C2G®
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(US) WIRELESS CONFERENCE ROOM VIDEO HUB - HDMI® AND USB-C®

(FR)

(ES)

Model 29973
EMEA Model 84309

Table of Contents

Introduction

29973 is a Full HD wireless transmission device.

This solution delivers uncompressed 1080p full HD video and audio content to your existing HDTV set wirelessly. It operates the transmission in 5.1 GHz~ 5.9 GHz frequencies, and it can adjust its communication frequency automatically in case of interference from another RF system. With built-in Omni-directional antennas, it can transmit uncompressed video content to 7 meters (20 feet) LOS (Line of sight) with no latency.
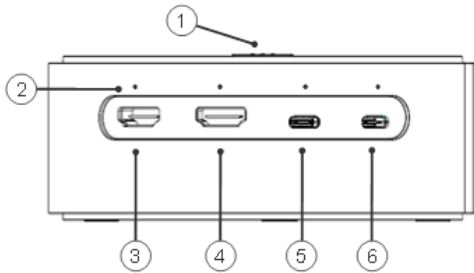
Package Contents

- 29973 Transmitter
- 29973 Receiver
- 1 x DC 5V/2A Micro USB Power Adapter
- 1x Power Adapter Cable
- 1x 12V/1A CD Power Brick
- 1 x HDMI Cable
- 1 x USB-C Cable
- 2 x Mounting Anchors
- 2 x Mounting Screws
- Manual

Product Overview

29973 Transmitter

Front of Wireless Transmitter

	FRONT OF TRANSMITTER	DESCRIPTION
1	Source Selection Switch	Press switch to select input. Three LED lights indicate hub is powered on.
2	Source LED	LED light indicates which source is currently selected.
3	HDMI Input	Connect HDMI cable between this port and HDMI output port of source device.
4	HDMI Input	Connect HDMI cable between this port and HDMI output port of source device.
5	USB-C Input	Connect USB-C cable between this port and USB-C output port of source device.
6	USB-C Input	Connect USB-C cable between this port and USB-C output port of source device.

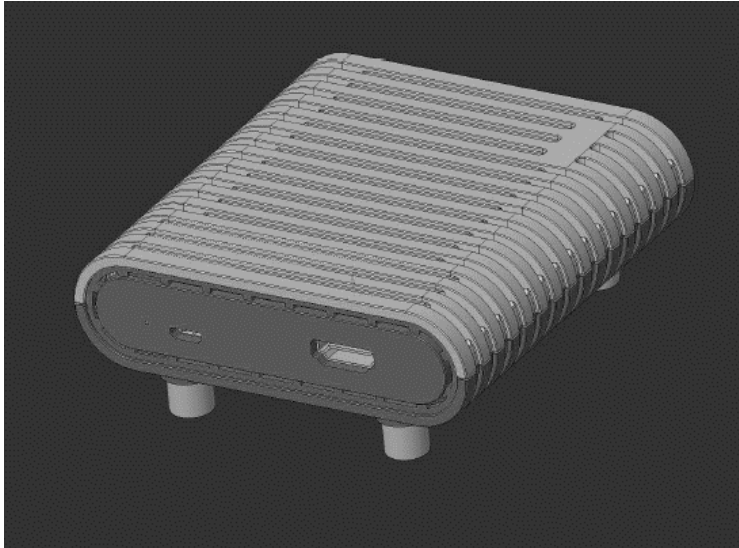## Rear of Wireless Transmitter
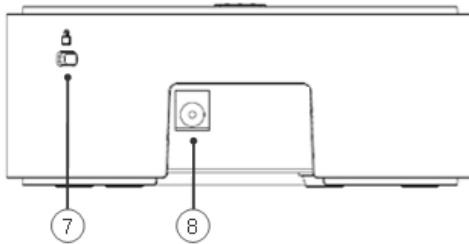
	REAR OF TRANSMITTER	DESCRIPTION
7	Security Slot	Attach a specialized security cable to the Hub's Security Slot.
8	Power Input	Connect 12V/1A DC universal power adapter to the power port.

