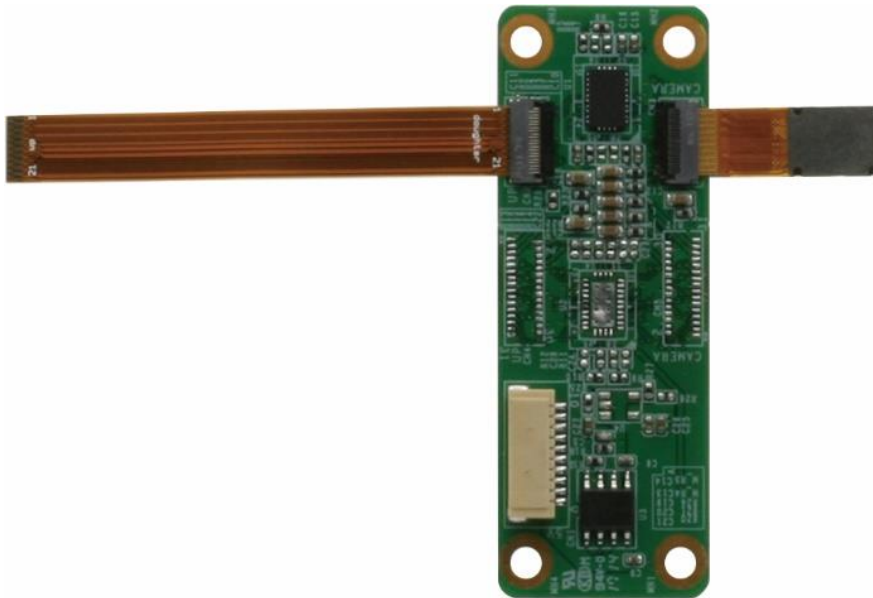


# Internal Department or Context

## UP-CAME-2M User Manual



**Revision:** 01 D2

**Update Date:** 28 September 2018

**Prepared For:** Aling Wu                      AAEON

**Prepared By:** IreneLin 林語禾              Evangelist

## Revision History

The following table contains the information regarding the history and revisions of this living document.

Version	Date	Contributor	Changes Description
01	10 Sep 2018	Irene Lin	Initial Creation

## Document Attributes

The following table contains the list of files that are associated with this living document.

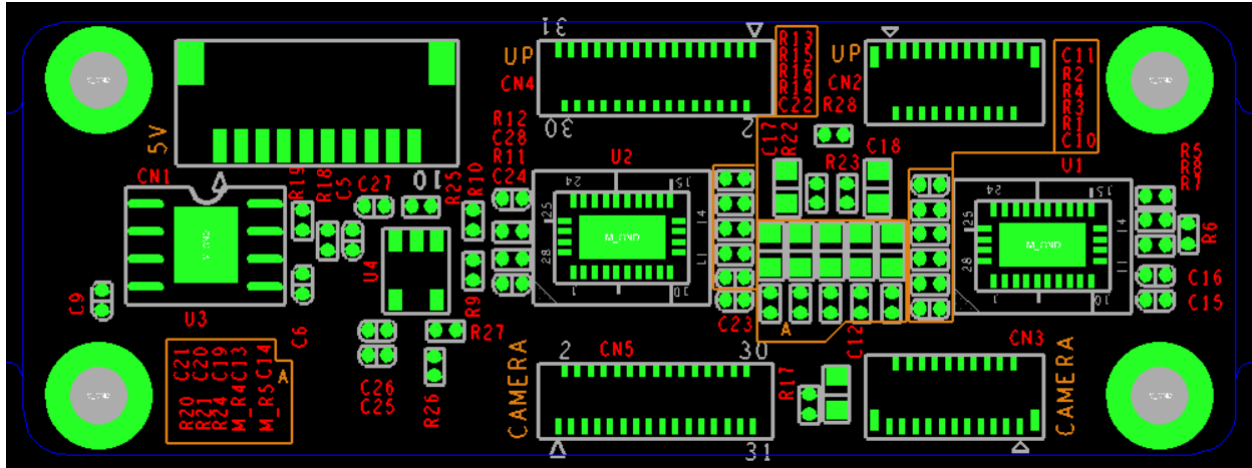
Filename	Description
N/A	

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## 2 UP-CAMERA Layout

### 2.1 TOP



### 2.2 BOTTOM

## 3 Connector, Switch References

### 3.1 Connector Index

Reference Designation	Functional Description	Connector Type
CN1	5V PW	10P 710-74-10TWR6
CN2	CAMERA/2M	21P FH35C-21S-0.3SHW(50)
CN3	CAMERA/2M	21P FH35C-21S-0.3SHW(50)

## 4 Switch Settings

### 4.1 CN1: 5V PW

Pin	Signal Description	Pin	Signal Description	Pin	Signal Description
1	5V	2	NC	3	NC
4	M_GND	5	5V	6	NC
7	NC	8	M_GND	9	NC
10	NC				

### 4.2 CN2: UP board-CAMERA board connector/2M

Pin	Signal Description	Pin	Signal Description	Pin	Signal Description
1	M_GND	2	M_+V2P8_CAM	3	M_I2C2_SOC_SDA
4	M_CAM_RST_N	5	M_I2C2_SOC_SDA	6	M_I2C2_SOC_SCL
7	M_GND	8	M_CAM_MCLK	9	M_GND
10	M_+V1P8_CAM	11	M_+V1P2_CAM	12	M_GND
13	M_MCSI_1_DATA0_DP	14	M_MCSI_1_DATA0_DN	15	M_GND
16	M_MCSI_1_CLK_DP	17	M_MCSI_1_CLK_DN	18	M_GND
19	M_MCSI_1_DATA1_DP	20	M_MCSI_1_DATA1_DN	21	M_GND

