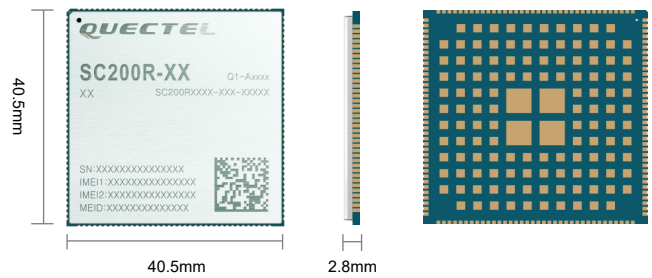




Quectel SC200R Series

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



SC200R is Quectel's new generation of multi-mode Smart LTE Cat 4 module with built-in Android OS. Based on Qualcomm Quad-core ARM Cortex-A53 64-bit Processors with built-in Adreno™ 308 GPU. It is ideal for both industrial and consumer applications with high data-rate and multimedia functions. SC200R is available in five variants: SC200R-CE, SC200R-NA*, SC200R-EM*, SC200R-JP* and Wi-Fi & BT only version SC200R-WF*.

SC200R supports multiple-input multiple-output (MIMO) technology. The use of multiple antennas at the receiver end at the same time and on the same frequency band greatly minimizes errors and optimizes the data speed. This module also combines high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GNSS (GPS, Galileo, GLONASS and BeiDou) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, SPK, UART, USB, I2C and SPI) extend the applicability of the module to a wide range of M2M applications, including edge device, edge computing, smart POS, smart cash registers, smart home gateways, smart robots, smart wearables, security surveillance, PDA & tablets, vending machines, delivery lockers, police and law enforcement equipment, in-car video streaming and entertainment systems, etc.

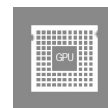


Key Benefits

- ✓ Exceptional application and system performance based on the Quad-core A53 64-bit Processors
- ✓ Enhanced mobile rendering APIs for image and video applications via Adreno™ 308 GPU
- ✓ Integrated ADSP, Better DoU and user experience in DSP enabled environment
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Excellent camera quality and performance with Dual ISP and 13MP camera
- ✓ Support recording and playback of 1080P videos at 30fps
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment



ARM Cortex-A53
64-bit Processor
(Quad-core)



Qualcomm®
Adreno™ 308 GPU



Android OS



Smart LTE Cat 4
Max 150Mbps (DL)
Max 50Mbps (UL)



IEEE 802.11
a/b/g/n



BT4.2 (BR/EDR+BLE)



