

Quectel UG95

Ultra-small UMTS/HSPA Module With High-speed Wireless Connectivity



UG95 is a series of cost effective and ultra-compact UMTS/HSPA module featuring a maximum data rate of 7.2Mbps down-link and 5.76Mbps uplink. Designed to be compatible with Quectel GSM/GPRS M95 module in the compact and unified form factor, it provides a flexible and scalable platform for migrating from GSM/GPRS/EDGE to UMTS/HSPA. This enables integrators and developers to design their applications once and take advantage of true worldwide coverage and service flexibility afforded by the combination of the two most prevalent cellular technologies worldwide.

The ultra-compact profile of 19.9mm × 23.6mm × 2.2mm in cost optimized SMT form factor and high integration level enable integrators and developers to easily design their applications and truly benefit from the module's small size, low power consumption and mechanical intensity. Its advanced LGA package allows fully automated manufacturing for high-volume applications.

A rich set of Internet protocols, industry-standard interfaces (USB/UART/I2C/Status Indicator/PCM) and abundant functionalities (USB drivers for Windows XP, Windows Vista, Windows 7/8/8.1/10, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M applications such as handheld device, tablet, telematics, metering, security and surveillance system, and industrial PDA.



Key Benefits

- ✓ Worldwide UMTS/HSPA and GSM/GPRS/EDGE coverage
- ✓ Ultra-small SMT form factor ideal for size-constrained applications
- ✓ Seamless drop-in migration to GSM/GPRS module
- ✓ Super slim profile in LGA package
- ✓ High-quality data and image transmission even in harsh environment
- ✓ Fast time-to-market: reference designs, evaluation tools and timely technical support minimize design-in time and development efforts
- ✓ Robust mounting and interfaces



Dual-mode & Multi-band for UMTS & GSM



HSPA 7.2Mbps



LGA Package



Embedded Abundant Protocols



DFOTA



Ultra-compact Size



USB 2.0 High Speed Interface



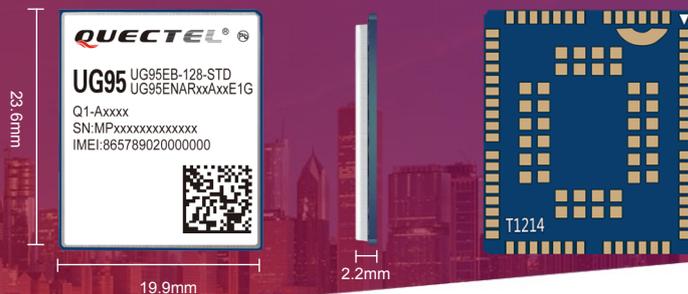
USB Drivers



Quectel Enhanced AT Commands

Quectel UG95

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Variant for Europe

UG95-E:

900/2100MHz @UMTS

900/1800MHz @GSM

Variant for America

UG95-A:

850/1900MHz @UMTS, 3G Only

Data

HSUPA:

Max. 5.76Mbps

HSDPA:

Max. 7.2Mbps

UMTS:

Max. 384Kbps (DL), Max. 384Kbps (UL)

EDGE:

Max. 236.8Kbps (DL)

GPRS:

Max. 85.6Kbps (DL), Max. 85.6Kbps (UL)

CSD:

GSM: 14.4Kbps (DL), 14.4Kbps (UL)

WCDMA: 64Kbps (DL), 64Kbps (UL)

Voice

Speech Codec Modes:

HR, FR, EFR, AMR, AMR-WB

Echo Arithmetic:

Echo Cancellation, Noise Reduction

SMS

Point-to-point MO and MT

SMS Cell Broadcast

Text and PDU Mode

Interfaces

USB 2.0 with High Speed up to 480Mbps

UART

Digital Audio through PCM Interface (Optional)

1.8V/ 3.0V (U)SIM Card Interface

I2C

NETLIGHT for Network Status Indication

STATUS for Power ON/OFF Status Indication

Enhanced Features

eCall

Firmware Update:

via USB or UART Interface

DFOTA:

Delta Firmware Upgrade over the Air

RAMFile:

RAM File System Access and Management

Electrical Characteristics

Output Power:

Class 3 (24dBm+1.7/-3.7dB) for UMTS bands

Class 4 (33dBm±2dB) for GSM 900

Class 1 (30dBm±2dB) for GSM 1800

Consumption:

70µA @power off

0.96mA @GSM sleep, DRX=9

1.15mA @UMTS sleep, DRX=9

212mA @GSM voice, max power

586mA @UMTS voice, max power

490mA @GPRS data, max power

524mA @HSDPA, max power

563mA @HSUPA, max power

Sensitivity:

-110dBm @UMTS 900/2100

-110.5dBm @UMTS 850/1900

-110.5dBm @DCS 1800

-109.5dBm @EGSM 900

Software Features

USB Driver:

Windows XP/Vista/7/8/8.1/10,

Linux 2.6/3.x/4.1, Android 4.x/5.x/6.0

RIL Driver:

Android 4.x/5.x/6.0

Protocols:

PPP/TCP/UDP/MMS/HTTP/HTTPS/SMTP/SMTPS/

FTP/FTPS/NTP/NITZ/PING/SSL

General Features

Extended Temperature: -40°C ~ +85°C

Dimensions: 19.9mm × 23.6mm × 2.2mm

Approx. 2.5g

Supply Voltage: 3.3V~4.3V, 3.8V Typ.

HSUPA: Release 7 (Category 6)

HSDPA: Release 7 (Category 6)

EDGE: Downlink Only

GPRS: Multi-slot Class 12

UMTS: Release 99/7

GSM: Release 99/4

3GPP TS 27.007, 3GPP TS 27.005 and Quectel

Enhanced AT Commands

Approvals

RoHS Compliant

CE/GCF (Europe)

DoC (Russia)

RCM (Australia)

FCC/PTCRB/AT&T (North America)

IC/Rogers (Canada)

ICASA (South Africa)