

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.

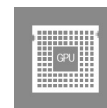


Key Benefits

- ✓ 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



BT4.2 (BR/EDR+BLE)



GPS+GLONASS+
BeiDou



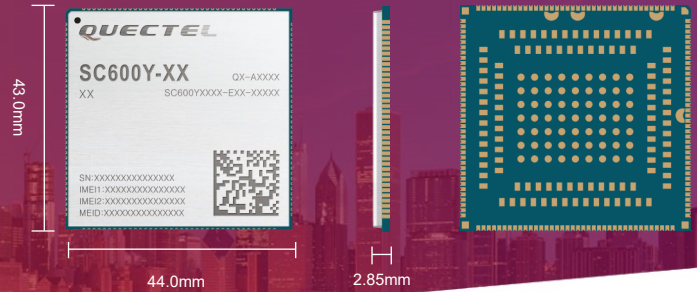
Powerful Multimedia
Function



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