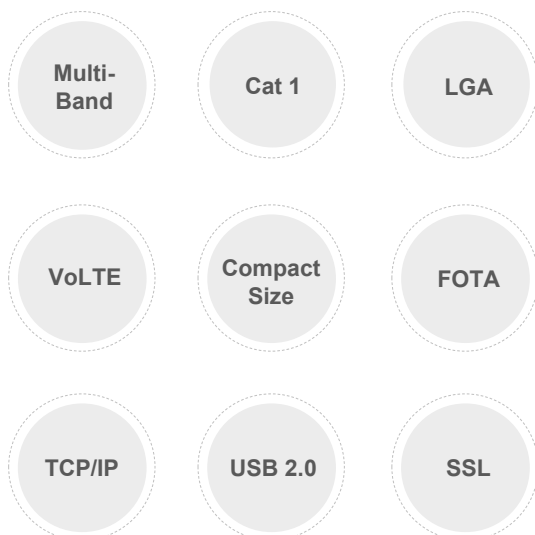
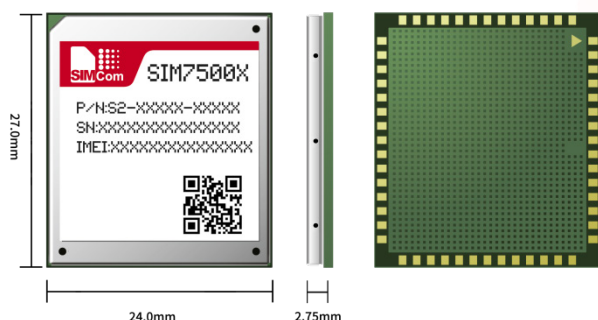


# SIM7500 Series

## SIMCom LTE Cat 1 Module



### Product Description

The SIM7500 series is the LTE Cat 1 module which supports wireless communication modes of LTE-TDD/LTE-FDD/HSPA+/GSM/GPRS/EDGE etc. It supports maximum 10Mbps downlink rate and 5Mbps uplink rate.

The SIM7500 series adopts LGA form factor and has a compact size of 24mm\*27mm which makes it ideal for compact products design.

The SIM7500 series integrates multiple satellite high accuracy positioning GNSS systems, with multiple built-in network protocols, supports drivers for main operation systems (USB driver for Windows, Linux and Android etc.) and software function, AT commands are compatible with SIM7600/SIM7600-H series modules. Meanwhile the SIM7500 series integrates main industrial standard interfaces, with powerful expansibility, including abundant interfaces such as UART, USB, I2C, GPIO, which is suitable for main IoT applications such as telematics, surveillance devices, CPE, industrial routers, and remote diagnostics etc.

### Key Benefits

- ◆ LGA form factor with abundant interfaces
- ◆ Suitable for LTE, UMTS and GSM networks with global coverage
- ◆ Abundant software functions: FOTA, LBS, TLS, VoLTE
- ◆ Multi-constellation GNSS receiver support
- ◆ AT commands of the SIM7500 series are compatible with the SIM7600/SIM7600-H series modules

