

Panel Color Repair Tool

Service Manual

v1.0

2023/12/19

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Date: 2023/12/19

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Change Log

Version	Date	Description
1.0	2023/12/19	First edition.

1 Description

ASUS Panel R2R Tool is for users to recover display color related information and settings of ASUS laptop, including:

- Color Profile Setting
- Color Calibration

(Not available for all models, please refer to the specifications on ASUS official website)

System Requirement	Windows 11 or later.
Usage Scenarios	Repair and replace motherboard or panel.

2 Preparation Beforehand

- 1 Please make sure items below are done:
 - 1.1 Make sure that your laptop is a ASUS ROG or a PC model.
 - 1.2 Download MyASUS app (for PC models) or Armoury Crate (for ROG models) and update it to the latest version.
 - 1.3 Make sure your internet is connected and the connection quality are stable.
 - 1.4 Remove your external display.
 - 1.5 For dual screen models, wake up the second panel.
 - 1.6 Open settings and execute windows update.
 - 1.7 For dual screen models, please remove ASUS ErgoSense Bluetooth keyboard from your laptop.
- 2 If your model meets the calibration requirement, please make sure below items are done:
 - 2.1 Plug in your AC-adapter.
 - 2.2 Prepare a measuring instrument. Please refer to chapter 5 Measuring Instrument.

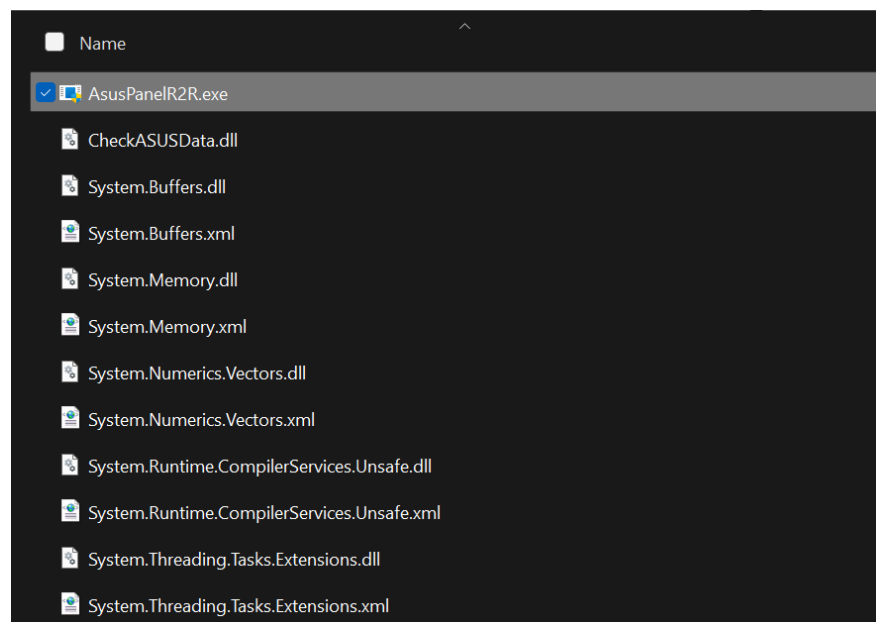
3 Standard Operation Procedure

Step1

1.1 Unzip AsusPanelR2R

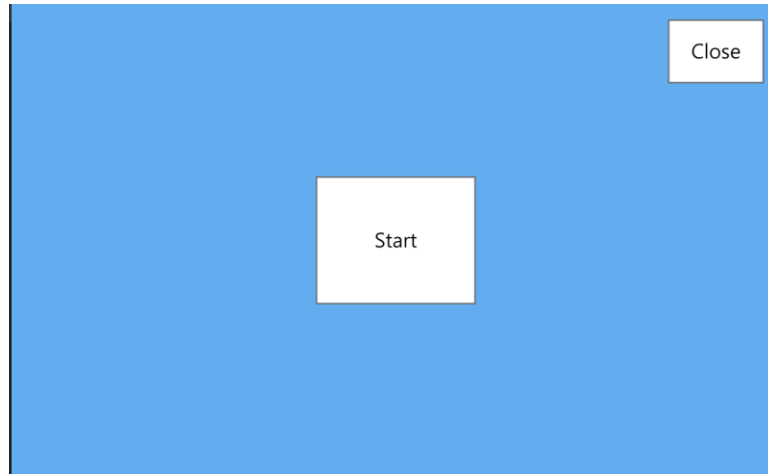
Step2

2.1 Execute AsusPanelR2R.exe



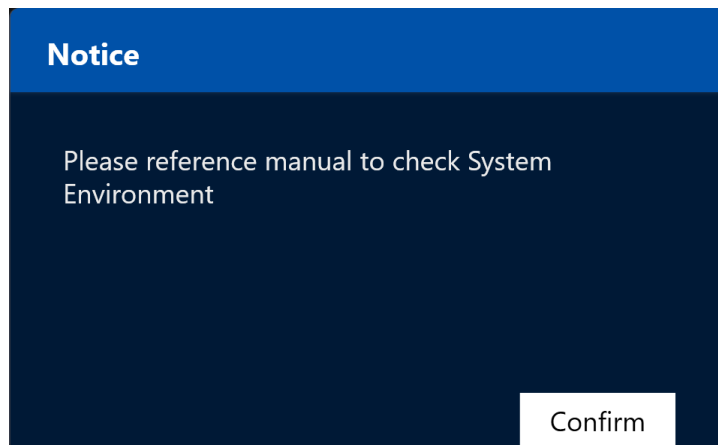
Step3

- 3.1 Click “Start” button and the calibration process will be start.



- 3.2 If your model doesn't meet the calibration requirement, you will enter Step6.

- 3.3 If your model meets the color calibration requirement, please refer to **Chapter 4 Environment Settings** to setup your device before click “Confirm”.



- 3.4 Please warm up your machine for at least 10 minutes. After your laptop is ready, please click “Confirm” and go to next step.

Notice

Please warm up your machine for about 10 minutes, then click 'Confirm' to start the calibration process.

Confirm

Step4

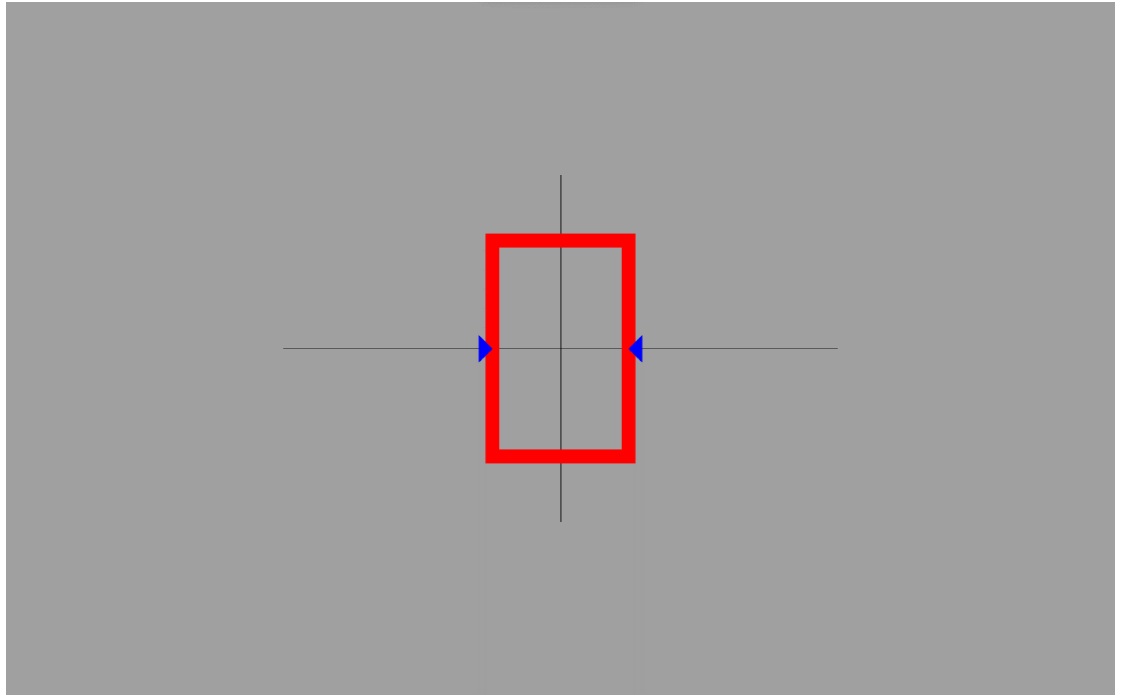
- 4.1 Rotate the cover on measuring instrument to its back, and exposure the lens.



