

# Quick Start Guide

## WirelessHD Application Controller

### **Introduction:**

Congratulations on your purchase of this high quality laptop with integrated WirelessHD transmitter, which represents the state of the art in 60GHz wireless video transmission giving you complete freedom to enjoy displaying content from your laptop to a display such as a TV, monitor, or projector without the limitations of cables.

The WirelessHD transmitter integrated into your laptop can provide a non line-of-sight transmission range of up to 33 feet (10 m) to a WirelessHD receiver connected to an HDMI-compatible display.

This Quick Start Guide provides the basic steps for making a wireless video connection from your laptop with integrated WirelessHD transmitter to a TV, monitor or projector with a connected WirelessHD receiver adapter.

Please refer to the documentation that came with your TV, WirelessHD receiver adapter, or WirelessHD transmitter/receiver adapter pair for proper setup, configuration, and operation of these devices.

### **Required Components:**

1. A laptop with integrated WirelessHD transmitter
2. A WirelessHD receiver adapter connected to an HDMI-compatible TV or monitor

Please note that when you purchased your laptop with integrated WirelessHD transmitter, you may have also purchased a kit containing a WirelessHD transmitter/receiver adapter pair.

Follow the instructions provided with that kit to properly connect the WirelessHD receiver adapter to the TV, monitor, or projector.

### **First Time Connection:**

Before attempting connection of your laptop with integrated WirelessHD transmitter to your TV, monitor, or projector, please setup and configure the WirelessHD receiver adapter to the TV, monitor, or projector according to the instructions provided with your WirelessHD receiver adapter.

Turn on the TV, monitor, or projector and change the input to the HDMI port for which the WirelessHD receiver adapter is connected.

Turn on the WirelessHD receiver adapter.

Turn on and boot up your laptop system.

Launch the WirelessHD Application Controller software from either the Desktop shortcut icon:



or from the Start/All Programs/WiHD Controller menu.

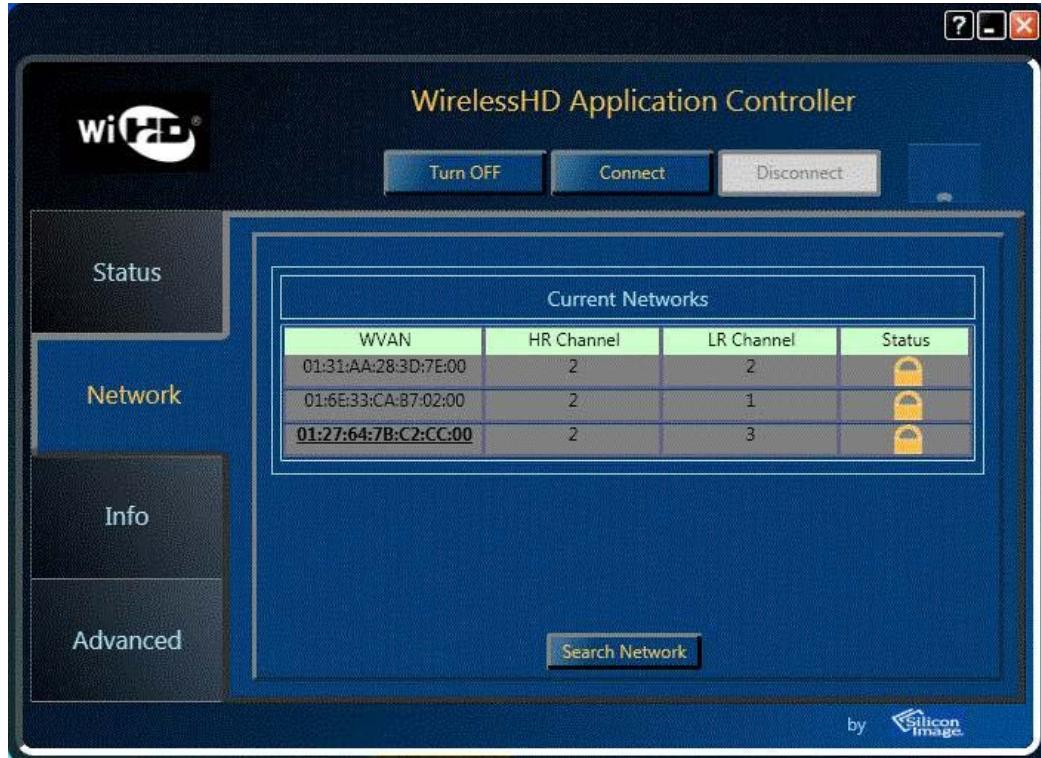
When the WirelessHD Application Controller software launches, you will see the following window:



Ensure that the WiHD transmitter is turned on. The left most of the top three buttons will indicate "Turn WiHD OFF" (see screenshot above) when the transmitter is turned on and enabled. If this button indicates "Turn WiHD ON", the transmitter is turned off therefore press this button once and within a couple seconds the button will change its status to "Turn WiHD OFF" and the WirelessHD transmitter will be turned on and

enabled.

