



UPCR-HDMI

HDMI In Carrier Board

User's Manual 1st Ed

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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● UPCR-HDMI (HDMI IN Carrier Board)	1
● FPC Cable	1
● Power Cable	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Do not cover the openings on the device to ensure optimal heat dissipation.
13. Watch out for high temperatures when the system is running.
14. Do not touch the heat sink or heat spreader when the system is running
15. Never pour any liquid into the openings. This could cause fire or electric shock.
16. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

17. If any of the following situations arises, please the contact our service personnel:
 - i. Damaged power cord or plug
 - ii. Liquid intrusion to the device
 - iii. Exposure to moisture
 - iv. Device is not working as expected or in a manner as described in this manual
 - v. The device is dropped or damaged
 - vi. Any obvious signs of damage displayed on the device

18. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

FCC Statement

Warning!



This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	X	X	○	○	○	○
外部信号 连接器及线材	X	X	○	○	○	○
<p>○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。</p> <p>X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。</p> <p>备注: 此产品所标示之环保使用期限, 系指在一般正常使用状况下。</p>						

China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products

AAEON Main Board/ Daughter Board/ Backplane

Component	Poisonous or Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
PCB & Other Components	X	X	○	○	○	○
Wires & Connectors for External Connections	X	X	○	○	○	○
<p>O: The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.</p> <p>X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.</p> <p>Note: The Environment Friendly Use Period as labeled on this product is applicable under normal usage only</p>						

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Chapter 1

Product Specifications

1.1 Specifications

System

I/O	FPC 61-pin MIPI CSI x 1 (Lontium.LT6911UXC) 2-pin Power Wafer x 2 HDMI 2.0 x 1 Color Format: CSC Disabled: RGB565/666/888, YUV422 8/10-bit, Legacy YUV420 8-bit CSC Enabled: RGB565/666/888, YUV422 8-bit Video Resolutions: 3840 × 2160 @30fps 1920 × 1200 @30fps 1920 × 1080 @30fps 1680 × 1050 @30fps 1440 × 900 @30fps 1366 × 768 @30fps 1280 x 1024 @30fps 1280 x 960 @30fps 1280 x 800 @30fps 1280 × 768 @30fps 1280 × 720 @30fps 1280 × 600 @30fps 1152 × 864 @30fps 1024 × 768 @30fps 800 × 600 @30fps 720 × 576 @60fps *Following a change in resolution or frequency, please reboot or unplug and plug in HDMI IN carrier board.
Dimensions	1.9" x 0.9" (49mm x 23mm)
Net Weight	0.44 lb. (0.2Kg)

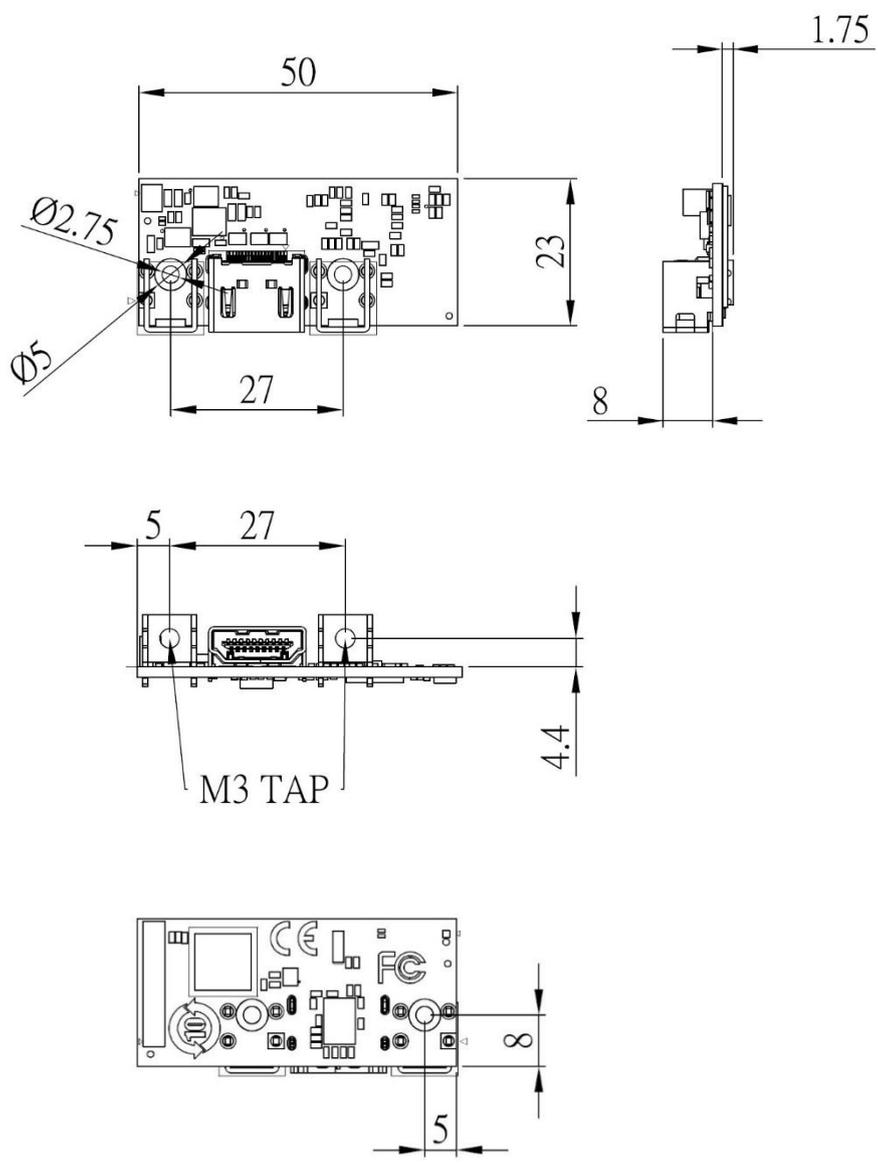
System

Gross Weight	0.88 lb. (0.4Kg)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C), 0.5m/s airflow
Operation Humidity	10% ~ 80% relative humidity, non-condensing
Certification	—
OS Support	Windows® 10