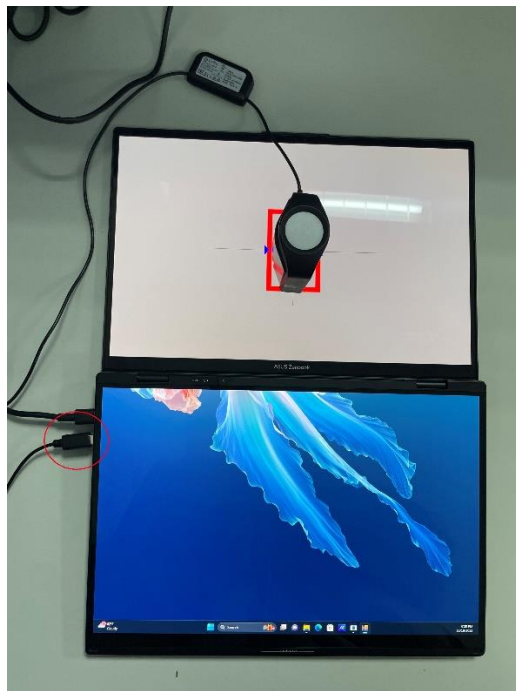
- 4.2 If there is screen protector or sticker on the screen, please remove them.

Step5

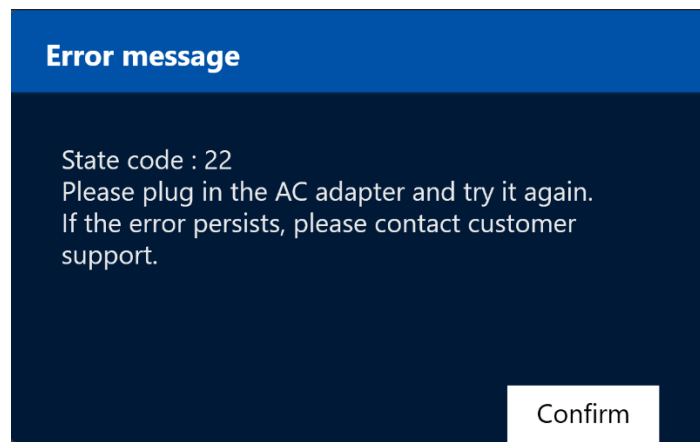
- 5.1 When the display shows the content as below, please put i1DISPLAY inside the red rectangle region and make the lens cling on the screen.



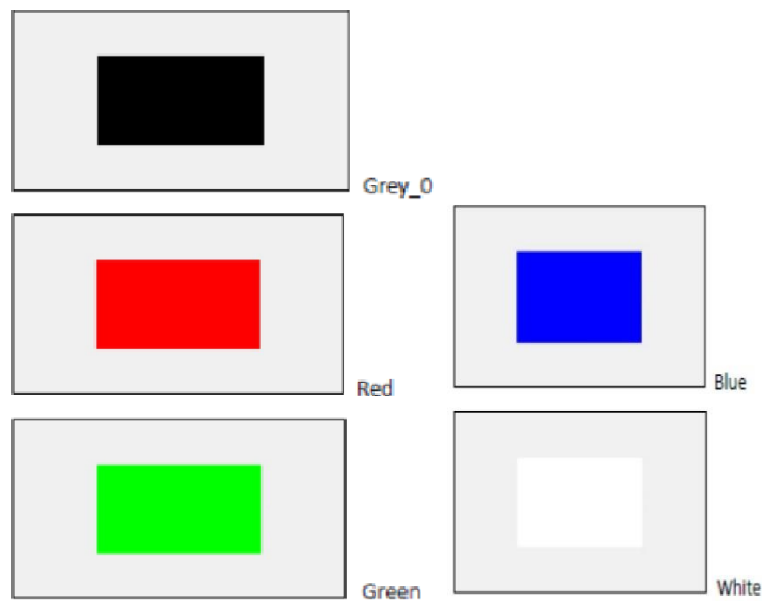
5.2 Connect i1DISPLAY's USB cable to your laptop.



- 5.3 If any message box pops up during the calibration process with “State code” not equal to zero, please refer to **Chapter 6 Troubleshooting**.
For example:

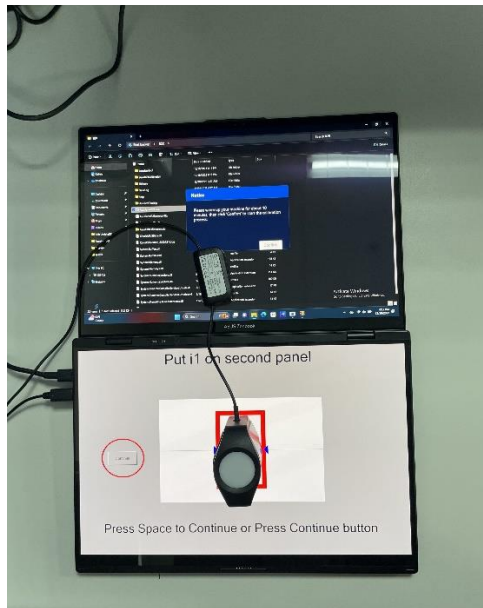


- 5.4 The program will automatically show color patterns. The black, red, green, blue, white and each color gray levels patterns are shown on the screen sequentially. (See the figures as below)



- 5.5 If your model is dual panel model, the calibration screen will automatically switch to the second screen.

- 5.6 Same as Step 5.1, put i1DISPLAY inside the red rectangle region and make the lens cling on the screen. Then click continue button or press Space key to continue calibration.

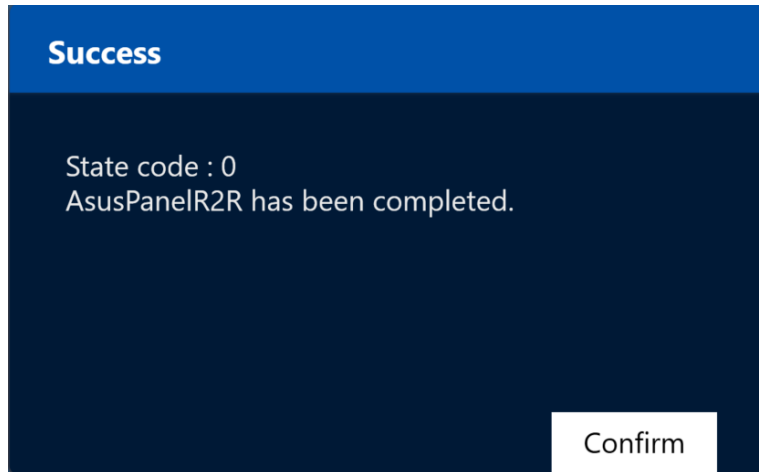


- 5.7 The program will repeat Step 5.4 to measure color patterns on the second screen.