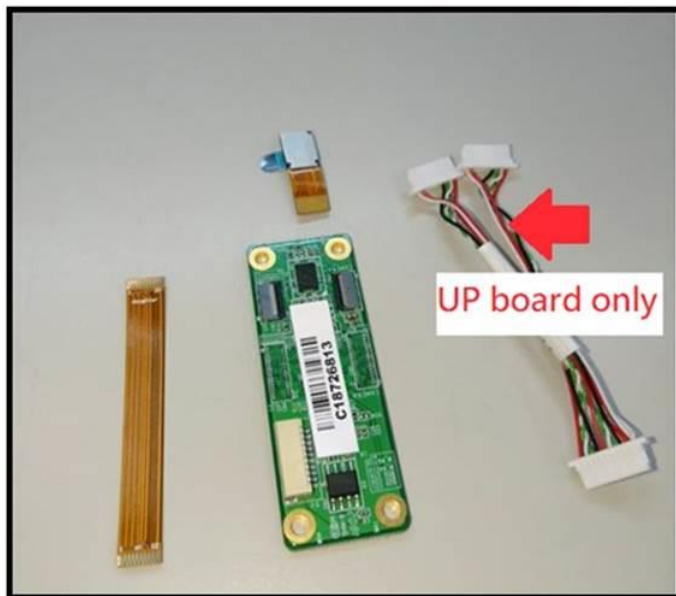
### 4.3 CN3: CAMERA board-camera connector/2M

Pin	Signal Description	Pin	Signal Description	Pin	Signal Description
1	M_GND	2	S_MCSI_1_DATA1_DN	3	S_MCSI_1_DATA1_DP
4	M_GND	5	S_MCSI_1_CLK_DN	6	S_MCSI_1_CLK_DP
7	M_GND	8	S_MCSI_1_DATA0_DN	9	S_MCSI_1_DATA0_DP
10	M_GND	11	+V1P2_R_CAM	12	+V1P8A
13	M_GND	14	M_CAM_MCLK	15	M_GND
16	M_I2C2_SOC_SCL	17	M_I2C2_SOC_SDA	18	M_CAM_RST_N
19	M_FLASH_RESET_N	20	M_+V2P8_CAM	21	M_GND

## 5 Quick Install Guide

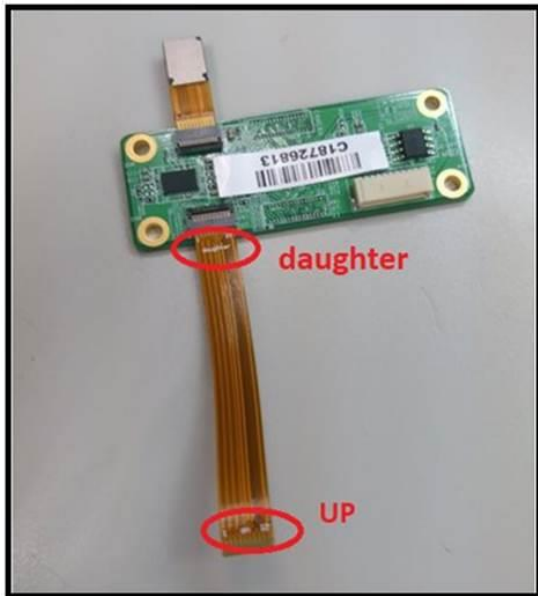
1. Check your UP-CAME package. You will have:

- 1 x Y cable(for UP-CHT01 only, not necessary for UP-APL01 and UP core)
- 1 x Camera adapter board
- 1 x 21PIN FPC cable
- 1 x 2M Chicony camera module



2. Connect your 2M camera(Golden Finger side up) to UP-CAME board trough "CAMERA" mipi csi connector (CN3).

3. Find the "daughter" side on the FPC cable and connect to "UP" mipi csi connector (CN2) on the camera board (Golden Finger side up).



4. Connect your UP-CAME board to UP, UP2 or UP core board.  
**UP-CHT01 (UP board):** connect the "UP" side of FPC cable to FPC connector (CN32) (Golden Finger side up).  
**UP-APL01 (UP Squared):** connect the "UP" side of FPC cable to FPC connector (CN5) (Golden Finger side up).  
**UP-CHCR1 (UP core):** connect the "UP" side of FPC cable to FPC connector (CN32) (Golden Finger side up).
5. Boot up your device and install camera WIN10 driver according to UP/UP2/UP core SOP (see next chapter).

## 6 WIN10 Driver Installation Guide

\*Chicony 2M camera can only support Windows 10 ver.1607.