Chapter 2

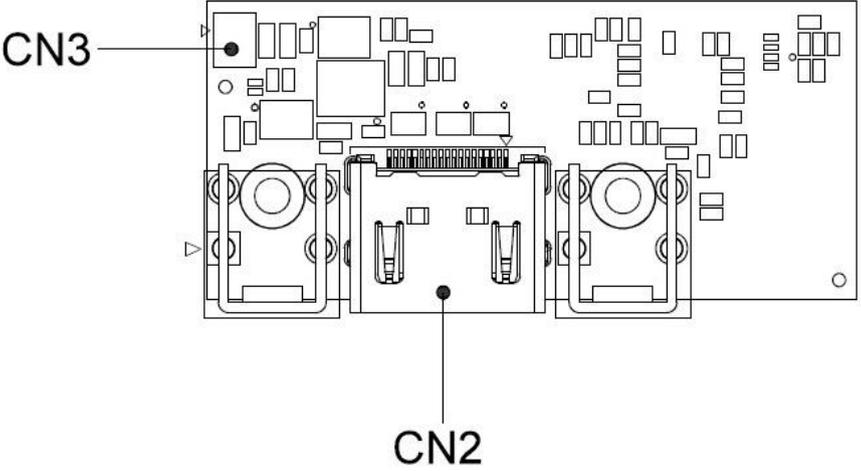
Hardware Information

2.1 Dimensions

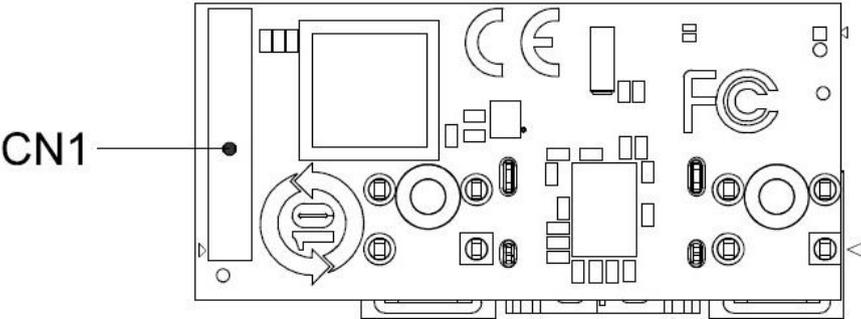


2.2 Jumpers and Connectors

Top



Bottom



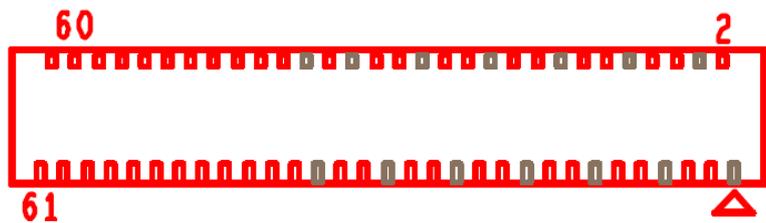
2.3 List of Jumpers and Connectors

Label	Functional Description
CN1	CSI
CN2	HDMI in
CN3	PWR

2.4 Connector Index

Reference	Functional Description	Connector Type
CN1	CSI	(TF).FPC/FFC Connector Pitch=0.3mm H=0.9mm.DualContact type.SMD.61P90D.FEMALE.SHENG-DA.BL309P-61S31-TAH0
CN2	HDMI in	(TF)HDMI CONN..SMD.19P90D.FEMALE.A TYPE.FOXCONN. QJ51191-LFB4-7F
CN3	PWR	(TF)WAFER BOX.2P.180D.(M).SMD.2.0mm.W/LOCK SMD.CATCH .1192-700-02SM

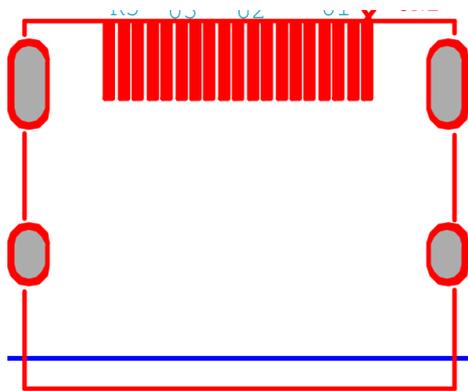
2.4.1 CSI (CN1)



Pin	Signal Description	Pin	Signal Description
1	GND	2	CSI_A_D0_DN
3	CSI_A_D0_DP	4	GND
5	CSI_A_D1_DP	6	CSI_A_D1_DN
7	GND	8	CSI_A_CK_DN
9	CSI_A_CK_DP	10	GND
11	CSI_B_D0_DP	12	CSI_B_D0_DN
13	GND	14	CSI_B_D1_DN
15	CSI_B_D1_DP	16	GND
17	CSI_B_CK_DP	18	CSI_B_CK_DN
19	GND	20	CSI_C_D0_DN
21	CSI_C_D0_DP	22	GND
23	CSI_C_D1_DP	24	CSI_C_D1_DN
25	GND	26	CSI_C_CK_DN
27	CSI_C_CK_DP	28	GND
29	CSI_D_D0_DP	30	CSI_D_D0_DN
31	GND	32	CSI_D_D1_DN
33	CSI_D_D1_DP	34	GND
35	NC	36	NC

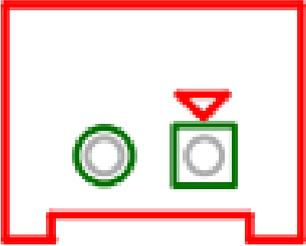
Pin	Signal Description	Pin	Signal Description
37	GND	38	GND
39	CSI_I2S_BCLK	40	CSI_I2S_SDO
41	CSI_I2S_FRM	42	CSI_I2S_SDI
43	NC	44	NC
45	NC	46	NC
47	HDMI_IN_DET	48	NC
49	NC	50	I2C1_SCL
51	NC	52	I2C1_SDA
53	NC	54	NC
55	NC	56	NC
57	NC	58	NC
59	INT_IO_GPIO5	60	NC
61	HDMI_IN_RST		

2.4.2 HDMI (CN2)



Pin	Signal Description	Pin	Signal Description
1	TMDS1_D2+	2	GND
3	TMDS1_D2-	4	TMDS1_D1+
5	TMDS1_D1-	6	GND
7	TMDS1_D0+	8	GND
9	TMDS1_D0-	10	TMDS1_CLK+
11	GND	12	TMDS1_CLK-
13	NC	14	NC
15	DDC_SCL	16	DDC_SDA
17	GND	18	5V
19	HPD		