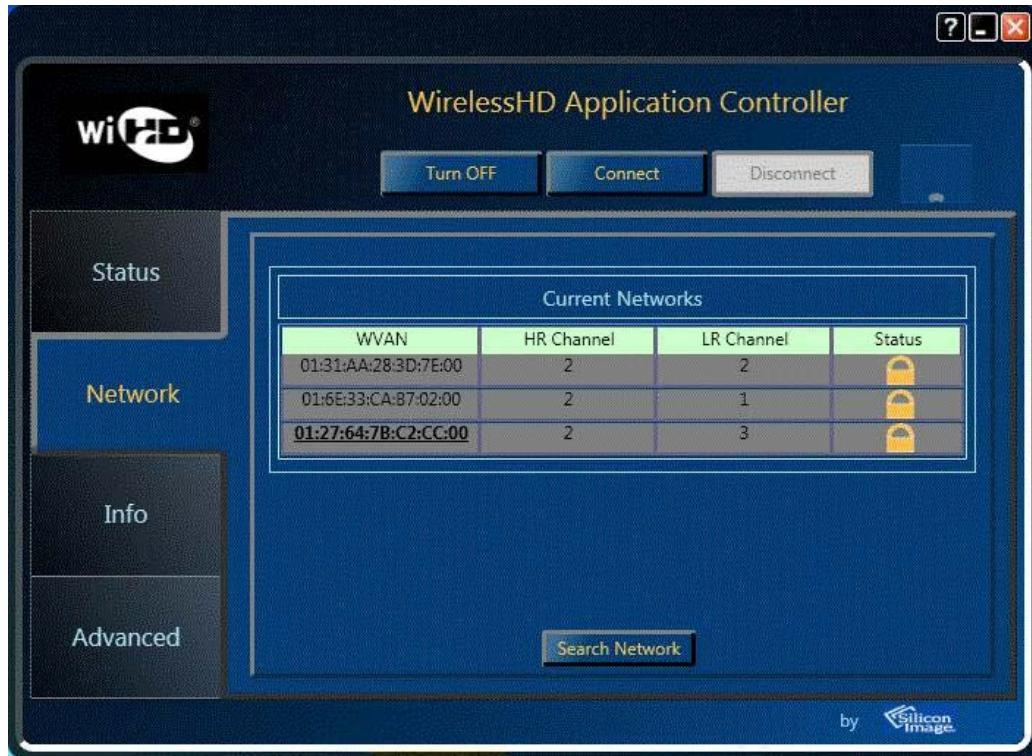
Click on the Network tab along the left hand side of the application. You will see a window like the following:



The MAC address shown for the WVAN (wireless video area network) represents the WVAN ID that is provided from the receiver adapter which is connected to the TV, monitor, or projector.

If the WirelessHD receiver adapter is turned on and there is not a MAC address that shows up in the WVAN list, press "Refresh List" to update the list. If there are still issues with getting the WVAN ID, check the connections on the WirelessHD receiver adapter and the antenna orientations of the WirelessHD receiver and your notebook.

