

# Getting started with your GRS Viper SBC



To get started with your GRS Viper SBC, you will need the following:

- A 12V2A round head socket or 5V3A USB-C socket power supply(Buy here: <https://thunderstickstudio.com/products/12v2a-power-adaptor-for-grs-viper-sbc>)
- A USB-C to USB-A cable(Buy here: <https://thunderstickstudio.com/products/usb-type-a-to-c-cable-for-grs-viper-sbc>)
- A HDMI Display
- HDMI-micro to HDMI-A cable(buy here: <https://www.amazon.com/UGREEN-Adapter-Ethernet-Compatible->

Raspberry/dp/B06WWQ7KLV)

- A Gamepad controller/ keyboard/Mouse for control
- A Windows PC for burning the image into the SBC

## Install an Operating system

To operate the GRS Viper SBC, an operating system is required, which is not included by default. You'll need to obtain the GRS Viper SBC image file and utilize Rockchip's software tool to flash the image onto the GRS Viper SBC's EMMC drive. Below is a straightforward guide to assist you in this process.

1. **Install Tools and Image:** Download the RKDevTool and RockChip's DriverAssistant software and have your image file (\*.img) ready for use in your Windows PC. Install the DriverAssistant software. The RKDevTool is executable so no need to install onto your windows PC.

DriverAssistant download link:

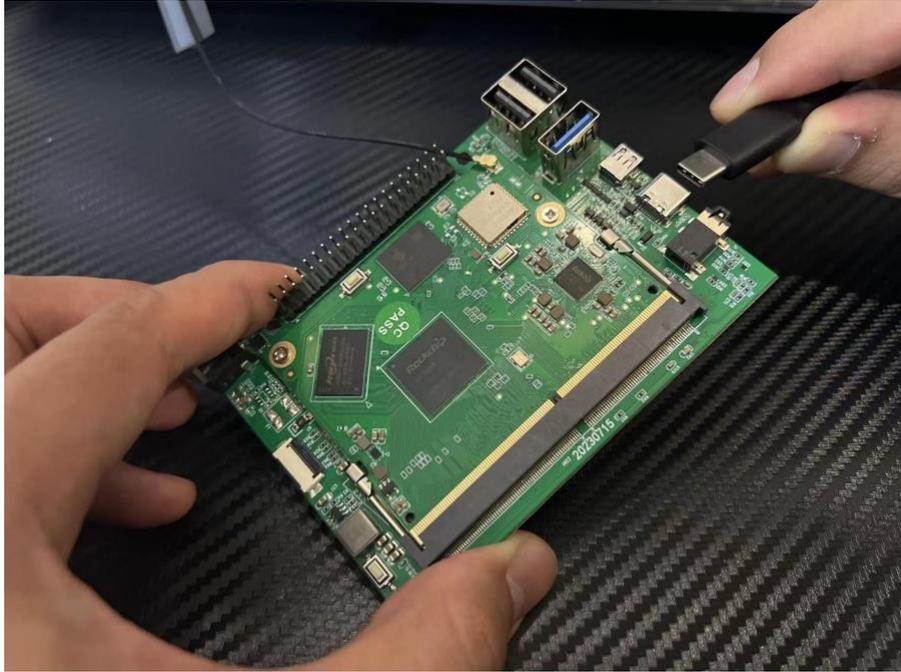
<https://www.dropbox.com/scl/fo/7mllkjzy7j0mkxk8sm0za/h?rlkey=us6vm8e33wz5ogvosiba6bhsz&dl=0>

RKDevTool download link:

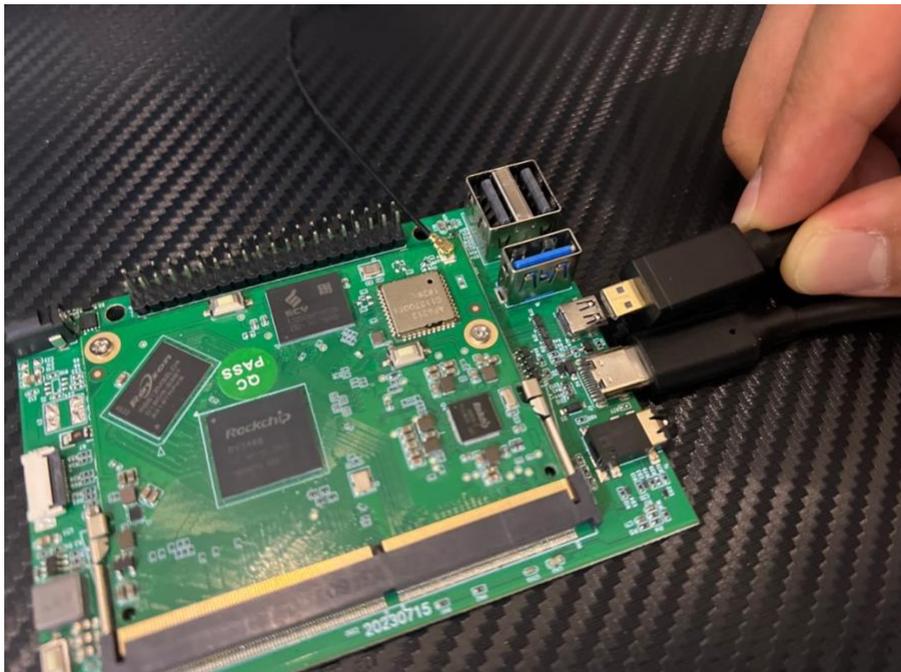
<https://www.dropbox.com/scl/fo/sdirr1y6vr0pb6esnrla/h?rlkey=ri93k3d0pmwnmg068h43se4nx&dl=0>