| Product                       | SIM7500A   | SIM7500AD  | SIM7500V   | SIM7500SA  |
|-------------------------------|--|--|--|--|
| <b>Form Factor</b>            | LGA, 56PIN   | LGA, 56PIN   | LGA, 56PIN   | LGA, 56PIN   |
| <b>Dimensions(mm)</b>         | 24.0*27.0*2.75   | 24.0*27.0*2.75   | 24.0*27.0*2.75   | 24.0*27.0*2.75   |
| <b>Frequency Bands</b>        | LTE-FDD<br>WCDMA   | B2/B4/B12  | B2/B4/B12  | B4/B13   |
| <b>GNSS</b>                   |  | B2/B5  | B2/B5  | B1/B3/B5/B7/B8/B28   |
| <b>Temperature</b>            |  | B2/B5  | B2/B5  | B1/B5  |
|                               | o  | o  | o  | o  |
|                               | -40°C ~ +85°C  | -40°C ~ +85°C  | -40°C ~ +85°C  | -40°C ~ +85°C  |
| <b>Electrical Features</b>    |  |  |  |  |
| <b>Supply Voltage(V)</b>      | 3.4~ 4.2   | 3.4~ 4.2   | 3.4~ 4.2   | 3.4~ 4.2   |
| <b>Power Consumption (mA)</b> | LTE  | 1.6  | 1.6  | 1.6  |
|                               | WCDMA,<br>DRX=9  | 3.3  | 3.3  | 3.3  |
| <b>Data Transfer</b>          |  |  |  |  |
| <b>LTE(Mbps)</b>              | 10(DL)/5(UL)   | 10(DL)/5(UL)   | 10(DL)/5(UL)   | 10(DL)/5(UL)   |
| <b>HSPA+(Mbps)</b>            | 42(DL)/5.76(UL)  | 42(DL)/5.76(UL)  | 42(DL)/5.76(UL)  | 42(DL)/5.76(UL)  |
| <b>WCDMA(Kbps)</b>            | 384(DL)/384(UL)  | 384(DL)/384(UL)  | 384(DL)/384(UL)  | 384(DL)/384(UL)  |
| <b>Software Features</b>      |  |  |  |  |
| <b>Protocol</b>               | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/HTTP/<br>HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/<br>HTTP/HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/<br>HTTP/HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/<br>HTTP/HTTPS/DNS |
| <b>TLS</b>                    | •  | •  | •  | •  |
| <b>File System</b>            | •  | •  | •  | •  |
| <b>Audio Record/Play</b>      | o  |  | o  | o  |
| <b>TTS</b>                    | o  |  | o  | o  |
| <b>DTMF</b>                   | o  |  | o  | o  |
| <b>LBS</b>                    | •  | •  | •  | •  |
| <b>FOTA</b>                   | •  | •  | •  | •  |
| <b>Jamming Detection</b>      | •  | •  | •  | •  |
| <b>Android RIL</b>            | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                |
| <b>USB Driver</b>             | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  |
| <b>WWAN (RNDIS)</b>           | •  | •  | •  | •  |
| <b>ECM</b>                    | •  | •  | •  | •  |
| <b>MBIM</b>                   | Win8/Win10   | Win8/Win10   | Win8/Win10   | Win8/Win10   |
| <b>NDIS</b>                   | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       |
| <b>Firmware Upgrade</b>       | USB/FOTA   | USB/FOTA   | USB/FOTA   | USB  |
| <b>Interfaces</b>             |  |  |  |  |
| <b>SIM Card</b>               | 1.8V/3.0V  | 1.8V/3.0V  | 1.8V/3.0V  | 1.8V/3.0V  |
| <b>UART</b>                   | •  | •  | •  | •  |
| <b>USB</b>                    | •  | •  | •  | •  |
| <b>PCM</b>                    | o  |  | o  | o  |
| <b>ADC</b>                    | •  | •  | •  | •  |
| <b>I2C</b>                    | •  | •  | •  | •  |
| <b>Diversity Receiver</b>     | •  | •  | •  | •  |
| <b>Certification</b>          |  |  |  |  |
| <b>Regulatory</b>             | FCC/IC/PTCRB/RoHS/<br>REACH                                | FCC/PTCRB/RoHS/REACH                                       | FCC/GCF/RoHS/REACH   | CE-RED/ACMA/NCC/RoHS/<br>REACH                             |
| <b>Carrier</b>                | AT&T/Rogers*   | T-Mobile   | Verizon  |  |

