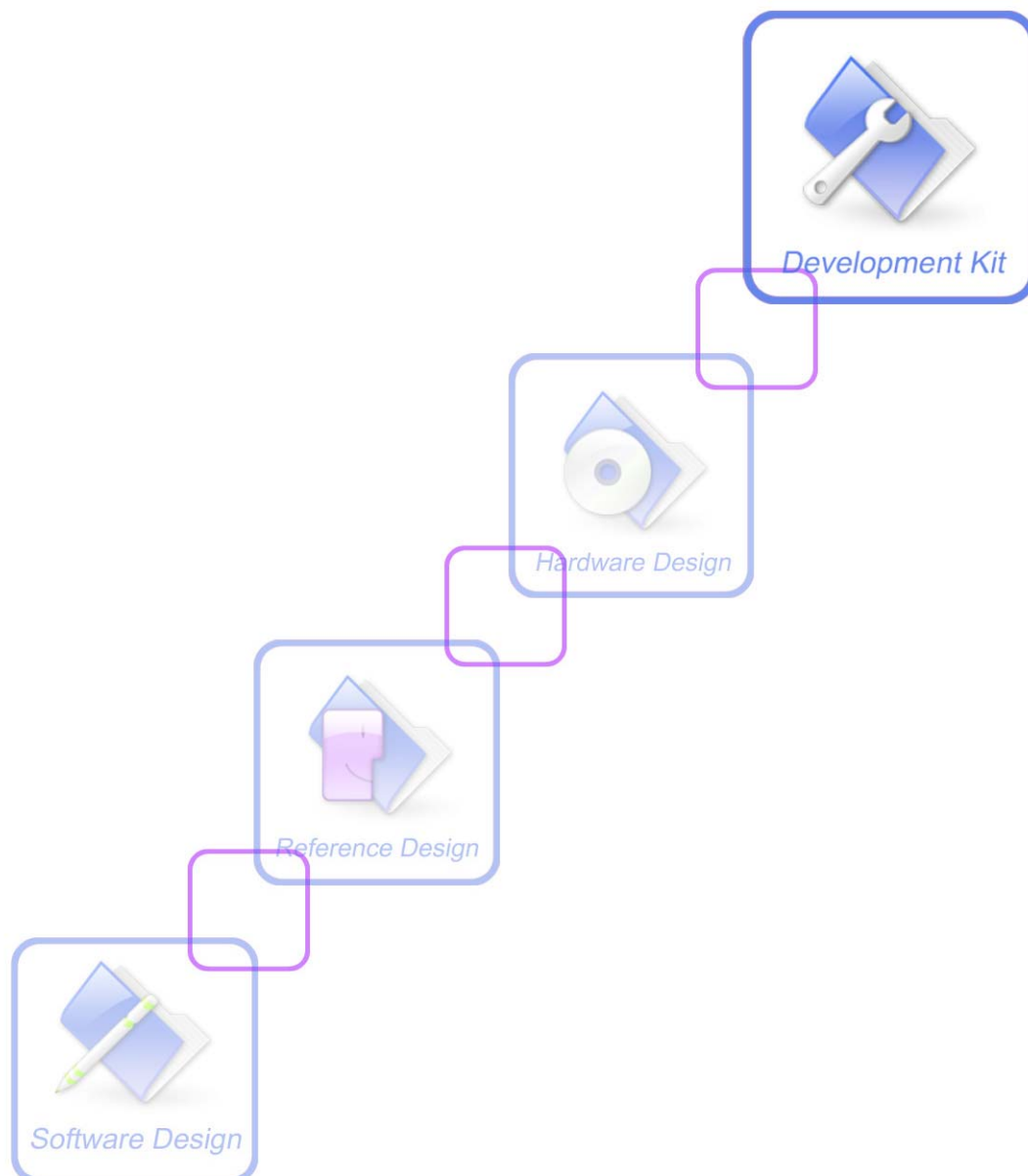


# UART Multiplexer Application Note



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## Version History

Version	Chapter	Comments
V0.01	New Version	huangzhichong

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# 1. Introduction

## 1.1 Overview

This document gives the usage of SIM52XX UART Multiplexer; one can get useful information about the UART Multiplexer function quickly through this document.