29973 Receiver

Wireless Receiver

	RECEIVER	DESCRIPTION
9	USB Micro-B	Connect to receiver's power adapter.
10	HDMI Output	Connect to HDTV set via an HDMI cable.

Installation

Step 1: Setup the transmitter

Connect a source device to the transmitter:

1. Connect the supplied power adapter to the DC IN port of the transmitter and a wall socket. Once the transmitter is connected to power the LED indicator lights on the source selection switch will be white.
2. Plug an HDMI cable or USB-C cable into transmitter's corresponding connector
3. Plug the cable into the Source Device

Step 2: Setup the receiver

HDTV set connection with receiver

High Def. Projector   High Def. Flat-panel TV

1. Connect the HDMI cable to the HDMI OUT jack of the receiver and to your HDTV set (or an HD projector).
2. Connect the supplied power adapter to the Micro USB port of the receiver and a wall socket. When it's connected to power the Power LED indicator will be white.
   Step 3: Boot up the transmitter and receiver

1. After the power cord is plugged into the electrical outlet, the Wireless Conference Room Hub will be turned on and link established automatically.
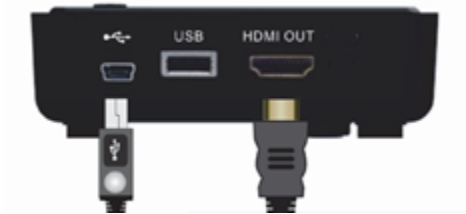
When transmitter power is unplugged, receiver will enter Standby mode (POWER LED of receiver is lit in red) when link is dropped for over 10mins.

2. When receiver is in Standby mode (Receiver POWER LED is lit in red), and transmitter is powered, the transmitter will wake up the receiver and automatically to establish a link.

3. During the warm-up period, the POWER LED will blink white until the signal link between the transmitter and the receiver is established. It will take around 15 ~ 20 seconds for boot up and link establishment if the operation is in normal condition.

4. Ensure your TV set or projector is in "HDMI input" mode and is powered on.

5. If all operation is normal, the POWER LED and INFO/CHANNEL LED will be solid white.

Please refer to the below form containing detailed LED indicator and OSD description of transmitter / receiver:

LED/OSD Behavior

1. The power LED will be solid white when the unit is powered on.

2. The source LED will be solid white when the source is selected. (The default setting of the source is HDMI, as indicated by the solid white HDMI LED.)

   Press the source button to switch to the input source; the switch sequence is: HDMI → USB TYPE-C1 → USB TYPE-C2 → HDMI.

3. If there is signal (HDMI 5V , USB TYPE-C VBUS)in the source input:
   3.1 The TX unit will send the CEC message "TEXT VIEW ON" to turn on the TV set.
   3.2 The TX unit will then send the CEC message "ACTIVE SOURCE" to switch to the selected source of the TV set

4. For the "auto switch":
   If the input source A (maybe HDMI or USB TYPE-C1 or USB TYPE-C2) is selected originally, and then the signal (HDMI 5V or USB TYPE-C) is detected on source B (maybe HDMI or USB TYPE-C1 or USB TYPE-C2). The input source will be auto switched from source A to source B.

   4.1 The TX unit will send the CEC message "TEXT VIEW ON" to turn on the TV set.
   4.2 The TX unit will then send the CEC message "ACTIVE SOURCE" to switch to the selected source of the TV set

