

# Quectel UG96

## UMTS/HSPA Module

UMTS/HSPA



Multi-band  
for UMTS&GSM



HSDPA 7.2Mbps  
HSUPA 5.76Mbps



LGA Package



Embedded Abundant  
Protocols



eCall\*



Tiny Size



USB 2.0 High Speed  
Compliant Interface



DFOTA



Digital Audio  
(Optional)



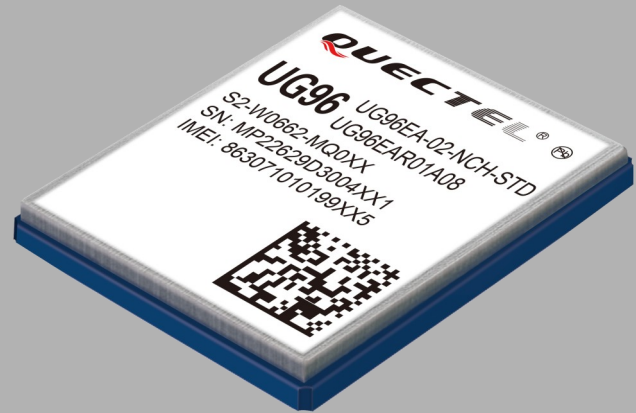
GPRS/EDGE  
Multi-slot Class 12



USB Drivers



Quectel Enhanced  
AT Commands



UG96 is a Penta-band UMTS/HSPA module offering a maximum data rate of 7.2Mbps downlink and 5.76Mbps uplink. With the outstanding feature of fully pin-to-pin compatibility with Quectel UMTS/HSPA UG95 and GSM/GPRS M95 module, it supports GSM/GPRS/EDGE and UMTS/HSPA/HSUPA networks, which enables integrators and developers to design their applications once and truly benefit from the flexibility of worldwide coverage and service afforded by the combination of the two most prevalent cellular technologies worldwide.

With cost-effective SMT form factor of 22.5 × 26.5 × 2.2mm and highly integration level, UG96 enables integrators and developers to easily design their applications and take advantage from the module's low power consumption and mechanical intensity. Its advanced LGA package allows fully automated manufacturing for high-volume applications.

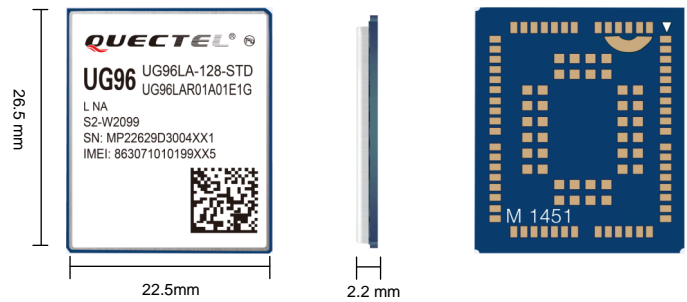
A rich set of Internet protocols, industry-standard interfaces (USB/JART/I2C/Status Indicator/PCM) and abundant functionalities (USB drivers for Windows XP, Windows 7, Windows CE, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M applications such as wireless POS, metering, telematics, security, industry PDA/PC and tablet.

### Key Benefits

- ☞ Worldwide UMTS/HSPA and GSM/GPRS/EDGE coverage
- ☞ Minimal SMT form factor ideal for small end products with tight space
- ☞ Easy 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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## UMTS/HSPA Module



### General Features

<b>Frequency Bands</b>	800/850/900/1900/2100MHz@UMTS 850/900/1800/1900MHz@GSM
<b>HSUPA</b>	Release 7 (category 6)
<b>HSDPA</b>	Release 7 (category 8)
<b>EDGE</b>	Multi-slot Class 12
<b>GPRS</b>	Multi-slot Class 12
<b>UMTS</b>	Release 99/7
<b>GSM</b>	Release 99/4
<b>Supply Voltage Range</b>	3.3V ~ 4.3V, 3.8V typ.
<b>Operation Temperature</b>	-40 °C ~ +85°C
<b>Dimensions</b>	22.5mm × 26.5mm × 2.2mm
<b>Weight</b>	3.1g
<b>Control via AT commands</b>	3GPP TS27.007, 27.005 and other enhanced AT Commands

### Electrical Characteristics

<b>Output Power</b>	Class 3 (24dBm +1.7/-3.7dB) for UMTS bands Class E2 (27dBm±3dB) for GSM850 and EGSM900 Class E2 (26dBm±3dB) for DCS1800 and PCS1900 Class 4 (33dBm ±2dB) for GSM 850/900 Class 1 (30dBm ±2dB) for GSM 1800/1900
<b>Consumption</b>	126µA@power off 1.1mA@GSM sleep, DRX=9 1.7mA@UMTS sleep, DRX=9 240mA@GSM voice, max power 510mA@UMTS voice, max power 610mA@GPRS data, max power 500mA@EDGE data, max power 580mA@HSDPA, max power 540mA@HSUPA, max power
<b>Sensitivity</b>	-110dBm@UMTS 800/850/900/2100 -109.5dBm@UMTS 1900 -109.5dBm@GSM 850 -108.5dBm@EGSM 900 -110dBm@DCS 1800 -108dBm@PCS 1900

### Specifications

<b>SMS</b>	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode												
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<b>Protocols</b>	TCP/UDP/PPP/MMS/HTTP/HTTPS*/SMTP/ SMTPS*/FTP/NTP/NITZ/PING/SSL*												

### Interfaces

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

\* Under development

### Special Features

<b>Drivers</b>	<b>USB Serial</b>	Windows XP, Windows 7, Linux2.6/3.0, Android2.3/4.0/4.2
<b>eCall*</b>		Accident, Emergency Services
<b>Firmware Update</b>		Firmware Update via USB and UART Interface
<b>RAMFile*</b>		RAM File System Access and Management
<b>DFOTA</b>		Delta Firmware Upgrade Over The Air