2.4.3 Power (CN3)



Pin	Signal Description	Pin	Signal Description
1	TMDS1_D2+	2	GND

Chapter 3

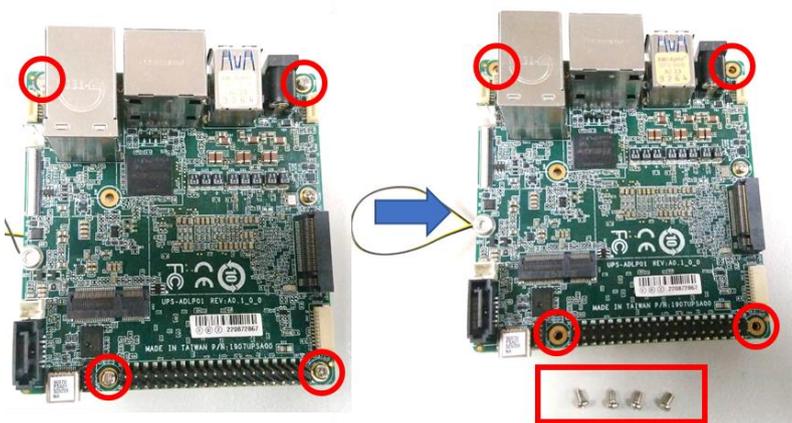
Hardware & Software Installation Guide

3.1 Hardware Installation

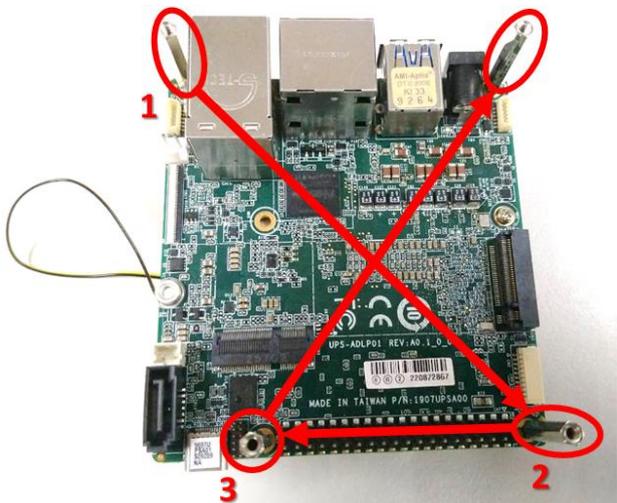
For this process you will need a Phillips head screwdriver.

3.1.1 UP Squared i12 UPCR-HDMI Installation

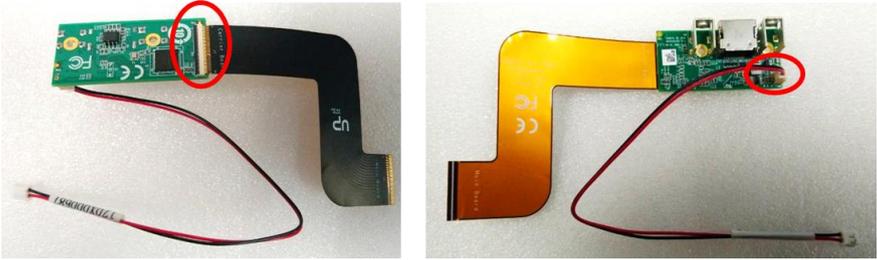
Step 1: Remove the four (4) screws from the outer edges of the board.



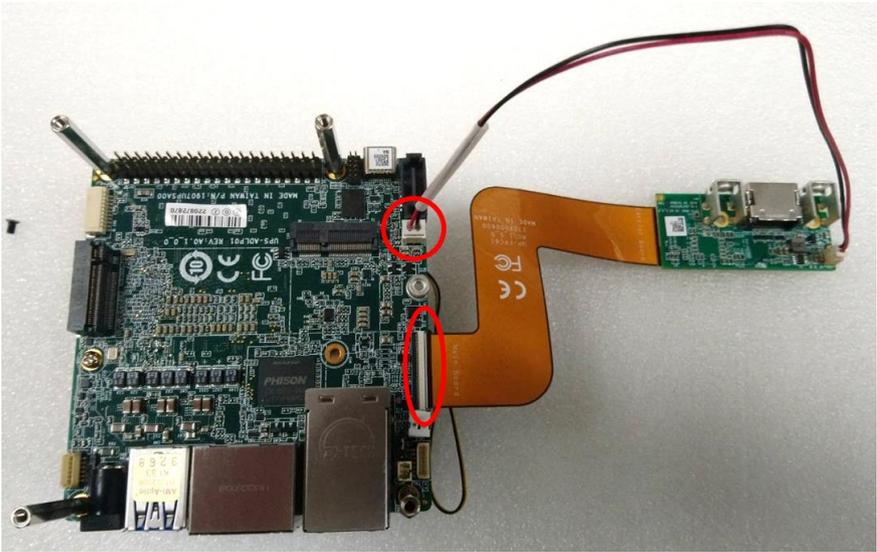
Step 2: Affix and lock the four (4) pillars to the board in the following sequence.



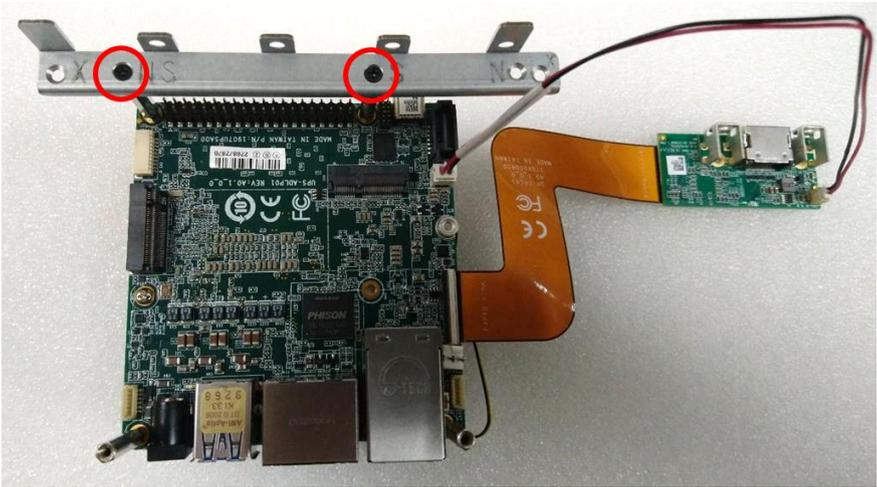
Step 3: Make sure to unlock the HDMI IN FPC connector, then plug the FPC cable into the FPC connector and power cable, noting the direction of the FPC cable.