The UART Multiplexer is designed for one who wants to use multi-function (AT command, Modem, NMEA) at one time but with only UART interface on one's device.

## 1.2 References

Please refer to the following document for AT command:

[1]SIMCOM\_SIM5360\_ATC\_EN\_V0.05.pdf

# 2. Use Multiplexer

## 2.1 Prepare

Before using the multiplexer of module, one should also implement the same function on one's own side, currently the multiplexer resided in the module is conformed to the specification of GSM07.10 so one can implement his own multiplexer followed by this specification.

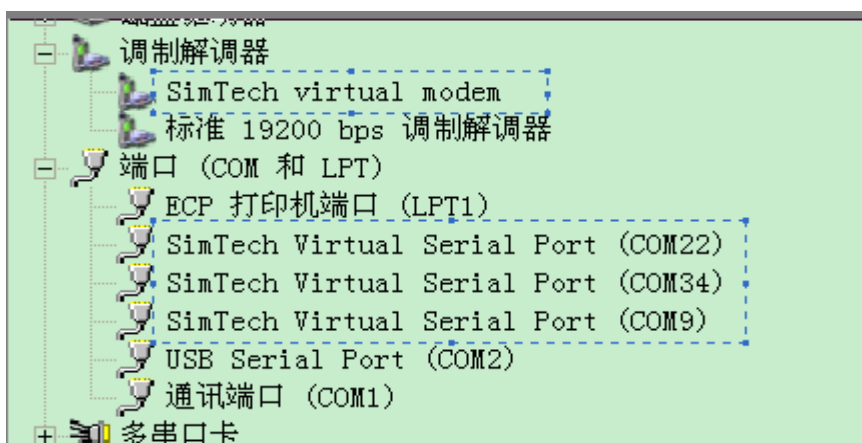
In a word one must implement his own multiplexer first at his side before rightly using SIMCOM module's multiplexer.

Currently SIMCOM's 3G module only supports Basic mode and one byte length indicator

## 2.2 Use

As one moves through this chapter one has the entire environment ready, this chapter presents an example on PC side with OS Windows XP to depict the usage of multiplexer.

1. Install the multiplexer's driver on windows XP which can be supplied by SIMCOM. You will get the four virtual COM ports in device manager after the driver installed.



