

UM02518LTE Cat.1 Module Windows Driver installation and Firmware Upgrade Manual

V0.1

Document information

Info	Content
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Abstract	Describe LTE Cat.1 Module Windows Driver installation and Firmware Upgrade Manual

Content

CHAPTER 1 WINDOWS DRIVER INSTALLATION	3
1.1 HARDWARE PREPARATION	3
1.2 DEVICE MANAGER	3
1.3 UPDATE DRIVER	3
1.4 INSTALL DRIVER FOR THE REST PORT DEVICES	5
1.5 AT COMMAND OPERATION	7
CHAPTER 2 FIRMWARE UPGRADE ON WINDOWS.....	9
2.1 ENTER DOWNLOAD MODE	9
2.2 FIRMWARE UPGRADE	9
2.3 FIRMWARE UPGRADE TO MORE MODULES	12
REVISION	13

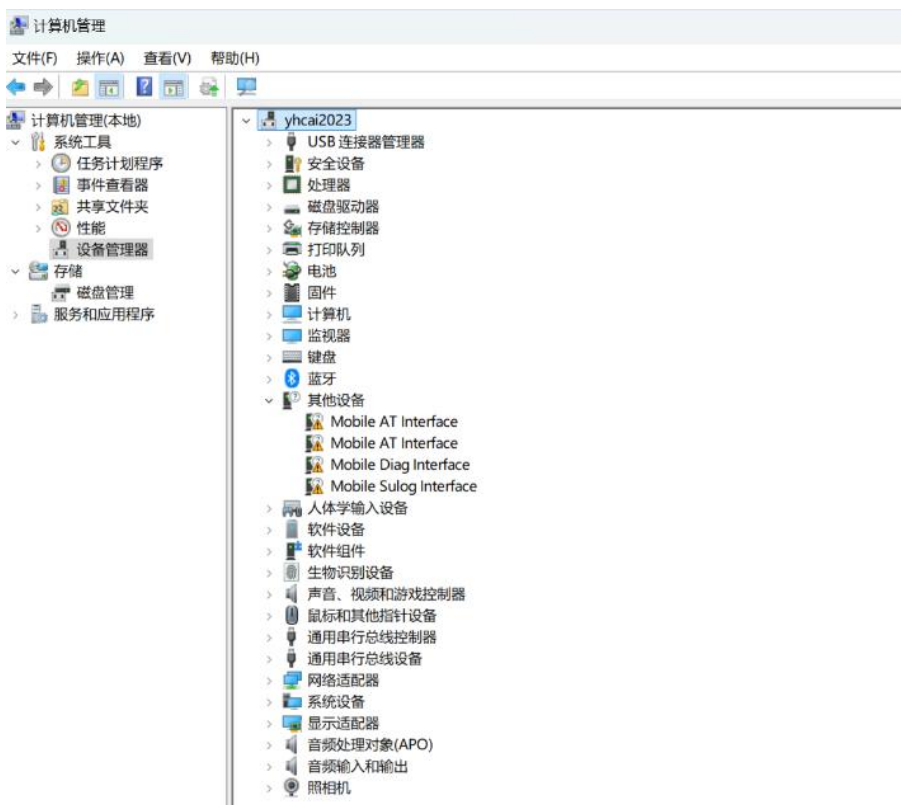
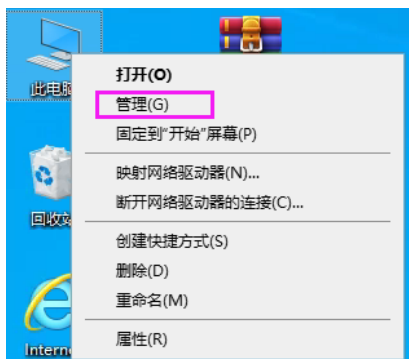
Chapter 1 Windows driver installation

1.1 Hardware preparation

Usually User should use an EVK or others hardware with a USB interface to work in windows system. Connect the USB interface to computer with a USB Cable.