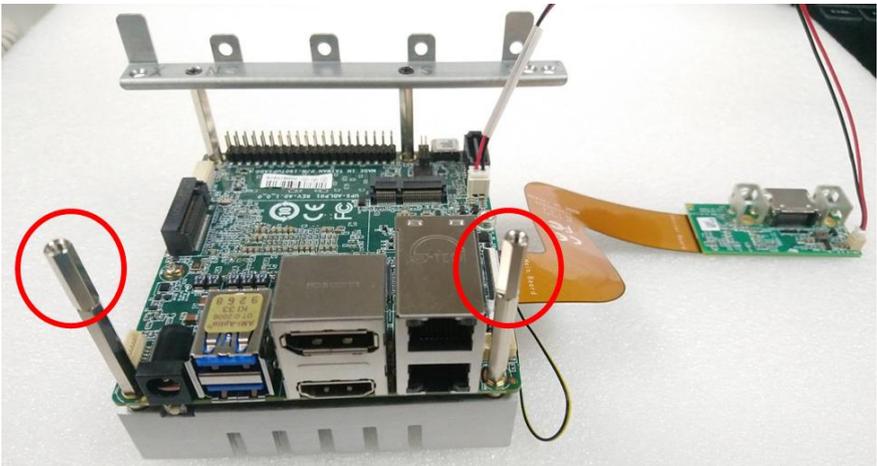
Step 4: Unlock the main board FPC connector, then plug the FPC cable and power cable into it.



Step 5: Place bracket on top of the pillars, then affix and lock the two (2) black screws.



Step 6: Affix and lock the two (2) small pillars.

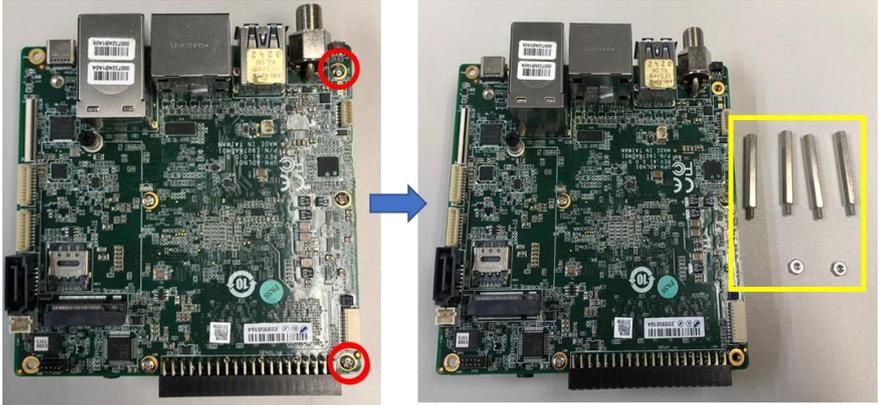


Step 7: Affix and lock the two (2) silver screws to the HDMI IN carrier board.



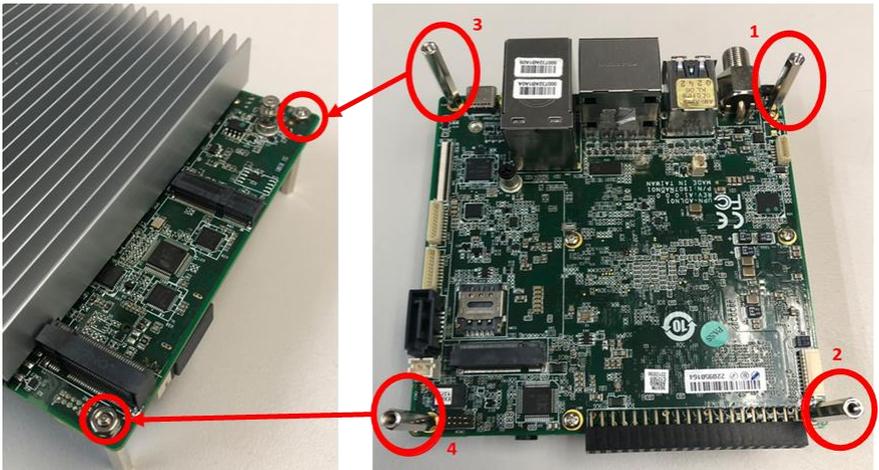
3.1.2 UP Squared Pro 7000 UPCR-HDMI Installation

Step 1: Remove the two (2) screws from the outer edges of the board.



Note: Components marked in yellow can be found in the product accessories bag.

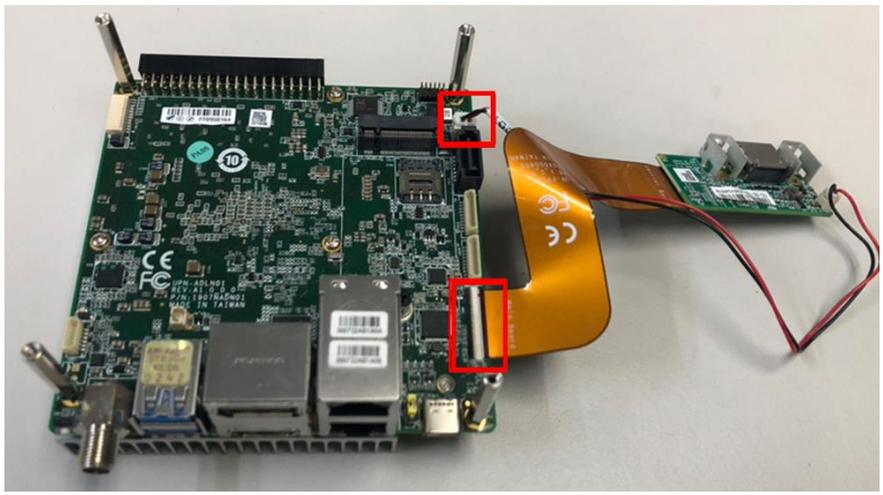
Step 2: Affix and lock the two (2) nuts (left figure) and four (4) pillars (right figure) to the board in the following sequence.



