

Quectel UG95

Ultra-small UMTS/HSPA Module

High-speed Wireless Connectivity

UMTS/HSPA



Dual-mode&Multi-band
for UMTS&GSM



HSPA 7.2Mbps



LGA Package



Embedded Abundant
Protocols



DFOTA



Tiny Size



USB 2.0 High Speed
Compliant Interface



USB Drivers



Quectel Enhanced
AT Commands



UG95 is a cost effective and ultra-compact UMTS/HSPA module featuring a maximum data rate of 7.2Mbps downlink 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 tiny profile of 19.9 × 23.6 × 2.2mm in cost optimized SMT form factor and highly 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 7, Windows CE, 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.

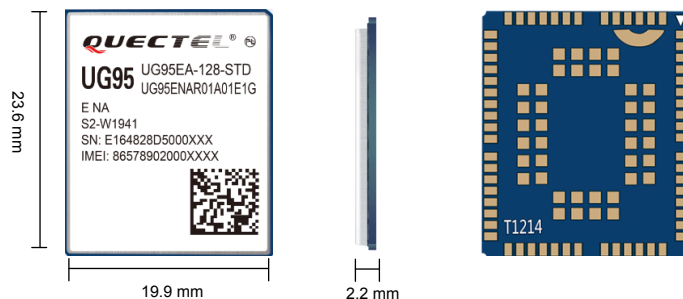
Key Benefits

- ☛ Worldwide UMTS/HSPA and GSM/GPRS/EDGE coverage
- ☛ Minimal SMT form factor ideal for small end products with tight space
- ☛ Seamless drop-in migration to GSM/GPRS module
- ☛ Super slim profile in LGA package
- ☛ High-quality data and image transmission even in hazard conditions and dark environment
- ☛ Fast time-to-market:
Reference designs, evaluation tools and timely technical support minimize design-in time and development efforts
- ☛ Robust mounting and interfaces

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General Features

Frequency Bands	UG95-E 900/2100MHz@UMTS 900/1800MHz@GSM UG95-A 850/1900MHz@UMTS 3G only
HSUPA	Release 7 (category 6)
HSDPA	Release 7 (category 8)
EDGE	Downlink only
GPRS	Multi-slot Class 12
UMTS	Release 99/7
GSM	Release 99/4
Supply Voltage Range	3.3V ~ 4.3V, 3.8V typ.
Operation Temperature	-40°C ~ +85°C
Dimensions	19.9mm × 23.6mm × 2.2mm
Weight	Approx. 2.5g
Control via AT commands	3GPP TS27.007, 27.005 and other enhanced AT Commands

Specifications

SMS	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
HSUPA	Max.5.76Mbps
HSDPA	Max.7.2Mbps
UMTS	Max.384Kbps (DL)/Max.384Kbps (UL)
DATA	EDGE Max.236.8Kbps (DL)
GPRS	Max.85.6Kbps (DL)/Max.85.6Kbps (UL)
CSD	GSM: 14.4 Kbps (DL)/14.4Kbps (UL) WCDMA: 64 Kbps (DL)/64Kbps (UL)
Voice	Speech Codec Modes HR, FR, EFR, AMR, AMR-WB
Echo Arithmetic	Echo Cancellation Noise Reduction
Protocols	PPP/TCP/UDP/MMS/HTTP/HTTPS/SMTP/ SMTPS/FTP/FTPS/NTP/NITZ/PING/SSL

Special Features

Drivers	USB Serial Windows XP, Windows 7, Linux2.6/3.0, Android 2.3/4.0/4.2
Firmware Update	Firmware Update via USB and UART Interface
RAMFile	RAM File System Access and Management
DFOTA	Delta Firmware Upgrade Over The Air

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

Interfaces

USB	2.0 High Speed
Audio Digital	Digital Audio through PCM Interface (optional)
UART	×1, Full Functions
I2C	×1
PCM	×1
USIM	1.8V/3.0V
NETLIGHT	Indication for Network Status
STATUS	Indication for Power On and Off Status

Certification

Approval	CE/GCF/FCC/IC/ICASA/PTCRB/AT&T/Rogers
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