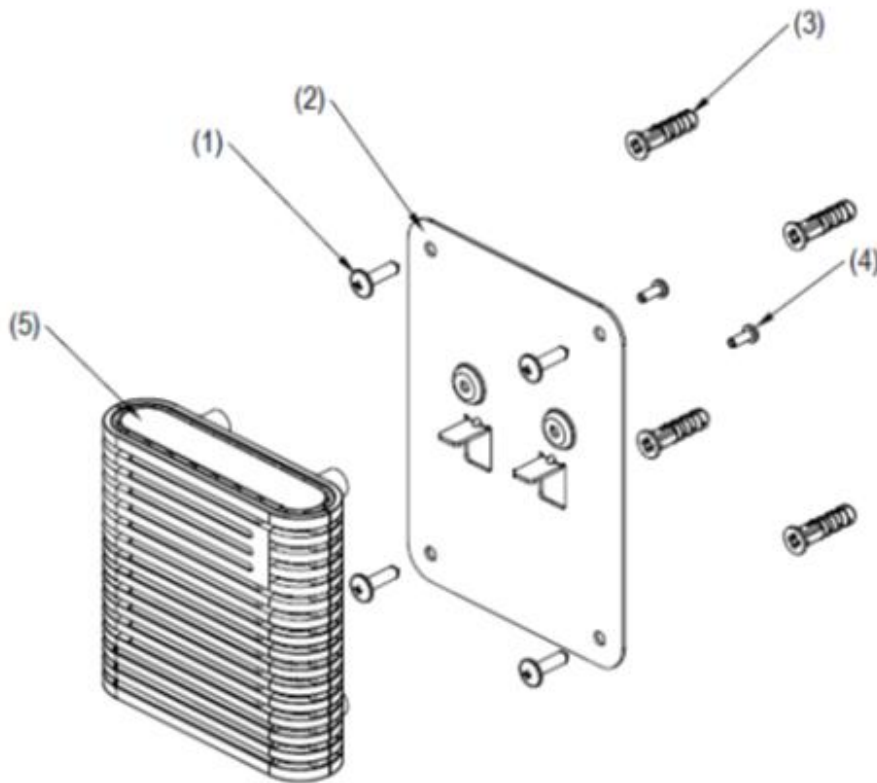5. If there is no signal to the source input: the TX unit will not send a CEC message.

6. If there is no signal to the source input and if the end user plugs in the source cable and a signal is received:

    6.1 The TX unit will send the CEC message "TEXT VIEW ON" to turn on the TV set.

    6.2 The TX unit will then send the CEC message "ACTIVE SOURCE" to switch to the selected source of the TV set.

7. If there is a signal to the source input and if the end user presses the source button to switch the source without a signal present: the TX unit will not send a CEC message, and the TV (display unit) will display a black screen.

8. If there is a signal to the source input and if the end user then unplugs the source cable, the TX unit will not send a CEC message, RX will send 480P black screen
and the OSD will display which input source is selected : "HDMI", "USB Type-C-1", or "USB Type-C-2".

Step 4: Mounting the receiver to the Wall

1. Mark pilot holes by holding mounting plate (2) on wall.
2. Drill pilot holes from markings.
3. Insert the supplied anchors (3) into the wall.
4. Mount receiver (5) to mounting plate with the two supplied (4) screws.
5. Align the four holes that had been used for the pilot holes to the four anchors in the wall.
6. Use the four supplied screws (1) to screw into the anchors. Do not over tighten.

Troubleshooting

Problem	Solution
The WHD100 front panel power indicator (red LED) doesn't light up.	• Check if the power plugs of transmitter/receiver are properly inserted into a functioning power outlet. • Make sure both POWER LED of transmitter/receiver are lit in the blue.
There is no video displayed on your TV screen.	• Verify that the proper cables have been selected and installed between the transmitter input and your source device output. • On your TV side (connected to the receiver), select the HDMI as input source. • Verify the POWER LED and INFO. LED indicator of receiver. **Power LED Flashing in Blue** **OSD displayed:** (4 levels looping) * Ensure the transmission range between the transmitter and the receiver is not over 15 feet (LOS-line of sight) transmission distance. Move the transmitter closer to the receiver. **POWER LED in Solid Blue + Slow and Flashing SOURCE LED** **OSD displayed :** * Ensure your video resolution and frame rate is recognized/ supported and within the transmission range. * Connect the source device to your TV to check and modify the video format compatibility. * Check your video resolution with HDMI input from your device is 1080p, 1080i, 720p, 576p, 480p. Please refer Chapter 5 for the detail supported Resolution. **POWER LED in Solid Blue + STATUS LED Flash Quickly** **OSD displayed :** * Ensure the proper cables are connected between the transmitter and your source devices. * Ensure your source devices connected to the transmitter are powered on.
Poor picture quality or intermittent video play.	• Check if your video resolution with HDMI input from your source device is either 1080p, 1080i, 720p, 576p, or 480p. Please refer to the "Supported Resolution" chapter where the video frame rate from your source device WHD100 can support is defined. • Ensure the transmission distance is less than 15 feet (LOS).
No audio.	• Check if your TV's volume is properly set and not in "MUTE". • Ensure the bit rate of audio from the source device can be supported by WHD100. Please refer to the details in Chapter 6, Audio Bit Rate Support.