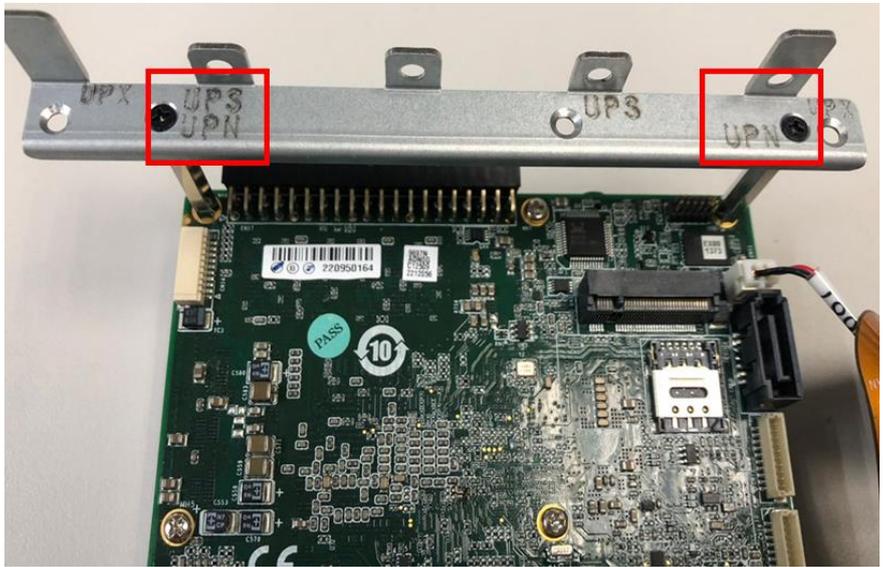
Step 3: Make sure to unlock the HDMI IN FPC connector, then plug the FPC cable into the FPC connector and power cable, noting the direction of the FPC cable.



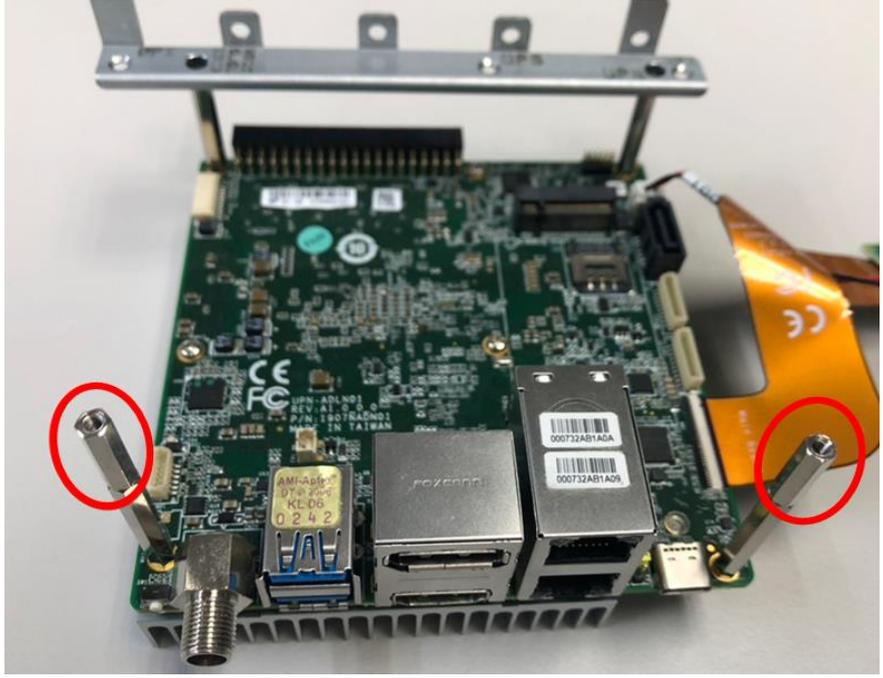
Step 4: Unlock the main board FPC connector, then plug the FPC cable and power cable into it.



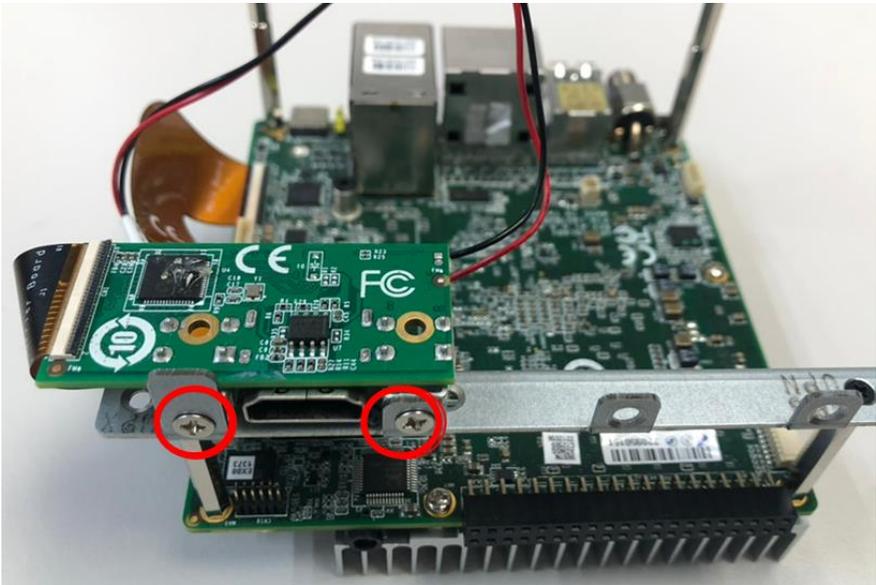
Step 5: Put bracket on top of the pillars and affix and lock the two (2) black screws.



Step 6: Affix and lock the two (2) short pillars.