### 6.1 How to install camera driver on UP-CHT01 and UP-CHCR1?

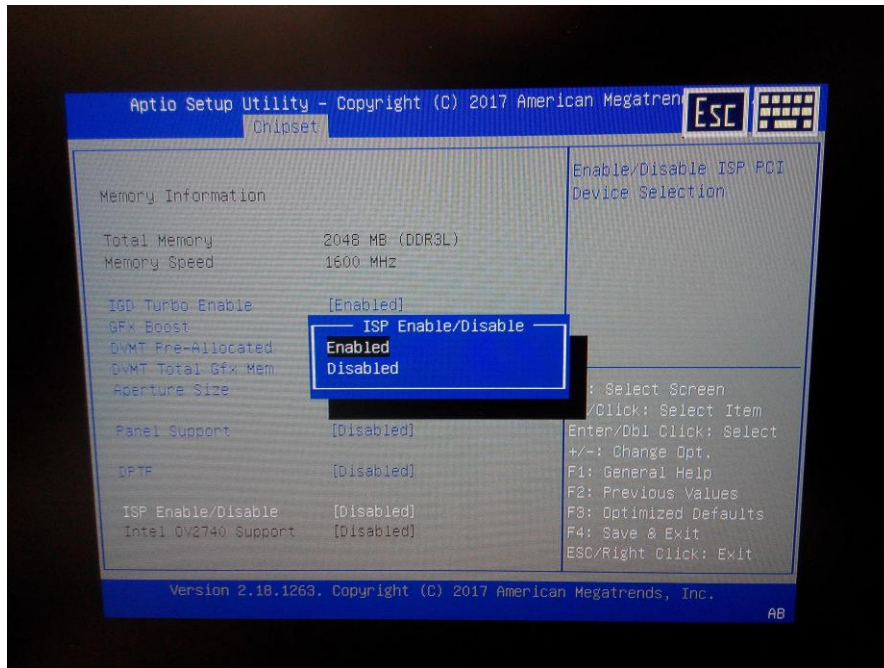
#### 6.1.1 BIOS setting

6.1.1.1 Go to "Chipset" > "North Bridge" > Press [Enter]

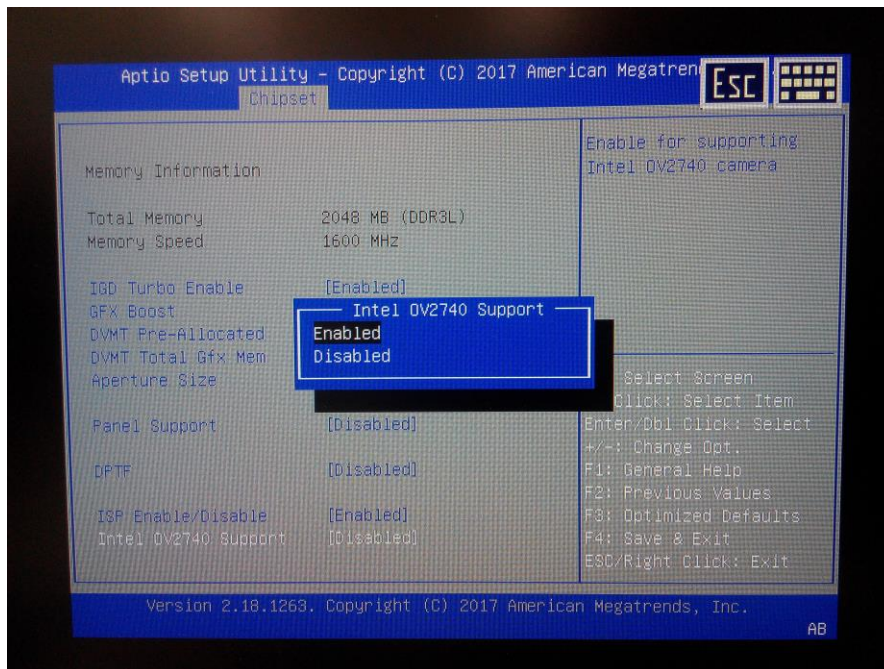




6.1.1.2 Press "ISP Enable/Disable" > select "Enabled"

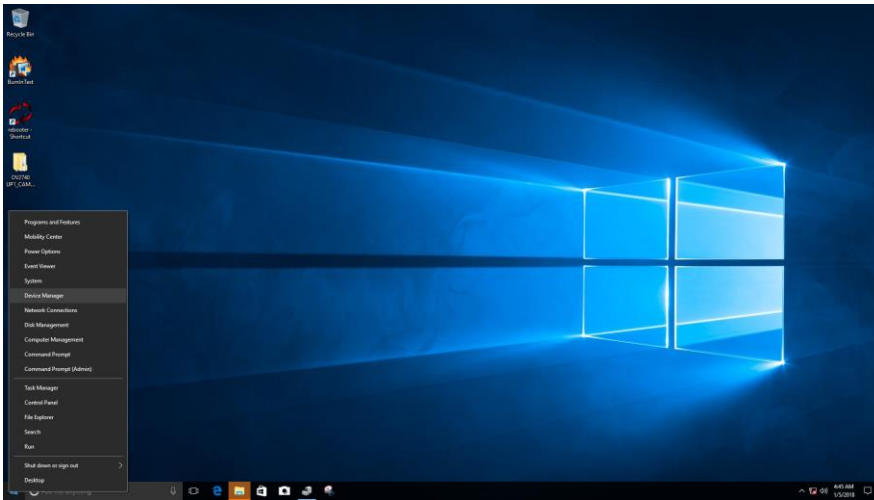


6.1.1.3 Press "Intel OV2740 Support" > select "Enabled"

