.

Step 5: Once the update process is complete and the adapter has rebooted you should close the Intel WiDi application and re-launch the Intel WiDi application to re-establish a connection to the updated adapter and start a new Intel WiDi session.

4.5 3rd Party Intel WiDi Enabled Receivers/Adapters

Note: All 3rd party Intel WiDi enabled receivers that are not based on Intel reference design will manage their respective firmware updates and methods of updating.

4.6 Features

Features Supported in this Version of Intel® WiDi	
Reference No.	Title / Description
N/A	Intel 4 th Gen Processor
N/A	Touch First User Interface
N/A	Cinematic Sync Smooth Video
N/A	Low Power Self Refresh
N/A	Unified 32/64-bit Software Installer, using single file
N/A	Up to 1080p (Full HD) with hardware based H.264 encoding
N/A	802.11n PAN support: 2.4GHz and 5GHz bands (non DFS channels)
N/A	Support for Intel® HD Graphics 3000/4000
N/A	HDCP 2.x Output Protection to support DVD, Blu-ray, on Intel® Core™ Gen 2/3/4 Core based Processors
N/A	Multi-channel sound output: 6-channel 16-bit/48 kHz LPCM (requires playback application support)
N/A	Lower latency; less than 150ms
N/A	WiDi Widget 1.2 & Extensions Support
N/A	HDMI Consumer Electronics Control (CEC) - "One Touch Play"

Features Supported in this Version of Intel® WiDi

Reference No.	Title / Description
N/A	Interoperability with DLNA Receivers (That support AVC/TS file format) on Intel® Core™ Gen 2 and 3 Core based Processors
N/A	Support for Business (HDMI/VGA)
N/A	Support for S3D up to Full HD Res (Requires Gen 3/4 enabled receivers adapters & 3 rd or 4 th Gen Core™ based PC running the latest 15.31 Intel HD Graphics Driver)
N/A	Quality vs Speed' User Interface option (Formerly known as > Low Delay Mode)
N/A	Support for Microsoft* Windows* 7/8

4.7 Known Errata and Limitations

Description	Windows 7	Windows 8
Intel WiDi user interface shows status as "Connecting" and the adapter displays status as "Connected" permanently during a connect/disconnect scenario in which the User attempts to cancel during WiFi Protected Setup and clicks connect again. Workaround: Click the cancel button and wait ~40secs for adapter to return to the ready for connection state.	X	N/A
When more than one Media Player application is being used simultaneously all audio is being heard on the TV. Workaround: Use one media player at a time.	X	X
In some instances both the Intel WiDi fast cursor and Windows cursor may appear on TV momentarily before getting synchronized with the fast cursor. Workaround: None	X	X
Multiple cursors are seen on TV when "Allow the pointer to change based on the context" option is checked under behavior tab. Workaround: This issue is observed when windows cursor themes are installed. Do not check this option when using windows cursor themes.	X	X
Intel WiDi does discover Netgear PVT1000 adapters when the PC is connected to an 802.11 5GHz Access Point. Workaround: This is expected behavior as Netgear PVT1000 only support 802.11n 2.4Ghz	X	X
Intel WiDi freezes when Bluetooth file transfer is initiated on systems incorporating Bluetooth/WiFi combination modules. Workaround: Do not perform files transfers during an active WiDi Session.	X	X
Mouse pointers displayed on TV are not correct with 3rd party mouse pointer themes installed. Workaround: Do not use customized mouse pointer packages.	X	X
Audio is not heard from Host when switching off the TV. Workaround: None	X	X
Part of Windows Media Player is displayed on host screen, when Windows Media Player window is maximized on the extended display. Workaround: None	X	N/A
Google Earth – Mouse Pointer – Hand symbol is not visible on TV screen. Workaround: None	X	X
Intel WiDi error message "Wrong security code" and TV displays PIN repetitively if there is a delay greater then ~90 seconds in entering the pin for pairing. Workaround: Disconnect from the adapter to return to the idle state and then re-connect and enter the PIN as soon as prompted.	X	N/A
In rare instances connection with adapter fails, the adapter screen prompts the user to enter the pin security code the next time a connection is attempted. Workaround: Enter the PIN code as shown on TV and Pairing procedure is carried out with Adapter screen showing "Security Configuration Successful", followed by Desktop being shown on TV.	X	N/A
Blank video screen is displayed on TV when Video is played on 3 rd party Media Player with Overlay Mixer mode. Workaround: Reinstall player in VMR mode	X	X
Corrupted Video displays on some premium media players after HDMI Hot plug while Blu-ray playback going on clone mode. Workaround: None.	X	X
The Intel WiDi software shall support screen rotation. In duplicate display mode the WiDi screen will mirror the orientation of the display when it is a clone of (no independent rotation support	X	X