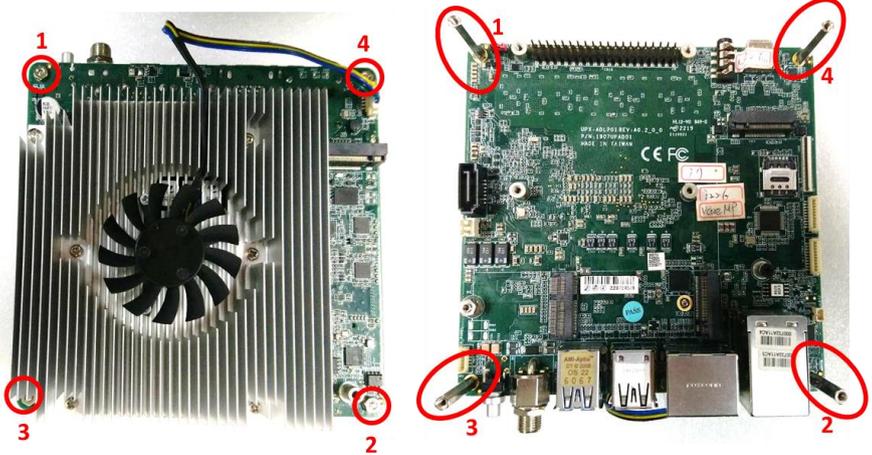


Step 7: Affix and lock the two (2) sliver screws to the HDMI IN carrier board.

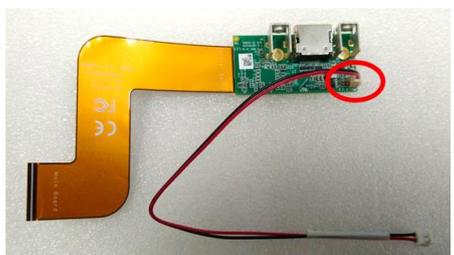
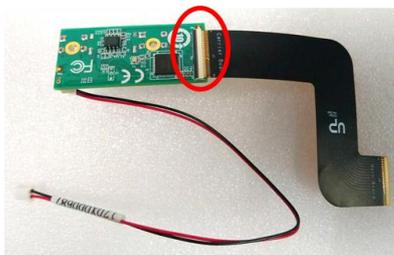


3.1.3 UP Xtreme i12 UPCR-HDMI Installation

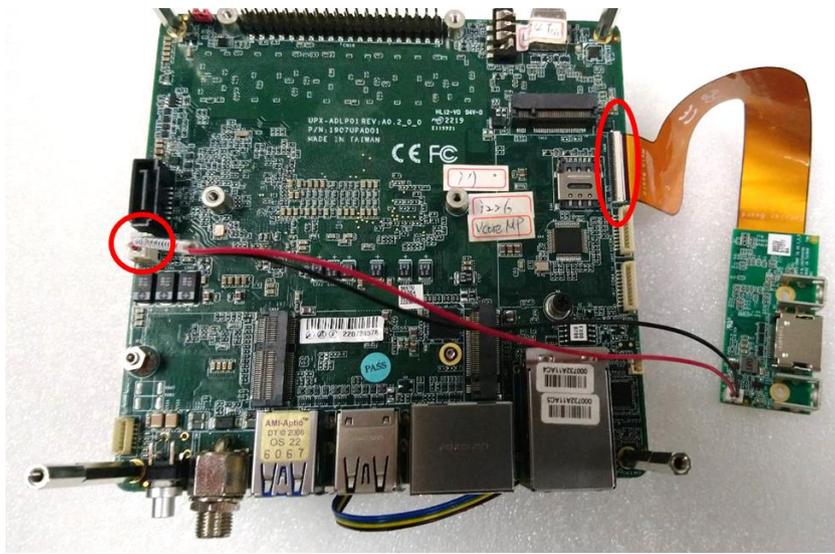
Step 1: Affix and lock the four (4) screws and the four (4) pillars (28mm) to the board in the following sequence.



Step 2: Make sure to unlock the HDMI IN FPC connector, then plug the FPC cable into the FPC connector and power cable, noting the direction of the FPC cable.



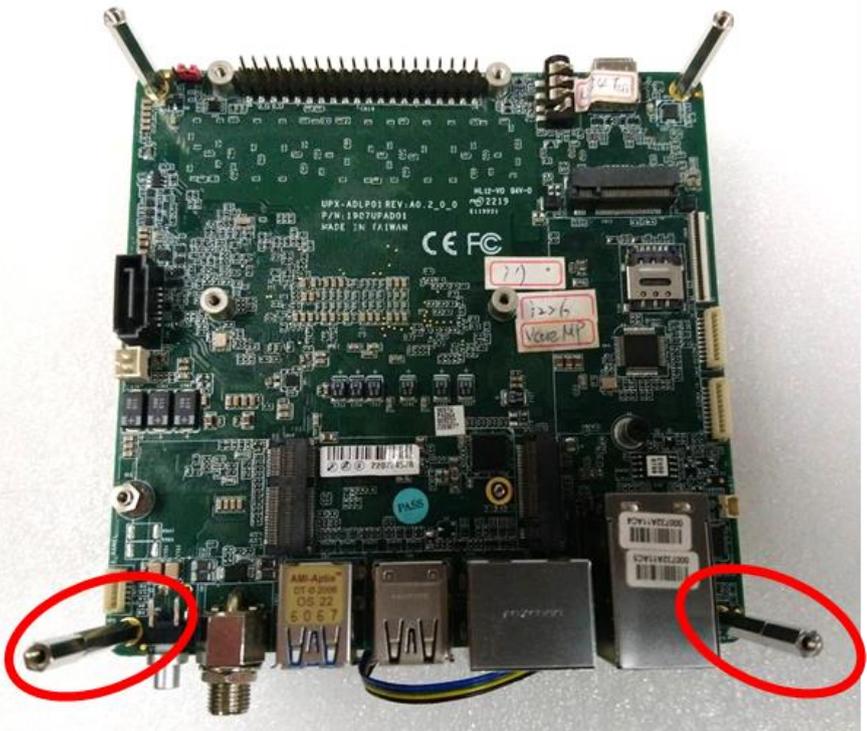
Step 3: Unlock the main board FPC connector, the plug the FPC cable and power cable into it.