Supported Resolution

Video Format Timings	Resolution	Supported
Primary CEA Video Timing		
640x480p @ 59.94 / 60Hz	480p	YES
720x480p @ 59.94Hz		YES
720x480p @ 60Hz		YES
720x576p @ 50Hz	576p	YES
1280x720p @ 50Hz	720p	YES
1280x720p @ 59.94 / 60Hz		YES
1920x1080i @ 50Hz	1080i	YES
1920x1080i @ 59.94 / 60Hz		YES
1920x1080p @ 50Hz	1080p / 60	YES
1920x1080p @ 59.94 / 60Hz		YES
Secondary CEA Video Timing		
1920x1080p @ 23.98 / 24Hz	1080p / 24	YES
1920x1080p @ 25Hz		YES
1920x1080p @ 29.97 / 30Hz		YES
VESA Timing (DVI only)		
640x480 @ 59.94 / 72.809Hz	VGA	YES
800x600 @ 60.317 / 72.188Hz	SVGA	YES
1024x768 @ 60 / 70.069Hz	XGA	YES
1280x768 @ 60 Hz	WXGA	YES
1280x1024 @ 60 Hz	SXGA	YES
1600x1200 @ 60Hz	UXGA	YES

Audio Bit Rate Support

- Digital Audio from HDMI inputs: Up to 6Mbit/s bit-rate support.
- Support AC3 and DTS.
    - 2-channel PCM audio: 16~24 bits audio sample with 32~48KHz sampling rate

2channel PCM	32KHz	44.1KHz	48KHz	96KHz
16 bits	YES	YES	YES	YES
24 bits	YES	YES	YES	YES

Product Specifications

General Specifications		
Supported Video Resolutions	HDMI Input	1080p, 1080i, 720p, 576p, 480p
Supported Audio Resolutions	Digital Audio	Up to 6 Mb/s AC-3 and DTS
Transmission Range	LoS (line of sight): 30 feet (10 m)	
System Latency	≤1 ms	
Wireless	Wireless 5GHz, Channel Bandwidth: 40 MHz, Transmission Operating Frequency 5.15~ 5.85GHz (DFS & non-DFS frequency bands)	
Power Supply	TX:100 V–240 V AC in, DC jack 12V/1A DC out brick power adaptor RX: DC 5V/2A wall-mount power adapter	
HDMI	HDMI 1.4a / HDCP 1.4 Compliant	
Ambient Operating Temperature Storage Temperature Operating Relative Humidity	0 °C–40 °C 0~ 60°C 0~ 85% RH non-condensing	
Environmental	RoHS , WEEE , Prop-65 , REACH , Conflict Minerals	
Regulation	FCC, ISED & CE with DFS	

Interface		Transmitter	Receiver
A/V Interface	HDMI Input	Type A × 2	—
	USB	USB Type-C × 2	—
	HDMI Output	—	Type A × 1
Power	Power Input	via DC jack	via Micro USB
Buttons	Power	—	—
	Source selection	Yes (one tactile switch)	—
	Device Pairing	—	—
LEDs	Power LED	—	1* LED (white)
	Source selection LED	4* LED (white)	—

