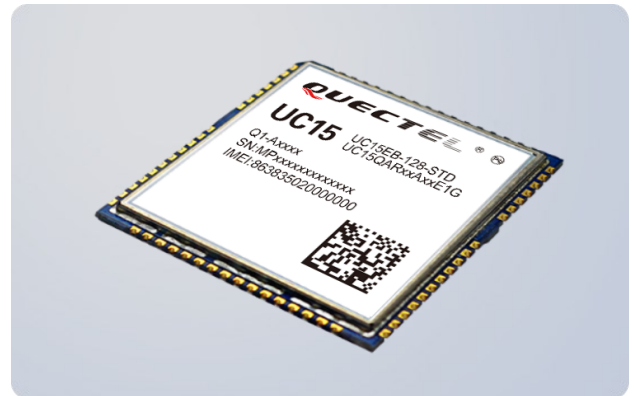# Quectel UC15

UMTS/HSDPA Module

UC15 is a series of 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.

The advanced LCC package allows fully automated manufacturing for high volume applications and copper-surfaced bottom design optimizes heat dissipation. The compact 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/UART/ADC/NETLIGHT/PCM) and abundant functionalities (USB drivers for Windows XP, Windows Vista, Windows 7/8/8.1/10, Windows CE, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M applications such as automotive, smart 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 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

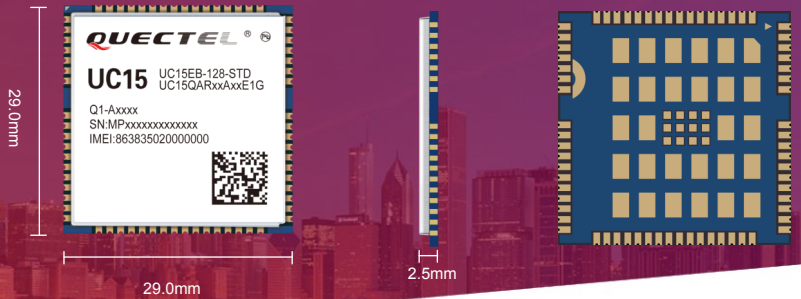|		
Dual-mode & Multi-band for UMTS & GSM	HSDPA 3.6Mbps	LCC Package
Embedded Abundant Protocols	eCall	Compact Size
USB Drivers	Quectel Enhanced AT Commands	USB 2.0 High Speed Interface

Quectel UC15

UMTS/HSDPA Module

29.0mm

29.0mm

2.5mm

Variant for Europe

UC15-E:

900/2100MHz @UMTS

900/1800MHz @GSM

Variant for America

UC15-A:

850/1900MHz @UMTS

850/900/1800/1900MHz @GSM

Variant for Thailand

UC15-T:

850/2100MHz @UMTS

850/900/1800/1900MHz @GSM

Data

HSDPA:

Max.3.6Mbps (DL)

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

Analog Audio: 2 Analog Input and Output

Channels (Optional)

Digital Audio through PCM (Optional)

1.8V/ 3.0V (U)SIM Card Interface

ADC (12 bits) × 2

NETLIGHT for Network Activity Status Indication

STATUS for Power ON/OFF Status Indication

Enhanced Features

eCall

Firmware Update: via USB or UART Interface

QuecFile: File System Access and Management

FOTA: QuecFOTA, DFOTA

Electrical Characteristics

Output Power:

Class 3 (24dBm +1/-3dB) for UMTS bands

Class 4 (33dBm ±2dB) for GSM 850/900MHz

Class 1 (30dBm ±2dB) for GSM 1800/1900MHz

Consumption:

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

Sensitivity:

-110dBm @UMTS Bands

-108.5dBm @GSM 900MHz

-108.5dBm @GSM 1800MHz

Software Features

USB Driver:

Windows XP, Windows Vista,

Windows 7/8/8.1/10, Windows CE 5.0/6.0/7.0*,

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

RIL Driver:

Android 4.x/5.x/6.0

Protocols:

TCP/UDP/PPP/FTP/HTTP/SMTP/MMS/SSL/PING/

NITZ/NTP/HTTPS/SMTPS

General Features

Extended Temperature: -40°C ~ +85°C

Dimensions: 29.0mm × 29.0mm × 2.5mm

Approx. 4.3g

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

3GPP TS 27.007, 3GPP TS 27.005 and Quectel

Enhanced AT Commands

Approvals

RoHS Compliant

CE/GCF (Europe)

DoC (Russia)

FCC/PTCRB/AT&T (North America)

RCM (Australia)

CCC/OFCA/SRRC/NAL (China)

NCC (Taiwan)

IC/Rogers (Canada)

NBTC (Thailand)

* Under Development