Description	Windows 7	Windows 8
while in duplicate display mode). In extended display mode the WiDi screen can be rotated independently of the other displays. Workaround: None		
WiDi fast cursor icon will not change/rotate when screen is rotated. Workaround: None	X	X
Clicking the WiFi scan icon continuously during a WiDi session will cause WiFi interference resulting in video corruption on the TV screen. Workaround: Do not continuously click the Wireless scan icon.	X	X
In some rare instances when resuming from sleep WiDi does not auto scan. My WiFi Technology is disabled message observed. Workaround: Click the scan button	X	X
Applications and games that require DirectX support are not supported such as: 3D DirectX games will not run properly with an active WiDi session. 3D Mark06 and 3D Mark Vantage benchmark tool will not run with an active WiDi session. Workaround: None.	X	X
DLNA support requires Graphics driver baseline 15.22 or higher. Workaround: None	X	N/A
In noisy WiFi environments Audio / video freezes may be observed while playing video content and or longer than expected latency may occur when streaming over DLNA. Workaround: Ensure you have a clean/optimal WiFi environment	X	X
Windows Media Center player error message "Cannot play DVD" message when switch off TV while Protected DVD playback clone mode. Workaround: Restart Windows Media Center	X	N/A
In some instances when using a USB keyboard connected to a Gen 3.5 TV reference Adapters USB Port, pressing a key may result in multiple key strokes for one key stroke when connected through a USB hub. Workaround: Don't use a USB hub and or Terminate the WiDi session and reconnect	X	X
USB mouse and keyboard are not detected when using a USB (Self-Powered) Hub. Workaround: Use a external powered USB hub	X	X
Unable to connect initiate a WiDi Session after upgrading OS from Win* 7 to Win* 8. Workaround: Uninstall WiDi, Install WiDi 4.2 or later release of WiDi, Install Intel GFX 15.28 or later driver & Install 15.6.1 or 16.0 Intel WiFi Driver	N/A	X
In some instances you may not be able to connect to the adapter after installing McAfee antivirus software. Workaround: Add WiDi to the McAfee approved white list of applications	X	X
In some instances you may not be able to connect to the adapter after installing Norton antivirus software. Workaround: Add WiDi to the Norton approved white list of applications	X	X
Connecting to an access point with an active WiDi session can result in dropping the WiDi connection. Workaround: Reconnect or connect to the Access point first before starting a WiDi session	N/A	X

Description	Windows 7	Windows 8
When playing a video with WMP player with 5.1 audio enabled and the user changes from Regular mode to low delay mode audio is not heard. Workaround: Restart the video on WMP (or close and restart WMP).	N/A	X
3 rd Party WiFi based systems might only support WFD protocol and hence might not be able to upgrade Gen2 and Gen3 Intel Reference adapters running old L2SD firmware version 3.1.x or earlier. The adapters must be upgraded to a 3.5.9 version of Firmware using a system configured with an Intel supported wireless NIC. Workaround: None	N/A	X
Manually terminating the WiDi.exe task from Task Manager or if the application crashes it will result in the audio playback not automatically returning to the system audio. Workaround: Close the WiDi application and re-launch it which will reset the default audio device back to the system audio.	X	X