1.2 Device Manager

Right-click on "My Computer", select "Manage", and then select "Device Manager". When no driver is installed, the port display is as follows:



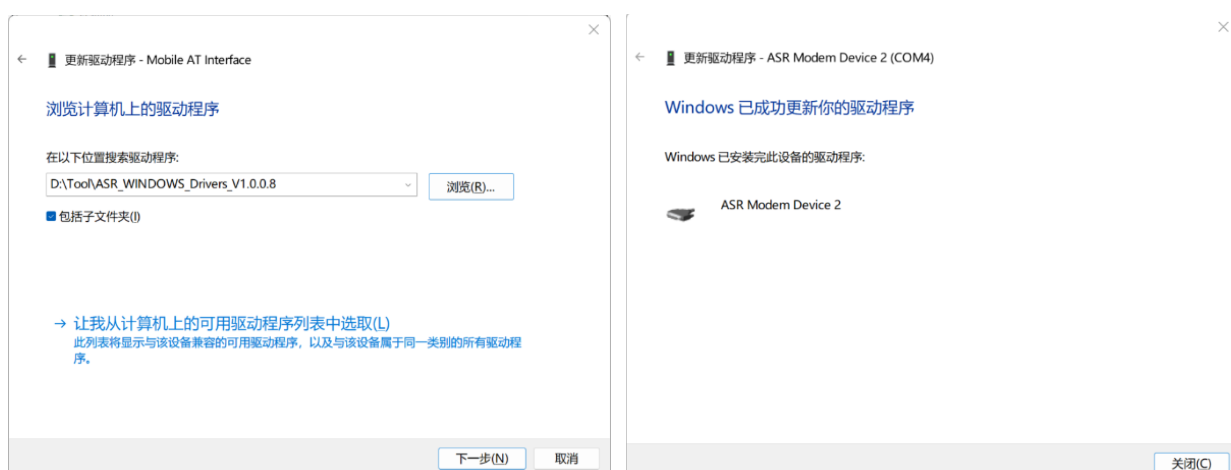
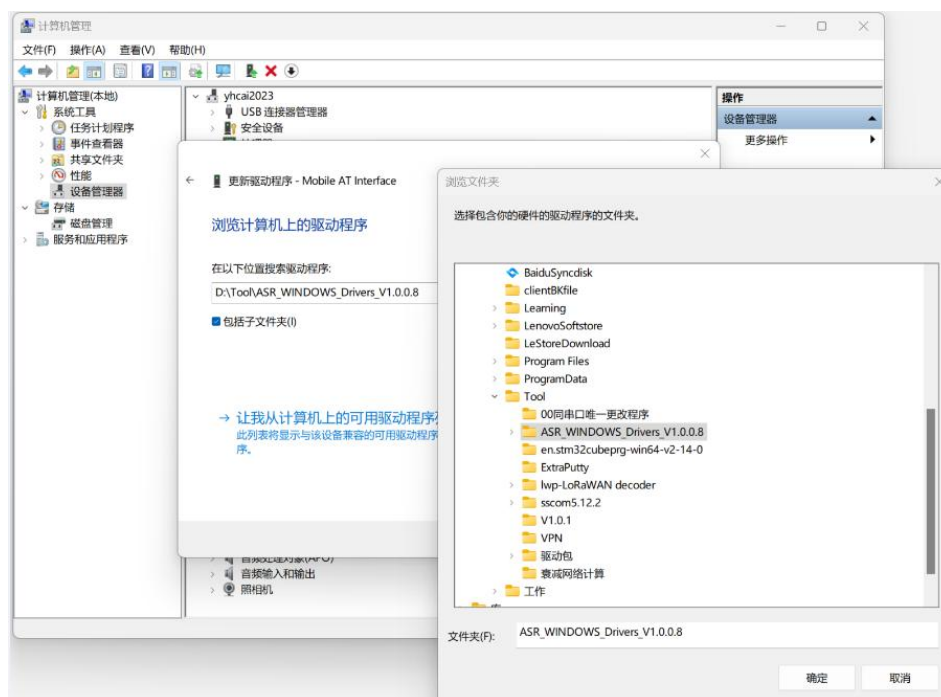
1.3 Update driver

Unzip the driver compression package, [ASR_WINDOWS_Drivers_V1.0.0.8.zip](#).