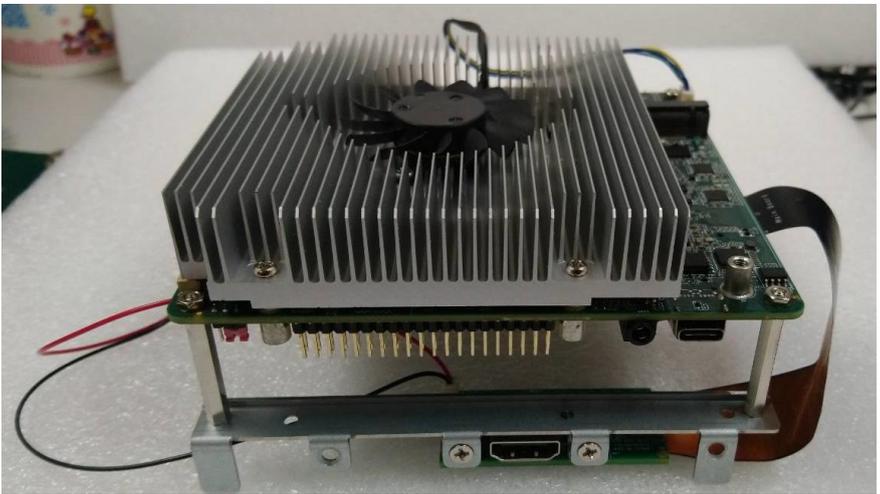
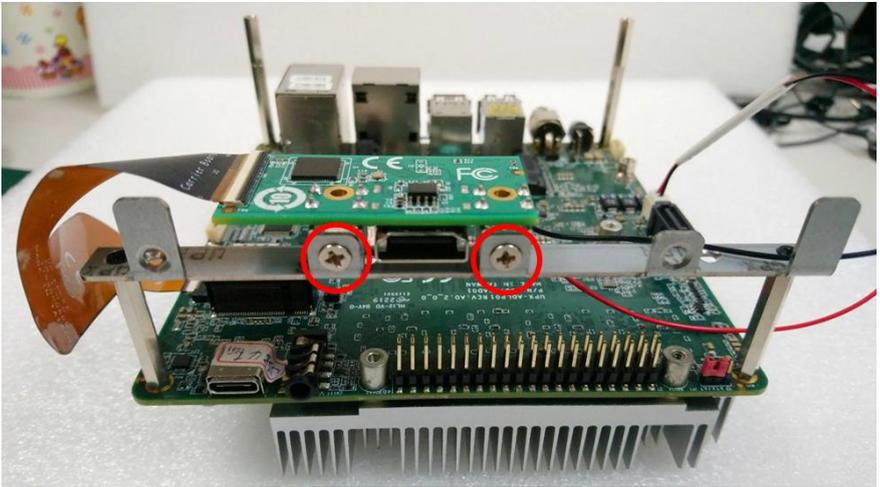
Step 4: Put bracket on top of the pillars and affix and lock the two (2) black screws.



Step 5: Affix and lock the two (2) small pillars.



Step 6: Affix and lock the two (2) silver screws to the HDMI IN carrier board.



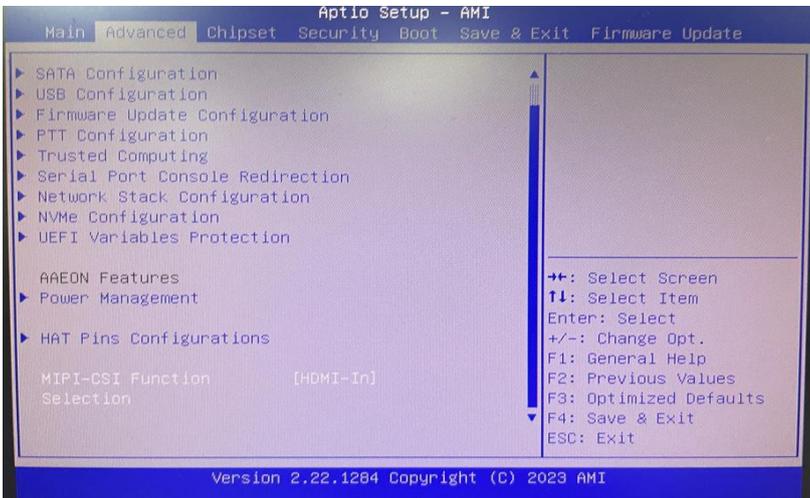
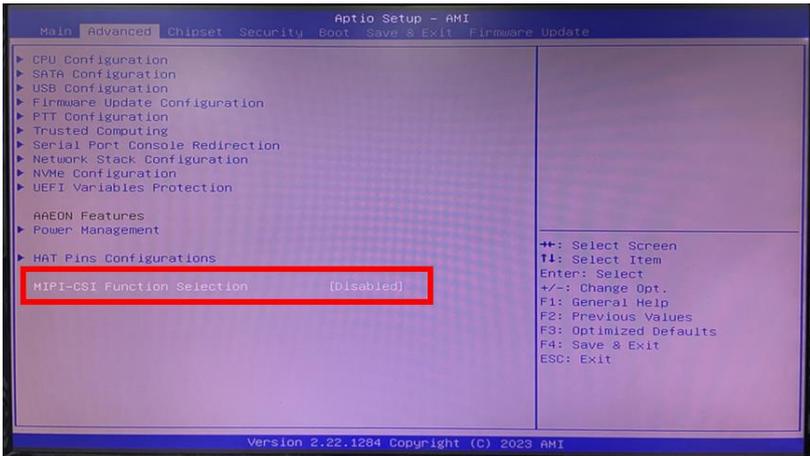
3.2 BIOS Settings

Enter the BIOS password: upassw0rd, then follow the below path:

→ **Advanced** → **MIPI-CSI Function Selection** → **HDMI-IN**

Note the below table for each board version and its corresponding BIOS.

Product	Board Version	BIOS Version
UP Squared i12	A1.0	After USADAM11
UP Squared Pro 7000	A1.0	After UNADAM24



3.3 OS Driver Settings

3.3.1 Windows 10

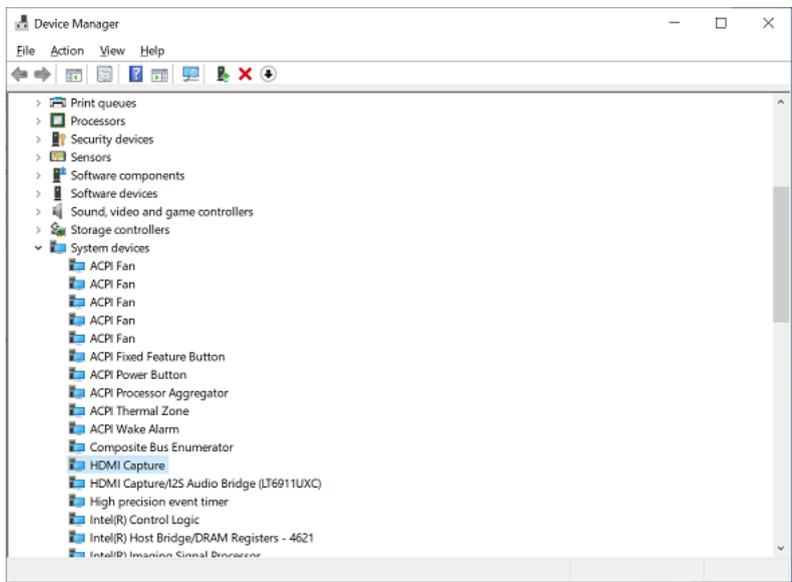
Step 1: Drivers can be downloaded from the UP Board website by following the link <https://up-board.org> and navigating to the Downloads section.