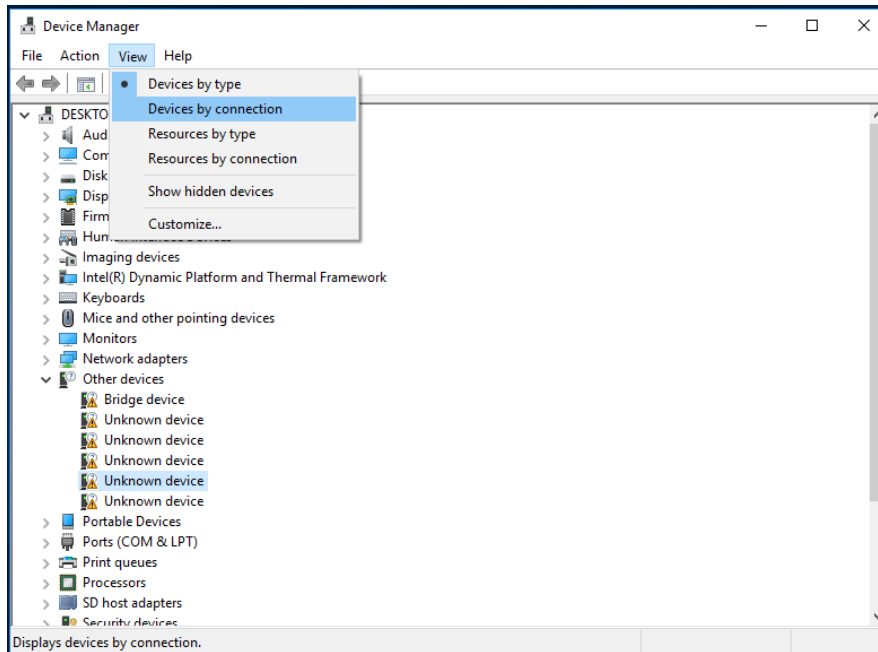


## 6.1.2 Windows driver installation

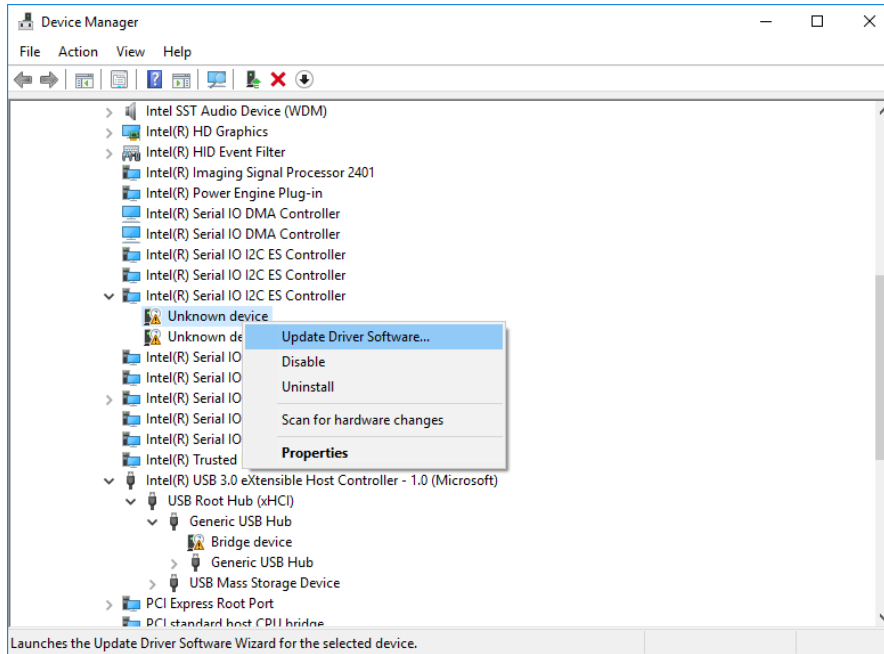
### 6.1.2.1 Right click "Start" > Enter "Device Manager"



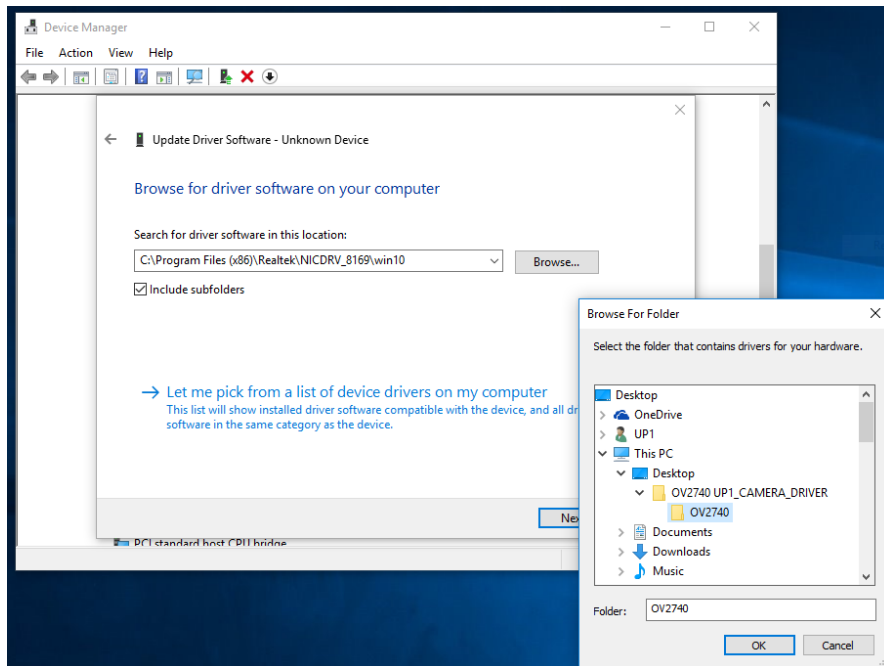
### 6.1.2.2 Click "Devices by connection"



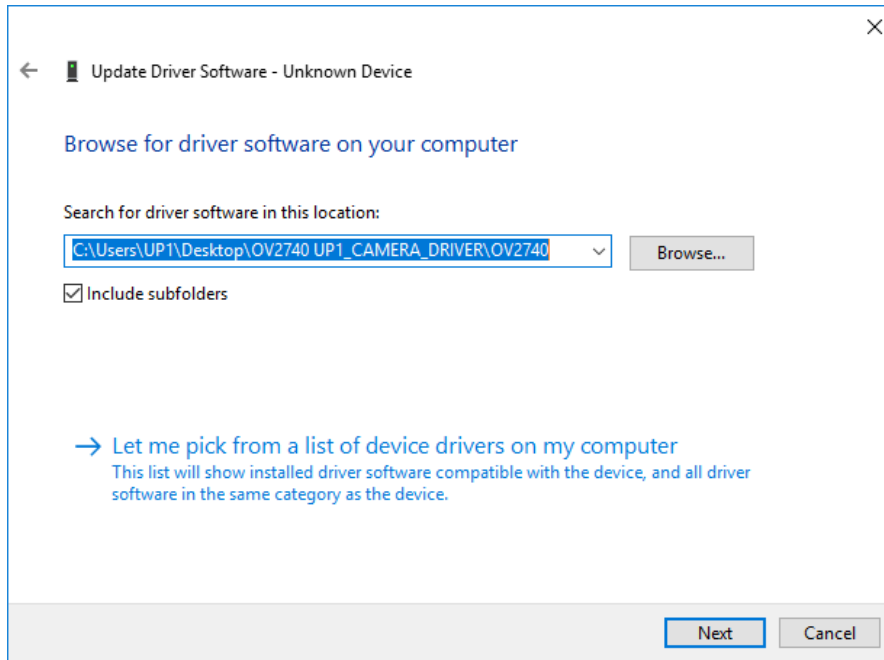
### 6.1.2.3 Right click "Unknown device" (Either one) > Click "Update Driver Software"