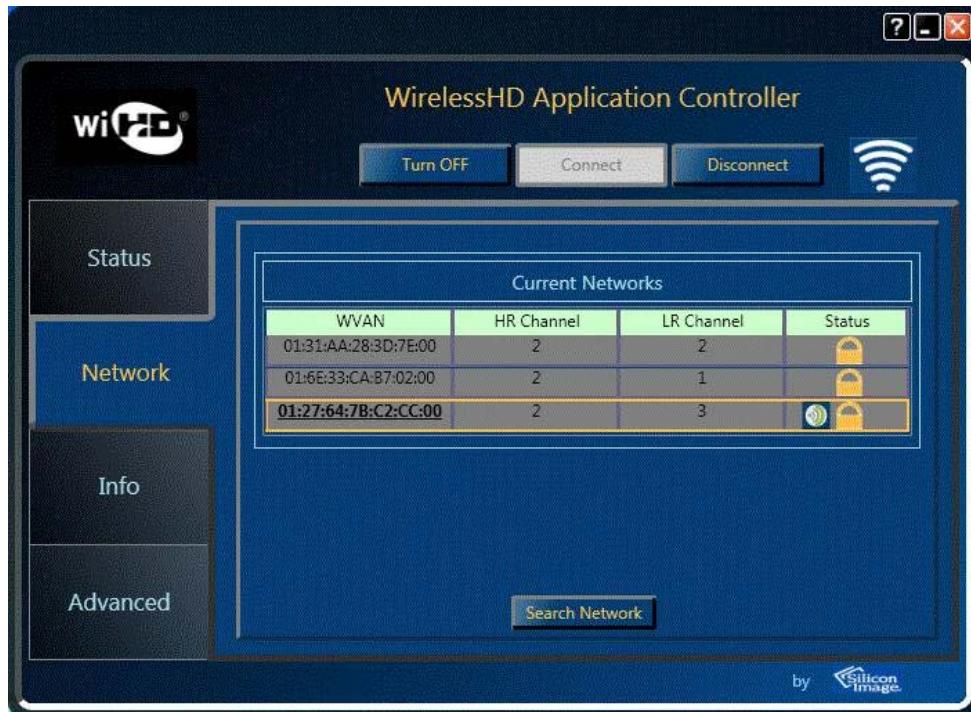
Select the WVAN ID and then press the "Connect" button as shown below:



Within 20 seconds, the notebook screen should be displayed on the TV, monitor, or projector.

Note that "Windows key" + "P" keystroke allows selection of duplicate display mode (notebook display and external display contain the same content and resolution) or extended display mode (external display is an extension to the notebook display).

The Status tab will reflect something similar as shown below upon a successful connection:



#### Select different mode to other display screen:

- I. Power on TV/monitor (or other display products) and make sure WirelessHD receiver is activating.
- II. Open laptop WAC application
- III. Wait for the laptop and WirelessHD receiver to be associated.
- IV. Click "Connect" button on the WAC.
- V. Wait until the connection is successful.
- VI. Let cursor stay on Windows' desktop and press right button on the mouse then choosing "screen resolution". It should detect 2 different displays on it.
- VII. Select "Duplicate" to let receiver side show the same format on screen.
- VIII. Wait 30 seconds\* for the TV/monitor connection to be successful and stable.  
Checkpoint: Same Windows desktop should appear on laptop internal display and the TV/monitor.
- IX. Select "Extend" to cascade the secondary display besides primary one
- X. Wait 30 seconds\* for the TV/monitor connection to be successful and stable.

Checkpoint: Extended Windows desktop should appear on laptop internal display and the TV/monitor.

\*The WirelessHD connection may be lost if display mode switching is too soon before it gets stabilized.

## **OEM Installation Instructions for SIL-SK63100 Module**

### **Interference Statement**

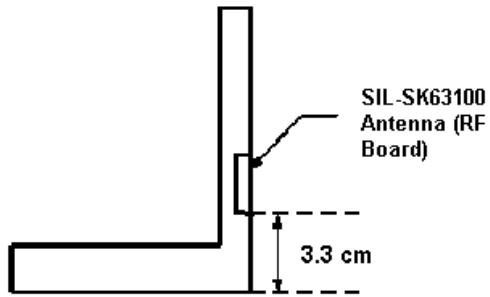
#### **USA - Federal Communications Commission (FCC)**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
2. This product does not contain any user serviceable components. Any unauthorized product changes or modifications will invalidate warranty and all applicable regulatory certifications and approvals.
3. Caution: User is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
4. FCC rule 15.255(a) prohibits the use of this device on aircrafts or satellites.
5. This module is intended for the OEM integrator.
6. Portable Configuration

6A. Caution: Exposure to Radio Frequency Radiation: The installer of this radio equipment must follow the following guidelines:

- a) Module shall be placed inside the lid of the laptop (display portion of laptop) and that the antenna (RF board) shall be pointed away from the end user.
- b) Minimum distance from base plane of laptop to the bottom edge of RF chip shall be greater than or equal to 3.3cm.