Right-click on the relevant device, and then click "Update Driver" - "Browse My Computer for Driver".



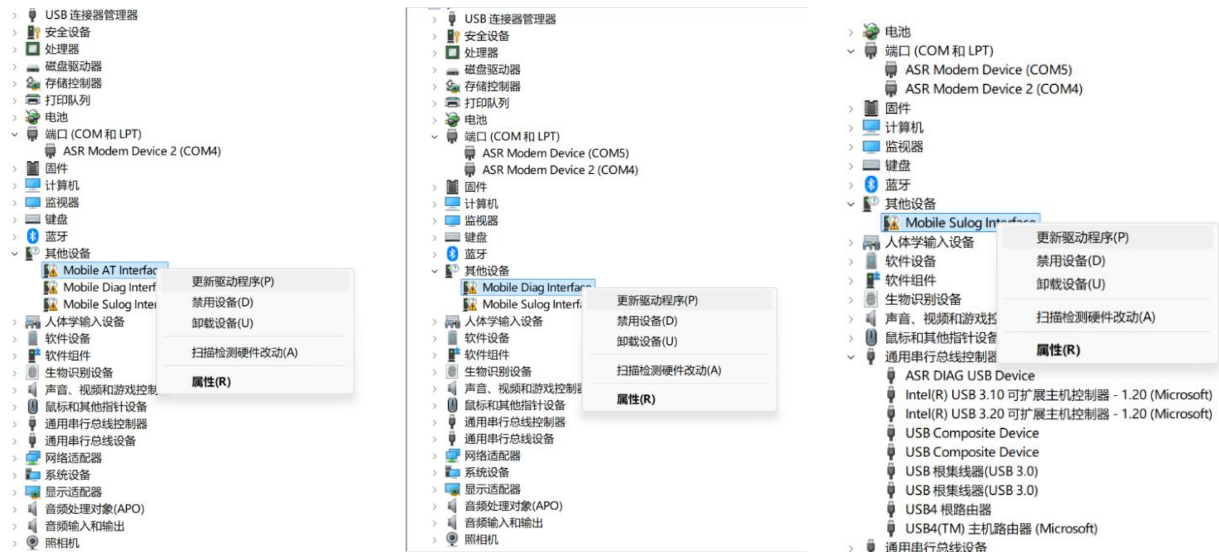
Select the folder where the driver is located, and click "Next" to proceed with the installation.