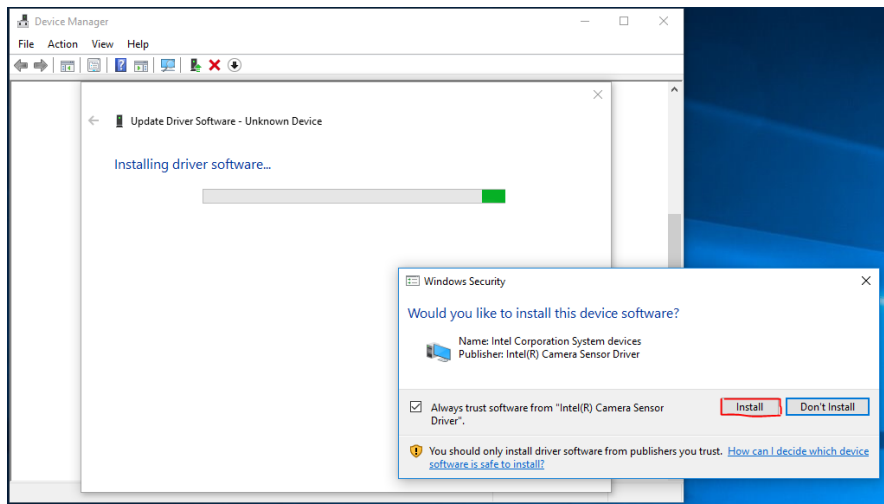
### 6.1.2.4 Search your driver location and click "OK"



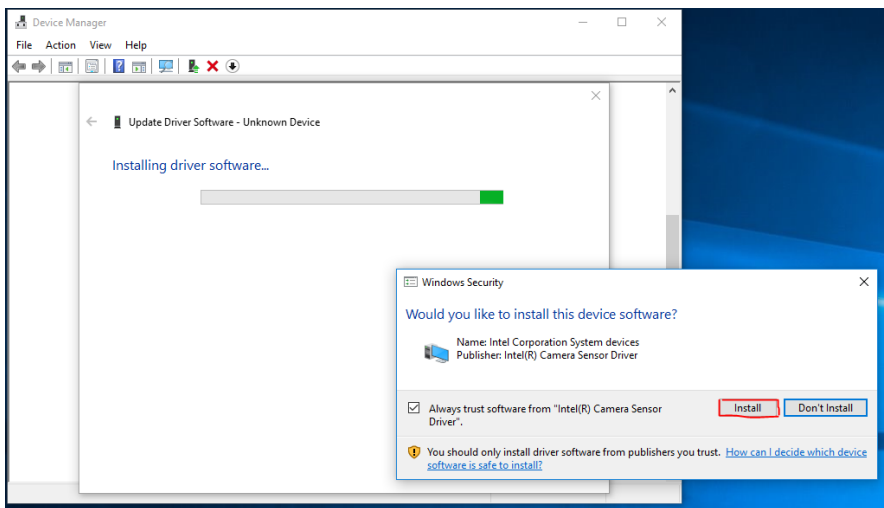
### 6.1.2.5 Click "Next"



