USR IOT

Communication Expert
of Industrial IoT

USR-G786-G

LTE Cat 4 Module



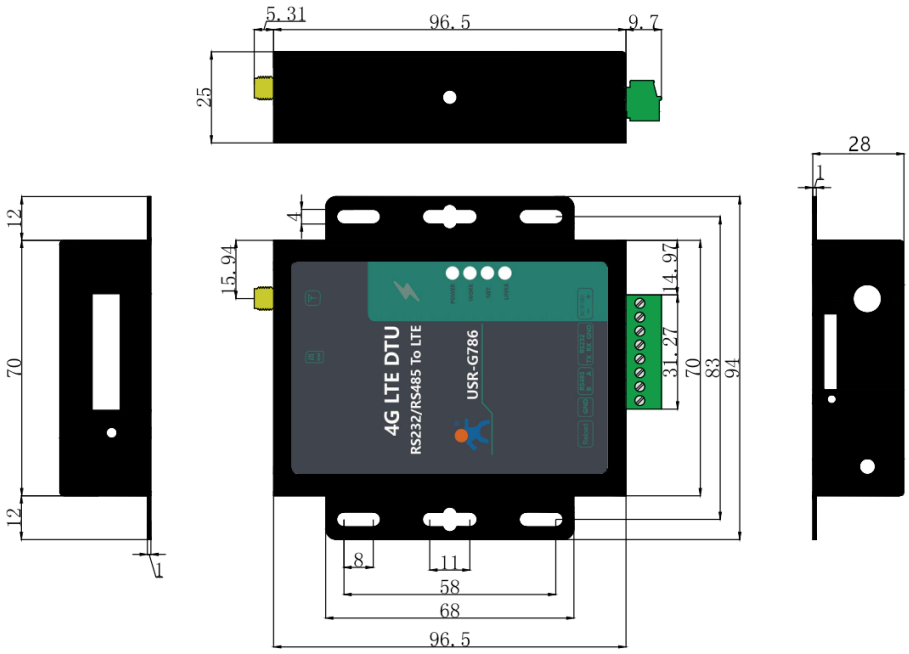
Product Description

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/La tin 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℃~+75℃
Storage temperature: -40℃~+90℃
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，LINK
Reload：Button
Installation：Panel mounting

UART

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

Certifications

CE/RoHS