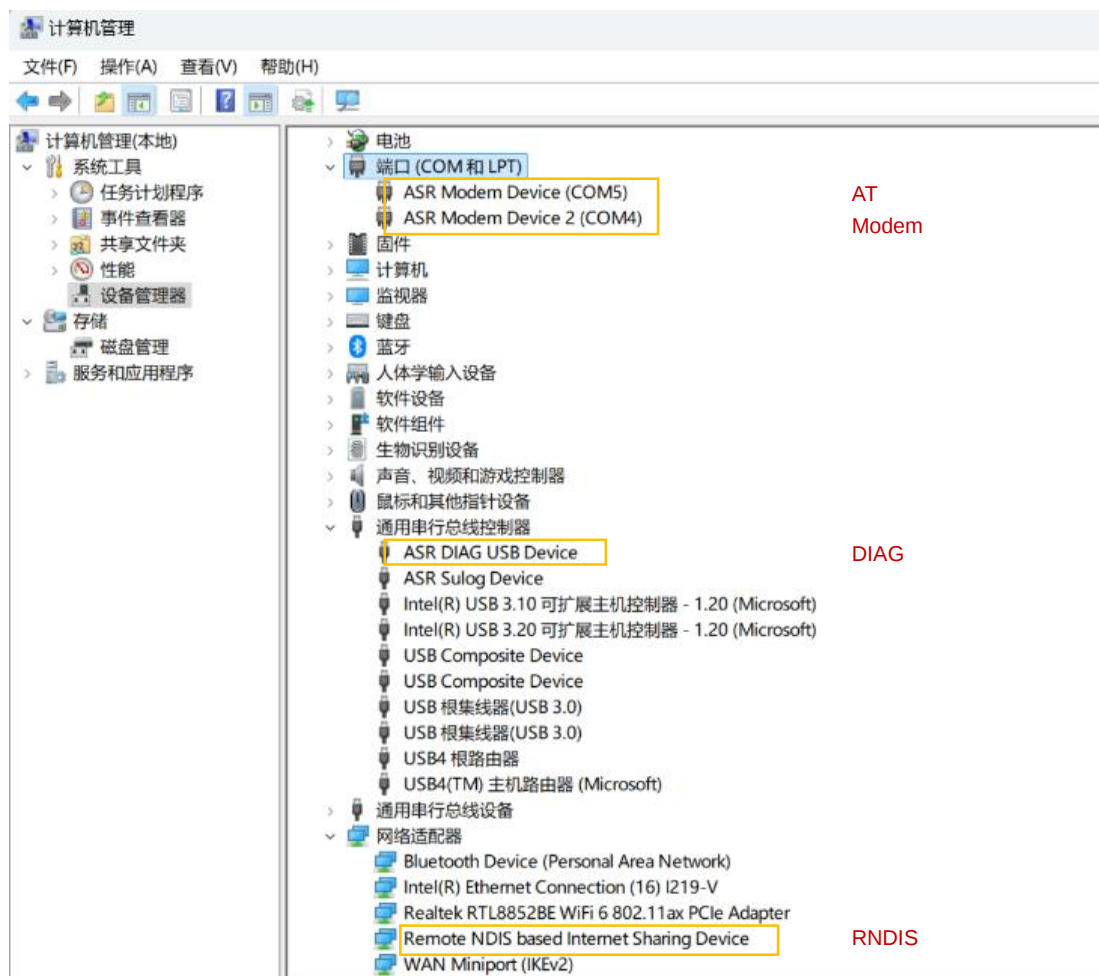
1.4 Install driver for the rest port devices

Repeat the same process to install driver for the rest port devices

Right-click on the relevant device, and then click "Update Driver" - "Browse My Computer for Driver", this is the same as above process.



After the module is properly installed and the driver is updated, four terminal ports will show in "Device Manager".



Four terminal ports function is as follows:

1) AT refers to the AT communication port;

- 2) The MODEM port is a dial-up port for a modem, and it can also perform AT communication when not in use for dialling;
- 3) The DIAG port is used for debugging and upgrading;
- 4) RNDIS is a virtual network card used for RNDIS dial-up. (After the module is powered on, it will automatically dial up the internet through RNDIS by default. The computer will use SIM card data. If you do not need to use the module's network, please disable the network card.)