### 6.1.2.6 Click "Install"



6.1.2.7 Done. You can use skype to check up-camera, or any app for it.

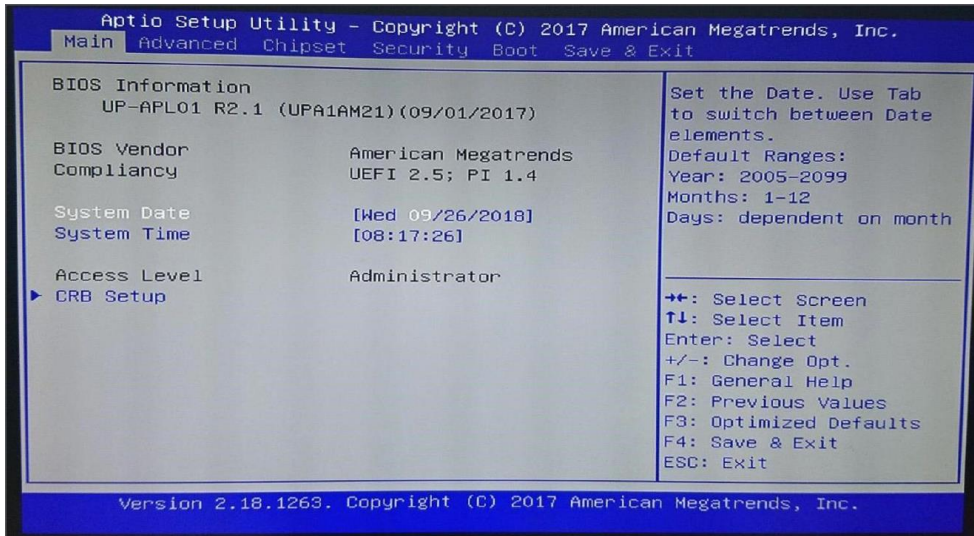


## 6.2 How to install camera driver on UP-APL01?

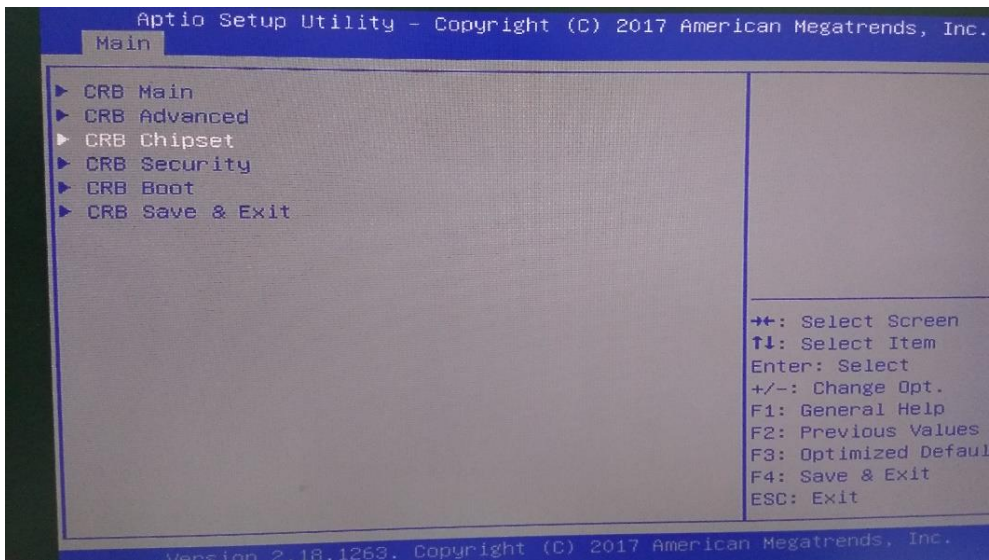
### 6.2.1 BIOS setting

(Before entering BIOS, please key in **upassw0rd** as password.)

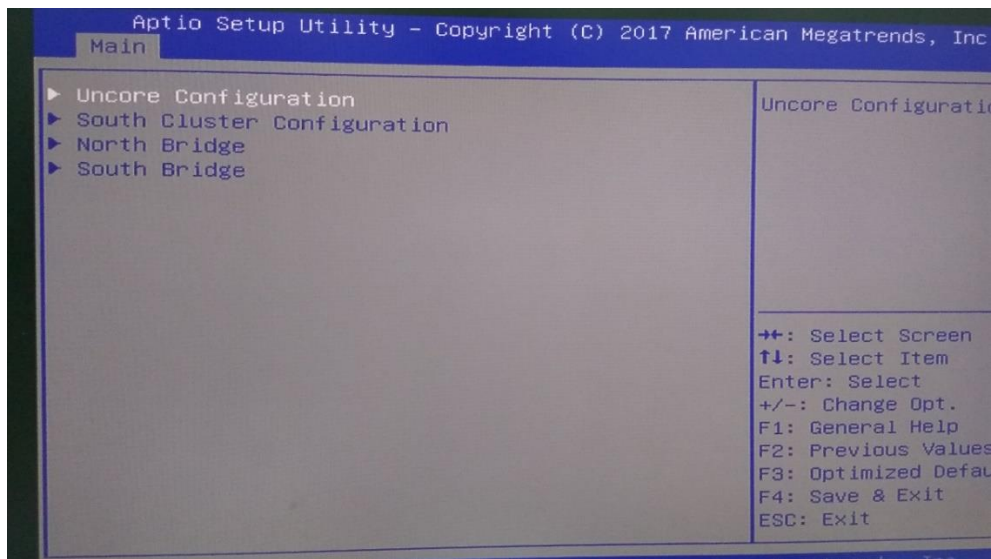
#### 6.2.1.1 Main > CRB Setup



#### 6.2.1.2 Enter CRB Chipset

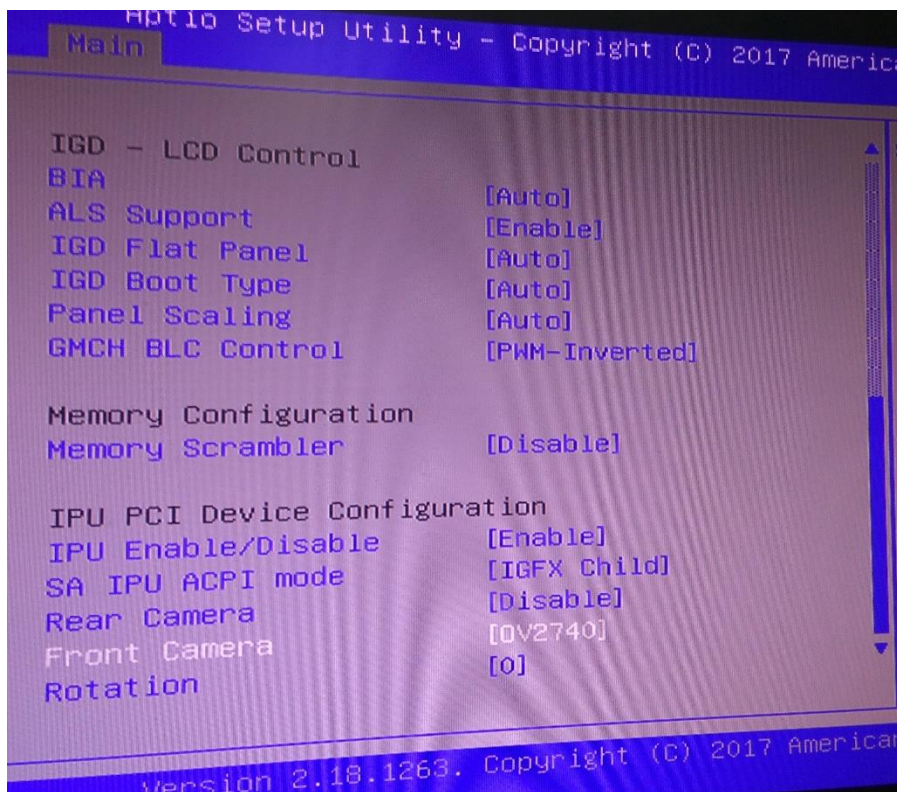


### 6.2.1.3 Uncore Configuration



### 6.2.1.4 IPU Enable/Disable > Enable

### 6.2.1.5 SA IPU ACPI mode > [IGFX Child]



### 6.2.1.6 CAMERA setting:

\*You can enable only one camera(2M/8M) at the time.