Firmware Update Procedure

1. Connect the 29973 to a Windows 7 or Windows 10 PC/notebook via the Micro-USB interface.

2. Press and hold the **Power** button. While holding the **Power** button, plug in the power cable.

3. The power LED will flash 2 times/second. This indicates that the LUD29973 is attempting to ready the firmware update drive.
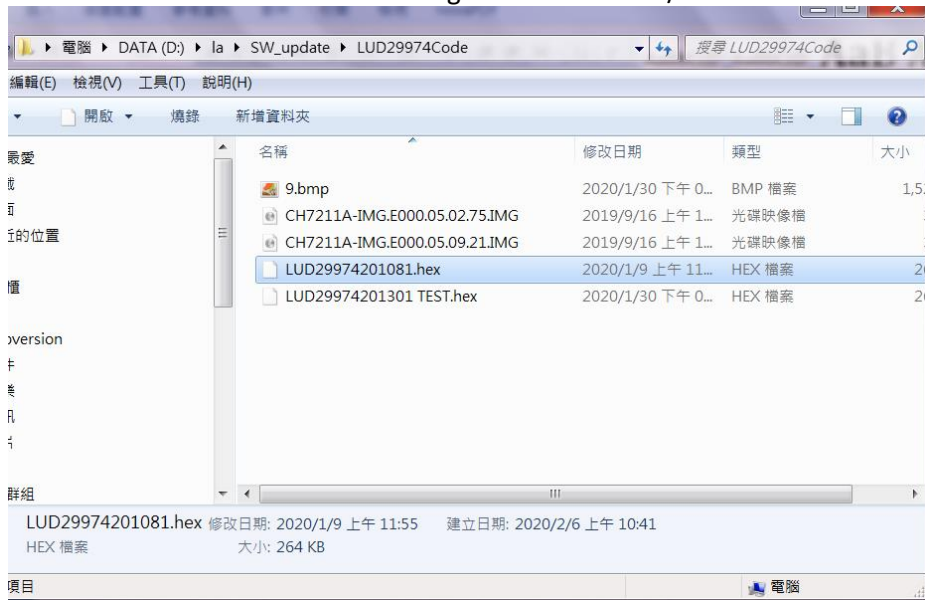

4. Your notebook/PC will detect the firmware update drive within 3 seconds. When the firmware update drive is detected, the power LED will remain steady on (not flashing), and the PC/notebook will display a message box indicating it discovered a USB mass storage device.
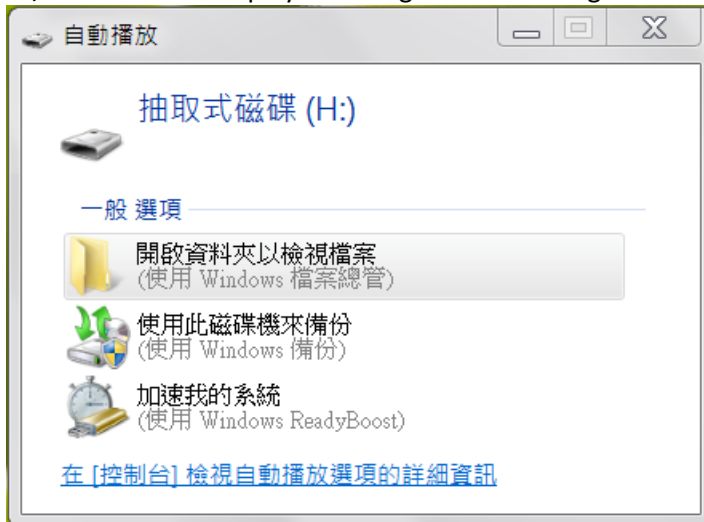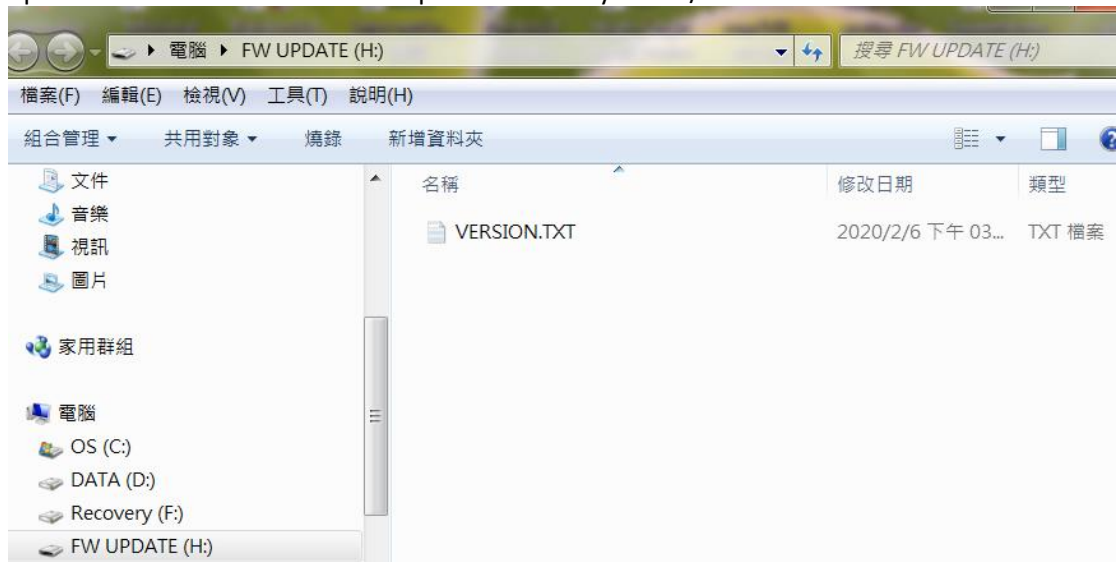