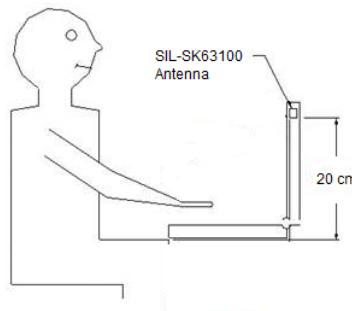
c) For minimum distance less than 3.9cm, the orientation of the RF chip shall be restricted to place the A1 marker located at the top.

6B. The antenna(s) used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, except in accordance with FCC multi-transmitter product procedures. Other antennas shall be installed with a minimum 20 cm separation from the 60 GHz device antenna.

## 7. Mobile Configuration

7A. Caution: Exposure to Radio Frequency Radiation: The installer of this radio equipment must follow the following guidelines:

- Module shall be placed inside the lid of the laptop (display portion of laptop) and that the antenna (RF board) shall be pointed away from the end user.
- Minimum distance from base plane of laptop to the bottom edge of RF chip shall be greater than or equal to 20 cm.



7B. The worst case scaled power density of the WirelessHD device at a 20 cm separation distance is  $0.22 \text{ mW/cm}^2$ . The fractional portion of the MPE limit is 0.22, or expressed as a percentage = 22%. Other antenna(s) may be collocated with the WirelessHD antenna provided that the maximum sum of the scaled fractional portions of the MPE limit of all other collocated transmitters is less than or equal to  $1 - 0.22 = 0.78$ , or expressed as a percentage = 78%. For the particular case of co-located WLAN and Bluetooth transmitters, applying OET Bulletin 65 Equation 18 in reverse yields the maximum allowable sum of the scaled EIRPs of all such transmitters. The resulting maximum EIRP is 35.9 dBm, with the provision that each transmitter must comply with the applicable EIRP and/or de facto EIRP limits, which may be less than this

total allowable EIRP for multiple transmitters. The co-located operation with other transmitters only applies to the mobile configuration, as described in the filing.

#### **Additional note to System Integrator / OEM:**

System integrator/OEM needs to ensure that Host system shall have the ability to allow the end user to disable the transmitter when the modules are used in portable devices that could, for example, be taken on-board aircraft. Clear instructions as to how to enable and disable the wireless transmission under such circumstances shall be included in the host system's user instructions.

The regulatory label on the final system must include the statement: "Contains FCC ID: **UK2-SIL-SK63100**".

#### **Canada - Industry Canada (IC)**

This device complies with RSS 210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device. "

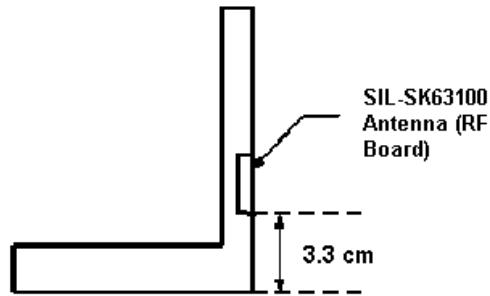
L' utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit être prêt à accepter tout brouillage radio électrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication. To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence.

**Caution: Exposure to Radio Frequency Radiation.**

8. The installer of this radio equipment must follow the following guidelines:
  - a) Module shall be placed inside the lid of the laptop (display portion of laptop) and that the antenna (RF board) shall be pointed away from the end user.
  - b) Minimum distance from base plane of laptop to the bottom edge of RF chip shall be greater than or equal to 3.3cm.



- c) For minimum distance less than 3.9cm, the orientation of the RF chip shall be restricted to place the A1 marker located at the top.

The installer of this radio equipment must ensure that the antenna (RF board) is pointed away from the end user such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website [www.hcsc.gc.ca/rpb](http://www.hcsc.gc.ca/rpb).

The regulatory label on the final system must include the statement: "Contains **IC: 6705A-SILSK63100**".

## Europe - EU Declaration of Conformity and Restrictions

This equipment complies with the essential requirements and other relevant provisions of Directive 1999/5/EC.

This equipment is marked with the  symbol.

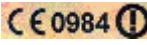
This indicates compliance with the R&TTE Directive 1999/5/EC and meets the relevant parts of following technical specifications:

**EN 301 567 v1.1.1:** Broadband Radio Access Networks (BRAN); 60 GHz Multiple-Gigabit WAS/RLAN Systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive.

**EN 301 489-28 v1.1.1:** Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 28: Specific conditions for wireless digital video links.

