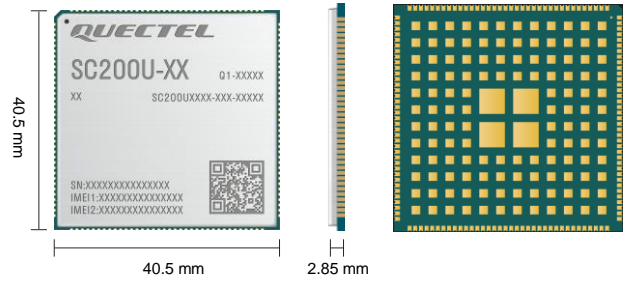


Quectel SC200U Series

Multi-mode Smart LTE Module with Wi-Fi & Bluetooth



SC200U series is Quectel’s new generation of multi-mode Smart LTE Cat 4 module with built-in Android 14/ Linux (Kernel 5.15)* OS. Based on SM6115 Kryo™ octa-core processors (4 × A73 @ 2.0 GHz + 4 × A53 @ 1.8 GHz) with built-in Adreno™ 610 GPU @ 950 MHz, it is an ideal solution for a wide range of industrial and consumer applications requiring high data rates and multimedia functions. SC200U series module comes in 5 variants: SC200U-CN, SC200U-EM, SC200U-NA, SC200U-JP and SC200U-WF (only supports Wi-Fi and Bluetooth) .










SC200U series module supports Multiple-Input Multiple-Output (MIMO) technology. The concurrent use of multiple antennas on the same frequency band at the receiver end greatly minimizes bit error rate and improves communication quality. The module also supports multi-constellation GNSS (GPS, GLONASS, BDS, Galileo, QZSS and SBAS) receivers for fast and accurate positioning.

A rich set of interfaces (such as LCM, camera, touch panel, video, audio, UART, USB, I2C and SPI) are integrated in the module, which extends the module’s applicability to a wide range of M2M applications, including smart cash registers, smart POS, tax control machines, smart safety, on-board equipment, high-end information acquisition equipment, smart robots, smart home, smart hardware, industrial smart handheld equipment, audio and video recorders, smart interphones, smart wearables, vending machines, logistics cabinets, etc.



Key Features

- ✓ Exceptional system performance based on SM6115 64-bit octa-core ARM Kryo™ processors with 11 nm process
- ✓ Built-in high-performance Adreno™ 610 graphics engine
- ✓ Supports frequency bands in multiple different areas globally
- ✓ Android 14/ Linux (Kernel 5.15)* OS
- ✓ 2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac
- ✓ Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE
- ✓ Dual concurrent cameras
- ✓ GPS/ BDS/ GLONASS/ Galileo/ QZSS/ SBAS
- ✓ Recording and playback 1080P @ 60 fps

 ARM Kryo™ 64-bit Processor (Octa-core)	 Qualcomm® Adreno™ 610 GPU	 Android 14/ Linux (Kernel 5.15)*
 LTE Cat 4 Max. 150 Mbps (DL) Max. 50 Mbps (UL)	 IEEE 802.11 a/ b/ g/ n/ ac	 Bluetooth 5.0 (BR/ EDR + BLE)
 GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	 Powerful Multimedia Function	 LCC + LGA Package