Step6

After all the process is completed, the UI will shows:

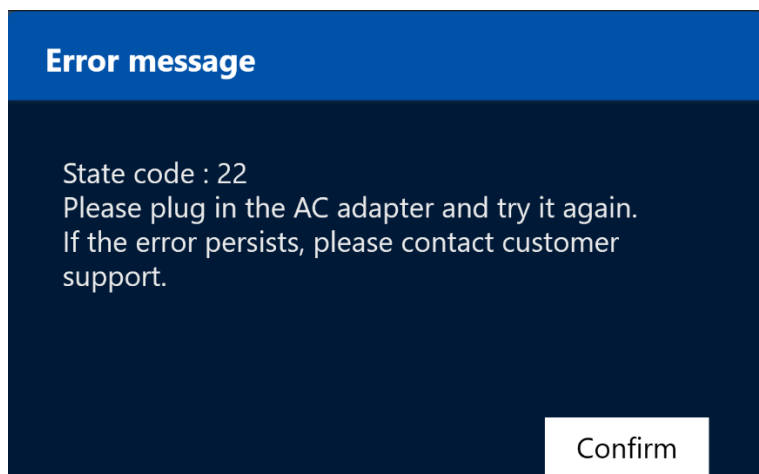
Success: (with “State code” shows 0)



Fail:

If the state code displayed on the screen is not 0 (see example below), please refer to

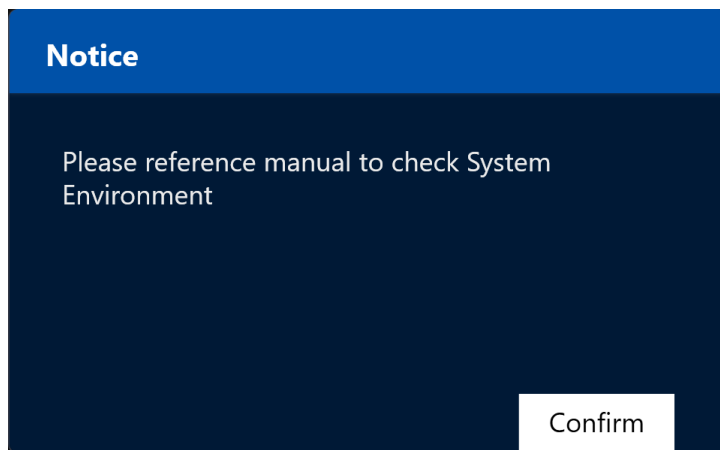
Chapter 6 Troubleshooting.



Click “Confirm” to end ASUS Panel R2R Tool.

4 Environment Settings

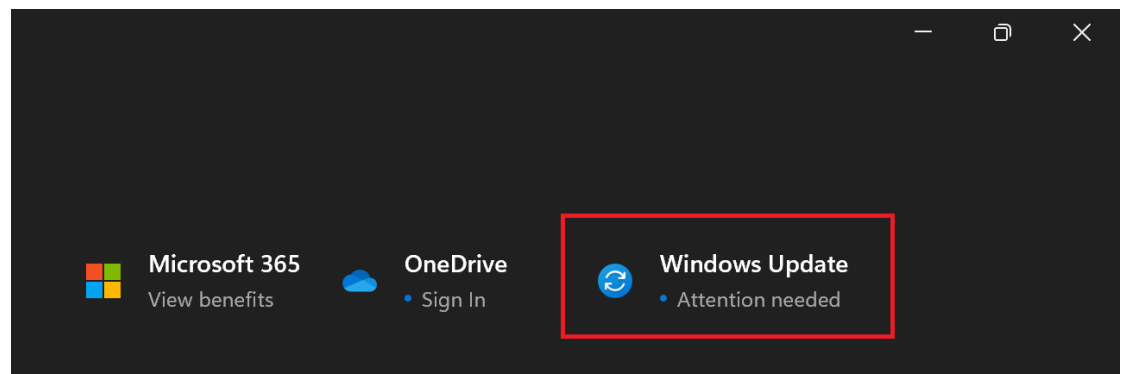
The environment setting is for color calibration model. To ensure the accurate execution of the color calibration process, please follow the steps below to configure the machine environment if the program shows:



Please note that not all of the settings mentioned below are supported on your device.

1 Windows Update

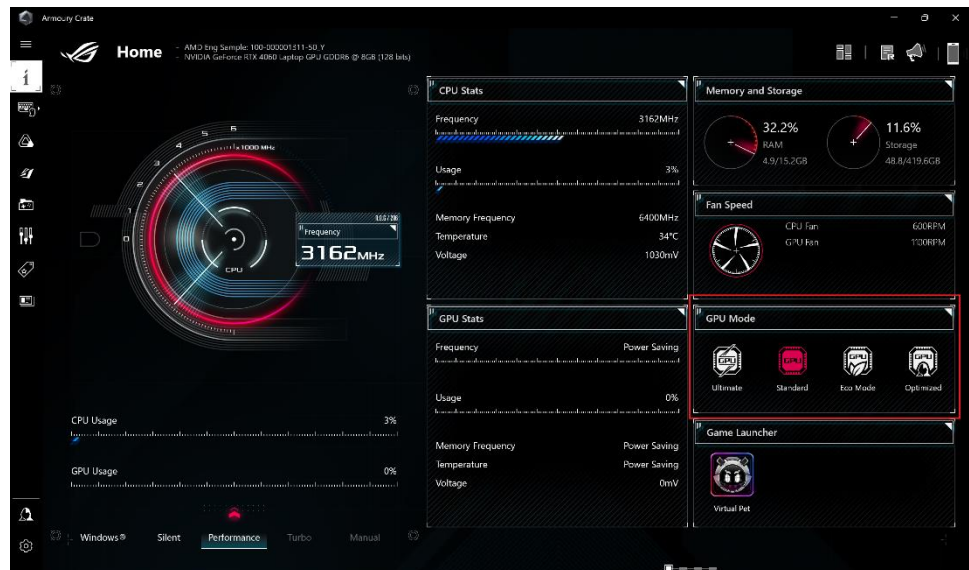
1.1 Windows update in settings



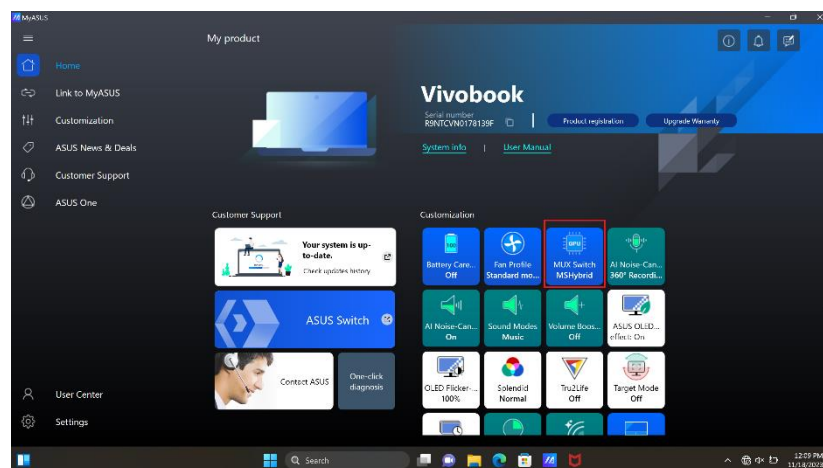
2 Switch GPU mode to MSHybrid.

2.1 For ROG models, please open Armoury Crate

2.1.1 Find the section “GPU Mode” and switch to Standard



2.2 For models other than ROG, please open MyASUS and switch to MSHybrid

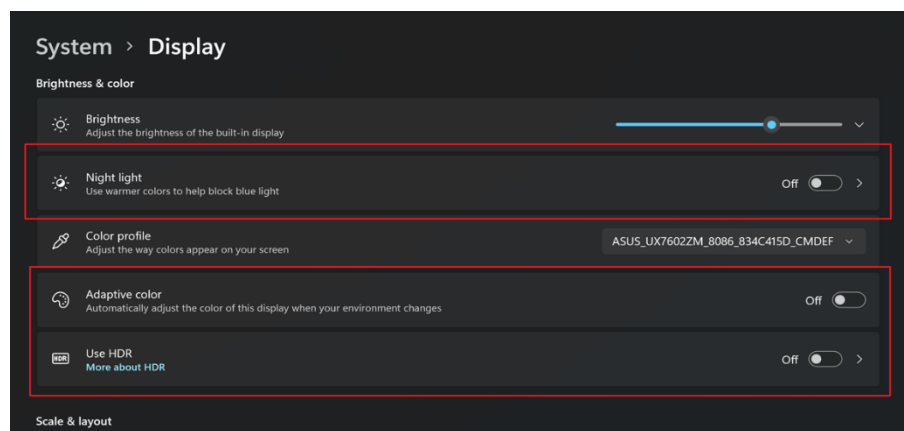


- 3 Panel setting for some ROG models. Open Armoury Crate and find section named System Configuration. If you see Backlight Control, please select OneZone.

