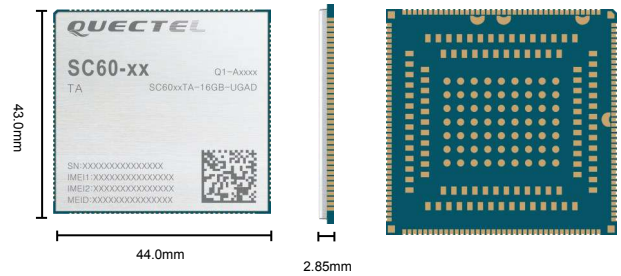


Quectel SC60

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



SC60 is Quectel's new generation of multi-mode Smart LTE Cat 6 module with built-in Android OS. Based on Qualcomm octa-core and 64-bit high-performance processors with built-in Adreno™ 506 GPU, SC60 is designed to support leading performance, various multimedia features and Quick Charge 3.0 technology. It is ideal for both industrial and consumer applications with high data-rate and multimedia functions. SC60 comes in five variants: SC60-CE, SC60-E, SC60-A, SC60-J and Wi-Fi & BT only version SC60-W.

SC60 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 Benefits

- ✓ LTE Cat 6 modem supporting 2x20 MHz carrier aggregation, with maximum download speed up to 300 Mbps
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Dual LCDs and dual touch panels for independent display and operation: 1920x1200 @60 fps for primary display and 1920x1080 @ 60fps for secondary display
- ✓ Support a maximum of four cameras, with two of them working simultaneously
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Support recording and playback of 1080P videos at 60 fps



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



Qualcomm®
Adreno™ 506 GPU



Android OS



Smart LTE Cat 6
Max 300 Mbps (DL)
Max 50 Mbps (UL)



IEEE 802.11
a/b/g/n/ac



BT4.2 (BR/EDR+BLE)



GPS+GLONASS+
BeiDou



Powerful Multimedia
Function



LCC+LGA Package

Quectel SC60 Series

LTE Cat 6	SC60-CE	SC60-E	SC60-A	SC60-J	SC60-W
Region/Operator	China	EMEA / India / Korea / Taiwan / South Asia / Latin America / Australia / New Zealand	North America	Japan	Global
OS	Android 7.1 / Android 9.0	Android 9.0	Android 9.0	Android 9.0	Android 7.1 / Android 9.0
Memory	64 GB eMMC + 4 GB LPDDR3 16 GB eMMC + 2 GB LPDDR3 8 GB eMMC + 1 GB LPDDR3	64 GB eMMC + 4 GB LPDDR3 16 GB eMMC + 2 GB LPDDR3	64 GB eMMC + 4 GB LPDDR3 16 GB eMMC + 2 GB LPDDR3	64 GB eMMC + 4 GB LPDDR3 16 GB eMMC + 2 GB LPDDR3	64 GB eMMC + 4 GB LPDDR3 16 GB eMMC + 2 GB LPDDR3 8 GB eMMC + 1 GB LPDDR3
Dimensions (mm)	43.0× 44.0 × 2.85	43.0× 44.0 × 2.85	43.0× 44.0 × 2.85	43.0× 44.0 × 2.85	43.0× 44.0 × 2.85
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 / B4 / 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 / B4 / B5 / B8	B2 / B4 / B5	B1 / B6 / B8 / B19	
EVDO/CDMA	BC0				
GSM/EDGE	900/1800 MHz	850/900/1800/1900 MHz			
BT	BT2.1+EDR/3.0/4.1LE/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
Wi-Fi	2.4G/5G, 802.11 a/b/g/n/ac	2.4G/5G, 802.11 a/b/g/n/ac	2.4G/5G, 802.11 a/b/g/n/ac	2.4G/5G, 802.11 a/b/g/n/ac	2.4G/5G, 802.11 a/b/g/n/ac
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	1.4/3/5/10/15/20 MHz	
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	CCC / SRRC / NAL	GCF* / CE* / RCM*	GCF* / FCC* / PTCRB* / IC *	JATE* / TELEC*	
Carrier			Verizon* / AT&T* / T-Mobile*	NTT DOCOMO* / KDDI*	
Others	RoHS / REACH	RoHS / REACH	RoHS / REACH	RoHS / REACH	RoHS / REACH
Data Transmission					
LTE FDD data rate (Mbps)	300 (DL) / 50 (UL)	300 (DL) / 50 (UL)	300 (DL) / 50 (UL)	300 (DL) / 50 (UL)	
LTE TDD data rate (Mbps)	265 (DL) / 35 (UL)	265 (DL) / 35 (UL)	265 (DL) / 35 (UL)	265 (DL) / 35 (UL)	
DC-HSPA+ data rate (Mbps)	42 (DL) / 11.2 (UL)	42 (DL) / 5.76 (UL)	42 (DL) / 5.76 (UL)	42 (DL) / 5.76 (UL)	
WCDMA data rate (Kbps)	384 (DL) / 384 (UL)	384 (DL) / 384 (UL)	384 (DL) / 384 (UL)	384 (DL) / 384 (UL)	
EDGE data rate (Kbps)	296 (DL) / 236.8 (UL)	296 (DL) / 236.8 (UL)			
GPRS data rate (Kbps)	107 (DL) / 85.6 (UL)	107 (DL) / 85.6 (UL)			
Enhanced Features					
3GPP E-UTRA	Release 10	Release 10	Release 10	Release 10	
Rx-diversity	●	●	●	●	
DL MIMO 2×2	●	●	●	●	
(U)SIM Card Detection	●	●	●	●	
Firmware Upgrade via USB	●	●	●	●	●
General Features					
Supply Voltage Range	3.55 V ~ 4.4 V, 3.8 V Typ.				
Power Consumption	70 μA @Power off / 3 mA @Sleep, Typ. / 22 mA @Idle				
Weight (g)	Approx. 13.0				
Interface					
LCM	4-lane MIPI_DSI0 + 4-lane MIPI_DSI1 WUXGA (1920×1200) @60 fps				
Camera	3 Groups of 4-lane MIPI_CSI, up to 2.1 Gbps per lane Support 3 or 4 Cameras, up to 21 MP with dual ISPs				
Capacitive Touch Panel	Supported				
UART	× 4 (Support 4 Mbps with Hardware Flow Control)				
USB	Compliant with USB 3.0/2.0, Support USB OTG				
Audio	Speaker, Earpiece, Headphone, and 3 MICs for Analog Audio Support One Noise-canceling MIC				
GPIO	× 19				
SD Card	× 1 (3.0, 4-bit SDIO)				
I2C	× 5				
ADC	× 2				
SPI	× 2 (Can be Multiplexed into UART and I2S Respectively, and I2S Supports Both Tx and Rx)				
PWRKEY	1.8 V, Pulled-up Internally				
Motor Drive	× 1				
(U)SIM	× 2 (1.8 V / 2.95 V)				
Flashlight	× 2				
LED	× 1				
Antenna	× 4 (main antenna, Rx-diversity/MIMO antenna, GNSS antenna and Wi-Fi/BT antenna)				

Notes: 1. * means under development 2. ● means supported.