- Please set the right baud rate for the physical serial port and make sure this port can communicate with module rightly.
- Configure each COM port to the right service, currently all the virtual COM ports have the same service: AT Command Service by default. One can change the default service by  
+CMUXSRVPORT

```

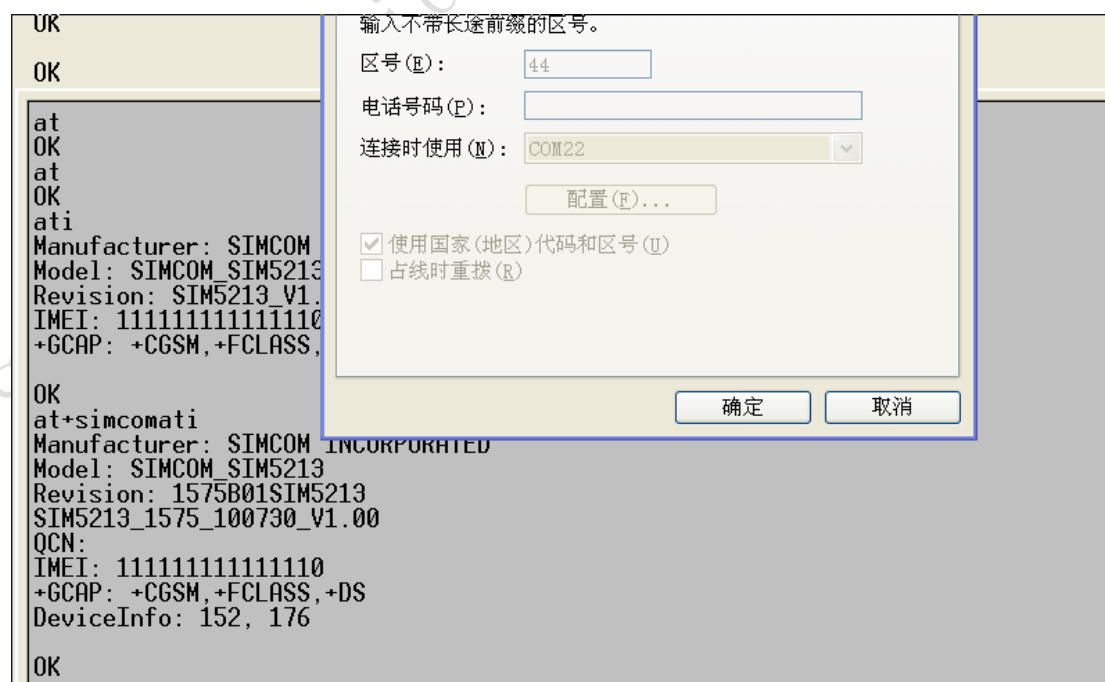
AT+CMUXSRVPORT=0,0 /*the first virtual com port using DIAG service*/
AT+CMUXSRVPORT=1,5 /*the second virtual com port using NMEA service*/
AT+CMUXSRVPORT=2,1 /*the third virtual com port using DATA service*/
AT+CMUXSRVPORT=3,1 /*the third virtual com port using AT Command Service*/

```

- Enable the multiplexer

One can use +CMUX=0 to request the module enter into multiplexer mode, after this command the physical serial port can no longer be used since it is used as the physical channel by multiplexer.

- Now one can use the virtual com ports as normal.



Virtual com port with AT Command service

```

at+cgps=1
OK
$GPGSV,4,1,16,32,...,31,...,30,...,29,...,*70

$GPGSV,4,2,16,28,...,27,...,26,...,25,...,*74
$GPGSV,4,3,16,24,...,23,...,22,...,21,...,*7D
$GPGSV,4,4,16,20,...,19,...,18,...,17,...,*7B
$GPGGA,0,...,*66
$GPVTG,T,M,N,K,N*2C
$GPRMC,V,...,N*53
$GPGSA,A,1,...,*1E
$GPGSV,4,1,16,32,...,31,...,30,...,29,...,*70
$GPGSV,4,2,16,28,...,27,...,26,...,25,...,*74
$GPGSV,4,3,16,24,...,23,...,22,...,21,...,*7D
$GPGSV,4,4,16,20,...,19,...,18,...,17,...,*7B
$GPGGA,0,...,*66
$GPVTG,T,M,N,K,N*2C
$GPRMC,V,...,N*53
$GPGSA,A,1,...,*1E
$GPGSV,4,1,16,32,...,31,...,30,...,29,...,*70
$GPGSV,4,2,16,28,...,27,...,26,...,25,...,*74
$GPGSV,4,3,16,24,...,23,...,22,...,21,...,*7D
$GPGSV,4,4,16,20,...,19,...,18,...,17,...,*7B
$GPGGA,0,...,*66
$GPVTG,T,M,N,K,N*2C
$GPRMC,V,...,N*53
$GPGSA,A,1,...,*1E

```

Virtual com port with NMEA service



Virtual com port with DATA service

*Note:*

1. Under UART multiplexer mode the AT Command service and DATA service are the same but only one of the ports of this service can dial up successfully!
2. DIAG service is used for debug purpose by SIMCOM, so please don't configure any virtual com port to this service if one doesn't want to debug anything.

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