5. Updating the ST MCU firmware

5.1 Select the new ST MCU firmware image file from the PC/notebook.
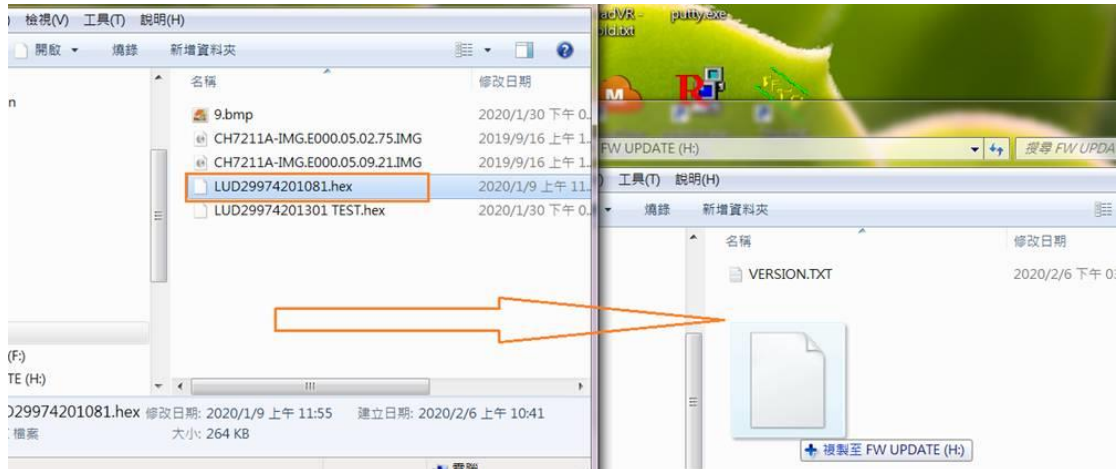

5.2 Open the 29973 device firmware update drive on your PC/notebook.
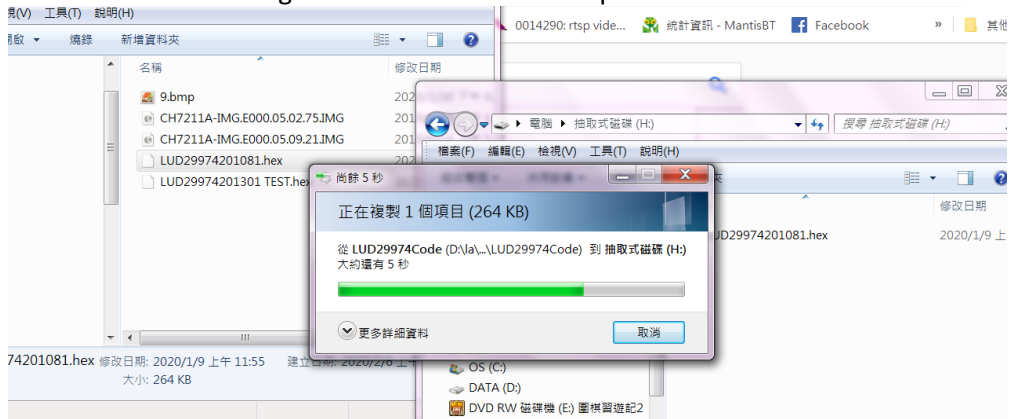

5.3 Copy the ST MCU firmware image file and paste it into the 29973 device firmware update