4.8 Known Issues

Description	Windows 7	Windows 8
Some Media players may show momentary corruption when switching display modes. Workaround: Get updated player from the Media Player Vendor	X	X
Windows Media Player displays "Digital copy protection" error message when performing HDMI hot plug scenarios DVD movie playback. Workaround: None	X	X
In some instances pairing and connection fails Workaround: Retry. If not corrected, reboot the PC.	X	X
On entering Wrong Security Code, WiDi displays "Unable to Connect to remote display" message. Workaround: Re-connect after Adapter returns to Ready for Connection and enter the correct code	X	X
In some instances the TV screen hangs after disconnecting from PS3. Workaround: Click back button on PS3 menu	N/A	X
While playing Blu-ray over WiDi and hot plugging HDMI causes HDCP error codes 0122 or 0102 messages. Workaround: None	N/A	
Streaming WiDi using DLNA may show black screen on the TV. Workaround: None	N/A	X
System hang occurs and WiDi disconnects on launching 3DMark06 Benchmark Test with actiontec adapter while in Speed Mode. Workaround: None	N/A	X
In some instances a message "Your system is not compatible with HDCP", BD playback is disabled (error code: 2002)" appears while playing bluray in duplicate mode. Workaround: None	N/A	X
If WiDi running on Broadcom* 4352 and is connected first prior to starting a WLAN connection, or if the WLAN AP changes to a different WLAN channel, the WiDi session may freeze, even though the App indicates that it is still Connected. Workaround: wait for WiDi adapter to reset, Disconnect and Re-Connect WiDi.	N/A	X

Description	Windows 7	Windows 8
In some instances Audio or Video artifacts occur during a WiDi session with Broadcom 4352 wireless card. Workaround: None	N/A	X
When Font scaling is set to 150%, few parts of WiDi application might not be visible properly Workaround: None. Set font scaling to 100% or 125%	N/A	X

4.9 Issues Resolved

Issues Resolved in Intel® WiDi Build 4.2.19.0
Unsmooth termination on WiDi TV when WiDi application is closed without disconnecting first
Sometimes WiDi installation fails when installed right after WiFi driver installation
Unable to rename WiDi adaptor in some cases even when Adaptor doesn't have such restriction
Non-vPro systems unable to pair and connect to Enterprise adapters

5 Licensing

INTEL® WIRELESS DISPLAY SOFTWARE

INTEL SOFTWARE LICENSE AGREEMENT (OEM/Single User)

IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.

DO NOT INSTALL, USE OR LOAD THIS SOFTWARE AND ANY ASSOCIATED MATERIALS (COLLECTIVELY, THE “SOFTWARE”) UNTIL YOU HAVE CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS. BY INSTALLING, USING OR LOADING THE SOFTWARE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT WISH TO SO AGREE, DO NOT INSTALL, USE OR LOAD THE SOFTWARE.

Please Also Note:

- If you are an Original Equipment Manufacturer (OEM) this complete INTEL SOFTWARE LICENSE AGREEMENT (the “Agreement”) applies;
- If you are an End-User, then only Exhibit A of the Agreement applies.

For OEMs:

LICENSE. This Software is licensed for use only in conjunction with computer systems based on Intel-based (“Your Licensed Products”). Use of the Software in conjunction with non-Intel Products is not licensed hereunder. Subject to the terms of this Agreement, Intel grants to You a nonexclusive, nontransferable, worldwide, fully paid-up license under Intel’s and it’s suppliers’ copyrights (as and to the extent applicable) to:

- a) copy or install the Software onto Your Licensed Products solely for commercial re-distribution purposes;
- b) distribute the Software in conjunction with Your Licensed Products, to Your end-users, but only under a license agreement with terms at least as restrictive as those contained in Exhibit A hereto; and
- c) copy and distribute the end-user documentation which may accompany the Software, but only in association with the Software.

Except as provided under the paragraph entitled “Ownership of Software and Copyrights”, You shall not assign, sublicense, lease, or in any other way transfer or disclose Software to any third party. You shall not decompile, disassemble or otherwise reverse engineer the Software.

