

# USR-G786-G

## LTE Cat 4 Module



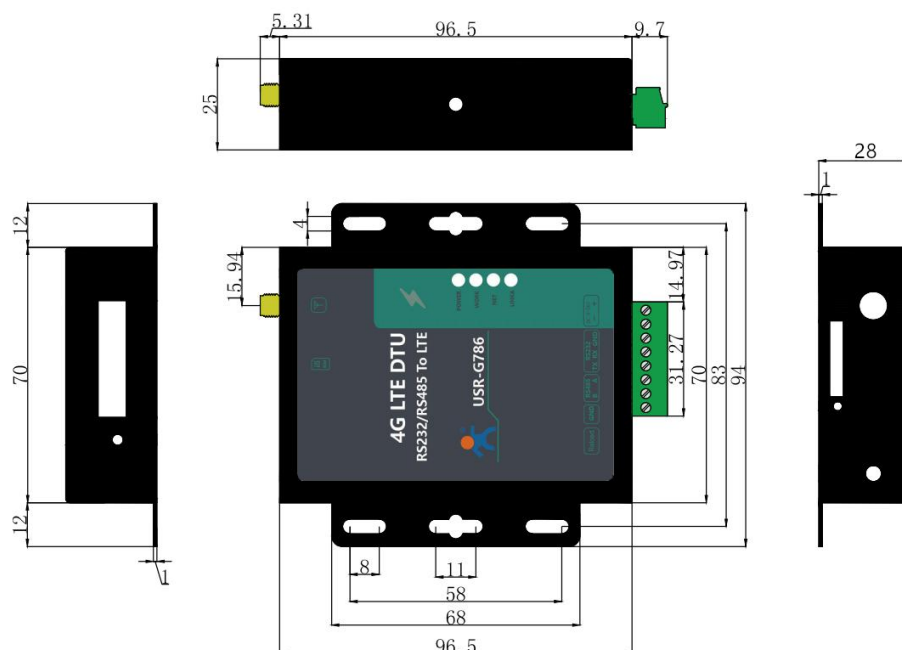
### Product Description

USR-G786 is an LTE Cat 4 Modem with low latency, high reliability and high real-time characteristics. The product has a fast transmission rate, with an uplink peak rate of 50Mbps and a downlink peak rate of 150Mbps. USR-G786-G supports the frequency bands of major operators all over the world, USR-G786-EUX in European, and USR-G786-AUX in Australia and Latin America.

The product supports TCP/UDP transparent transmission, SMS transparent transmission, HTTP transparent transmission, and mutual conversion between modbus TCP and RTU. The product has rich functions, simple to use, and supports customization. It can realize functions such as MQTT to meet more functional needs of customers.

### Features

- DC 9-36V wide input voltage range power supply
- 4G LTE, fallback to 3G/2G
- Two-way Transparent transmission
- TCP/UDP, HTTP, SMS, Modbus, MQTT
- SMS, NET, Serial AT command configuration
- FTP Upgrade and FOTA self upgrade
- Socket Distribution Protocol



# Product Parameters

## Frequency Bands

### Global

#### USR-G786-G

LTE-FDD: B1/B2/B3/B4/B5/B7/B8/  
B12/B13/B18/B19/B20/B25/B26/B28  
LTE-TDD: B38/B39/B40/B41  
UMTS: B1/B2/B4/B5/B6/B8/B19  
GSM: B2/B3/B5/B8

### Europe/Middle East/Africa/Korea /Thailand/India

#### USR-G786-EUX

LTE-FDD: B1/B3/B7/B8/B20/B28A  
LTE-TDD: B38/B40/B41  
WCDMA: B1/B8  
GSM: B3/B8

### Australia/New Zealand/Taiwan/Latin America

#### USR-G786-AUX

LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28  
LTE TDD: B40  
WCDMA: B1/B2/B4/B5/B8  
GSM: B2/B3/B5/B8

## Rx Sensitivity:

#### USR-G786-G

LTE B1: -99.5dBm (10MHz)  
LTE B2: -99.9dBm (10MHz)  
LTE B3: -99.7dBm (10MHz)  
LTE B4: -99.7dBm (10MHz)  
LTE B5: -99.9dBm (10MHz)  
LTE B7: -99.2dBm (10MHz)  
LTE B8: -99.8dBm (10MHz)  
LTE B12: -99.8dBm (10MHz)  
LTE B13: -99.5dBm (10MHz)  
LTE B18: -100dBm (10MHz)  
LTE B19: -99.9dBm (10MHz)  
LTE B20: -99.8dBm (10MHz)  
LTE B25: -100dBm (10MHz)  
LTE B26: -99.5dBm (10MHz)  
LTE B28: -99.6dBm (10MHz)  
LTE B38: -99dBm (10MHz)  
LTE B39: -99.5dBm (10MHz)  
LTE B40: -99.2dBm (10MHz)  
LTE B41: -99dBm (10MHz)  
WCDMA B1: -109.2dBm  
WCDMA B2: -110dBm  
WCDMA B4: -109.7dBm  
WCDMA B5: -110.4dBm  
WCDMA B6: -110.5dBm  
WCDMA B8: -110.5dBm  
WCDMA B19: -110.1dBm  
GSM850: -108dBm  
EGSM900: -108dBm  
DCS1800: -107.5dBm  
PCS1900: -107.5dBm

