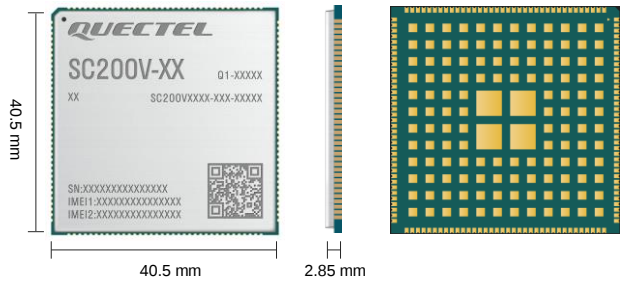


Quectel SC200V Series

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



The SC200V series is Quectel's next-generation, multi-mode smart LTE Cat 4 module featuring an integrated Android OS. It is built on the high-performance SM6225 platform with a 64-bit octa-core processor (4x A73 @ 2.4 GHz + 4x A53 @ 1.9 GHz) and an Adreno™ 610 GPU. This powerful combination delivers the high data rates and advanced multimedia capabilities required for a wide range of industrial and consumer applications. The series offers five variants targeting different markets: SC200V-EM, SC200V-CN, SC200V-NA, SC200V-JP, and the cellular-free SC200V-WF (Wi-Fi and Bluetooth only).

The SC200V series module supports Multiple-Input Multiple-Output (MIMO) technology. By utilizing multiple antennas simultaneously on the same frequency band at the receiver's end, MIMO significantly reduces the bit error rate and enhances link reliability. The module also integrates a multi-constellation GNSS receiver, supporting GPS, GLONASS, BDS, Galileo, and SBAS for fast, accurate positioning.

The SC200V series module is equipped with an extensive set of interfaces including LCM, camera, touch panel, audio/video, UART, USB, I2C, and SPI, enabling its deployment across a diverse range of M2M applications, such as smart cash registers, smart POSes, tax control machines, smart safety, automotive equipment, high-end information acquisition equipment, smart robots, smart home devices, smart hardware, industrial smart handheld equipment, audio/ video recorders, smart intercoms, smart wearables, vending machines, logistics cabinets, etc.



Key Features

- ✓ Exceptional system performance, powered by the SM6225 64-bit octa-core ARM Kryo™ processors
- ✓ High-performance graphics, powered by the Adreno™ 610
- ✓ Frequency Bands: Europe, Africa, Middle East, Asia-Pacific (including India)
- ✓ Android 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
- ✓ 3 concurrent cameras
- ✓ GPS/ BDS/ GLONASS/ Galileo/ SBAS positioning systems
- ✓ 1080P @ 60 fps video recording and playback



ARM Kryo™ 64-bit Processor (Octa-Core)



Qualcomm® Adreno™ 610 GPU



Android



Smart 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/ SBAS



Powerful Multimedia
Function



LCC + LGA
Package

Quectel SC200V Series

LTE Cat 4	SC200V-CN	SC200V-EM	SC200V-NA	SC200V-JP	SC200V-WF
Region/ Operator	China	Europe/ Middle East/ Asia-Pacific/ India/ Africa	North America	Japan	Global
CPU	SM6225, 4 × A73 @ 2.4 GHz + 4 × A53 @ 1.9 GHz	SM6225, 4 × A73 @ 2.4 GHz + 4 × A53 @ 1.9 GHz	SM6225, 4 × A73 @ 2.4 GHz + 4 × A53 @ 1.9 GHz	SM6225, 4 × A73 @ 2.4 GHz + 4 × A53 @ 1.9 GHz	SM6225, 4 × A73 @ 2.4 GHz + 4 × A53 @ 1.9 GHz
NPU	0.9 TOPS	0.9 TOPS	0.9 TOPS	0.9 TOPS	0.9 TOPS
Memory	• 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 (Default) • 8 GB LPDDR4X + 128 GB eMMC (Optional)	• 4 GB LPDDR4X + 64 GB eMMC (Default) • 8 GB LPDDR4X + 128 GB eMMC (Optional)
OS	Android 13/ 14	Android 13/ 14	Android 13/ 14	Android 13/ 14	Android 13/ 14
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. 10.6	Approx. 10.6	Approx. 10.6	Approx. 10.6	Approx. 10.6
Temperature Range					
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C	-30 °C ~ +75 °C	-30 °C ~ +75 °C	-30 °C to +75 °C
Frequency Bands					
LTE-FDD	B1/ 3/ 5/ 8	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28/ 66	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	-	-	-
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	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE
GNSS	GPS/ GLONASS/ BDS/ Galileo/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ SBAS	GPS/ GLONASS/ BDS/ Galileo/ SBAS	-
Certifications					
Carrier	-	-	North America: AT&T/ T-Mobile*/ Verizon*	-	-
Regulatory	China: CCC/ NAL/ SRRC	• Europe: CE • Australia/ New Zealand: RCM • North America: FCC • Brazil: Anatel	• North America: FCC/ PTCRB • Global: GCF • Canada: IC	Japan: JATE*/ TELEC*	Europe: CE
Others	RoHS/ REACH	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)/ 5.76 (UL)	42 (DL)/ 5.76 (UL)	-	-	-
WCDMA (kbps)	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:

● : Supported

*: In progress

Quectel SC200V Series

LTE Cat 4 General Features	
Interfaces	
LCM	One 4-lane MIPI DSI, with up to 1080 × 2520 @ 90 fps
Camera	• Three 4-lane MIPI CSIs, up to 2.5 Gbps/ lane; each 4-lane can be divided into (2-lane + 1-lane), 3 concurrent cameras • 3 ISPs, up to 3 concurrencies (13 MP + 13 MP + 5 MP) or 2 concurrencies (25 MP + 5 MP or 16 MP + 16 MP) or 1 single connection of 32 MP (30 fps @ ZSL) • Up to 64 MP for 1 single camera (Non-ZSL)
Touch Panel	Capacitive touch panel
Video	• Encode: 1080P @ 60 fps; HEVC/ H.264/ H.265 • Decode: 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 DSDS (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, dedicated for debugging • UART0: 4-wire serial port, RTS and CTS hardware flow control • UART1: 2-wire serial port
I2C	× 4
SPI	× 1 (Multiplexed from UART0)
I2S	× 2 (Multiplexed from other interfaces)
PWRKEY	1.1 V, internally pulled up
GPIO	× 26
Antenna	× 4, Main, Rx-diversity, GNSS, Wi-Fi & Bluetooth antennas respectively (SC200V-WF: × 1, Wi-Fi & Bluetooth antenna)
Electrical Features	
Supply Voltage Range	3.55–4.4 V, typ. 3.8 V
Power Consumption	TBD

Note:
TBD: To Be Determined