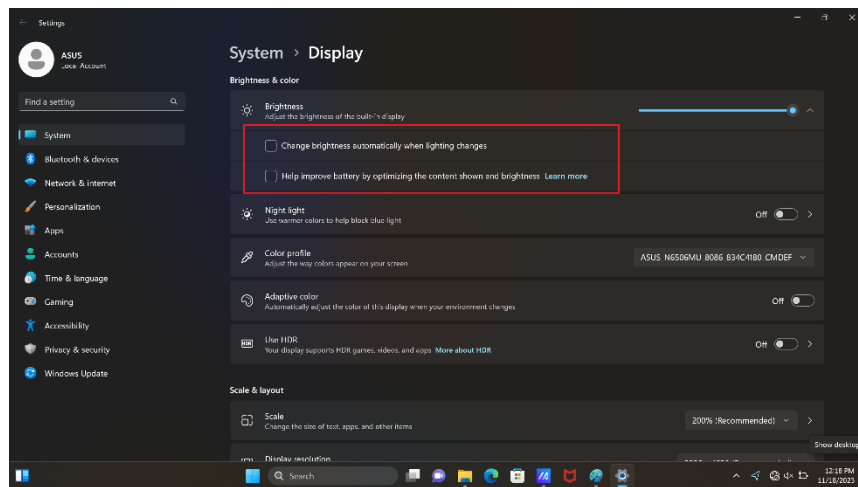


- 3.1 Display Setting. Go to Settings >> System >> Display. Please turn off the following features:

- Night light
- Adaptive Color
- Use HDR

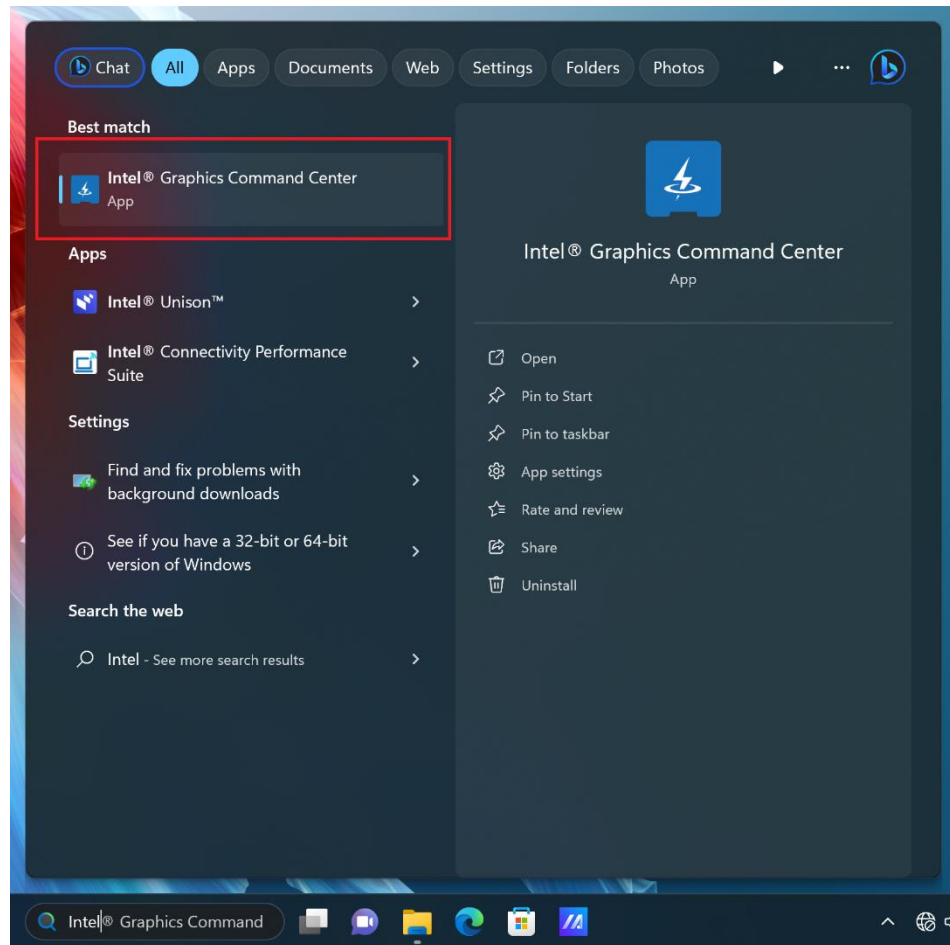


- 3.2 Click Brightness. If you see “Change brightness automatically when lighting changes” or “Help improve battery by optimizing the content shown and brightness”, please uncheck them.



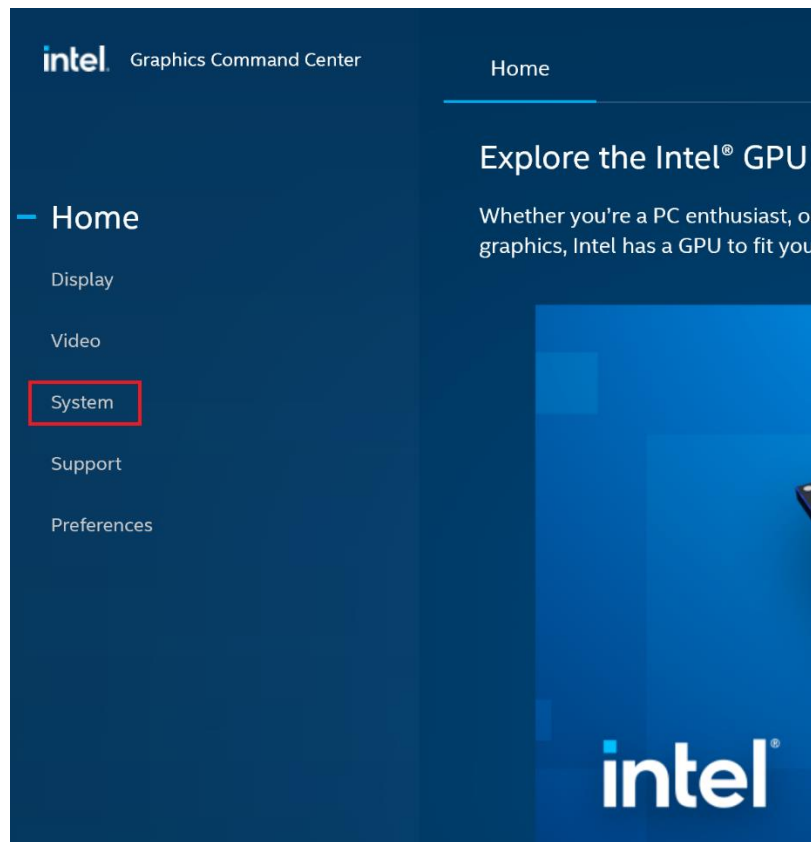
- 4 Settings for models with Intel Graphic Driver. (If your laptop does not have an Intel CPU, please skip this section.)