#### USR-G786-EUX/AUX

LTE B1: -101.5dBm (10M)  
LTE B2: -101dBm (10M)  
LTE B3: -101.5dBm (10M)  
LTE B4: -101dBm (10M)  
LTE B5: -101dBm (10M)  
LTE B7: -99.5dBm (10M)  
LTE B8: -101dBm (10M)  
LTE B12: -101dBm (10M)  
LTE B13: -100dBm (10M)  
LTE B14: -99dBm (10M)  
LTE B18: -101.7dBm (10M)  
LTE B19: -101.4dBm (10M)  
LTE B20: -102.5dB (10M)  
LTE B26: -101.5dBm (10M)  
LTE B28: -102dBm (10M)  
LTE B38: -100dBm (10M)  
LTE B40: -100dBm (10M)  
LTE B41: -99dBm (10M)  
LTE B66: -99dBm (10M)  
LTE B71: -100dBm (10M)  
WCDMA B1: -110dBm  
WCDMA B2: -110dBm  
WCDMA B4: -110dBm  
WCDMA B5: -110.5dBm  
WCDMA B6 -110.5dBm  
WCDMA B8: -110.5dBm  
WCDMA B19: -110.5dBm  
GSM850: -109dBm  
EGSM900: -109dBm  
DCS1800: -109dBm  
PCS1900: -109dBm

## TX Power

Class 4 (33dBm±2dB) for GSM850  
Class 4 (33dBm±2dB) for EGSM900  
Class 1 (30dBm±2dB) for DCS1800  
Class 1 (30dBm±2dB) for PCS1900  
Class E2 (27dBm±3dB) for GSM850 8-PSK  
Class E2 (27dBm±3dB) for EGSM900 8-PSK  
Class E2 (26dBm±3dB) for DCS1800 8-PSK  
Class E2 (26dBm±3dB) for PCS1900 8-PSK  
Class 3 (24dBm+1/-3dB) for WCDMA bands  
Class 3 (23dBm±2dB) for LTE-FDD bands  
Class 3 (23dBm±2dB) for LTE-TDD bands

## Transmission Speed

LTE FDD: Peak 150Mbps (DL)/ 50Mbps (UL)  
LTE TDD: Peak 130Mbps (DL)/ 30Mbps (UL)  
DC-HSDPA: Peak 42Mbps (DL)  
HSUPA: Peak 5.76Mbps (UL)  
WCDMA: Peak 384Kbps (DL)/ 384Kbps (UL)  
EDGE: Peak 296Kbps (DL)/ 236.8Kbps (UL)  
GPRS: Peak 107Kbps (DL)/ 85.6Kbps (UL)

## Software

TCP/UDP/HTTP/DNS/FTP/OTA/NTP/FTP/MQTT  
SMS:MO/MT Text and PDU modes  
TCP/UDP/HTTPD/SMS transparent transmission  
Base station geolocation

## Hardware Characteristics

POWER: 9~36V  
Power supply protection:  
ESD: IEC 61000-4-2 Level 3  
Surge: IEC 61000-4-5 Level 3  
EFT: IEC 61000-4-5 Level 3  
Reverse Polarity Protection  
RS232 protection:  
ESD: IEC 61000-4-2 Level 3  
RS485 protection:  
ESD: IEC 61000-4-2 Level 3  
Surge: IEC 61000-4-5 Level 3  
EFT: IEC 61000-4-5 Level 3  
Working current: 48.95mA~54.78mA 12V  
Dimensions: 111.51mm × 94mm × 28mm  
Operating temperature: -35°C~+75°C  
Storage temperature: -40°C~+90°C  
Relative Humidity: 5%~95%(non-condensing)

## Physical Interfaces

UART: RS485 (2PIN)/RS232(3PIN)  
USIM: 3.0V/1.8V MINI SIM 2FF  
RF: SMA  
Indicators: POWER, WORK, NET, LINKA  
Reload: Button  
Installation: Panel mounting

## Serial

Baudrate: 2400~230400bps  
Parity: NONE/ODD/EVEN  
Data: 8  
Stop: 1/2

## Certifications

CE/RoHS