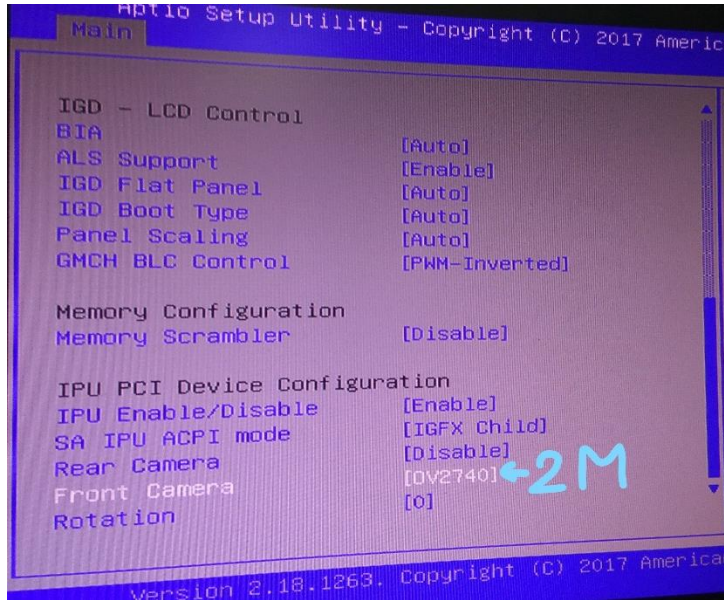
>>Rear Camera Disable / IMX135

>>Front Camera Disable / OV2740

#### 6.2.1.6.1 2M CAMERA

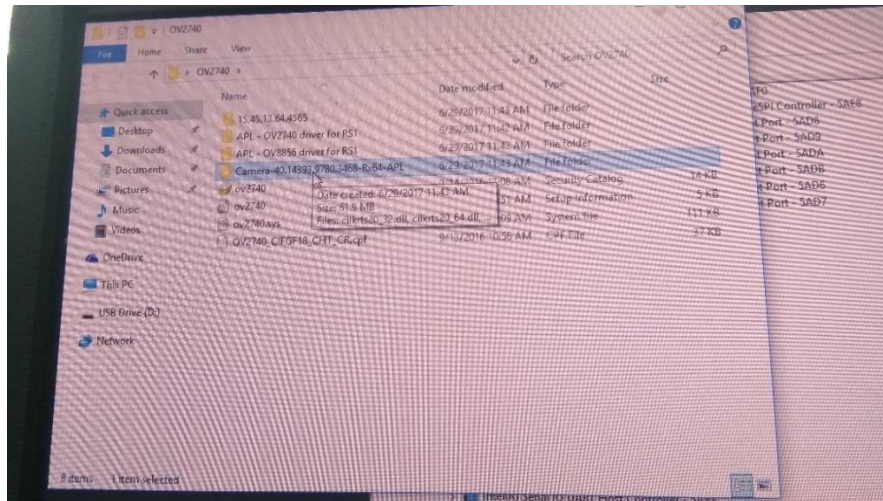
1. Please refer to below image:

Rear Camera[Disable]; Front Camera[OV2740]



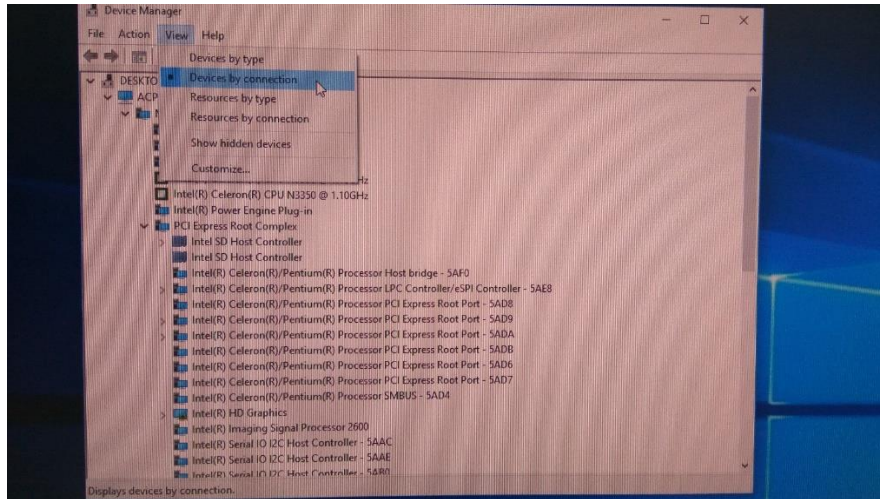
2. Enter Windows to install the camera driver.

Note: DRIVER location: File "Camera-4.014393.9780.3468-Rx64-APL"