4.1 Search and open Intel® Graphics Command Center

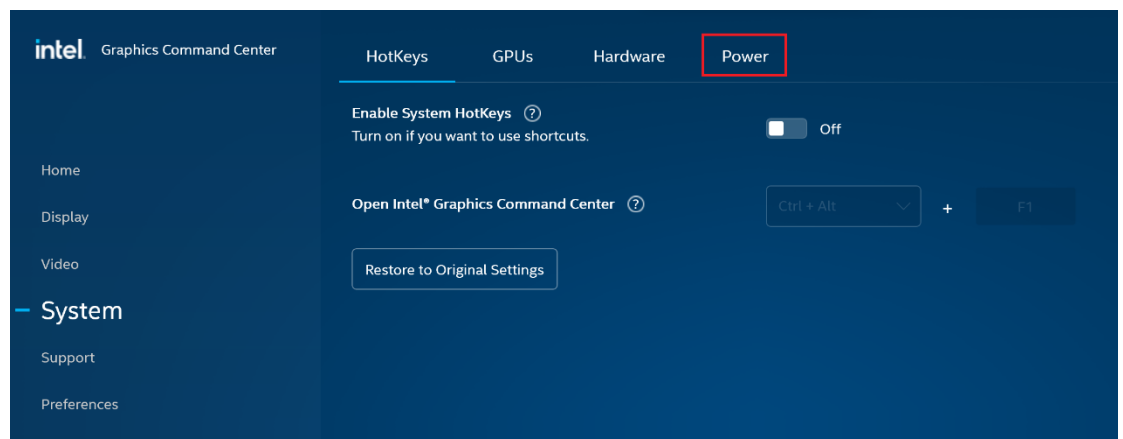


4.2 Turn off Intel DPST backlight power saving mechanism.

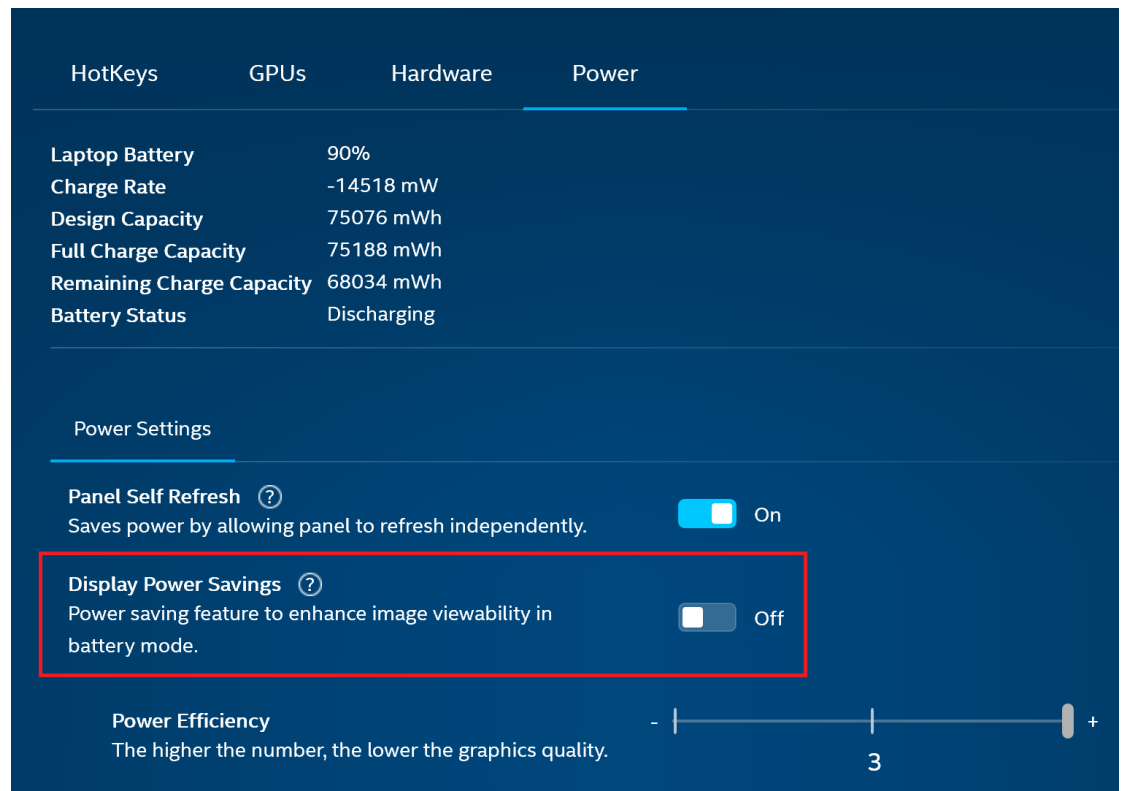
4.2.1 Click on the "System" tab in the navigation bar.



4.2.2 Click on the "Power" tab in the navigation bar.

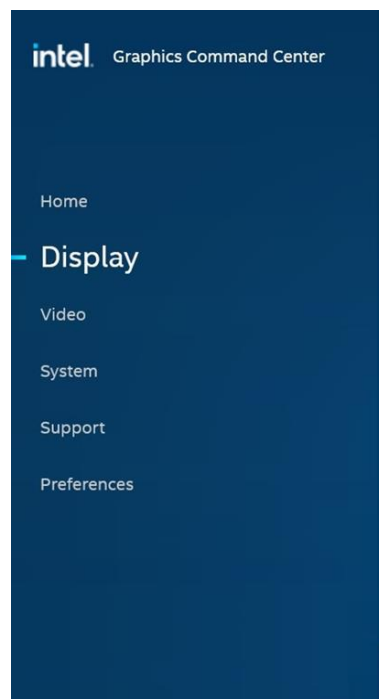


4.2.3 Turn off “Display Power Savings”



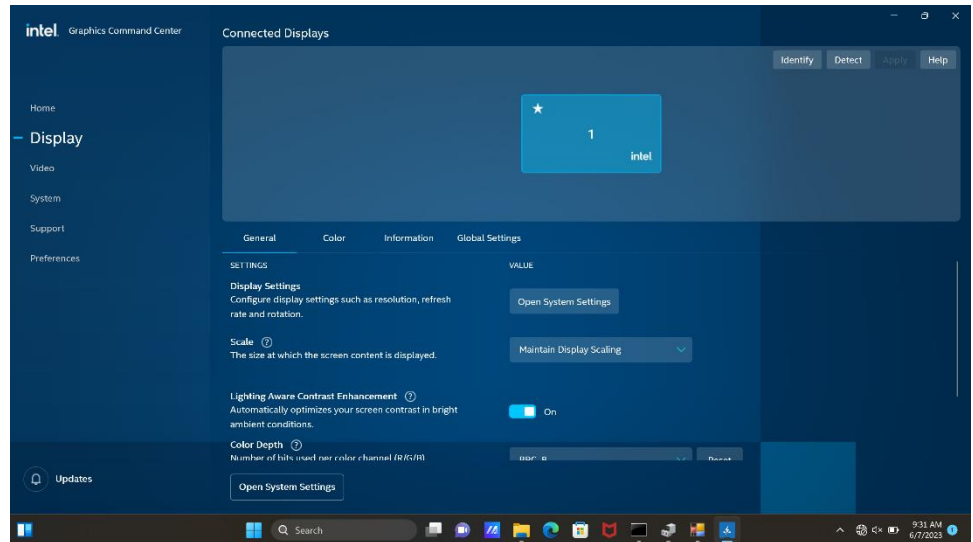
4.3 Turn off adaptive contrast adjustment.

4.3.1 Click on the “Display” tab in the navigation bar.



4.3.2 Click on the “General” tab in the navigation bar. Please turn off the following items:

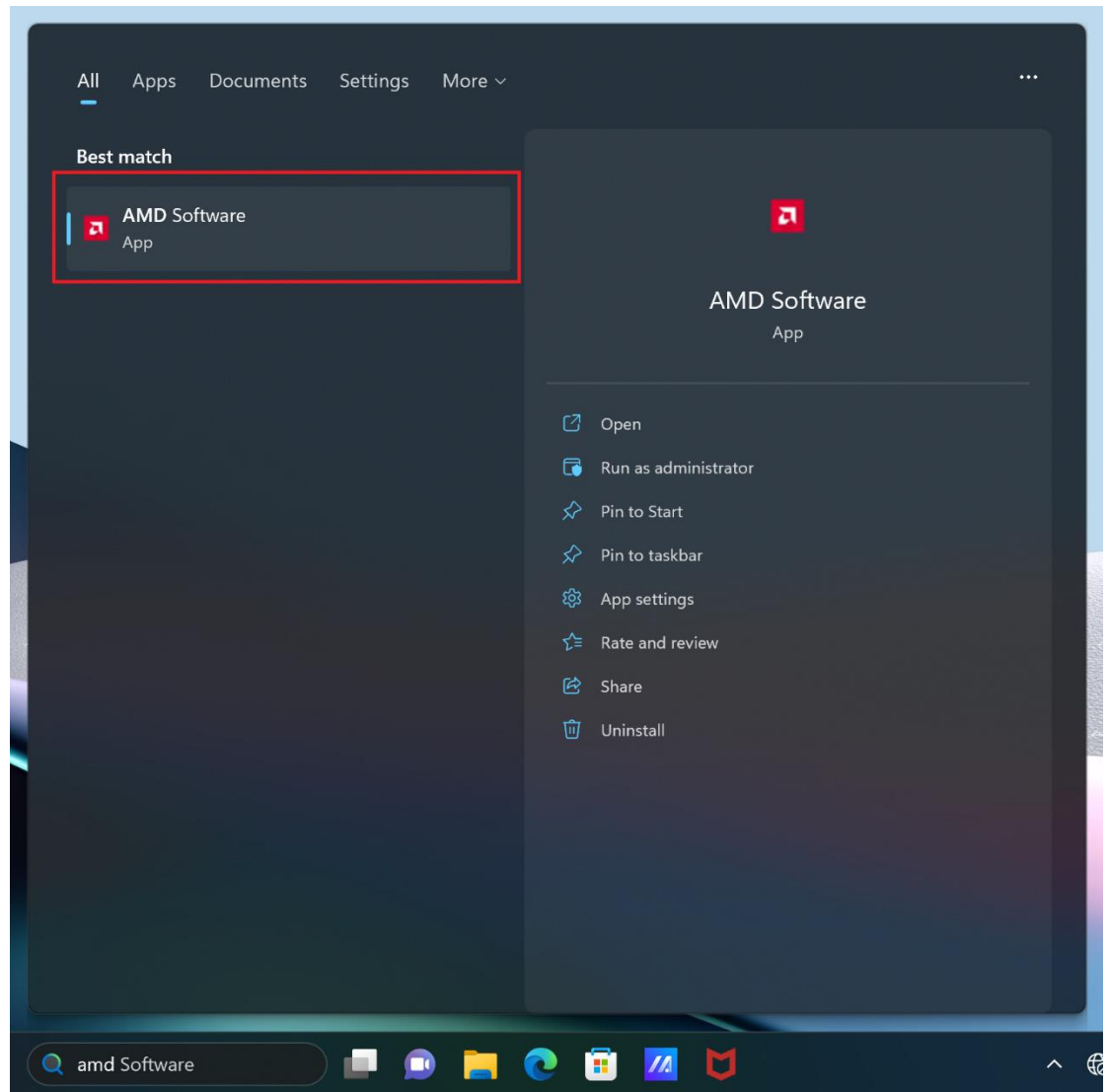
- Local Adaptive Contrast Enhancement
- Light Aware Contrast Enhancement



