

# Quectel SC600Y

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



SC600Y is Quectel’s new generation of multi-mode Smart LTE Cat 6 module with built-in Android 9.0 OS. Based on Qualcomm octa-core and 64-bit high-performance processors with built-in Adreno™ 506 GPU, SC600Y 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. SC600Y is available in four variants: SC600Y-NA\*, SC600Y-EM\*, SC600Y-JP\* and Wi-Fi & BT only version SC600Y-WF\*.

SC600Y 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.

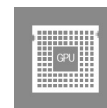


### Key Benefits

- ✓ LTE Cat 6 modem supporting 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 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 60fps



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



Qualcomm®  
Adreno™ 506 GPU



Android 9.0



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



IEEE 802.11  
a/b/g/n/ac



BT 4.2 (BR/EDR+BLE)



GPS+GLONASS+  
BeiDou



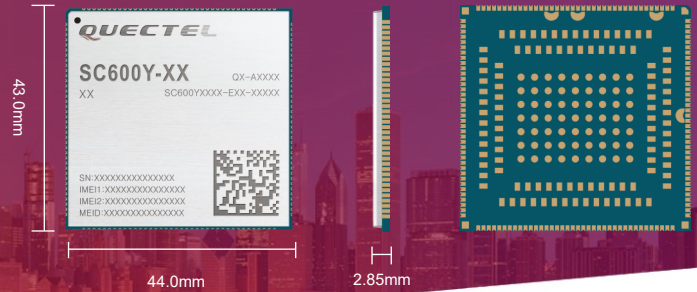
Powerful Multimedia  
Function



LCC+LGA  
Package

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### Variant for EMEA/India/Korea/Taiwan/South Asia/Latin America/Australia/New Zealand SC600Y-EM\*:

LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28  
LTE TDD: B38/B39/B40/B41  
WCDMA: B1/B2/B4/B5/B8  
GSM: 850/900/1800/1900MHz

### Variant for North America SC600Y-NA\*:

LTE FDD: B2/B4/B5/B7/B12/B13/B14/B17/B25/  
B26/B66/B71  
LTE TDD: B41  
WCDMA: B2/B4/B5

### Variant for Japan SC600Y-JP\*:

LTE FDD: B1/ B3/B5/B8/B11/B18/B19/B21/B26/  
B28  
LTE TDD: B41  
WCDMA: B1/B6/B8/B19

### Variant for the Global SC600Y-WF\*:

Only Support Wi-Fi & BT

### Data

#### LTE:

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

#### UMTS:

DC-USDPA: Max 42Mbps (DL)  
DC-HSUPA: Max 11.2Mbps (UL)  
WCDMA: Max 384Kbps (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, 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 (23dBm±2dB) for LTE-FDD bands  
Class 3 (23dBm±2dB) for LTE-TDD bands

### Sensitivity :

TBD

### Audio & Video

#### VoLTE:

Crystal Clear VoLTE with Ultra HD Voice and SRVCC/CSFB  
High Fidelity Music Playback of 24-bit/192kHz

#### Video:

Encode:  
1080p @60fps (HEVC/H.264)  
1080p @30fps (MPEG-4/VP8)  
864x480 @30fps (H.263)  
Decode:  
1080p @60fps (HEVC/H.264/VP8/VP9/VC-1/  
MPEG-4/)  
1080p @30fps (DivX4.x/5.x/6.x,MPEG-2)  
864x480 @30fps (H.263)  
720x480 @30fps (DivX3.11)  
Wi-Fi Display Supports up to 1080P at 30fps for 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 21MP with Dual ISPs

#### Touch Panel:

Capacitive Touch Panel

#### Audio:

Speaker, Earpiece, Headphone, and 3 MICs for Analog Audio  
Support One Noise-canceling MIC

#### USB:

Compliant with USB 3.0/2.0 , 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

Built-in Charge IC & Fuel Gauge,

Qualcomm Quick Charge 3.0 (Optional)

Support Dual LCDs for Independent Display

Support Dual SIM Dual Standby

Firmware Upgrade via USB

### General Features

OS: Android 9.0

#### Memory:

16GB eMMC+2GB LPDDR3 (Default)

32GB eMMC+4GB LPDDR3 (Optional)

Operating Temperature: -35°C ~ +65°C

Dimensions: 43.0mm × 44.0mm × 2.85mm

Package: LCC+LGA

Weight: Approx. 13.0g

\* Under Development

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