GPS, Galileo
GLONASS, BeiDou



Powerful Multimedia
Function



LCC+LGA
Package

Rev.: V1.0 | Status: Released

Quectel SC200R Series

LTE Cat 4	SC200R-CE	SC200R-EM*	SC200R-NA*	SC200R-JP*	SC200R-WF*
Region/Operator	China	EMEA/ India/ Korea/ South Asia/ Latin America/ Australia/ New Zealand/ South Africa	North America	Japan	Global
CPU	QCM2150, Quad-core ARM Cortex-A53 64-bit CPU @1.3GHz	QCM2150, Quad-core ARM Cortex-A53 64-bit CPU @1.3GHz	QCM2150, Quad-core ARM Cortex-A53 64-bit CPU @1.3GHz	QCM2150, Quad-core ARM Cortex-A53 64-bit CPU @1.3GHz	QCM2150, Quad-core ARM Cortex-A53 64-bit CPU @1.3GHz
Memory	1GB LPDDR3 +8GB eMMC 2GB LPDDR3 +16GB eMMC	1GB LPDDR3 +8GB eMMC 2GB LPDDR3 +16GB eMMC	1GB LPDDR3 +8GB eMMC 2GB LPDDR3 +16GB eMMC	1GB LPDDR3 +8GB eMMC 2GB LPDDR3 +16GB eMMC	1GB LPDDR3 +8GB eMMC 2GB LPDDR3 +16GB eMMC
OS	Android 10.0	Android 10.0	Android 10.0	Android 10.0	Android 10.0
Dimensions (mm)	40.5 × 40.5 × 2.8	40.5 × 40.5 × 2.8	40.5 × 40.5 × 2.8	40.5 × 40.5 × 2.8	40.5 × 40.5 × 2.8
Temperature Range					
Operation 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/B3/B5/B8	B1/B2/B3/B5/B7/B8/B20/B28	B2/B4/B5/B7/B12/B13/B14/ B17/B25/B26/B66/B71	B1/B3/B5/B8/B11/B18/B19/ B21/B26/B28	/
LTE TDD	B34/B38/B39/B40/B41	B38/B39/B40/B41	B41	B41	/
WCDMA	B1/B8	B1/B2/B5/B8	B2/B4/B5	B1/B6/B8/B19	/
EVDO/CDMA	BC0	/	/	/	/
GSM/EDGE	900/1800MHz	850/900/1800/1900MHz	/	/	/
WLAN	2.4G/5GHz 802.11a/b/g/n	2.4G/5GHz 802.11a/b/g/n	2.4G/5GHz 802.11a/b/g/n	2.4G/5GHz 802.11a/b/g/n	2.4G/5GHz 802.11a/b/g/n
Bluetooth	BT2.1+EDR/3.0/4.1 LE/4.2 BLE	BT2.1+EDR/3.0/4.1 LE/4.2 BLE	BT2.1+EDR/3.0/4.1 LE/4.2 BLE	BT2.1+EDR/3.0/4.1 LE/4.2 BLE	BT2.1+EDR/3.0/4.1 LE/4.2 BLE
GNSS	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	/
Certifications					
Regulatory	China: SRRC*/NAL*/CCC*	Global: GCF* Europe: CE* Australia/New Zealand: RCM*	Global: GCF* North America: FCC*/PTCRB* Canada: IC*	Japan: JATE*/TELEC*	TBD
Carrier	/	Australia: Telstra*	North America: Verizon*/ AT&T*	Japan: NTT DOCOMO*	TBD
Others	RoHS/REACH	RoHS/REACH	RoHS/REACH	RoHS/REACH	RoHS/REACH
Data Transmission					
LTE FDD data rate (Mbps)	150 (DL)/50 (UL)	150 (DL)/50 (UL)	150 (DL)/50 (UL)	150 (DL)/50 (UL)	/
LTE TDD data rate (Mbps)	130 (DL)/30 (UL)	130 (DL)/30 (UL)	130 (DL)/30 (UL)	130 (DL)/30 (UL)	/
DC-HSPA+ data rate (Mbps)	42 (DL)/11.2 (UL)	42 (DL)/11.2 (UL)	42 (DL)/11.2 (UL)	42 (DL)/11.2 (UL)	/
WCDMA data rate (Kbps)	384 (DL/UL)	384 (DL/UL)	384 (DL/UL)	384 (DL/UL)	/
CDMA2000 data rate (Mbps)	3.1 (DL)/1.8 (UL)	/	/	/	/
EDGE data rate (Kbps)	296 (DL)/236.8 (UL)	296 (DL)/236.8 (UL)	296 (DL)/236.8 (UL)	296 (DL)/236.8 (UL)	/
GPRS data rate (Kbps)	107 (DL)/85.6 (UL)	107 (DL)/85.6 (UL)	107 (DL)/85.6 (UL)	107 (DL)/85.6 (UL)	/
Enhanced Features					
3GPP E-UTRA	Release 10	Release 10	Release 10	Release 10	/
Bandwidth	1.4/3/5/10/15/20MHz	1.4/3/5/10/15/20MHz	1.4/3/5/10/15/20MHz	1.4/3/5/10/15/20MHz	/
Rx-diversity	●	●	●	●	/
DL MIMO 2 × 2	●	●	●	●	/
(U)SIM Detection	●	●	●	●	/
Dual SIM Dual Standby	●	●	●	●	/
Firmware Upgrade via USB	●	●	●	●	●
OTA	●	●	●	●	●
General Features					
Supply Voltage Range	3.55V ~ 4.2V, 3.8V Typ.				
Power Consumption	TBD				
Package	LCC+LGA				
Weight (g)	Approx. 10.2				
Interface					
LCM	x1, 4-lane MIPI_DSI, HD+ (1440×720) @60fps				
Camera	2 Groups of 4-lane MIPI_CSI, up to 2.1Gbps/Lane; Support 3 Cameras, Up to 13MP with Dual ISPs				
Touch Panel	Capacitive Touch Panel				
Audio	Speaker, Earpiece, Headphone, and 3 MICs for Analog Audio Support One Noise-canceling MIC				
USB 2.0	x1, Compliant with USB 2.0, Support USB OTG, USB OTG + Charge, etc.				
(U)SIM	x2, Support 1.8/2.95V (U)SIM cards, with (U)SIM card detection function, DSDS supported				
UART	x3, Support 4Mbps, One of them supports Hardware Flow Control				
SDIO	x1, 3.0, 4-bit SDIO				
ADC	x1, General-purpose ADC interface				
I2C	x4				
I2S	x2, Can be Multiplexed into UART and GPIO Respectively				
SPI	x4, Can be Multiplexed into UART/I2S/GPIO Respectively				
PWRKEY	1.8V, Pulled-up Internally				
GPIO	x35				
Antenna	x4, Main/Rx-diversity/GNSS/Wi-Fi & BT Antenna, Respectively				x1, Wi-Fi & BT Antenna

Notes:

- * means under development
- means supported