

Quectel UC15 Mini PCIe

UMTS/HSDPA Module



UC15 Mini PCIe is a UMTS/HSDPA module featuring a maximum data rate of 3.6Mbps downlink and 384Kbps uplink. It is designed to provide customers with global network coverage on the connectivity of HSDPA/WCDMA, and it is also fully backward compatible with existing EDGE and GSM/GPRS networks through multi-band combination of dual-band WCDMA and dual-band GSM.

The compact profile of 51.0mm × 30.0mm × 4.9mm in standard Mini PCIe form factor and high integration level enable integrators and developers to easily design their applications and truly benefit from low power consumption and convenient Plug and Play Function.

With an extended temperature range from -40°C up to 80°C, UC15 Mini PCIe functions reliably in extreme environments for use outdoors or inside at sites that lack of cooling and heating systems.

A rich set of Internet protocols, industry-standard interfaces (USB/UART/PCM/Analog Audio/LED_WWAN) and abundant functions (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 commercial and industrial M2M applications.



Key Benefits

- ✓ Worldwide UMTS/HSDPA and GSM/GPRS/EDGE coverage
- ✓ Standard Mini PCIe form factor maximizes the convenience for customers to design and use
- ✓ 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



Mini PCIe Package



Embedded Abundant Protocols



eCall



Audio (Optional)



USB Drivers



Quectel Enhanced AT Commands



USB 2.0 High Speed Interface



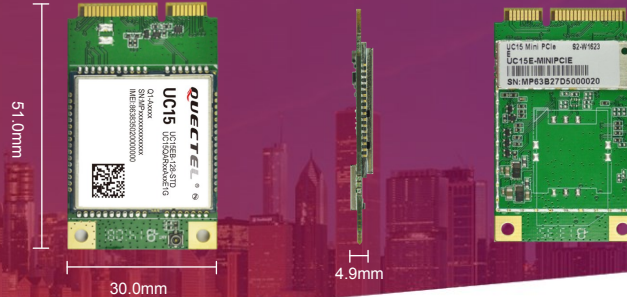
GPRS Multi-slot Class 12



Extended Temperature Range: -40°C ~ +80°C

Quectel UC15 Mini PCIe

UMTS/HSDPA Module



Variant for Europe and China

UC15-E Mini PCIe:

UMTS/HSDPA: 900/2100MHz

GSM/GPRS/EDGE: 900/1800MHz

Data

HSDPA:

Max. 3.6Mbps

UMTS:

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

GPRS:

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

CSD:

64Kbps

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 (Optional)

Digital Audio through PCM (Optional)

1.8V/ 3.0V (U)SIM Card Interface

(U)SIM Card Holder (Optional)

LED_WWAN# for Network Status Indication

W_DISABLE# for Disabling RF Function

PERST# for Module Resetting

Solder Pad for RF Antenna

Enhanced Features

eCall

Firmware Update: via USB 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 900MHz

Class 1 (30dBm ±2dB) for GSM 1800MHz

Consumption:

5.8mA @Sleep

80mA @Idle, USB active

320mA @GSM voice, max power

600mA @UMTS voice, max power

400mA @GPRS data, max power

520mA @HSDPA, max power

Sensitivity:

-110dBm @UMTS Bands

-108.5dBm @GSM 900MHz

-108.5dBm @GSM 1800MHz

Software Features

USB Driver:

Windows XP/Vista/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

General Features

HSDPA: Release 5 (Category 6)

EDGE: Downlink Only

GPRS: Multi-slot Class 12

UMTS: Release 99/5

GSM: Release 99/4

Extended Temperature: -40°C ~ +80°C

Dimensions: 51.0mm × 30.0mm × 4.9mm

Approx. 9.3g

Supply Voltage: 3.0V~3.6V, 3.3V Typ.

3GPP TS 27.007, 3GPP TS 27.005 and Quectel

Enhanced AT Commands

Approvals

CE/GCF (Europe)

DoC (Russia)

NCC (Taiwan)

* Under Development