



HUAWEI

MU509-b

HSDPA M2M Module

LGA Package

Quad-band EDGE/GPRS/GSM

PCM Voice

Compact Design

DL (3.6 Mbps)/UL (384 kbps)

Embedded TCP/IP Stack

Dual-band HSDPA

Analog Audio

CE, FCC, GCF, PTCRB, CCC

The MU509 family are high-quality designed WCDMA modules in small size and Huawei standard LGA form factor which specially for industrial-grade M2M applications such as vehicle telematics, tracking, mobile payment, industrial router, safety monitor and industrial PDAs.

Based on Huawei standard LGA technology, the MU509 modules provide a smoothly path to Huawei HSPA+ or LTE high-speed modules.

The MU509 modules support 3.6Mbps downlink data rate, providing data and voice service under global GSM/GPRS/EDGE/WCDMA networks. The modules also include enhanced features like embedded TCP/IP stack, FOTA, and Huawei enhanced AT commands.

There are three variants which meet different market requirements:

MU509-b (UMTS/HSDPA 900/2100MHz), for European, China market.

MU509-c (UMTS/HSDPA 850/1900 MHz), for North America market.

MU509-g (UMTS/HSDPA 850/2100 MHz), for Asia pacific, Latin America market.

MU509-1 (UMTS/HSDPA 2100MHz), for European, China market.

The MU509 variants are completely compatible both pin-to-pin and the AT commands.

All Huawei modules comply with the RoHS directive and Regional certification.

General Features

- UMTS/HSDPA: 900/2100 MHz
- GSM/GPRS/EDGE: 850/900/1800/1900 MHz
- Output Power
 - UMTS: +24dBm (Power Class 3)
 - EGSM850 Class 4 (2 W)
 - EGSM900 Class 4 (2 W)
- GSM1800 Class 1 (1 W)
- GSM1900 Class 1 (1 W)
- Sensitivity
 - GSM 850/900 MHz: -109 dBm
 - GSM 1800/1900 MHz: -109 dBm
 - WCDMA 900/2100 MHz: -110 dBm
- AT commands
 - 3GPP TS 27.007 and 27.005
- Huawei extended AT command
 - Power supply: 3.3 V to 4.2V (typical: 3.8V)
 - Power consumption
 - WCDMA standby: 2mA
 - Power off: 8µA
 - Temperature range: -40°C to 85°C
 - Humidity: 5%~ 95%
 - Dimensions: 30 x 30 x 2.6 mm
 - Weight: approx.5.5g

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Voice

- Support analog voice function and MIC/SPK interface
- Support PCM voice function and interface
- Echo Cancellation
- Noise reduction
- DTMF support

Data

- HSDPA: DL 3.6Mbps
- WCDMA PS: UL 384kbps/DL 384kbps
- EDGE: UL (236.8 kbps)/ DL (236.8 kbps)
- GPRS: UL (85.6 kbps)/ DL (85.6 kbps)

SMS

- MO / MT
- Text / PDU mode

Additional Features

- Embedded TCP/IP stack
- Firmware Update via USB/UART
- FOTA

Supplementary Service

- Caller ID display
- Call forwarding / hold / waiting
- USSD

Interfaces

- Antenna interface
- 145-pin LGA connector:
- Analog audio
- UART
- Multiple GPIOs
- SIM card (1.8V / 3.0V)
- Power supply
- Reset

Approvals & Certifications

- CE
- FCC
- IC
- GCF
- PTCRB
- RoHS

Note:

Please refer to the latest version of Hardware Guide about the specifications. Huawei reserves the right to make changes or improvements to any of the products without prior notice.