drive folder.

5.4 The device will then begin the ST MCU firmware update.

The power LED will flash 2 times/second until the firmware update is complete.
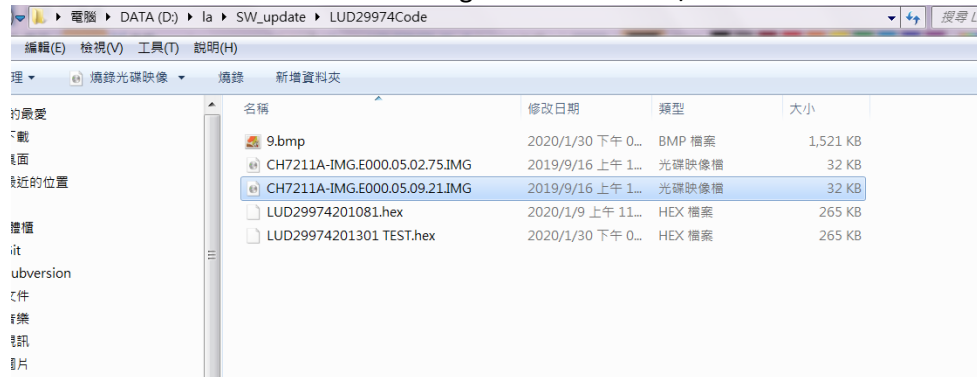
5.5 When the firmware update is complete, all five LEDs on the 29973 (power and four source LEDs) will be solid on.
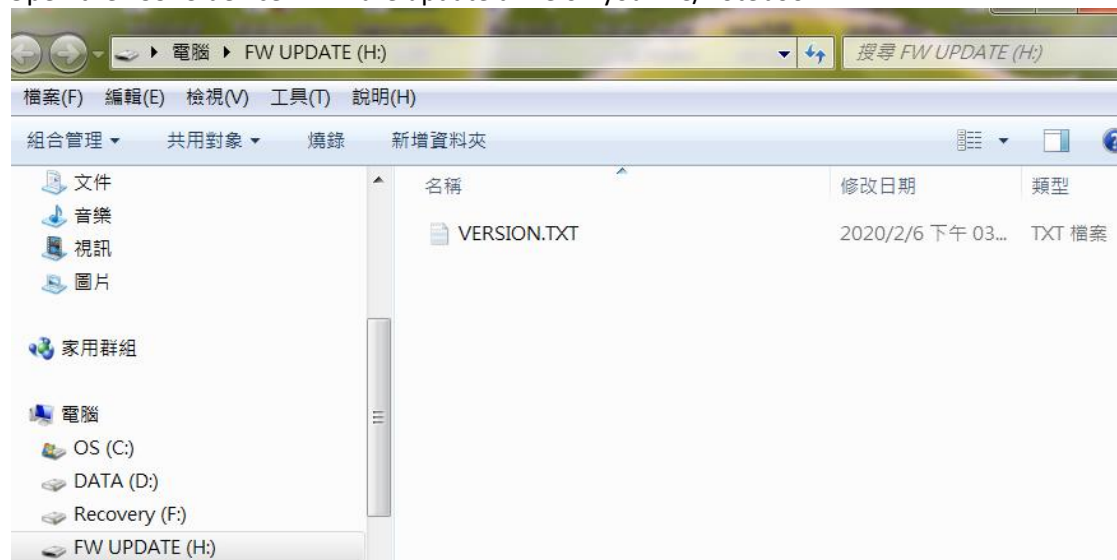