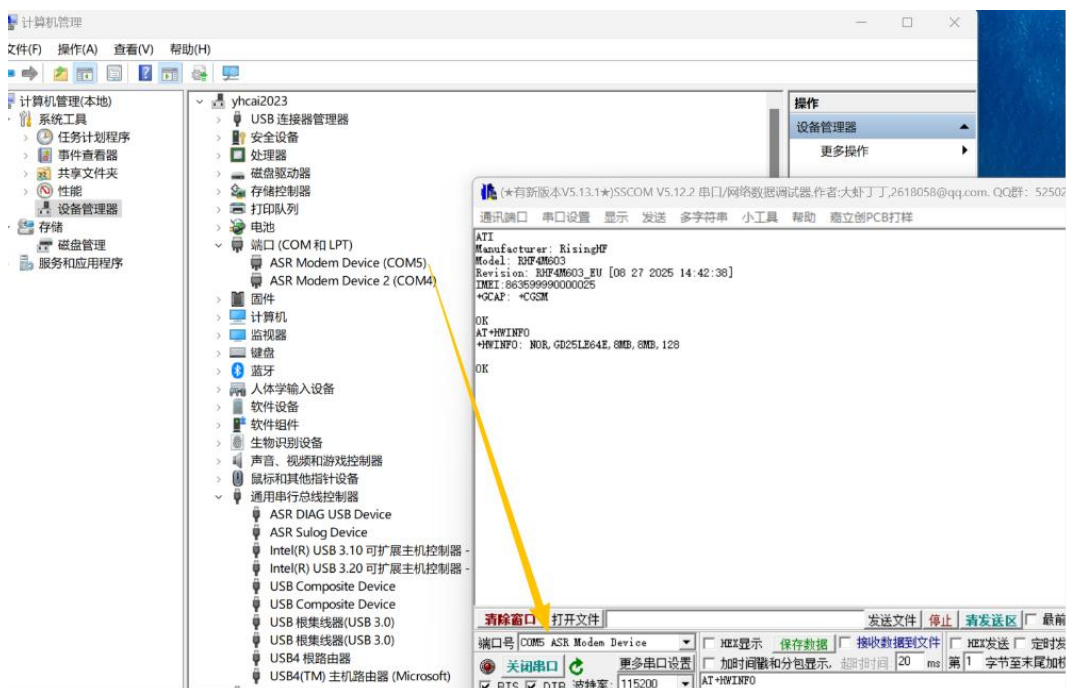
NOTE

- ✎ If a yellow exclamation mark is still shown after the driver installation is complete, your computer may be running an older version of Windows 7, and you need to apply a patch. The patch for older versions of Windows 7 is available in the file "patch.zip". Simply double-click patch file to use.

1.5 AT command Operation

After the driver is successfully installed, select the corresponding port through the serial port tool to perform AT operations on the module.

There are numerous serial port tools on the market. Here we use SSCOM as an example.





In the software, select the COM port corresponding to the module's AT port. The baud rate of the module's USB port is adaptive (while UART port baud rate 115200 by default), Please noted that AT commands use carriage return and new line break as the terminator. Be sure to check "Send New Line" before sending AT command.