Latest Image File download link:xxxxxx

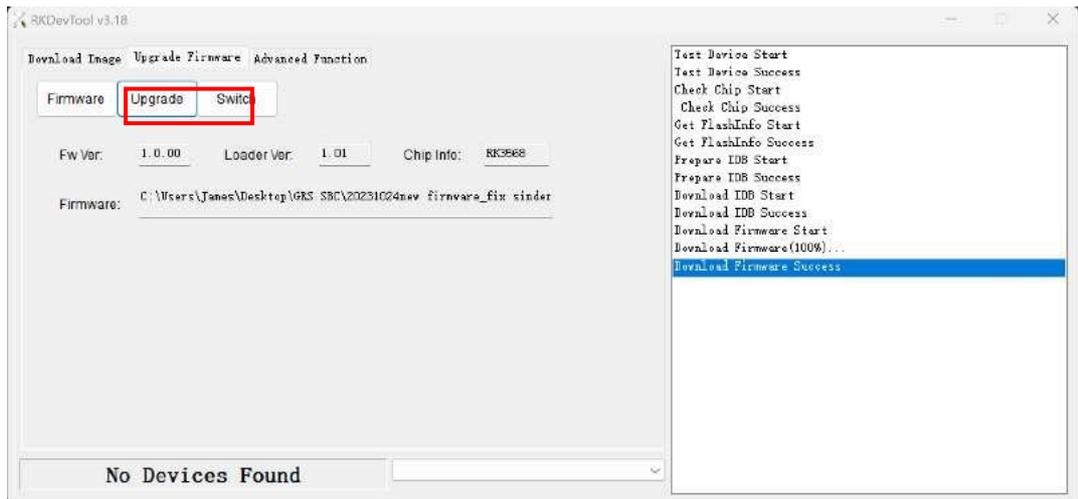
2. **Prepare Cable:** Make sure you have a proper USB-C to USB-A cable on hand. Charging cables will not work for this process.
3. **Connect USB-C:** Plug the USB-C end into the Viper SBC. Note that there should be only one USB-C port on the board. Do not connect the other end to your PC yet.



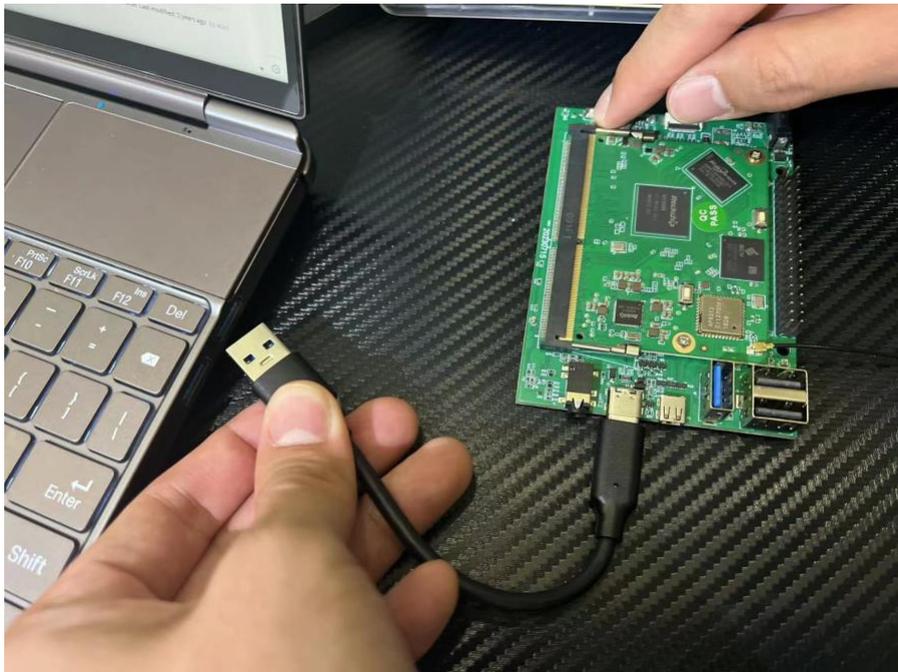
4. **HDMI Display Connection:** Connect the HDMI-micro end to the Viper SBC and the HDMI-A end to a powered HDMI display.