Except as expressly stated in this Agreement, no license or right is granted to You directly or by implication, inducement, estoppel or otherwise. Intel shall have the right to inspect or have an independent auditor inspect Your relevant records to verify Your compliance with the terms and conditions of this Agreement.

TRADEMARKS. You shall not use Intel's name in any publications, advertisements, or other announcements without Intel's prior written consent. You do not have any rights to use any Intel trademarks or logos pursuant to this Agreement.

OWNERSHIP OF SOFTWARE AND COPYRIGHTS. Title to all copies of the Software remains with Intel or its suppliers. The Software is copyrighted and protected by the laws of the United States and other countries, and international treaty provisions. You may not remove any copyright notices from the Software. Except as otherwise expressly provided, Intel grants no express or implied right under Intel or supplier patents, copyrights, trademarks, or other intellectual property rights. You may transfer the Software only if the recipient agrees to be fully bound by these terms and if you retain no copies of the Software.

SOFTWARE MODIFICATION AND SUPPORT. Intel or its suppliers may make changes to the Software, or to items referenced therein, at any time and without notice. Intel may provide support for the Software, including the provision of updates, upgrades or bug fixes thereto, at times and in manners and amounts at its sole discretion.

LIMITED MEDIA WARRANTY. If the Software has been delivered by Intel on physical media, Intel warrants the media to be free from material physical defects for a period of ninety (90) days after delivery by Intel. If such a defect is found, return the media to Intel for replacement or alternate delivery of the Software as Intel may select.

EXCLUSION OF OTHER WARRANTIES. EXCEPT AS PROVIDED ABOVE, THE SOFTWARE IS PROVIDED "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND, INCLUDING WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT OF INTELLECTUAL PROPERTY, OR FITNESS FOR A PARTICULAR PURPOSE. Intel does not warrant or assume responsibility for the accuracy or completeness of any information, text, graphics, links or other items contained within the Software.

LIMITATION OF LIABILITY. IN NO EVENT SHALL INTEL OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER IN CONNECTION WITH THIS AGREEMENT, WHETHER ARISING FROM LOSS OF PROFITS, LOSS OF USE, LOSS OR CORRUPTION OF DATA, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, IRRESPECTIVE OF WHETHER INTEL HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

IN NO EVENT SHALL INTEL'S OR ITS SUPPLIERS' TOTAL CUMULATIVE LIABILITY TO YOU ARISING FROM THIS AGREEMENT EXCEED THE LESSER OF THE SUM PAID TO INTEL BY LICENSEE FOR SOFTWARE LICENSED UNDER THIS AGREEMENT WHICH IS BOTH THE SUBJECT OF AND DIRECTLY AFFECTED BY THE SUBJECT CLAIMS OR FIFTY UNITED STATES DOLLARS (\$50.00).

THE LIMITED WARRANTY, LIMITED REMEDIES, WARRANTY DISCLAIMER AND LIMITED LIABILITY ARE FUNDAMENTAL ELEMENTS OF THE BASIS OF THE BARGAIN BETWEEN INTEL AND YOU. INTEL WOULD NOT BE ABLE TO PROVIDE THE SOFTWARE WITHOUT SUCH LIMITATIONS.

TERMINATION OF THIS AGREEMENT. Intel may terminate this Agreement at any time if you violate its terms. Upon termination, you will immediately destroy the Software or return all copies of the Software to Intel.

APPLICABLE LAWS; ENTIRE AGREEMENT. Claims arising under this Agreement shall be governed by the laws of the State of Delaware, excluding its principles of conflict of laws and the United Nations Convention on Contracts for the Sale of Goods. You may not export the Software in violation of applicable export laws and regulations. Intel is not obligated under any other agreements unless they are in writing and signed by an authorized representative of Intel.

GOVERNMENT RESTRICTED RIGHTS. The Software is provided with "RESTRICTED RIGHTS." Use, duplication, or disclosure by the Government is subject to restrictions as set forth in FAR52.227-14 and DFAR252.227-7013 *et seq.* or their successors. Use of the Software by the Government constitutes acknowledgment of Intel's proprietary rights therein. Contractor or Manufacturer is Intel Corporation, 2200 Mission College Blvd., Santa Clara, CA 95052.