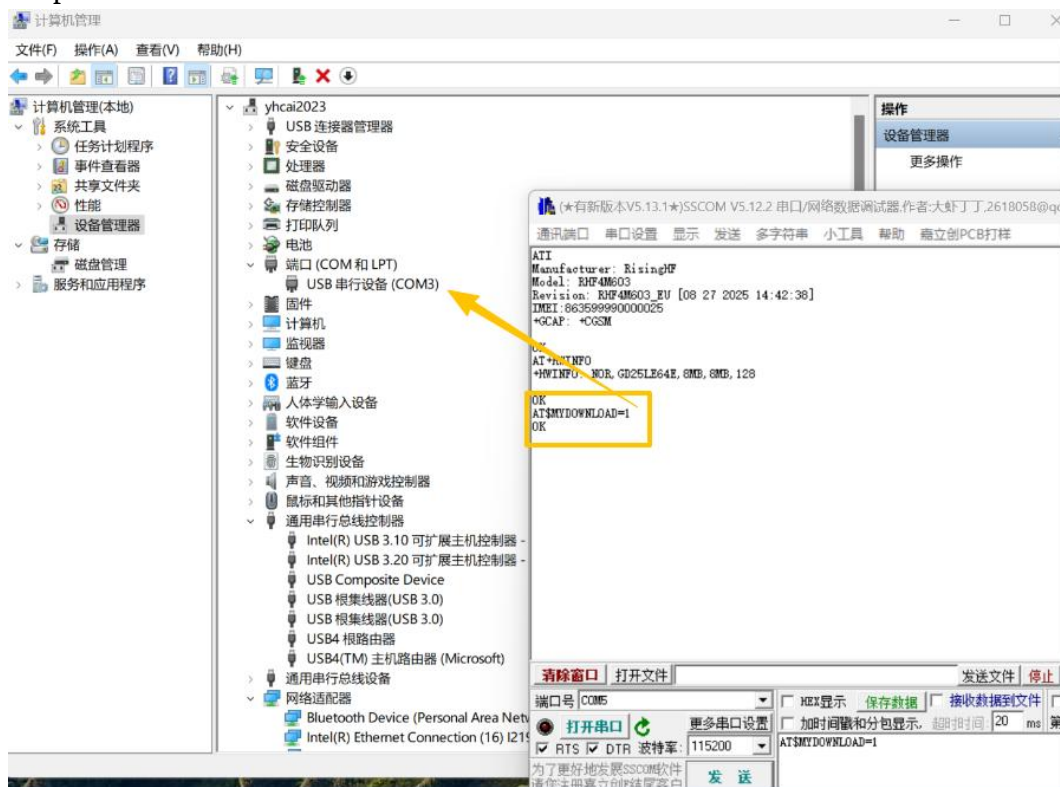
Now you can use the module freely.

Chapter 2 Firmware upgrade on Windows

2.1 Enter download mode

There are two ways to set the module into download mode: ① within a few seconds after the module is powered on; ② by sending the command `AT$MYDOWNLOAD=1` to the module.

After entering download mode, the port of the device manager will change. Normally the driver will installed automatically. If not, please install driver manually, the process is same as the above chapter.



2.2 Firmware upgrade

After entering download mode, Open the tool “aboot-tools-2023.08.27-win-x86.7z”, extract it, and then double-click "aboot.exe" in the folder.

新建文件夹			
名称	修改日期	类型	大小
training.json	2024/5/22 17:21	JSON 文件	1 KB
YUGE_HE9_02MB.zip	2024/4/10 20:02	ZIP 文件	4,271 KB
debug.log	2024/3/15 9:50	文本文档	1 KB
YUGE_CV9_02MB101.zip	2024/3/12 19:14	ZIP 文件	3,955 KB
YUGE_CV9_02MB111.zip	2024/3/12 19:11	ZIP 文件	3,955 KB
YUGE_CV9_02MB.zip	2024/3/12 18:54	ZIP 文件	3,955 KB
YUGE_HV9G_04MB.zip	2024/1/18 20:04	ZIP 文件	7,378 KB
YUGE_HV9_04MB.zip	2024/1/18 19:26	ZIP 文件	6,253 KB
nw.dll	2023/11/1 17:28	应用程序扩展	176,160 KB
nw_100_percent.pak	2023/11/1 17:28	PAK 文件	592 KB
nw_200_percent.pak	2023/11/1 17:28	PAK 文件	886 KB
nw_elf.dll	2023/11/1 17:28	应用程序扩展	1,000 KB
resources.pak	2023/11/1 17:28	PAK 文件	4,205 KB
v8_context_snapshot.bin	2023/11/1 17:28	BIN 压缩文件	717 KB
vk_swiftshader.dll	2023/11/1 17:28	应用程序扩展	4,003 KB
vk_swiftshader_icd.json	2023/11/1 17:28	JSON 文件	1 KB
vulkan-1.dll	2023/11/1 17:28	应用程序扩展	808 KB
aboot.dll	2023/11/1 17:28	应用程序扩展	6,106 KB
aboot.exe	2023/11/1 17:28	应用程序	3,329 KB
aboot.json.example	2023/11/1 17:28	EXAMPLE 文件	1 KB
adownload.exe	2023/11/1 17:28	应用程序	4,508 KB
arelease.exe	2023/11/1 17:28	应用程序	5,735 KB
credits.html	2023/11/1 17:28	360 se HTML Do...	6,716 KB
d3dcompiler_47.dll	2023/11/1 17:28	应用程序扩展	4,777 KB
ffmpeg.dll	2023/11/1 17:28	应用程序扩展	1,878 KB
icudtl.dat	2023/11/1 17:28	DAT 文件	10,210 KB