Quectel SC200U Series

LTE Cat 4	SC200U-CN	SC200U-EM	SC200U-NA	SC200U-JP	SC200U-WF
Region/ Operator	China	EMEA/ South Korea/ South Asia/ India/ Australia/ New Zealand/ South Africa/ Latin America	North America	Japan	Global
CPU	SM6115 4 × A73 @ 2.0 GHz 4 × A53 @ 1.8 GHz	SM6115 4 × A73 @ 2.0 GHz 4 × A53 @ 1.8 GHz	SM6115 4 × A73 @ 2.0 GHz 4 × A53 @ 1.8 GHz	SM6115 4 × A73 @ 2.0 GHz 4 × A53 @ 1.8 GHz	SM6115 4 × A73 @ 2.0 GHz 4 × A53 @ 1.8 GHz
NPU	0.9 TOPS	0.9 TOPS	0.9 TOPS	0.9 TOPS	0.9 TOPS
Memory	4 GB LPDDR4X + 64 GB eMMC	4 GB LPDDR4X + 64 GB eMMC (Default) 8 GB LPDDR4X + 128 GB eMMC (Optional)	4 GB LPDDR4X + 64 GB eMMC (Default) 8 GB LPDDR4X + 128 GB eMMC (Optional)	4 GB LPDDR4X + 64 GB eMMC (Default) 8 GB LPDDR4X + 128 GB eMMC (Optional)	4 GB LPDDR4X + 64 GB eMMC
OS	Android 14/ Linux (Kernel 5.15)*	Android 14/ Linux (Kernel 5.15)*	Android 14/ Linux (Kernel 5.15)*	Android 14/ Linux (Kernel 5.15)*	Android 14/ Linux (Kernel 5.15)*
Dimensions (mm)	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85
Package	LCC + LGA	LCC + LGA	LCC + LGA	LCC + LGA	LCC + LGA
Weight (g)	Approx. 10.16	Approx. 10.16	Approx. 10.16	Approx. 10.16	Approx. 10.16
Temperature Range					
Operating Temperature	-35 °C ~ +75 °C	-35 °C ~ +75 °C	-35 °C ~ +75 °C	-35 °C ~ +75 °C	-35 °C ~ +75 °C
Frequency Bands					
LTE-FDD	B1/ 3/ 5/ 8	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 66/ 71	B1/ 3/ 5/ 8/ 11/ 18/ 19/ 21/ 26/ 28	-
LTE-TDD	B34/ 38/ 39/ 40/ 41	B38/ 40/ 41	B41	B41	-
WCDMA	B1/ 8	B1/ 2/ 4/ 5/ 8	-	B1/ 6/ 8/ 19	-
GSM/ EDGE (MHz)	900/ 1800	850/ 900/ 1800/ 1900	-	-	-
WLAN	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac
Bluetooth	Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	Bluetooth 2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE
GNSS	GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	-
Certifications					
Carrier	-	-	America: AT&T	-	-
Regulatory/ conformance	China: CCC*/ NAL*/ SRRC*	Europe: CE South Korea: KC Australia/ New Zealand: RCM	Global: GCF North America: PTCRB America: FCC Canada: IC	Japan: JATE*/ TELEC*	Europe: CE America: FCC* Canada: IC*
Others	-	RoHS/ REACH	RoHS/ REACH	RoHS/ REACH	RoHS/ REACH
Data Rates					
LTE-FDD (Mbps)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	-
LTE-TDD (Mbps)	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)	-
DC-HSPA+ (Mbps)	42 (DL)/ 11.2 (UL)	42 (DL)/ 11.2 (UL)	-	42 (DL)/ 11.2 (UL)	-
WCDMA (kbps)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	-	384 (DL)/ 384 (UL)	-
EDGE (kbps)	296 (DL)/ 236.8 (UL)	296 (DL)/ 236.8 (UL)	-	-	-
GPRS (kbps)	107 (DL)/ 85.6 (UL)	107 (DL)/ 85.6 (UL)	-	-	-
Enhanced Features					
3GPP E-UTRA	Release 10	Release 10	Release 10	Release 10	-
Bandwidth (MHz)	1.4/ 3/ 5/ 10/ 15/ 20	1.4/ 3/ 5/ 10/ 15/ 20	1.4/ 3/ 5/ 10/ 15/ 20	1.4/ 3/ 5/ 10/ 15/ 20	-
Rx-diversity	●	●	●	●	-
DL MIMO 2 × 2	●	●	●	●	-
(U)SIM Card Detection	●	●	●	●	-
DSDS	●	●	●	●	-
Firmware Upgrade via USB	●	●	●	●	●
Firmware Upgrade via OTA	●	●	●	●	●

Notes:

- *: Under development/ in progress
- : Supported

Quectel SC200U Series

LTE Cat 4		General Features	
Interfaces			
LCM		Maximum resolution FHD+ (2520 × 1080) aspect ratio, with up to 10bpc and QSEED4, 4 L, Q-SYNC, SVI, CABL and FOSS	
Camera		3 × ISP (13 MP + 13 MP)/(25 MP + 5 MP) @ 30 fps ZSL or (16 MP + 16 MP) @ 24 fps zSL	
Touch Panel		Capacitive touch panel	
Video		Encoding: 1080P @ 60 fps; HEVC/ H.264/ H.265 Decoding: 1080P @ 60 fps; HEVC/ H.264/ H.265/ VP9	
Audio		3 analog audio inputs: MIC1, MIC2 and MIC3 3 analog audio outputs: speaker, headset and earpiece	
USB		× 1, USB 3.1 Type-C interface, compatible with USB 2.0	
(U)SIM		× 2, 1.8/ 2.95 V (U)SIM cards; (U)SIM card hot swap detection and DSOS (Dual-SIM Dual-Standby)	
SD Card		× 1, SD 3.0, 4-bit SDIO	
ADC		× 2, general-purpose ADC interface	
UART		× 3 Debug UART: 2-wire serial port, only for debugging UART0: 4-wire serial port, RTS and CTS hardware flow control UART1: 2-wire serial port	
I2C		× 4	
SPI		× 1 (Multiplexed from GPIO)	
I2S		× 2 (Multiplexed from GPIO)	
PWRKEY		1.1 V, internally pulled up	
GPIO		× 28	
Antenna		× 4, Main, Rx-diversity, GNSS, Wi-Fi/ Bluetooth antennas respectively (SC200U-WF: × 1, Wi-Fi/ Bluetooth antenna)	
Electrical Features			
Supply Voltage Range		3.55 V to 4.4 V; Typ. 3.8 V	
Power Consumption		4.7 mA @ sleep mode	