LANGUAGE; TRANSLATIONS. In the event that the English language version of this Agreement is accompanied by any other version translated into any other language, such translated version is provided for convenience purposes only and the English language version shall control.

EXHIBIT "A"

INTEL® WIRELESS DISPLAY SOFTWARE LICENSE AGREEMENT

(Single User)

IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.

DO NOT INSTALL, USE OR LOAD THIS SOFTWARE (DEFINED BELOW) UNTIL YOU HAVE CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS. BY INSTALLING, USING OR LOADING THE SOFTWARE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT WISH TO SO AGREE, DO NOT INSTALL, USE OR LOAD THE SOFTWARE.

By accessing or using the Software, you understand that in order to improve your user experience and system functionality and security, Intel may collect certain information about your platform specifications, operating system, language, and various identification information. No personally identifiable information will be collected. If you do not agree to the terms of this Agreement, do not use the Software.

If you agree to these terms and later change your mind and do not want Intel to continue to collect the above information, you must uninstall the Software. You can contact Intel for more information on how to do this.

"Software" means any computing programming code and any associated materials that are provided in connection with, under, or subject to this Agreement, but does not include computing programming code that is (i) delivered with

the Software but is Open Source Software and/or (ii) subject to an agreement, obligation and/or license (in each case whether or not accompanying such computing programming code) intended to supersede or override this Agreement.

“Open Source Software” means any software that requires as a condition of use, modification and/or distribution of such software that the software or other software incorporated into, derived from or distributed with the software (a) be disclosed or distributed in source code form; or (b) be licensed by the user to third parties for the purpose of making and/or distributing derivative works; or (c) be redistributable at no charge. Open Source Software includes, without limitation, software licensed or distributed under any of the following licenses or distribution models, or licenses or distribution models substantially similar to any of the following: (a) GNU’s General Public License (GPL) or Lesser/Library GPL (LGPL), (b) the Artistic License (e.g., PERL), (c) the Mozilla Public License, (d) the Netscape Public License, (e) the Sun Community Source License (SCSL), (f) the Sun Industry Source License (SISL), and (g) the Common Public License (CPL).

LICENSE. You may copy the Software onto a single Intel-based computer for your personal, noncommercial use, and you may make one back-up copy of the Software, subject to these conditions:

1. You may not copy, modify, rent, sell, distribute, publicly perform, publicly display or transfer any part of the Software except as provided in this Agreement, and you agree to prevent unauthorized copying of the Software.
2. You may not reverse engineer, decompile, or disassemble the Software.
3. You may not sublicense the Software.
4. The Software may contain the software or other property of third party suppliers, some of which may be identified in, and licensed in accordance with, any enclosed “license.txt” or “read me” file or other text or file.

OWNERSHIP OF SOFTWARE AND COPYRIGHTS. Title to all copies of the Software remains with Intel or its suppliers. The Software is copyrighted and protected by the laws of the United States and other countries, and international treaty provisions. You may not remove any copyright notices from the Software. Except as otherwise expressly provided, Intel grants no express or implied right under Intel or supplier patents, copyrights, trademarks, or other intellectual property rights. You may transfer the Software only if the recipient agrees to be fully bound by these terms and if you retain no copies of the Software.

SOFTWARE MODIFICATION AND SUPPORT. Intel or its suppliers may make changes to the Software, or to items referenced therein, at any time and without notice. Intel may provide support for the Software, including the provision of updates, upgrades or bug fixes thereto, at times and in manners and amounts at its sole discretion.

LIMITED MEDIA WARRANTY. If the Software has been delivered by Intel on physical media, Intel warrants the media to be free from material physical defects for a period of ninety (90) days after delivery by Intel. If such a defect is found, return the media to Intel for replacement or alternate delivery of the Software as Intel may select.

