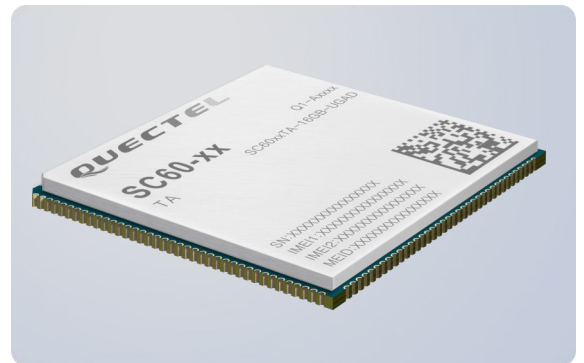


Quectel SC60

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 7.1 Nougat 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 requiring high data-rate and multimedia functions. SC60 contains seven variants: SC60-CE, SC60-E, SC60-A, SC60-AU, SC60-J, SC60-LA and SC60-W (SC60-W for Wi-Fi & BT only).

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. The 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.

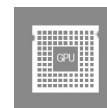


Key Benefits

- ✓ LTE Cat 6 modem supporting 2x20MHz carrier aggregation, with maximum download speed up to 300Mbps
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Dual LCDs and dual touch panels for independent display and operation: 1920x1200 @60fps for primary display and 1920x1080 @60fps for secondary display
- ✓ Support maximally 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 60fps



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



Qualcomm®
Adreno™ 506 GPU



Android 7.1



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



IEEE 802.11
a/b/g/n/ac



BT4.2 (BR/EDR+BLE)



GPS+GLONASS+
BeiDou



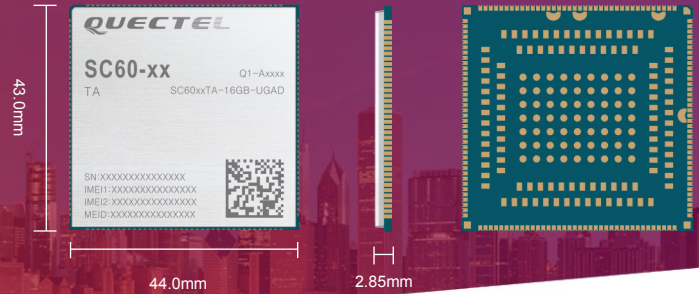
Powerful Multimedia
Function



LCC+LGA Package

Quectel SC60

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



Variant for China/India

SC60-CE:

LTE FDD: B1/B3/B5/B8
LTE TDD: B34/B38/B39/B40/B41
WCDMA: B1/B8
TD-SCDMA: B34/B39
EVDO/CDMA: BCO
GSM: 900/1800MHz

Variant for EMEA/Korea/Thailand

SC60-E*:

LTE FDD: B1/B3/B5/B7/B8/B20/B28A
LTE TDD: B38/B40/B41
WCDMA: B1/B2/B5/B8
GSM: 850/900/1800/1900MHz

Variant for North America

SC60-A*:

LTE FDD: B2/B4/B5/B7/B12/B13/B14/B25/B26
LTE TDD: B41
WCDMA: B1/B2/B4/B5
GSM: 850/1900MHz

Variant for Australia/Taiwan/Brazil

SC60-AU*:

LTE FDD: B1/B3/B5/B7/B8/B28
LTE TDD: B40
WCDMA: B1/B2/B5/B8
GSM: 850/900/1800/1900MHz

Variant for Japan

SC60-J*:

LTE FDD: B1/B3/B8/B18/B19/B26
LTE TDD: B41
WCDMA: B1/B6/B8/B19

Variant for Latin America

SC60-LA*:

LTE-FDD: B2/B4/B5/B7/B8/B28
LTE TDD: B40
WCDMA: B2/B5/B8
GSM: 850/900/1900MHz

Variant for Global

SC60-W:

Only Support Wi-Fi & BT

Data

LTE:

Cat 6 FDD: Max 300Mbps (DL)/50Mbps (UL)
Cat 6 TDD: Max 265Mbps (DL)/35Mbps (UL)

UMTS:

DC-USDPA: Max 42Mbps (DL)
DC-HSUPA: Max 11.2Mbps (UL)
WCDMA: Max 384Kbps (DL/UL)

TD-SCDMA:

Max 4.2Mbps (DL)/2.2Mbps (UL)

CDMA2000:

EVDO: Max 3.1Mbps (DL)/1.8Mbps (UL)
1X Advanced: Max 307.2Kbps (DL/UL)

GSM

GPRS: Max 107Kbps (DL)/85.6Kbps (UL)
EDGE: Max 296Kbps (DL)/236.8Kbps (UL)

Electrical Characteristics

Supply Voltage: 3.55V~4.4V, 3.8V Typ.

