

Quectel UC20 Mini PCIe UMTS/HSPA+ Module

General Features

Frequency Bands	UC20-E Mini PCIe 900/2100MHz@UMTS 850/900/1800/1900MHz@GSM UC20-A Mini PCIe 850/1900MHz @UMTS, 3G only UC20-G Mini PCIe 800/850/900/1900/2100MHz@UMTS 850/900/1800/1900MHz@GSM
HSPA+	Release 5/6 (UL category 6, DL category 10)
EDGE	Multi-slot Class 12 (10 by default)
GPRS	Multi-slot Class 12 (10 by default)
WCDMA	Release 99
GSM	Release 99/4
Supply Voltage Range	3.0 ~ 3.6V, Typ. 3.3V
Operation Temperature	-40°C ~ +80°C
Dimensions	51.0x30.0x4.9mm
Weight	Approx. 9.8g
Control via AT commands	3GPP TS27.007, 27.005 and other enhanced AT Commands

Specifications

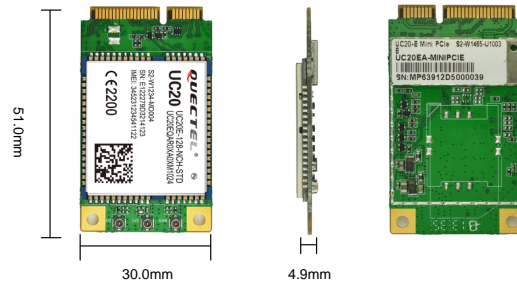
SMS	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
HSPA+	Max.14.4Mbps (DL)/Max.5.76Mbps (UL)
UMTS	Max.384Kbps (DL)/Max.384Kbps (UL)
DATA EDGE	Max.236.8Kbps (DL)/Max.236.8Kbps (UL)
GPRS	Max.85.6Kbps (DL)/Max.85.6Kbps (UL)
CSD	14.4Kbps
Speech Codec Modes	HR, FR, EFR, AMR, AMR-WB
Voice Echo Arithmetic	Echo Cancellation Noise Reduction
Protocols	PPP/TCP/UDP/FTP/HTTP/MMS/SMTP/SSL

Special Features

USB Serial	Windows XP, Windows Vista, Windows 7, Windows 8, Windows CE5.0/6.0/7.0, Linux 2.6/3.0, Android 2.3/4.0/4.2
Drivers	USB RIL Android 2.3/4.0/4.2, Windows CE6.0 NDIS Windows XP, Windows Vista, Windows 7, Windows 8, Linux2.6/3.0 MUX Linux 2.6/3.0, Android 2.3/4.0/4.2
eCall	Accident, Emergency Services
Firmware Update	Firmware Update via USB Interface
QuecFile	File System Access and Management
FOTA	QuecFOTA, DFOTA
GNSS	GPS/GLONASS
QuecLocator	

Electrical Characteristics

Output Power	Class 3 (24dBm +1/-3dB) for UMTS bands Class E2 (27dBm ±3dB) for EDGE 850/900 Class E2 (26dBm +3/-4dB) for EDGE 1800/1900 Class 4 (33dBm ±2dB) for GSM 850/900 Class 1 (30dBm ±2dB) for GSM 1800/1900
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Consumption (GNSS Off)	3.1mA@GSM sleep, DRX=9 3.0mA@UMTS sleep, DRX=9 43.0mA@Idle, USB active 365mA@GSM voice, max power 630mA@UMTS voice, max power 681mA@GPRS data, max power 570mA@EDGE data, max power 660mA@HSDPA, max power 640mA@HSUPA, max power
Sensitivity	-110 dBm@UMTS Bands -108.5 dBm@GSM 850/900MHz -108 dBm@GSM 1800/1900MHz

GNSS Features

GNSS Receiver	Qualcomm gpsOne Gen8
SBAS	WAAS, EGNOS, MSAS
AGNSS	Supports XTRA™ Technology
Accuracy@Open Sky	<1.5m CEP-50
TTFF@-130dBm with XTRA™, typ.	Cold Start 22s Warm Start 3s Hot Start 2s
TTFF@-130dBm without XTRA™, typ.	Cold Start 32s Warm Start 29s Hot Start 2.5s
Sensitivity (with LNA)	Cold Start -147dBm Reacquisition -159dBm Tracking -161dBm
Power Saving Mode	Supports DPO Mode
Dedicated GNSS AT Commands	

Interfaces

AUDIO	Digital Audio through PCM Interface (Optional)
USB	2.0 High Speed
UART	1xSeven-Line UART Interface
USIM	1.8V/3V
LED_WWAN#	Network Status
W_DISABLE#	Close RF Channel
PERST#	Reset Pin
USIM Holder	UC20-E Mini PCIe supports

Certificates

Approval	CE/ FCC/ GCF/ PTCRB/ RCM
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