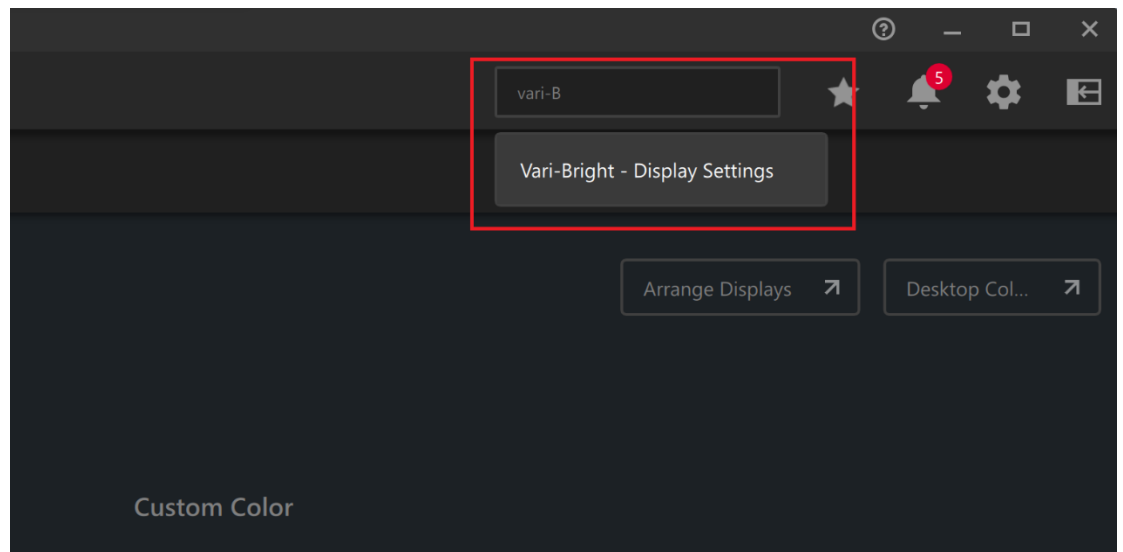
5 Settings for models with AMD Graphic Driver. (If your machine does not have an AMD CPU, please skip this section.)

