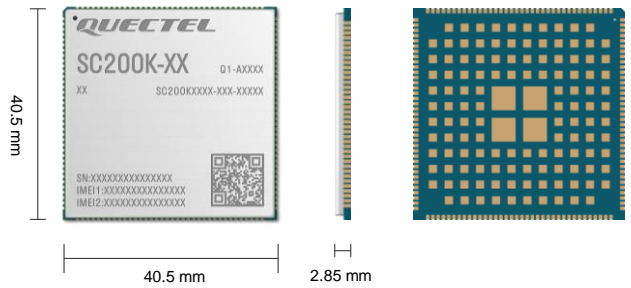


# Quectel SC200K Series

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



SC200K series is Quectel’s new generation of multi-mode Smart LTE Cat 4 module with built-in Android 10 OS. Based on UIS8581E with built-in PowerVR Fentale GE8322 GPU and NEON multimedia processing engine, it is an ideal solution for a wide range of industrial and consumer applications requiring high data rates and multimedia functions. SC200K series comes in three variants: SC200K-EU\*, SC200K-CE and SC200K-WF (only supports Wi-Fi, Bluetooth and GNSS).

SC200K series supports multiple-input multiple-output (MIMO) technology. The use of multiple antennas at the receiver end greatly minimizes errors and optimizes the data speed, thereby improving communication quality. The module also supports multi-constellation GNSS (GPS, GLONASS and BDS) receiver for fast and accurate positioning.

A rich set of interfaces (such as LCM, camera, touch panel, microphone, speaker, UART, USB, I2C, SPI) are integrated to extend the applicability of the module to a wide range of M2M applications, including smart cash registers, smart POS, 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 Features

- ✓ Supports LTE Cat 4 with maximum downlink speed of 150 Mbps
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Supports display resolution of up to FHD+ (2160 × 1080) @ 60 fps
- ✓ Supports up to 3 cameras
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Supports recording and decoding of 1080P @ 30 fps
- ✓ Supports IEEE 802.11a/b/g/n/ac



ARM Cortex-A55  
64-bit Processor  
(Octa-core)



PowerVR Fentale  
GE8322 GPU



Android 10



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



NEON Multimedia  
Processing Engine



LCC + LGA  
Package

# Quectel SC200K Series

LTE Cat 4	SC200K-EU*	SC200K-CE	SC200K-WF
Region/Operator	EMEA/APAC	China/India	Global
OS	Android 10	Android 10	Android 10
Memory	16 GB eMMC + 2 GB LPDDR4X 32 GB eMMC + 2 GB LPDDR4X 64 GB eMMC + 4 GB LPDDR4X	16 GB eMMC + 2 GB LPDDR4X 32 GB eMMC + 2 GB LPDDR4X 64 GB eMMC + 4 GB LPDDR4X	32 GB eMMC + 2 GB LPDDR4X
Dimensions (mm)	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
Weight (g)	TBD	10.60	10.48
Temperature Range			
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C	-30 °C to +75 °C
Frequency Bands			
LTE-FDD	B1/B3/B5/B7/B8/B20/B28	B1/B3/B5/B8	-
LTE-TDD	B38/B40/B41	B34/B38/B39/B40/B41 (140 MHz)	-
WCDMA	B1/B5/B8	B1/B8	-
GSM/EDGE	900/1800 MHz	900/1800 MHz	-
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
Bluetooth	Bluetooth 1.2/2.1+EDR/4.2/5.0	Bluetooth 1.2/2.1+EDR/4.2/5.0	Bluetooth 1.2/2.1+EDR/4.2/5.0
GNSS	GPS + GLONASS or GPS + BDS	GPS + GLONASS or GPS + BDS	GPS + GLONASS or GPS + BDS
Certifications			
Regulatory	Global: GCF* Europe: CE*	China: SRRC/NAL/CCC	Europe: CE* The UK: UKCA* South Korea: KC* Taiwan, China: NCC* Japan: JATE*/TELEC* Thailand: NBTC*
Others	TBD	RoHS/REACH	TBD
Data Rates			
LTE-FDD (Mbps)	150 (DL)/50 (UL)	150 (DL)/50 (UL)	-
LTE-TDD (Mbps)	130 (DL)/30 (UL)	130 (DL)/30 (UL)	-
DC-HSPA+ (Mbps)	42 (DL)/11.2 (UL)	42 (DL)/11.2 (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	LTE: Release 12 UMTS: Release 9	LTE: Release 12 UMTS: Release 9	-
Bandwidth (MHz)	1.4/3/5/10/15/20	1.4/3/5/10/15/20	-
Rx-diversity	●	●	-
DL MIMO 2 × 2	●	●	-
(U)SIM Card Detection	●	●	-
Dual SIM Dual Standby	●	●	-
Firmware Upgrade via USB	●	●	●
Firmware Upgrade OTA	●	●	●
Electrical Features			
Supply Voltage Range	TBD	3.5~4.2 V, typ. 3.8 V	3.5~4.2 V, typ. 3.8 V
Power Consumption (Typical)	TBD	70 μA @ power off; 3.5 mA @ sleep mode	70 μA @ power off; 3.5 mA @ sleep mode

Notes:

- : supported
- : not supported
- \*: planning/under development

# Quectel SC200K Series

LTE Cat 4	General Features
Interfaces	
LCM	4-lane MIPI, supports up to FHD+ (2160 × 1080) @ 60 fps
Camera	Supports 3 cameras (4-lane + 2-lane + 1-lane), up to 16 MP
Touch Panel	Capacitive touch panel
Audio	<ul style="list-style-type: none"><li>• 3 analog outputs: loudspeaker, earpiece, headphone</li><li>• 3 analog inputs: MIC1, MIC2, MIC3 (including one noise-canceling MIC, MIC2 is only used as headset MIC)</li></ul>
USB	Supports 2 USB interfaces: <ul style="list-style-type: none"><li>• USB1 supports USB 2.0 high-speed mode but does not support USB hub</li><li>• USB2 can only work in host mode and supports USB hub</li></ul>
(U)SIM	× 2, supports 1.8/2.95 V (U)SIM cards (SC200K-WF does not support (U)SIM card)
UART	Supports 3 UART interfaces: <ul style="list-style-type: none"><li>• One supports hardware flow control with maximum data rate of 3.0 Mbps</li><li>• One can only be used for debugging</li></ul>
SD Card	× 1, SD 3.0
ADC	× 1
I2C	× 4
SPI	× 2, multiplexed from GPIOs
PWRKEY	Internally pulled up to VBAT
GPIO	× 40
Antenna	× 4, Main, Rx-diversity, GNSS, Wi-Fi/Bluetooth antennas respectively (SC200K-WF: × 2, GNSS, Wi-Fi/Bluetooth antennas respectively)