Step 2: Enter BIOS -> Advanced -> MIPI-CSI Function Selection and select HDMI-In.

Step 3: Please install **Camera-63.22000.3.7652** driver for HDMI Capture.

Driver Link: <https://up-shop.org/default/up-hdmi-in-carrier-board.html> -> to choose the main board you have: UP Squared i12, UP Squared Pro 7000.

*Make sure to check the main board BIOS version.

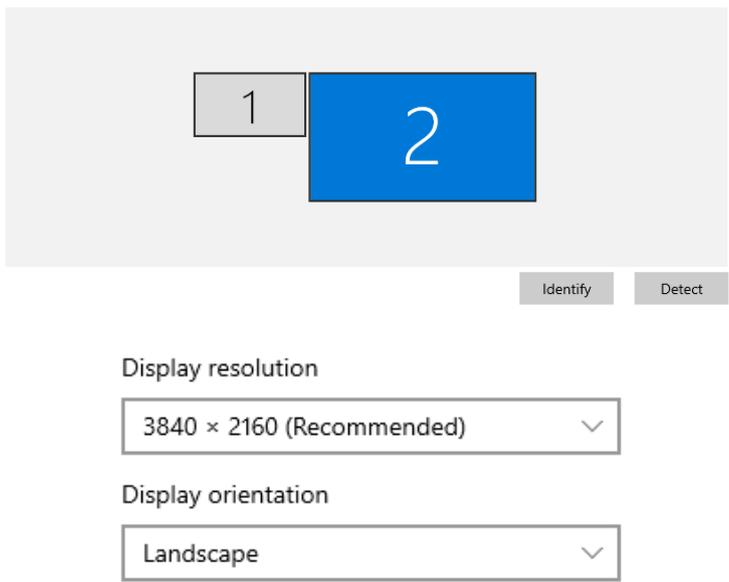


Step 4 (Optional): Setting HDMI output source unit, only supports 30Hz.

Display

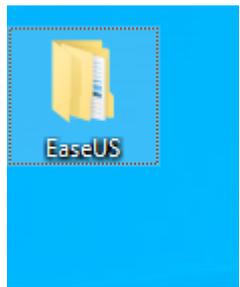
Rearrange your displays

Select a display below to change the settings for it. Press and hold (or select) a display, then drag to rearrange it.



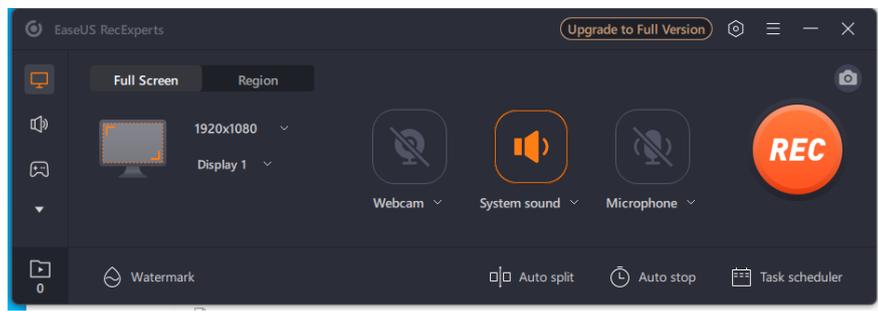
Step 5: From capture side, open the **RecExperts** app to capture HDMI input:

https://recorder.easeus.com/campaign/record-world-cup-qatar-2022.html?gclid=EALalQobChMlivC8v4vegAMVp2wPAh0QDAO2EAAyASAAEgKzz_D_BwE



File Explorer view of the bin directory in EaseUS RecExperts:

Name	Date modified	Type	Size
Qt5QuickSnapes.dll	12/12/2022 2:39 PM	Application exten...	181 KB
Qt5QuickTemplates2.dll	12/12/2022 2:39 PM	Application exten...	907 KB
Qt5QuickWidgets.dll	12/12/2022 2:39 PM	Application exten...	65 KB
Qt5RemoteObjects.dll	12/12/2022 2:39 PM	Application exten...	382 KB
Qt5SerialPort.dll	3/29/2023 1:31 AM	Application exten...	65 KB
Qt5Svg.dll	12/12/2022 2:39 PM	Application exten...	266 KB
Qt5WebChannel.dll	3/29/2023 1:31 AM	Application exten...	106 KB
Qt5WebEngineCore.dll	3/29/2023 1:31 AM	Application exten...	67,585 KB
Qt5WebEngineWidgets.dll	3/29/2023 1:31 AM	Application exten...	208 KB
Qt5Widgets.dll	12/12/2022 2:39 PM	Application exten...	4,489 KB
Qt5WinExtras.dll	12/12/2022 2:39 PM	Application exten...	441 KB
Qt5XmlPatterns.dll	12/12/2022 2:39 PM	Application exten...	2,263 KB
QtWebEngineProcess	3/29/2023 1:31 AM	Application	441 KB
RecExperts	3/30/2023 11:37 AM	Application	5,933 KB



Appendix A

Mating Connectors

A.1 List of Connectors

Label	Description	Connector Type
CN1	CSI	(TF).FPC/FFC Connector Pitch=0.3mm H=0.9mm.Dual Contact type .SMD.61P90D.FEMALE.SHENG-DA.BL309P-61S31-TAH0
CN2	HDMI in	(TF)HDMI CONN..SMD.19P90D.FEMALE.ATYPE.FOXCONN.QJ51191-LFB4-7F
CN3	PWR	(TF)WAFER BOX.2P:180D.(M).SMD.2.0mm.W/LOCK SMD.CATCH.1192-700-02SM