After updating the BIOS to a version with AGESA version AMD PinnaclePI-AM4_1.0.0.5 or later, Raven Ridge CPU requires AMD allin1 driver ver:18.10.20 or newer to get onboard display under the OS. If you experience issues with onboard display with a Raven Ridge CPU under the OS, please use one of the following two methods to recover the display output.

<Method 1>
Uninstall the old AMD Graphics driver under Windows 10 Safe Mode and then install a new driver from ASRock website to fix the issue.

1. Try to reboot the system three times or more until you see the Recovery page.
   Click “See advanced repair options”

   ![Recovery Page]

2. Select “Troubleshoot” to see advanced options.

   ![Choose an option]

3. Select “Advanced options” to go to next page.

4. Click “Startup Settings” to change the Windows startup behavior. If “Startup Settings” is not shown on this page, please select “See more recovery options” to go to the next page.
5. Click “Restart” to restart the system

![Windows Startup Settings]

6. After system has restarted, please press [4] on your keyboard to access Safe Mode.

![Startup Settings]

7. The system will boot into Windows 10 safe mode.
   Please go to device manager to uninstall “AMD Radeon Vega 8 Graphics”.
   Path: Windows 10 Safe Mode → Device Manager → Display Adapters → AMD Radeon Vega 8 Graphics.

   Please right click on “AMD Radeon Vega 8 Graphics” and then click on “Uninstall device”.
8. Check the box “Delete the driver software for this device” and click Uninstall.
9. After the driver is uninstalled and the system has been restarted, the system should able to get display output under Windows 10.

10. Download "AMD all in 1 with VGA driver ver:18.10.20_NHDA_WHQL" or later version from ASRock website:  
    https://www.asrock.com/mb/index.asp#AM4

11. After the driver installation is complete, please check in device manager if the graphics driver is at version **24.20.11020.2** (or newer).
<Method 2>
Downgrade the BIOS temporarily and install a new driver from ASRock website.

1. Please check the BIOS download page:
   https://www.asrock.com/mb/index.asp#AM4
   Download a BIOS version that is older than a BIOS with PinnaclePI-AM4_1.0.0.5/1.0.0.6.
   Use Instant Flash to downgrade the BIOS.
   (*Please refer to the ASRock website and make sure the CPU is supported by the old BIOS version)

2. After downgrading the BIOS, the system should be able to get display output under the OS.
   Please start the system to boot into the OS.

3. Download and install "AMD all in 1 with VGA driver ver:18.10.20_NHDA_WHQL" or later version from ASRock website:
   https://www.asrock.com/mb/index.asp#AM4

4. After the driver installation please make sure that device manager shows graphics driver version 24.20.11020.2 (or newer).

5. After the new driver is installed, the BIOS can be updated to the latest version.