Consumption:

70uA @power off
3.6mA @sleep mode, Typ.

Output Power:

Class 4 (33dBm±2dB) for GSM850
Class 4 (33dBm±2dB) for EGSM900
Class 1 (30dBm±2dB) for DCS1800
Class 1 (30dBm±2dB) for PCS1900
Class E2 (27dBm±3dB) for GSM850 8-PSK
Class E2 (27dBm±3dB) for EGSM900 8-PSK
Class E2 (26dBm±3dB) for DCS1800 8-PSK
Class E2 (26dBm±3dB) for PCS1900 8-PSK
Class 3 (24dBm+1/-3dB) for WCDMA bands
Class 3 (24dBm+3/-1dB) for EVDO/CDMA BCO
Class 2 (24dBm+1/-3dB) for TD-SCDMA bands
Class 3 (23dBm±2dB) for LTE-FDD bands
Class 3 (23dBm±2dB) for LTE-TDD bands

Sensitivity :

LTE FDD B1: -102dBm LTE FDD B3: -102dBm
LTE FDD B5: -102dBm LTE FDD B8: -102dBm
LTE TDD B34: -101dBm LTE TDD B38: -102dBm
LTE TDD B39: -102dBm LTE TDD B40: -102dBm
LTE TDD B41: -102dBm WCDMA B1: -110dBm
WCDMA B8: -110dBm TD-SCDMA B34: -109dBm
TD-SCDMA B39: -109dBm
EVDO/CDMA BCO: -109dBm
EGSM900: -109dBm
DCS1800: -109dBm

Audio & Video

Crystal Clear VoLTE with Ultra HD Voice and SRVCC/CSFB
High Fidelity Music Playback of 24-bit/192kHz
Video Encoding/Decoding up to 1080P at 60fps
Wi-Fi Display Support up to 1080P at 30fps
Encoding and Decoding

Interfaces

LCM: 4-lane MIPI_DSI0 + 4-lane MIPI_DSI1
WUXGA (1920x1200) @60fps

Camera: 3 Groups of 4-lane MIPI_CSI, up to 2.1Gbps/Lane Support 3 or 4 Cameras
Up to 24MP with Dual ISPs

Touch Panel: Capacitive Touch Panel

Audio: Speaker, Earpiece, Headphone, and 3 MICs for Analog Audio

Support One Noise-canceling MIC

USB: USB 3.0/2.0 Compliant, Support USB OTG

I2C: × 5

(U)SIM: × 2 (1.8V/2.95V)

UART: × 3 (Support 4Mbps with Hardware Flow Control)

SD Card: × 1 (3.0, 4-bit SDIO)

PWRKEY: 1.8V, Pulled-up Internally

SPI: × 2 (Can be Multiplexed into UART and I2S Respectively, and I2S Supports Both Tx and Rx)

ADC: × 2

GPIO: × 19

Motor Drive: × 1

Flash Driver: × 2

LED Sink: × 4

Antenna: 4 Solder Pads for Main/Rx-diversity/GNSS/Wi-Fi&BT Antenna, Respectively

Enhanced Features

WLAN: 2.4G/5G, 802.11 a/b/g/n/ac

Bluetooth: BT2.1+EDR/3.0/4.1 LE/4.2 BLE

GNSS: GPS/GLONASS/BeiDou

Cat 6 Modem with 2x20MHz CA

Support Rx-diversity, DL MIMO 2 × 2

Support 3GPP E-UTRA Release 12

Bandwidth: 1.4/3/5/10/15/20MHz

Build-in Charge IC & Fuel Gauge, Qualcomm

Quick Charge 3.0 (Optional)

Support Dual LCDs for Independent Display

Support Dual SIM Dual Standby

Firmware Upgrade over USB Interface

General Features

OS: Android 7.1

Memory:

16GB eMMC+2GB LPDDR3 (Default)

32GB eMMC+4GB LPDDR3 (Optional)

Extended Temperature: -40°C ~ +75°C

Dimensions: 43.0mm × 44.0mm × 2.85mm

Package: LCC+LGA Package

Weight: Approx. 13.0g

Approvals

CCC (China)

* Under Development