EXCLUSION OF OTHER WARRANTIES. EXCEPT AS PROVIDED ABOVE, THE SOFTWARE IS PROVIDED "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND INCLUDING WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT OF INTELLECTUAL PROPERTY, OR FITNESS FOR A PARTICULAR PURPOSE. Intel does not warrant or assume responsibility for the accuracy or completeness of any information, text, graphics, links or other items contained within the Software.

LIMITATION OF LIABILITY. IN NO EVENT SHALL INTEL OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER IN CONNECTION WITH THIS AGREEMENT, WHETHER ARISING FROM LOSS OF PROFITS, LOSS OF USE, LOSS OR CORRUPTION OF DATA, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, IRRESPECTIVE OF WHETHER INTEL HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

IN NO EVENT SHALL INTEL'S OR ITS SUPPLIERS' TOTAL CUMULATIVE LIABILITY TO YOU ARISING FROM THIS AGREEMENT EXCEED THE LESSER OF THE SUM PAID TO INTEL BY LICENSEE FOR SOFTWARE LICENSED UNDER THIS AGREEMENT WHICH IS BOTH THE SUBJECT OF AND DIRECTLY AFFECTED BY THE SUBJECT CLAIMS OR FIFTY UNITED STATES DOLLARS (\$50.00).

THE LIMITED WARRANTY, LIMITED REMEDIES, WARRANTY DISCLAIMER AND LIMITED LIABILITY ARE FUNDAMENTAL ELEMENTS OF THE BASIS OF THE BARGAIN BETWEEN INTEL AND YOU. INTEL WOULD NOT BE ABLE TO PROVIDE THE SOFTWARE WITHOUT SUCH LIMITATIONS. SOME JURISDICTIONS MAY PROHIBIT EXCLUSION OR LIMITATION OF LIABILITY FOR IMPLIED WARRANTIES (IF ANY) OR CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU IN ITS ENTIRETY. YOU MAY ALSO HAVE OTHER LEGAL RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

TERMINATION OF THIS AGREEMENT. Intel may terminate this Agreement at any time if you violate its terms. Upon termination, you will immediately destroy the Software or return all copies of the Software to Intel.

APPLICABLE LAWS; ENTIRE AGREEMENT. Claims arising under this Agreement shall be governed by the laws of the State of Delaware, excluding its principles of conflict of laws and the United Nations Convention on Contracts for the Sale of Goods. You may not export the Software in violation of applicable export laws and regulations. Intel is not obligated under any other agreements unless they are in writing and signed by an authorized representative of Intel.

GOVERNMENT RESTRICTED RIGHTS. The Software is provided with "RESTRICTED RIGHTS." Use, duplication, or disclosure by the Government is subject to restrictions as set forth in FAR52.227-14 and DFAR252.227-7013 *et seq.* or their successors. Use of the Software by the Government constitutes acknowledgment of Intel's proprietary rights therein. Contractor or Manufacturer is Intel Corporation, 2200 Mission College Blvd., Santa Clara, CA 95052.

LANGUAGE; TRANSLATIONS. In the event that the English language version of this Agreement is accompanied by any other version translated into any other language, such translated version is provided for convenience purposes only and the English language version shall control.

CONSENT. You agree that Intel may collect and use technical and related information, including but not limited to technical information about your computer, system and application software, and peripherals, that is gathered periodically to facilitate the provision of software updates, product support and other services to you (if any) related to the Software. Intel may use this information, and in the event of a Software program vulnerability, error or crash, may share it with other persons such as the supplier of such program, as long as it is in a form that does not personally identify you, to improve our products or to provide services or technologies to you.

NO SUPPORT SERVICES; UPDATES. Neither Intel, the manufacturer of your device, nor your internet service provider are responsible for providing support services for the Software. Contact Intel to determine if any support services are provided. Intel may make changes to the Software, at any time without notice, but is not obligated to support or update the Software. The Software may automatically download and install updates from time to time from Intel. These updates are designed to improve, protect, and enhance the Software and may take the form of bug fixes, security patches, enhanced functions, new software modules and completely new versions. You agree that Intel may deliver such updates to you as part of your use of the Software.

END OF FILE