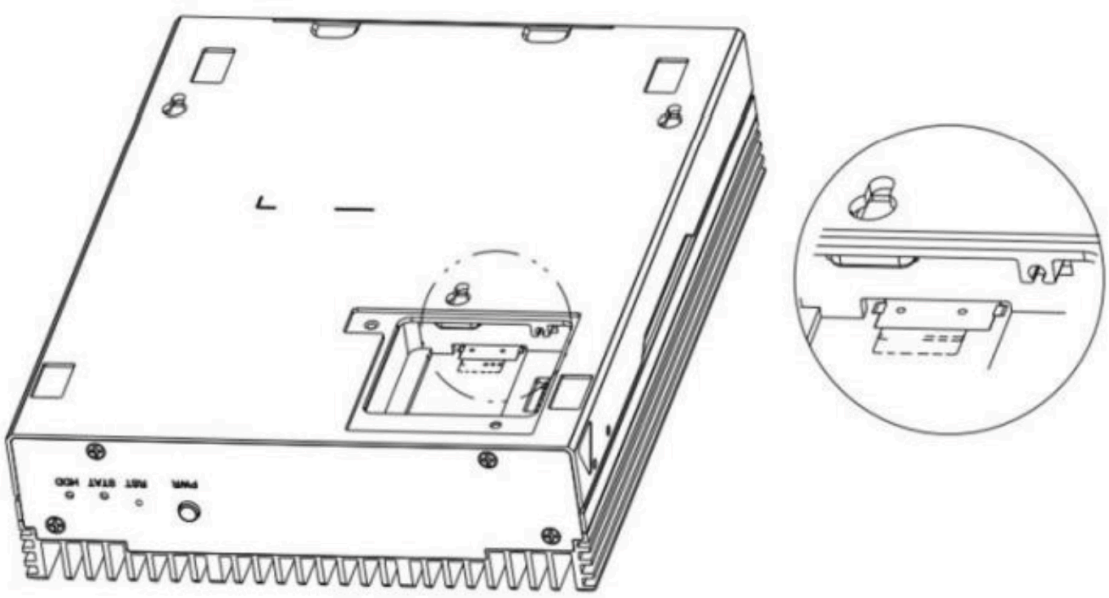
Sophgo SE5 firmware upgrade guide

upgrade using SD card

1. Prepare a MicroSD card with size of 16GB or above and a card reader, then format the card in `FAT32` format, pay attention to the partition (if it is formatted under linux, pay attention to creating a partition with fdisk, and then format it with mkfs.vfat).
2. Download SE5 flash package from Sophgo official site, (Recommand SDK version is 3.0.0 or above).
3. Unzip the downloaded compressed package, then enter the `sdcard` directory (`sophon-img/sdcard.tgz` if the sdk version is released after 3.0.0, e.g. 22.12.01, unzip the `sdcard.tgz` compressed file, then change directory under folder `sdcard`)note that you must make sure you are under this directory, there is an md5 file in the parent directory that does not need to be copied, then select all of the files under `sdcard` directory, copy these files to the root directory of the microSD card.
4. Make sure the SE5 power cable is unplugged, remove the maintenance window cover underneath, insert the MicroSD card in the MicroSD card slot.



5. Power on the device, and the STAT light on the front side turns red (steady on) indicate the flushing is in progress.
6. Wait a few minutes or so until the box light turns green(flashing).
7. Unplug the device power cable (power off), remove the microSD card.
8. The upgrade is complete, re-plug the power cable.

Remote connect to the SE5

1. Prepare two network cables and insert them into the LAN port and WAN port on the back of the SE5 box respectively. The LAN port network cable needs to be connected to a PC, and the WAN port network cable is connected to the switch or router.
2. Configure the computer ip as 192.168.150.2(Same network segment as SE5 default network segment 192.168.150.1).

3. Use any SSH tools or terminal connect to the SE5 with username: linaro password: linaro

```
ping 192.168.150.1
# check whether the device can be connected
ssh linaro@192.168.150.1
# then type in the password linaro
```

4. Check the WAN ip for the SE5

```
ip a
```

```
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
qlen 1
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: dummy0: <BROADCAST,NOARP> mtu 1500 qdisc noop state DOWN group default qlen 1000
    link/ether 72:1d:bf:27:79:1a brd ff:ff:ff:ff:ff:ff
3: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default
qlen 1000
    link/ether e0:a5:09:00:42:ea brd ff:ff:ff:ff:ff:ff
    inet 172.28.1.85/24 brd 172.28.1.255 scope global dynamic eth0
       valid_lft 12285sec preferred_lft 12285sec
    inet6 fe80::dbc4:ef6f:8382:1551/64 scope link
       valid_lft forever preferred_lft forever
4: eth1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group
default qlen 1000
    link/ether e0:a5:09:00:42:f2 brd ff:ff:ff:ff:ff:ff
    inet 192.168.150.1/24 brd 192.168.150.255 scope global eth1
       valid_lft forever preferred_lft forever
5: sit0@NONE: <NOARP> mtu 1480 qdisc noop state DOWN group default qlen 1
    link/sit 0.0.0.0 brd 0.0.0.0
6: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN
group default
    link/ether 02:42:25:81:65:70 brd ff:ff:ff:ff:ff:ff
    inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
       valid_lft forever preferred_lft forever
```

The eth0 address is the WAN port address, and the eth1 address is the LAN port address.

5. After got the WAN ip of the SE5, you can unplug the network cable connected to the SE5 LAN port, then you can use the WAN port address to access the SE5

```
ssh linaro@${WAN_ip_address}
```