**EN 60950:** Safety of Information Technology Equipment.

**EN 62311: 2008:** Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

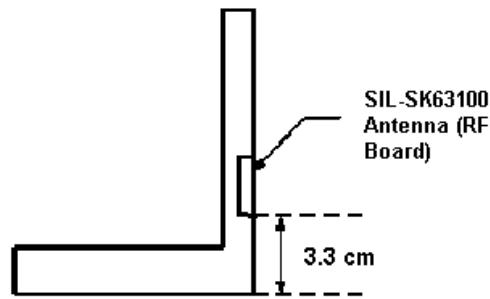
Marking by the symbol  indicates that usage restrictions apply.

### CE RF Radiation Exposure Statement:

**Caution** This equipment complies with European RF radiation exposure limits and is meant to be used as an Indoor device.

9. Portable Configuration. The installer of this radio equipment must follow the following guidelines:

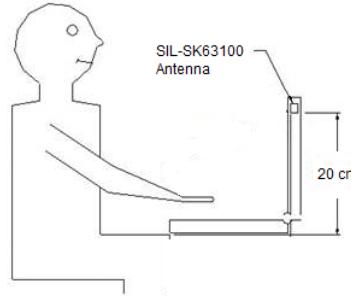
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- c) For minimum distance less than 3.9cm, the orientation of the RF chip shall be restricted to place the A1 marker located at the top.

10. Mobile Configuration. The installer of this radio equipment must follow the following guidelines:

- a) Module shall be placed inside the lid of the laptop (display portion of laptop) and that the antenna (RF board) shall be pointed away from the end user.
- b) Minimum distance from base plane of laptop to the bottom edge of RF chip shall be greater than or equal to 20 cm.



Following is a list of countries available for CE mark one-stop notification relating to this equipment:

Belgium, Bulgaria, Croatia, Cyprus, Germany, Hungary, Iceland, Macedonia, Montenegro, Norway, Romania, Slovakia, Spain, Switzerland and United Kingdom.



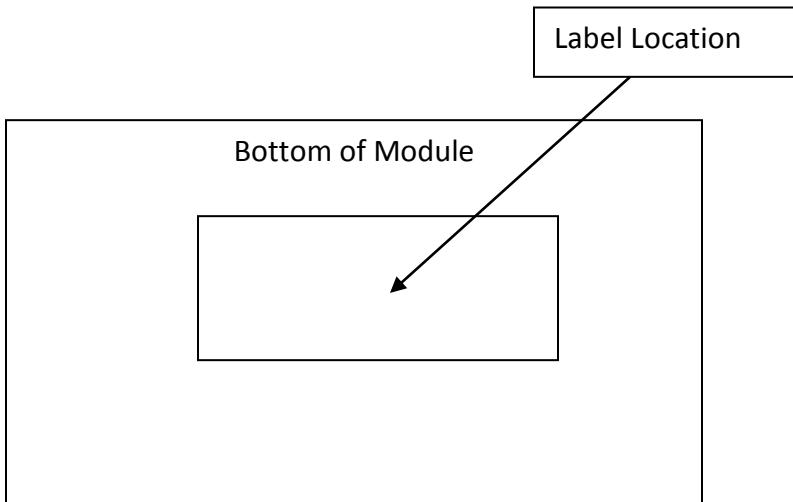
This device is restricted for use in the following countries:  
Denmark, Estonia, Finland, France, Latvia, Malta, Serbia and Slovenia.

**Note for system integrators:**

- The module is tested to comply with the requirement of the R&TTE Directive. System integrators are responsible for compliance of the final device with the R&TTE Directive.

- Packaging: CE Marking must also be on the outer packaging of the product. The outer packaging must also provide an indication as to where the device is intended to be used and/or conversely, where there may be restrictions for use.

## Proposed Label and Location



## Proposed Label and Location for Host Device



## **Additional Information Regarding WirelessHD:**

A product implementing WirelessHD is designed to wirelessly send fully uncompressed video up to 33 feet (10 m) non line-of-sight within the same room. Distances further than 33 feet (10 m) can be achieved when the transmitter and receiver are line-of-sight with each other.

It is important to note that the 60 GHz frequency, with which this product transmits, provides the necessary bandwidth to send every bit of information from the source device to the display with no compression or bit dropping, but does not penetrate walls or floors. Therefore, this product is not designed to send signals from one room to another.

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