

# Quectel UC15

## UMTS/HSDPA Module

UMTS/HSDPA



Dual-mode&Multi-band  
for UMTS&GSM



HSDPA 3.6Mbps



LCC Package



Embedded Abundant  
Protocols



eCall



Compact Size



USB 2.0 High Speed  
Compliant Interface



USB Drivers



Quectel Enhanced  
AT Commands



UC15 is a cost effective UMTS/HSDPA module featuring a maximum data rate of 3.6Mbps downlink and 384Kbps uplink. Designed to be compatible with Quectel GSM/GPRS M10 module in the compact and unified form factor, it provides a flexible and scalable platform for migrating from GSM/GPRS/EDGE to UMTS/HSDPA. 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.

Its advanced LCC package allows fully automated manufacturing for high volume applications and copper-surfaced bottom design optimizes heat dissipation. The tiny profile 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.

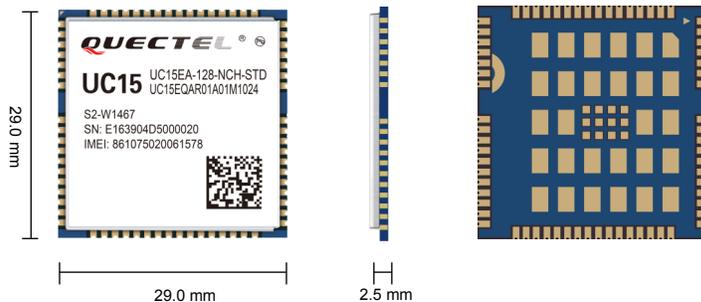
A rich set of Internet protocols, industry-standard interfaces (USB/JART/ADC/NETLIGHT/PCM) and abundant functionalities (USB drivers for Windows XP, Windows Vista, Windows 7, Windows 8, Windows CE, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M applications such as automotive, metering, security, CPE and wireless POS.

### Key Benefits

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



### General Features

<b>Frequency Bands</b>	<b>UC15-E</b> 900/2100MHz@UMTS 900/1800MHz@GSM <b>UC15-A</b> 850/1900MHz@UMTS 850/900/1800/1900MHz@GSM <b>UC15-T</b> 850/2100MHz@UMTS 850/900/1800/1900MHz@GSM
<b>HSDPA</b>	Release 5 (category 6)
<b>EDGE</b>	Downlink only
<b>GPRS</b>	Multi-slot Class 12
<b>UMTS</b>	Release 99/5
<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>	29.0mm×29.0mm×2.5mm
<b>Weight</b>	Approx. 4.3g
<b>Control via AT commands</b>	3GPP TS27.007, 27.005 and other enhanced AT Commands

### Specifications

<b>SMS</b>	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
<b>DATA</b>	<b>HSDPA</b> Max.3.6Mbps (DL) <b>UMTS</b> Max.384Kbps (DL)/Max.384Kbps (UL) <b>EDGE</b> Max.236.8Kbps (DL) <b>GPRS</b> Max.85.6Kbps (DL)/Max.85.6Kbps (UL) <b>CSD</b> GSM: 14.4 Kbps (DL)/14.4 Kbps (UL) WCDMA: 64 Kbps (DL)/64 Kbps (UL)
<b>Voice</b>	<b>Speech Codec Modes</b> HR, FR, EFR, AMR, AMR-WB <b>Echo Arithmetic</b> Echo Cancellation Noise Reduction
<b>Protocols</b>	TCP/UDP/PPP/FTP/HTTP/SMTP/MMS/SSL/ PING/NITZ/NTP/HTTPS/SMTPS

### Special Features

<b>Drivers</b>	<b>USB Serial</b> Windows XP, Windows Vista, Windows 7, Windows 8, Windows CE5.0/ 6.0/7.0, Windows Mobile 6.1/6.5*, Linux 2.6 or later, Android 2.3 or later <b>RIL</b> Windows CE6.0*, Windows Mobile 6.1/6.5*, Android 2.3/4.0 <b>MUX</b> Linux 2.6 or later, Android 2.3 or later
<b>eCall</b>	Accident, Emergency Services
<b>Firmware Update</b>	Firmware Update via USB and UART Interface
<b>QuecFile</b>	File System Access and Management
<b>FOTA</b>	QuecFOTA, DFOTA
<b>QuecLocator</b>	

### Electrical Characteristics

<b>Output Power</b>	Class 3 (24dBm +1/-3dB) for UMTS bands Class 4 (33dBm ±2dB) for GSM 850/900MHz Class 1 (30dBm ±2dB) for GSM 1800/1900MHz
<b>Consumption</b>	65µA@Power off 1.8mA@GSM Sleep,DRX=9 1.7mA@UMTS Sleep,DRX=9 260mA@GSM voice, max power 480mA@UMTS voice, max power 480mA@GPRS data, max power 475mA@HSDPA, max power
<b>Sensitivity</b>	-110dBm@UMTS Bands -108.5dBm@GSM 900MHz -108.5dBm@GSM 1800MHz

### Interfaces

<b>USB</b>	2.0 High Speed
<b>Audio Analog</b>	2 Analog Input and Output Channels (Optional)
<b>Audio Digital</b>	Digital Audio through PCM Interface (Optional)
<b>UART</b>	1×Full Functions
<b>USIM</b>	1.8V/ 3V
<b>ADC</b>	×2, 12bits
<b>NETLIGHT</b>	Indication for network activity status
<b>STATUS</b>	Indication for Power On and Off Status

### Certification

<b>Approval</b>	CE/GCF/IC/FCC/PTCRB/NBTC/AT&T/Rogers/ NCC/OFA/RCM
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\* Under development