Open the upgrade tool (aboot.exe) , select the correct zip format firmware version file, please note that the firmware upgrade package needs to be selected based on the corresponding model and flash type, user can use AT command [ATI](#) to check the module model and use AT command [AT+HWINFO](#) to check the flash type.

```

ATI
Manufacturer: RisingHF
Model: RHF4M603
Revision: RHF4M603_EU [08 27 2025 14:42:38]
IMEI: 863599990000025
+GCAP: +CGSM

OK
AT+HWINFO
+HWINFO: NOR, GD25LE64E, 8MB, 8MB, 128

OK
  
```

Select the firmware version file in zip format:

ASR

DownloadReleaseMisc

Release package: D:\RHF4M603EU_011_156_20250827_08MB_VOLTE_GPS.zip

Start >

☐ Production mode
 ☐ Save log
 ☒ Display log
 ☒ USB device only
 ☒ Auto enable for USB
 ☐ AT fallback
 Action after finished: No action
 Baud rate: 115200

Partition table

Name	Type	Start	Size	vStart	vSize
all	group	0x0000000000	0x0000800000	0xFFFFFFFF	0x0000800000
qspl	flash	0x0000000000	0x0000800000	0x0080000000	0x0000800000
bootloader	ubi	0x0000000000	0x0000024000	0x0080000000	0x0000024000
system	part	0x0000024000	0x0000741000	0x0080024000	0x0000741000
ptable	raw	0x0000024000	0x0000001000	0x0080024000	0x00000088C
rd	raw	0x0000025000	0x0000006000	0x0080025000	0x0000006000
apn	raw	0x000002B000	0x0000008000	0x008002B000	0x0000001571
cp	raw	0x0000033000	0x000061C000	0x0080033000	0x000061C000
dsp	raw	0x000064F000	0x0000115000	0x008064F000	0x0000115000
rtbin	raw	0x0000764000	0x0000001000	0x0080764000	0x0000008B2A
reserved	raw	0x0000765000	0x000002A000	0x0080765000	0x000002A000
nvm	raw	0x000078F000	0x0000064000	0x008078F000	0x0000064000
fota_param	raw	0x00007F3000	0x0000003000	0x00807F3000	0x0000003000
factory	part	0x00007F6000	0x000000A000	0x00807F6000	0x000000A000
factory_a	raw	0x00007F6000	0x000000A000	0x00807F6000	0x000000A000

Download command table

Group	Command	Name Partition	Value Image	Weight	Image size
☒ 0	require	product	arom-lynx		
☒ 0	require	version	0.5		
☒ 0	require	version-bootrom	2020.07.30		

After clicking "Start", it will jump to the next page. Restarting the module will initiate the upgrade process or you can enter download mode by sending the command `AT$MYDOWNLOAD=1` via the serial port.

The upgrade progress will show in real time.

