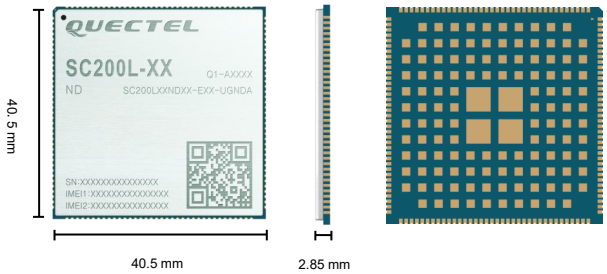
Quectel SC200L Series (Dual-band Wi-Fi)

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



SC200L (dual-band Wi-Fi) is a series of Quectel's new generation of multi-mode Smart LTE Cat 4 module with built-in Android 10 OS. Based on Unisoc quad-core ARM Cortex-A53 64-bit high-performance processor with built-in ARM Mali-T820 GPU, it is an ideal solution for both industrial and consumer applications requiring high data rates and multimedia functions. SC200L series (dual-band Wi-Fi) is available in three variants: SC200L-CE*, SC200L-EU and SC200L-AU*.

SC200L series (dual-band Wi-Fi) 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, GLONASS and BeiDou) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, SPK, UART, USB, I2C, SPI) extend the applicability of the module to a wide range of M2M applications, including 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 Features

- Supports LTE Cat 4, with maximum downlink speed of up to 150 Mbps
- Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- Supports display resolution of up to HD+ (1440 × 720) @ 60 fps
- Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- Supports recording and playback of 1080P videos @ 30 fps

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

ARM Mali-T820 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/ BeiDou

Powerful Multimedia Functions

LCC + LGA Package

Version: 1.2| Status: Released

Quectel SC200L Series(Dual-band Wi-Fi)

LTE Cat 4	SC200L-CE*	SC200L-EU	SC200L-AU*
Region/Operator	China	EMEA/APAC①	Latin America
OS	Android 10	Android 10	Android 10
Memory	8 GB eMMC + 1 GB LPDDR3 (default) 16 GB eMMC + 2 GB LPDDR3 (optional)	8 GB eMMC + 1 GB LPDDR3 (default) 16 GB eMMC + 2 GB LPDDR3 (optional)	8 GB eMMC + 1 GB LPDDR3 (default) 16 GB eMMC + 2 GB LPDDR3 (optional)
Dimensions (mm)	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85	40.5 × 40.5 × 2.85
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/B8	B1/B3/B5/B7/B8/B20/B28	B1/B2/B3/B4/B5/B7/B8/B28
LTE-TDD	B34/B38/B39/B40/B41(140 MHz)	B38/B40/B41	B38
WCDMA	B1/B8	B1/B5/B8	B1/B2/B4/B5/B8
GSM/EDGE	900/1800 MHz	900/1800 MHz	850/900/1800/1900 MHz
Bluetooth	Bluetooth 5.0	Bluetooth 5.0	Bluetooth 5.0
Wi-Fi	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
GNSS	GPS + GLONASS or GPS + BeiDou	GPS + GLONASS or GPS + BeiDou	GPS + GLONASS or GPS + BeiDou
Certifications			
Carrier	-	-	-
Regulatory	**China:** CCC/SRRC*/NAL*	**Global:** GCF* **Europe:** CE*	**Brazil:** Anatel*
Others	-	-	-
Data Rate			
LTE-FDD (Mbps)	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)
HSPA (Mbps)	21 (DL)/11 (UL)	21 (DL)/11 (UL)	21 (DL)/11 (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)	296 (DL)/236.8 (UL)
GPRS (kbps)	107 (DL)/85.6 (UL)	107 (DL)/85.6 (UL)	107 (DL)/85.6 (UL)
Enhanced Features			
3GPP E-UTRA	LTE: Release 10 UMTS: Release 9	LTE: Release 10 UMTS: Release 9	LTE: Release 10 UMTS: Release 9
Bandwidth	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz
Rx-diversity	●	●	●
DL MIMO 2 × 2	●	●	●
(U)SIM Card Detection	●	●	●
Dual SIM Dual Standby	●	●	●
Firmware Upgrade via USB or OTA	●	●	●
General Features			
Supply Voltage Range	3.5–4.2 V, typ. 3.8 V		
Power Consumption	TBD		
Interfaces			
LCM	1 group of 4-lane MIPI_DSI, supports up to HD+ (1440 × 720) @ 60 fps		
Camera	Front camera: 1-lane MIPI_CSI, supports up to 2 MP Rear camera: 2-lane MIPI_CSI, supports up to 8 MP		
Touch Panel	Capacitive touch panel		
UART	× 2, one supports hardware flow control with a maximum data rate of 3.25 Mbps; one for debugging only		
USB	× 2, USB1 supports USB 2.0 high-speed mode and USB OTG but does not support USB hub; USB2 can only work in host mode and supports USB hub.		
Audio	3 analog outputs: speaker, earpiece, headphone 3 analog inputs: MIC1, MIC2, MIC3 (MIC1 and MIC3 support dual-microphone noise reduction)		
GPIO	× 25		
SD	× 1, supports SD 3.0, 4-bit SDIO		
I2C	× 4		
ADC	× 1		
SPI	× 1, multiplexed from GPIOs		
PWRKEY	Internally pulled up to VBAT		
Motor Drive	× 1		
(U)SIM	× 2, supports 1.8/2.95 V (U)SIM cards; supports (U)SIM card detection and Dual SIM Dual Standby		
Antenna	× 4, main antenna, Rx-diversity antenna, GNSS antenna and Wi-Fi/Bluetooth antenna interfaces		

Notes:

1. * means under development/ongoing/planning.
2. ① means excluding Britain, ANZ, Korea and Taiwan.
3. ● means supported.

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