5.1 Turn off AMD Vari-Bright backlight power saving mode.

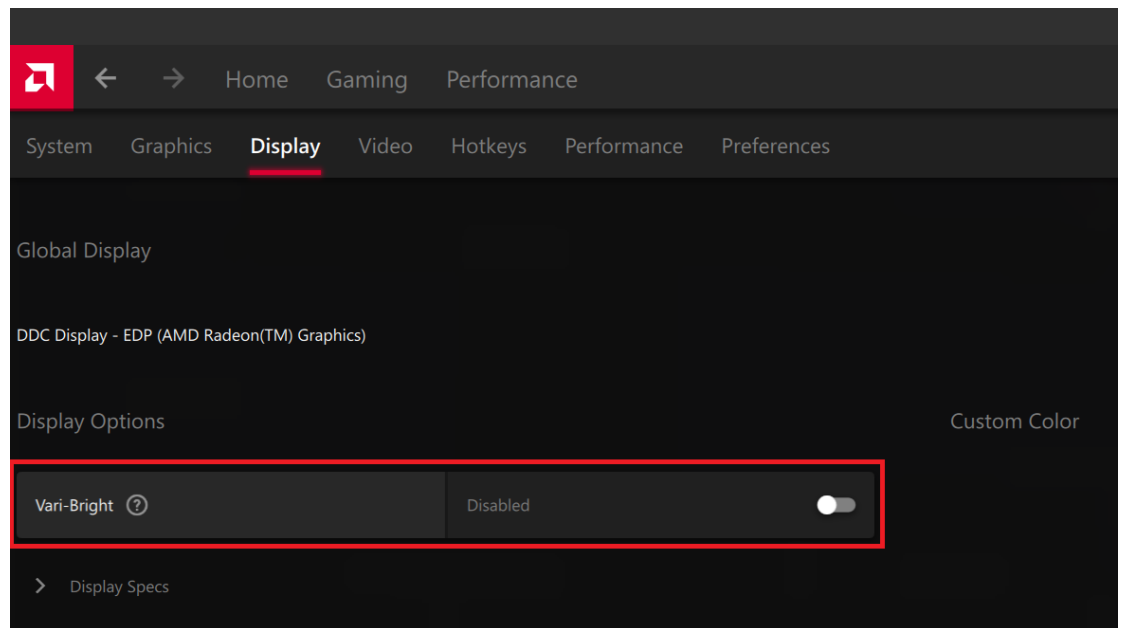
5.1.1 Search and open AMD Software



5.1.2 Search for “Vari-Bright” in the app

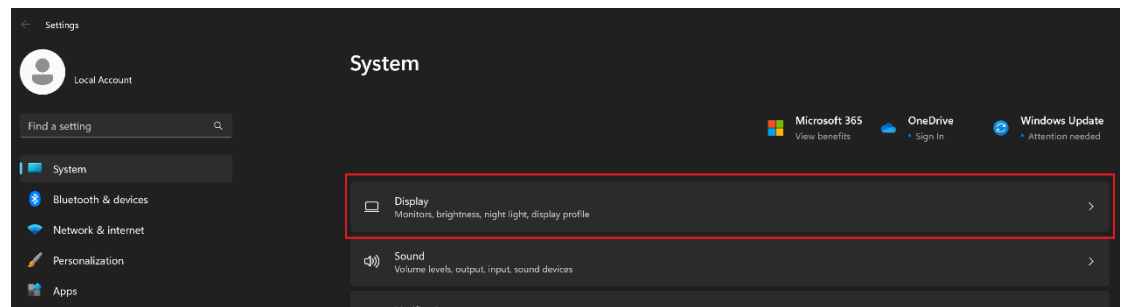


5.1.3 Turn off “Vari-Bright”

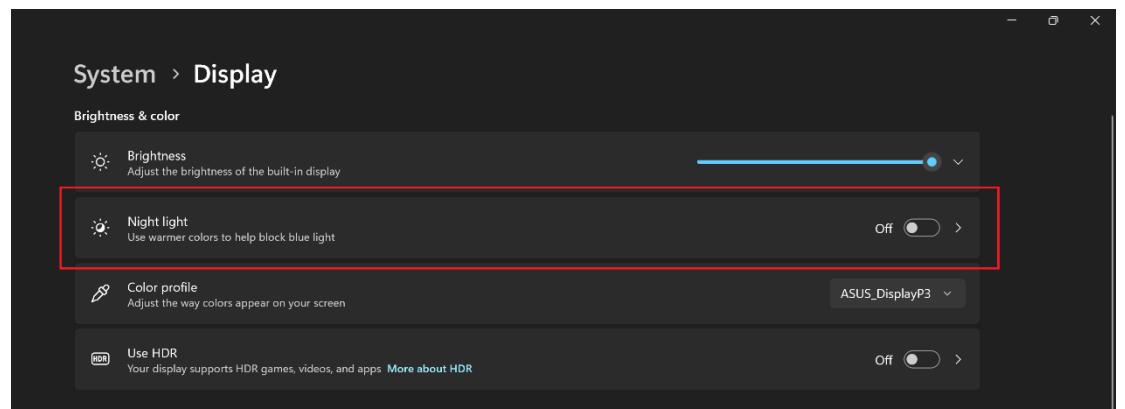


6 Turn off HDR mode and "Night Light"

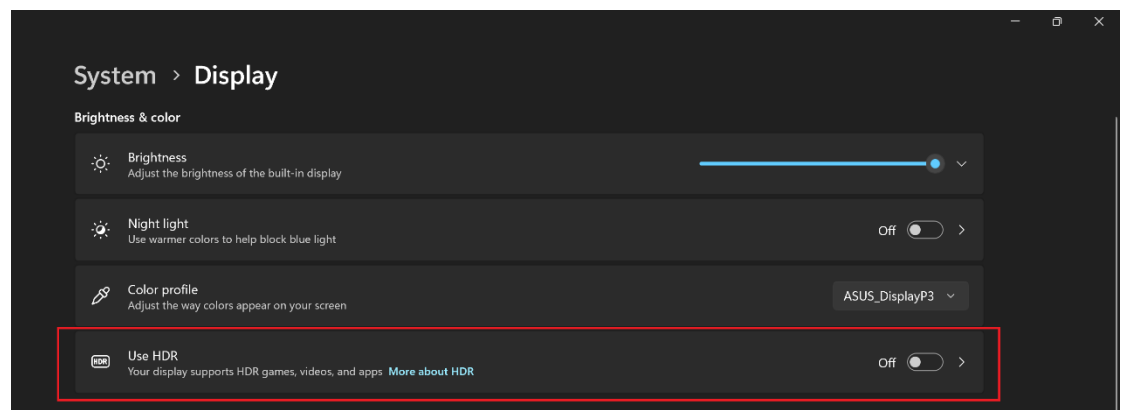
6.1 Go to "Settings" >> "System" >> "Display"



6.2 Turn off "Night light".



6.3 Turn off "Use HDR".



5 Measuring Instrument

For color calibration supported model, ASUS Panel R2R Tool only supports for the measuring instrument listed below:

- ColorChecker Display Pro
- ColorChecker Display Plus
- Display Pro HL
- Display Plus HL
- i1Display Pro
- i1Display Pro Plus



6 Troubleshooting

Error state 2:

Measure Data ERROR. Please confirm the location of the measuring instrument and try it again. For the correct measuring instrument position please refer to section 5.2 in Chapter 3 Standard Operation Procedure.

Error state 3:

Current BIOS version doesn't support calibration process. Please update BIOS from Windows update or from ASUS official website.

Error state 10:

Please turn off HDR mode. Please refer to section 3.3 in Chapter 4 Environment Settings.

Error state 11:

No measuring instruments have been detected. Please refer to Step 5 in Chapter 3 Standard Operation Procedure for more details.

Error state 15:

Instrument aberrant. Please make sure your measuring instrument are ready. Please refer to Step5 in Chapter 3 Standard Operation Procedure for more details.

Error state 17:

Measuring instruments cover is not removed. Please refer to section 4.2 in Chapter 4 Environment Settings for more details.

Error state 22:

Please make sure the AC power adapter is plugged in. Then try it again, if still have error state, please contact an authorized service center for assistance.

Error state 29:

Please turn off “Night Light”. Please refer to section 6.2 in Chapter 4 Environment Settings for more details.

Error state 30:

In discrete CPU mode. Please switch to MSHybrid mode or integrated GPU. Please refer to section 2 in Chapter 4 Environment Settings for more details.

Error state 39:

Please reinstall graphic driver, for updating details, please refer to chapter 4 Environment Settings section 1.1.

Error state 40:

Please check local dimming setting. Please refer to section 5 in Chapter 4 Environment Settings for more details.

Error state 0x30000001 - 0x30000007 :

Please ensure that the network is connected and disk space are free of 50MB. Then try it again, if still have error state, please contact an authorized service center for assistance.

Error state 0x40000004 - 0x40000005 :

Please contact an authorized service center for assistance.

Error state 0x40000006 :

Please ensure that the network is connected and disk space are free of 50MB. Then try it again, if still have error state, please contact an authorized service center for assistance.

Error state 0x40000007 - 0x4000000A :

Please contact an authorized service center for assistance.

Error state 0x60000003 :

Please ensure the network is connected. If still have error state, please contact an authorized service center for assistance.

Error state 0x60000004 - 0x60000006 :

Please contact an authorized service center for assistance.

Error state 0x60000007 :

Please ensure the network is connected. If still have error state, please contact an authorized service center for assistance.

Error state 0x60000008 - 0x6000000B :

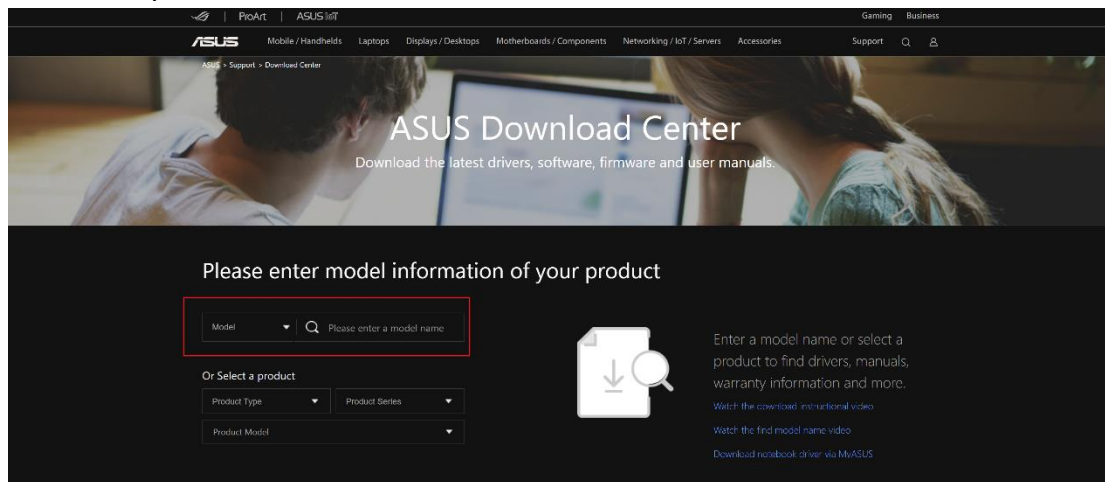
Please contact an authorized service center for assistance.

Error state 0x6000000C :

Please download update your driver by this website:

<https://www.asus.com/support/Download-Center/>

1. Enter your model name



ASUS Download Center

Download the latest drivers, software, firmware and user manuals.

Please enter model information of your product

Model Please enter a model name

Or Select a product

Product Type Product Series

Product Model

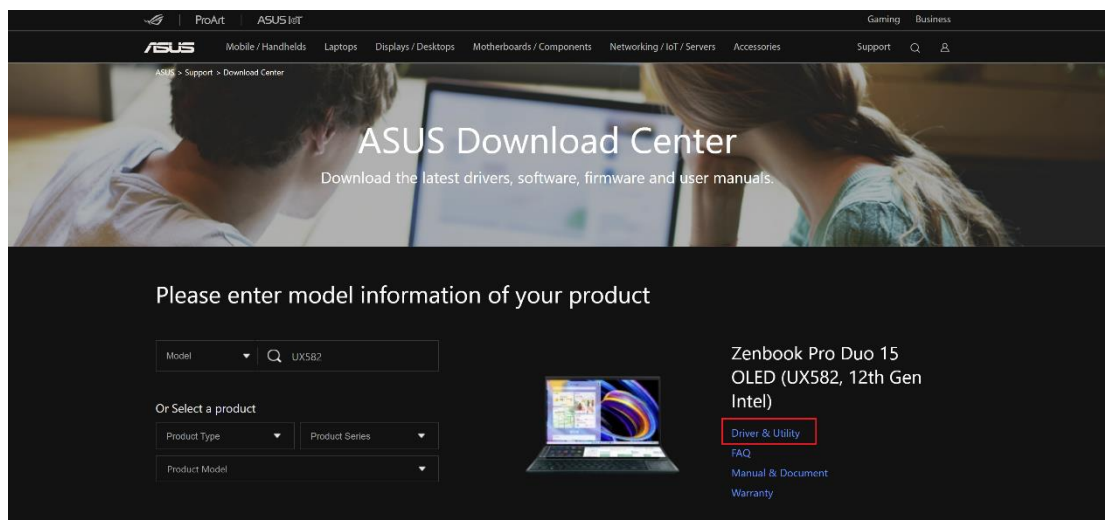
Enter a model name or select a product to find drivers, manuals, warranty information and more.