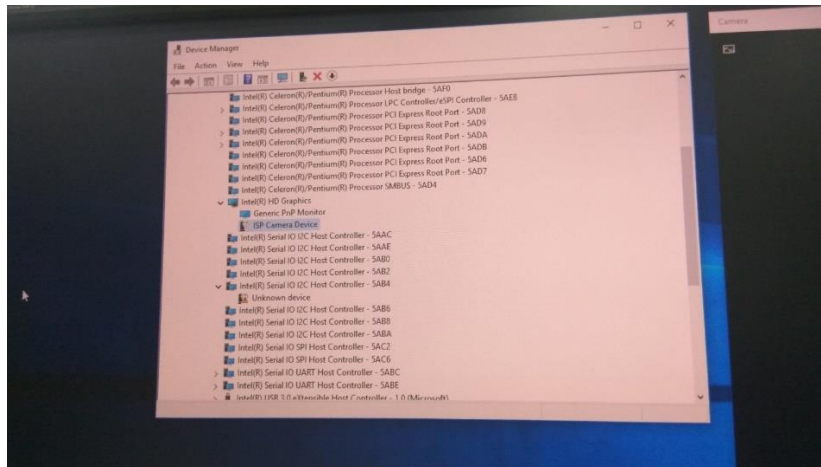


3. Open "Device Manager"
4. Click "VIEW" and select "Devices by connection"

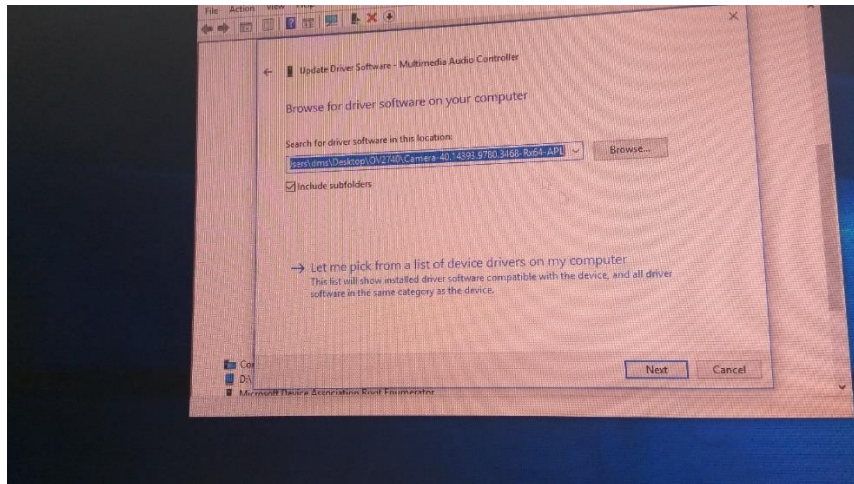


5. Start to install four drivers:

ISP Camera Device (1/4)

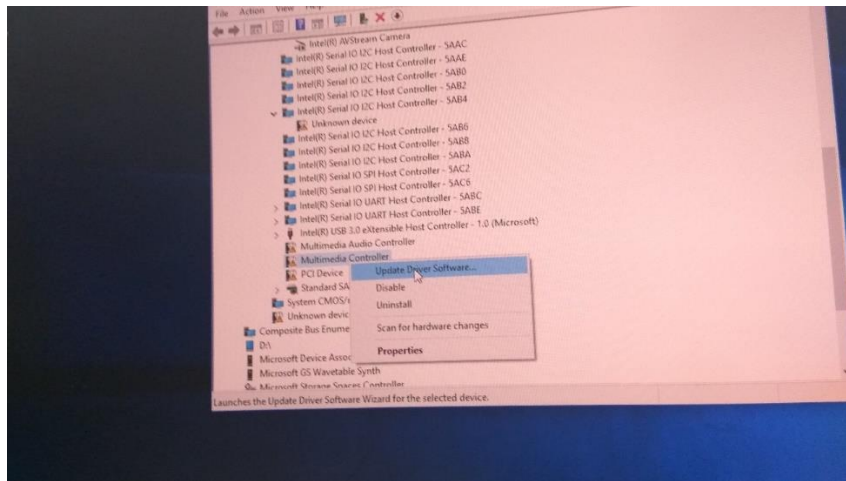


\*Browse to find the file "Camera-4.014393.9780.3468-Rx64-APL" and update driver:



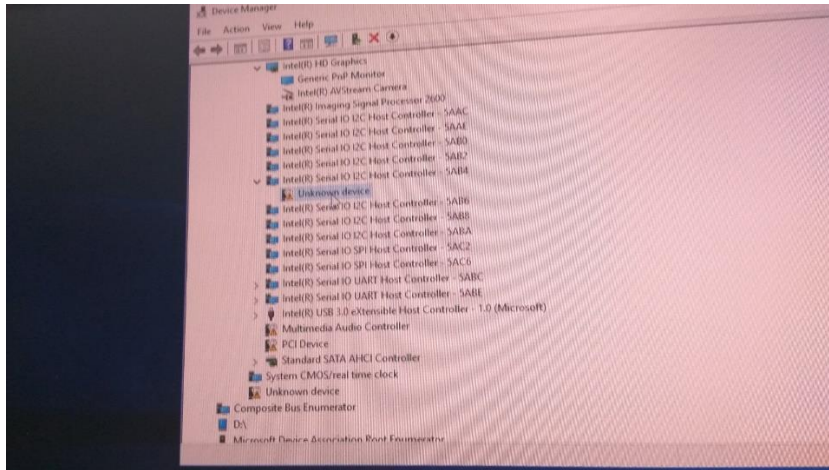
### Multimedia Controller (2/4)

\*Browse to find the file "Camera-4.014393.9780.3468-Rx64-APL" and update driver. (Same as driver#1)



### Unknown Device (3/4)

\*Browse to find the file "Camera-4.014393.9780.3468-Rx64-APL" and update driver. (Same as driver#1)

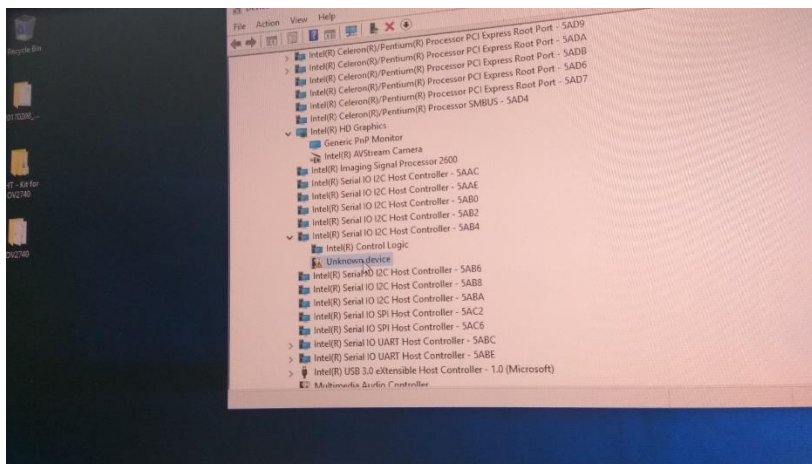


\*After installing driver#3, another "Unknown Device" will appear.

**Unknown Device (4/4)**

\*Browse to find the file "APL-OV2740 driver for RS1"

>> "driver" (=the driver for 2M camera) and update driver.



Note: Different from above 3 drivers.

