SIM7000 Linux User Guide
V2.00

Version History

Data	Version	Description of change	Author
2018-04-13	V2.00	Original	wei.zhang104

1 SIM7000 USB Description

For SIM7000 serial module, VID=0x1E0E, and PID=0x9001.

As a slave USB device, SIM7000 USB is enumerated as listed below.

Interface number		
0	USB serial	Diagnostic Interface
1	USB serial	GPS NMEA Interface
2	USB serial	AT port Interface
3	USB serial	Modem port Interface
4	USB serial	USB Audio Interface

2 Install USB Serial Driver

2.1 Precondition.

To configure Linux kernel, and make sure that:

CONFIG_USB_SERIAL=y
CONFIG_USB_SERIAL_WWAN=y
CONFIG_USB_SERIAL_OPTION=y

2.2 How to add SIM7000 VID and PID, and skip interface #5.

To find the source code file *option.c* in kernel. (Usually, it is located in the path: *drivers/usb/serial/option.c*)

● **If the kernel version is v3.2 or newer.**

#define SIMCOM_SIM7000_VID   0x1E0E

```
#define SIMCOM_SIM7000_PID              0x9001

static const struct option_blacklist_info simcom_SIM7000_blacklist = {
     .reserved = BIT(5),
};
```

Add into *option_ids* list

… …

```
{ USB_DEVICE(SIMCOM_SIM7000_VID, SIMCOM_SIM7000_PID),
  .driver_info = (kernel_ulong_t)& simcom_SIM7000_blacklist t
},
```

… …

- **If the kernel version is below v3.2.**

```
#define SIMCOM_SIM7000_VID              0x1E0E
#define SIMCOM_SIM7000_PID              0x9001
```

Add into *option_ids* list

```
{ USB_DEVICE(SIMCOM_SIM7000_VID, SIMCOM_SIM7000_PID)}, /*SIM7000 */
```

And skip interface #5 in *option_probe*.

```
/* SIM7000 */
 if (serial->dev->descriptor.idVendor == SIMCOM_SIM7000_VID &&
     serial->dev->descriptor.idProduct == SIMCOM_SIM7000_PID &&
     serial->interface->cur_altsetting->desc.bInterfaceNumber == 5 )
     return -ENODEV;
```

2.3 How to print kernel debug message.

If USB serial driver is installed successfully, kernel will print below message automatically after module was re-started. And from this message, we could confirm if *dev/ttyUSB#* was enumerated successfully or not.

```
usb 1-1: new high speed USB device using rt3xxx-ehci and address 2
option 1-1:1.0: GSM modem (1-port) converter detected
usb 1-1: GSM modem (1-port) converter now attached to ttyUSB0
option 1-1:1.1: GSM modem (1-port) converter detected
usb 1-1: GSM modem (1-port) converter now attached to ttyUSB1
```

option 1-1:1.2: GSM modem (1-port) converter detected
usb 1-1: GSM modem (1-port) converter now attached to ttyUSB2
option 1-1:1.3: GSM modem (1-port) converter detected
usb 1-1: GSM modem (1-port) converter now attached to ttyUSB3
option 1-1:1.4: GSM modem (1-port) converter detected
usb 1-1: GSM modem (1-port) converter now attached to ttyUSB4