Watch the download instructional video

Watch the find model name video

Download notebook driver via MyASUS

2. Click Driver & Utility



ASUS Download Center

Download the latest drivers, software, firmware and user manuals.

Please enter model information of your product

Model UX582

Or Select a product

Product Type Product Series

Product Model

Zenbook Pro Duo 15 OLED (UX582, 12th Gen Intel)

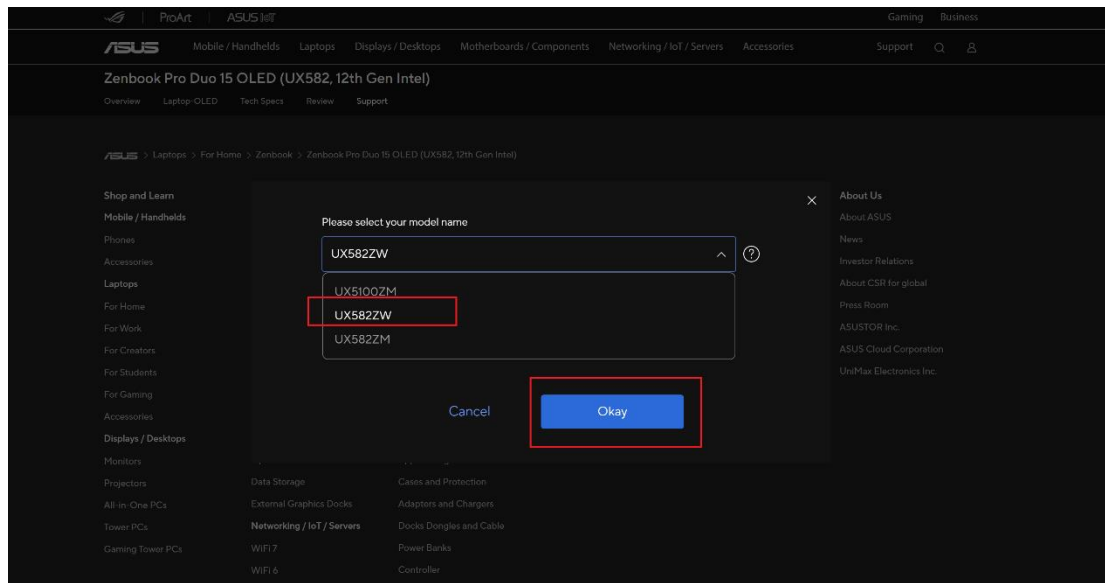
Driver & Utility

FAQ

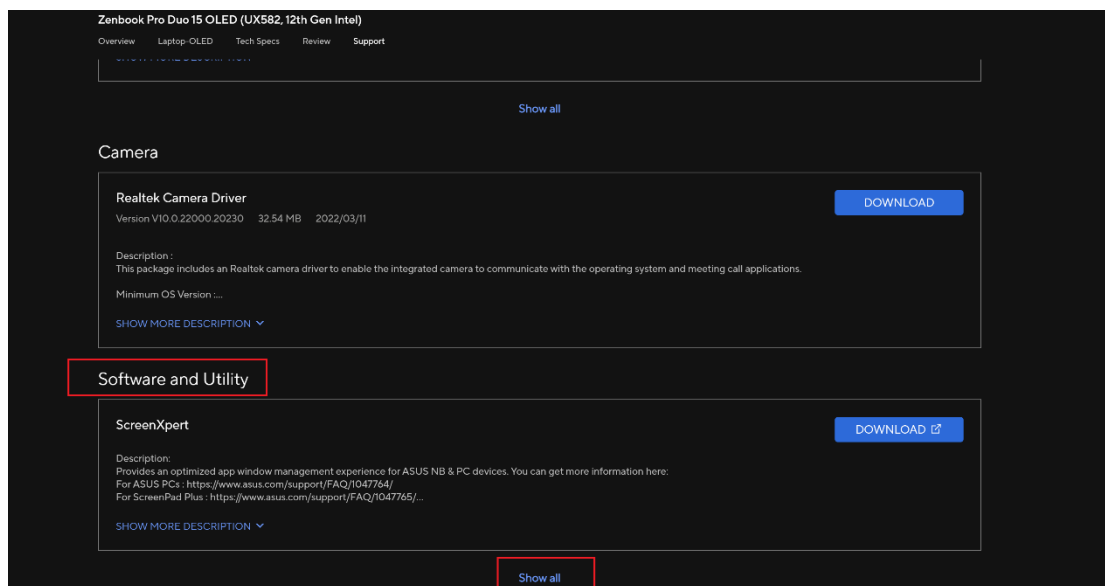
Manual & Document

Warranty

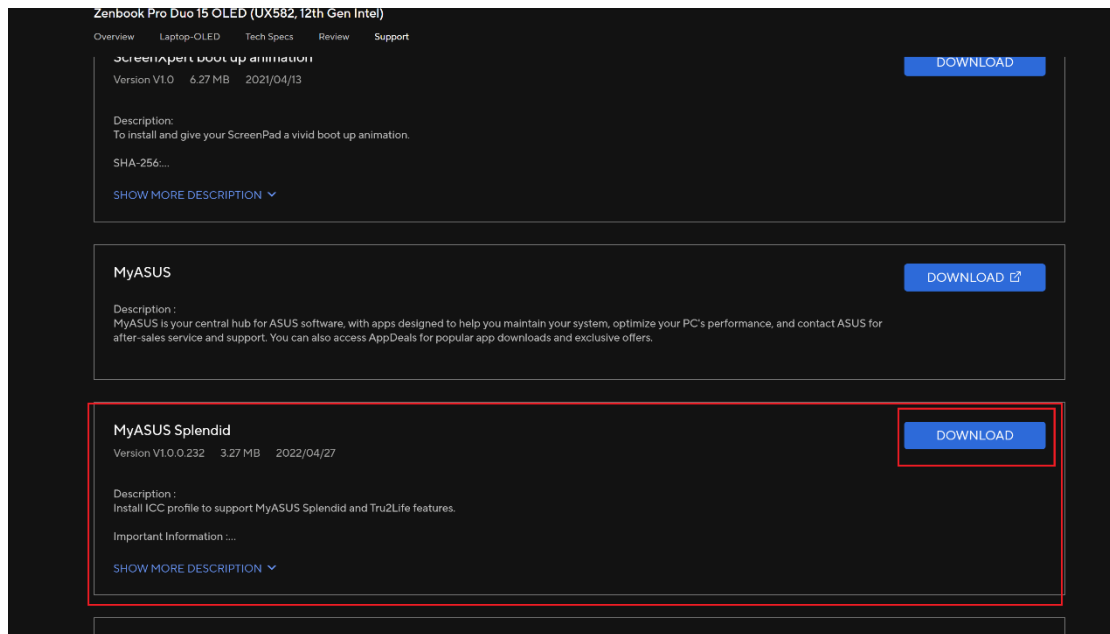
3. Select your full model name



4. Find “Software and Utility” and click “Show all”



5. Find “MyASUS Splendid” and click “DOWNLOAD”



6. After finishing the above 5 steps, please use AsusPanelR2R again.

Error state 0x6000000F :

Please contact an authorized service center for assistance.

Error state 0x70000001 – 0x70000004 :

Please contact an authorized service center for assistance.

Error state 0x70000005 :

Please ensure the network is connected. If still have error state, please contact an authorized service center for assistance.

Error state 0x70000006:

Please contact an authorized service center for assistance.