ASR

DownloadReleaseMisc

D:\RHF4M603EU_011_156_20250827_08MB_VOLTE_GPS.zip

Save Training Order < Back

1 | COM17

1

COM17

1%

RUNNING

```

16:42:07.407 <COM17> OKAY [ 0.036s]
16:42:07.407 <COM17> Writing 'rd' 1/1...
16:42:07.409 <COM17> (flasher) writing 'rd' scheduled in background
16:42:07.409 <COM17> OKAY [ 0.002s]
16:42:07.411 <COM17> target reported max download size of 2097152 bytes
16:42:07.411 <COM17> extracting apn.bin (5 KB)...
16:42:07.413 <COM17> processing command [flash apn apn.bin]
16:42:07.413 <COM17> Sending sparse 'apn' 1/1 (8 KB)...
16:42:07.433 <COM17> OKAY [ 0.020s]
16:42:07.433 <COM17> Writing 'apn' 1/1...
16:42:07.435 <COM17> (flasher) writing 'apn' scheduled in background
16:42:07.435 <COM17> OKAY [ 0.002s]
16:42:07.437 <COM17> target reported max download size of 2097152 bytes
16:42:07.438 <COM17> extracting cp.bin (6 MB)...
16:42:07.579 <COM17> processing command [flash cp cp.bin]
16:42:07.579 <COM17> Sending sparse 'cp' 1/4 (2044 KB)...
16:42:07.587 <COM17> (flasher) erase "bootloader" done.
16:42:07.587 <COM17> (flasher) programming partition 'ptable' with datap = #0x7e600000, size = 0x1044
16:42:07.608 <COM17> (flasher) program "ptable" done.
16:42:07.608 <COM17> (flasher) programming partition 'rd' with datap = #0x7e200000, size = 0x405c
16:42:07.808 <COM17> (flasher) program "rd" done.

```

The image below shows the download completion interface.



[Download](#)
[Release](#)
[Misc](#)

D:\RHF4M603EU_011_156_20250827_08MB_VOLTE_GPS.zip

[Save Training Order](#)
[Back](#)

1 | COM17

1

COM17

SUCCEEDED

S

```

16:47:38.820 <COM17> OKAY [ 0.002s]
16:47:38.820 <COM17> Sending sparse 'bootloader' 1/1 (116 KB)...
16:47:39.005 <COM17> (flasher) program "cp" done.
16:47:39.006 <COM17> (flasher) programming partition 'dsp' with datap = #0x7e200000, size = 0x115044
16:47:39.241 <COM17> OKAY [ 0.421s]
16:47:39.241 <COM17> Writing 'bootloader' 1/1...
16:47:39.243 <COM17> (flasher) writing 'bootloader' scheduled in background
16:47:39.243 <COM17> OKAY [ 0.002s]
16:47:39.243 <COM17> waiting for all operations to complete
16:47:39.244 <COM17> (flasher) waiting all flash operations to be completed
16:47:42.519 <COM17> (flasher) program "dsp" done.
16:47:42.519 <COM17> (flasher) programming partition 'rfbin' with datap = #0x7e400000, size = 0x1044
16:47:42.555 <COM17> (flasher) program "rfbin" done.
16:47:42.555 <COM17> (flasher) erasing partition 'fota_param'
16:47:42.559 <COM17> (flasher) erase "fota_param" done.
16:47:42.559 <COM17> (flasher) erasing partition 'nvm'
16:47:42.707 <COM17> (flasher) erase "nvm" done.
16:47:42.707 <COM17> (flasher) erasing partition 'bootloader'
16:47:42.761 <COM17> (flasher) erase "bootloader" done.
16:47:42.761 <COM17> (flasher) programming partition 'bootloader' with datap = #0x7e600000, size = 0x1d044
16:47:42.999 <COM17> (flasher) program "bootloader" done.
16:47:42.999 <COM17> OKAY [ 3.756s]
16:47:42.999 <COM17> all finished. total time: 29.494s

```

After the upgrade is complete, you need to manually restart the module to make the firmware upgrade effective. Can use AT command [ATI](#) to check the new firmware version.

2.3 Firmware upgrade to more modules

After the upgrade is complete for one module, if user want to go on upgrade other modules, it will be simple that only disconnect the previous module and connect a new one to the computer when user don't click "Back" or close the about tool, firmware download will start automatically.



NOTE

After the download of all the module is completed, click "Back" or close the about tool directly, otherwise the module will restart and attempt to download the version automatically again.

Revision

V0.1 2025-09-04

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