• : support o : optional \* : on going

| Product                    |                    | SIM7500E   | SIM7500E-L1C   | SIM7500JC  | SIM7500JE  |
|----------------------------|--------------------|--|--|--|--|
| Form Factor                |                    | LGA, 56PIN   | LGA, 56PIN   | LGA, 56PIN   | LGA, 56PIN   |
| Dimensions(mm)             |                    | 24.0*27.0*2.75   | 24.0*27.0*2.75   | 24.0*27.0*2.75   | 24.0*27.0*2.75   |
| Frequency Bands            | LTE-FDD            | B1/B3/B7/B8/B20  | B1/B3/B7/B8/B20  | B1/B18/B19/B26   | B1/B3/B8   |
|                            | WCDMA              | B1/B8  | B1/B8  |  |  |
|                            | GSM                | 900/1800MHz  | 900/1800MHz  |  |  |
| GNSS                       |                    | o  | o  | o  | o  |
| Temperature                |                    | -40℃ ~ +85℃  | -40℃ ~ +85℃  | -40℃ ~ +85℃  | -40℃ ~ +85℃  |
| <b>Electrical Features</b> |                    |  |  |  |  |
| Supply Voltage(V)          |                    | 3.4~ 4.2   | 3.4~ 4.2   | 3.4~ 4.2   | 3.4~ 4.2   |
| Power Consumption (mA)     | LTE                | 1.6  | 1.6  | 1.6  | 1.6  |
|                            | WCDMA, DRX=9       | 3.3  | 3.3  |  |  |
|                            | GSM, BS_PA_MFRMS=2 | 2.8  | 2.8  |  |  |
| <b>Data Transfer</b>       |                    |  |  |  |  |
| LTE(Mbps)                  |                    | 10(DL)/5(UL)   | 10(DL)/5(UL)   | 10(DL)/5(UL)   | 10(DL)/5(UL)   |
| HSPA+(Mbps)                |                    | 42(DL)/5.76(UL)  | 42(DL)/5.76(UL)  |  |  |
| WCDMA(Kbps)                |                    | 384(DL)/384(UL)  | 384(DL)/384(UL)  |  |  |
| GPRS/EDGE(Kbps)            |                    | 236.8(DL)/236.8(UL)  | 236.8(DL)/236.8(UL)  |  |  |
| <b>Software Features</b>   |                    |  |  |  |  |
| Protocol                   |                    | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/HTTP/<br>HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/<br>HTTP/HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/<br>HTTP/HTTPS/DNS | TCP/IP/IPV4/IPV6/<br>Multi-PDP/FTP/FTPS/HTTP/<br>HTTPS/DNS |
| TLS                        |                    | •  | •  | •  | •  |
| File System                |                    | •  | •  | •  | •  |
| Audio Record/Play          |                    | o  | o  | o  | o  |
| TTS                        |                    | o  | o  | o  | o  |
| DTMF                       |                    | o  | o  | o  | o  |
| LBS                        |                    | •  | •  | •  | •  |
| FOTA                       |                    | •  | •  | •  | •  |
| Jamming Detection          |                    | •  | •  | •  | •  |
| Android RIL                |                    | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                | Android 5.0/6.0/7.0/8.0/9.0                                |
| USB Driver                 |                    | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  | Microsoft Windows 7/8/10<br>Linux/Android                  |
| WWAN (RNDIS)               |                    | •  | •  | •  | •  |
| ECM                        |                    | •  | •  | •  | •  |
| MBIM                       |                    | Win8/Win10   | Win8/Win10   | Win8/Win10   | Win8/Win10   |
| NDIS                       |                    | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       | Linux/Windows 7/8/10                                       |
| Firmware Upgrade           |                    | USB/FOTA   | USB  | USB/FOTA   | USB/FOTA   |
| <b>Interfaces</b>          |                    |  |  |  |  |
| SIM Card                   |                    | 1.8V/3.0V  | 1.8V/3.0V  | 1.8V/3.0V  | 1.8V/3.0V  |
| UART                       |                    | •  | •  | •  | •  |
| USB                        |                    | •  | •  | •  | •  |
| PCM                        |                    | o  | o  | o  | o  |
| ADC                        |                    | •  | •  | •  | •  |
| I2C                        |                    | •  | •  | •  | •  |
| Diversity Receiver         |                    | •  | •  | •  | •  |
| <b>Certification</b>       |                    |  |  |  |  |
| Regulatory                 |                    | CE-RED/ACMA/NCC/RoHS/<br>REACH                             | CE-RED*/RoHS*/REACH*                                       | Telec/JATE/RoHS/REACH                                      | Telec/JATE/RoHS/REACH                                      |
| Carrier                    |                    | Deutsche Telekom   |  |  | Softbank   |

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