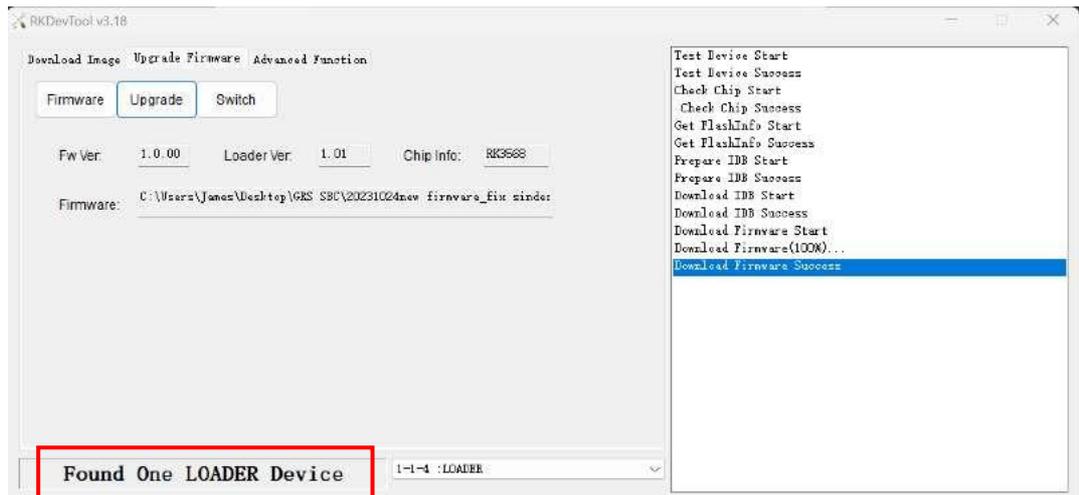
5. **Launch RKDevTool:** Open RKDevTool and navigate to the 'Upgrade Firmware' tab.



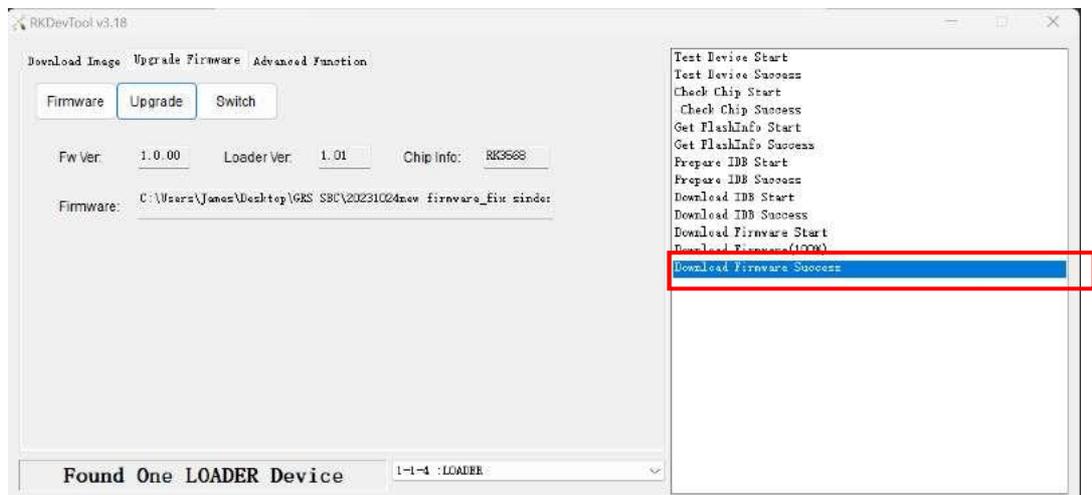
- 6. Enter Firmware Mode:** Press and hold the firmware mode button on the Viper SBC's extension PCB. While holding, plug the USB-A end into your PC.



A message "Found One Loader Device" should appear in RKDevTool, indicating the Viper SBC is ready for the firmware upgrade. Release the firmware mode button.



7. **Select Firmware:** In RKDevTool, click the 'Firmware' button. Select the \*.img file you wish to use for the upgrade, and then click 'OK'.
8. **Start Upgrade:** Click the 'Upgrade' button within the 'Upgrade Firmware' tab to initiate the firmware update process.
9. **Completion:** Wait for the log to display "Download firmware Success." The Viper SBC will reboot twice to complete the installation for operating system.



10. **Power Connection:** Disconnect the USB-C cable and connect a 12V2A round head or a 5V3A USB-C socket power supply to the GRS Viper SBC for booting.
11. **Controller Connection:** To navigate menus and play games, connect a USB controller or keyboard to the Viper SBC via USB.



12. Game on!