6. Updating the USB type C (Chrontel) firmware
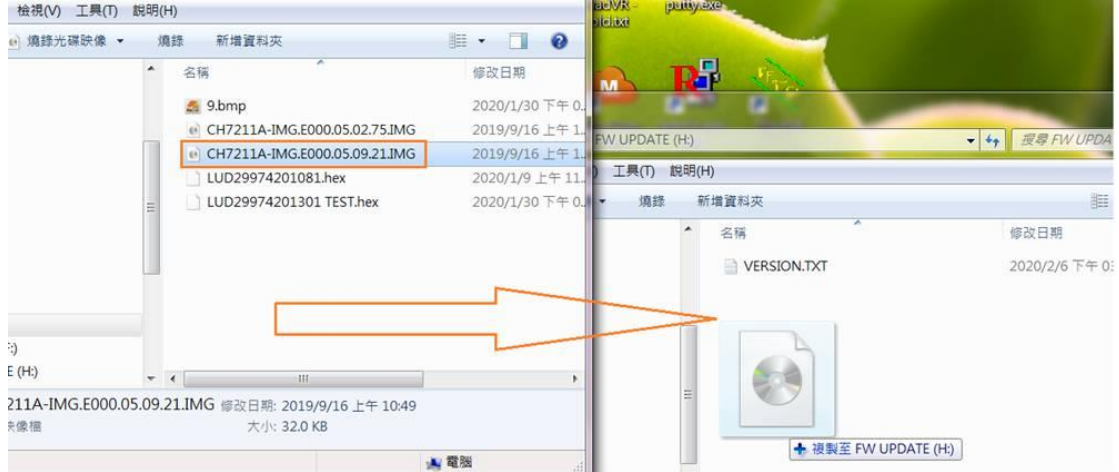   6.1 Select the new Chrontel firmware image file from the PC/notebook.

   6.2 Open the 29973 device firmware update drive on your PC/notebook.

6.3 Copy the Chrontel firmware image file and paste it into the 29973 device firmware update drive folder.

6.4 The device will then begin the Chrontel firmware update.
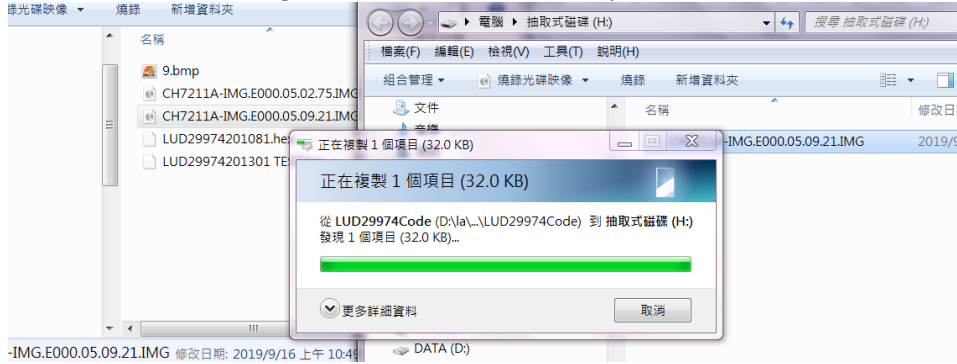
The power LED will flash 2 times/second until the firmware update is complete.

6.5 When the firmware update is complete, all five LEDs on the 29973 (power and four source LEDs) will be solid on.

7. To use the newly updated firmware, you must first recycle the power.

Federal Communication Commission Interference Statement

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that

  to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Industry Canada statement:

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution :

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Avertissement:

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.