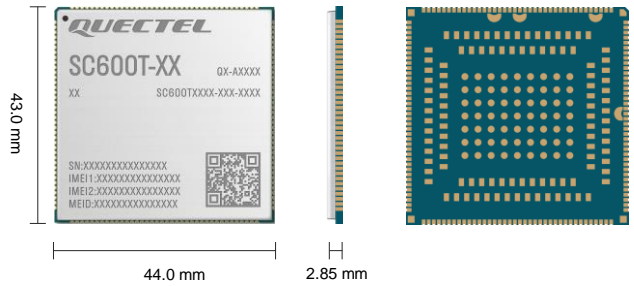


# Quectel SC600T Series

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



SC600T series is Quectel’s new generation of multi-mode Smart LTE Cat 6 module with built-in Android OS. Based on Qualcomm MSM8953 64-bit high-performance octa-core processors with built-in Adreno™ 506 GPU, the module is designed to support high 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. SC600T series comes in four variants: SC600T-EM, SC600T-NA, SC600T-JP and Wi-Fi & Bluetooth only version SC600T-WF.

SC600T series supports multiple-input multiple-output (MIMO) technology. The use of multiple antennas at the receiver end on the same frequency band greatly minimizes errors and improves the data speed. This module also combines high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GNSS (GPS, GLONASS, BeiDou, Galileo) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, UART, USB, I2C, SPI) extend the applicability of the module for 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, video streaming and entertainment systems, etc.



### Key Features

- ✓ LTE Cat 6 modem supporting 2 × 20 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: 1920 × 1200 @ 60 fps for primary display and 1920 × 1080 @ 60 fps for secondary display
- ✓ Maximum of four cameras, and supports two cameras working simultaneously
- ✓ Multi-constellation GNSS receiver for applications requiring fast and accurate fixes in any environment
- ✓ Recording and playback of 4K videos at 30 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



Bluetooth 4.2  
(BR/EDR + BLE)



GPS/GLONASS/  
BeiDou/Galileo



Powerful Multimedia  
Function



LCC + LGA  
Package

# Quectel SC600T Series

LTE Cat 6	SC600T-EM	SC600T-NA	SC600T-JP	SC600T-WF
<b>Region/Operator</b>	EMEA/India/Korea/South Asia/ Latin America/Australia/ New Zealand/South Africa	North America	Japan	Global
<b>CPU</b>	MSM8953, Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz	MSM8953, Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz	MSM8953, Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz	MSM8953, Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz
<b>Memory</b>	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)
<b>OS</b>	Android 9/10	Android 9/10	Android 9/10	Android 9/10
<b>Dimensions (mm)</b>	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85
<b>Package</b>	LCC + LGA	LCC + LGA	LCC + LGA	LCC + LGA
<b>Weight (g)</b>	Approx. 13.0	Approx. 13.0	Approx. 13.0	Approx. 13.0
<b>Temperature Range</b>				
<b>Operating Temperature</b>	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
<b>Frequency Bands</b>				
<b>LTE-FDD</b>	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	-
<b>LTE-TDD</b>	B38/B39/B40/B41	B41	B41	-
<b>WCDMA</b>	B1/B2/B4/B5/B8	B2/B4/B5	B1/B6/B8/B19	-
<b>GSM/EDGE</b>	850/900/1800/1900 MHz	-	-	-
<b>WLAN</b>	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	2.4&5 GHz 802.11a/b/g/n/ac
<b>Bluetooth</b>	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE
<b>GNSS</b>	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	GPS/BeiDou/GLONASS or GPS/BeiDou/Galileo	-
<b>Certifications</b>				
<b>Carrier</b>	Australia: Telstra	America: Verizon/AT&T/ T-Mobile/Sprint	Japan: NTT DOCOMO/KDDI	-
<b>Regulatory</b>	Global: GCF Europe: CE UK: UKCA Brazil: Anatel South Korea: KC Taiwan, China: NCC Australia/New Zealand: RCM	Global: GCF North America: PTCRB America: FCC Canada: IC Mexico: IFETEL	Japan: JATE/TELEC	Europe: CE America: FCC UK: UKCA* Canada: IC South Korea: KC Japan: JATE/TELEC Australia/New Zealand: RCM
<b>Others</b>	RoHS/REACH	RoHS/REACH	RoHS/REACH	RoHS/REACH
<b>Data Rate</b>				
<b>LTE-FDD (Mbps)</b>	300 (DL)/ 50 (UL)	300 (DL)/ 50 (UL)	300 (DL)/ 50 (UL)	-
<b>LTE-TDD (Mbps)</b>	265 (DL)/ 30 (UL)	265 (DL)/ 30 (UL)	265 (DL)/ 30 (UL)	-
<b>DC-HSPA+ (Mbps)</b>	42 (DL)/ 5.76 (UL)	42 (DL)/ 5.76 (UL)	42 (DL)/ 5.76 (UL)	-
<b>WCDMA (kbps)</b>	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	-
<b>EDGE (kbps)</b>	296 (DL)/ 236.8 (UL)	-	-	-
<b>GPRS (kbps)</b>	107 (DL)/ 85.6 (UL)	-	-	-
<b>Enhanced Features</b>				
<b>3GPP E-UTRA</b>	Release 10	Release 10	Release 10	-
<b>Bandwidth</b>	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	-
<b>Battery Management</b>	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0
<b>Rx-diversity</b>	●	●	●	-
<b>DL MIMO 2 × 2</b>	●	●	●	-
<b>(U)SIM Detection</b>	●	●	●	-
<b>Dual SIM Dual Standby</b>	●	●	●	-
<b>Firmware Upgrade via USB</b>	●	●	●	●
<b>Firmware Upgrade via OTA</b>	●	●	●	●

Note:

- \*: planning.
- : supported.

# Quectel SC600T Series

LTE Cat 6	General Features of SC600T Series
<b>Interfaces</b>	
<b>LCM</b>	Supports dual LCDs for independent display: 2 groups of 4-lane MIPI_DSI; WUXGA (1920 × 1200) @ 60 fps for primary display and FHD (1920 × 1080) @ 60 fps for secondary display 3 groups of 4-lane MIPI_CSI, up to 2.1 Gbps per lane
<b>Camera</b>	Supports three cameras (4-lane + 4-lane + 4-lane) or four cameras (4-lane + 4-lane + 2-lane + 1-lane) Up to 24 MP with dual ISPs
<b>Touch Panel</b>	× 2, Capacitive-screen, I2C controls
<b>Audio</b>	3 analog inputs: MIC1, MIC2, MIC3 (including one noise-canceling MIC) 3 analog outputs: speaker, earpiece, headphone
<b>USB</b>	× 1, USB 3.0 and 2.0 compliant, Type-C, USB OTG + charge
<b>(U)SIM</b>	× 2, supports 1.8/2.95 V (U)SIM cards, with (U)SIM card detection function, DSDS supported
<b>UART</b>	× 3, up to 4 Mbps, UART5 supports hardware flow control
<b>SD Card</b>	× 1, SD 3.0, supports 4-bit SDIO
<b>ADC</b>	× 2, general-purpose ADC interface
<b>I2C</b>	× 5
<b>SPI</b>	× 2
<b>PWRKEY</b>	Pulled up internally to 1.8 V
<b>GPIO</b>	× 17
<b>Antenna</b>	× 4, Main/Rx-diversity/GNSS/Wi-Fi & Bluetooth antenna interface respectively (SC600T-WF: × 1, Wi-Fi & Bluetooth antenna interface)
<b>Electrical Features</b>	
<b>Supply Voltage Range</b>	3.55–4.4 V, typ. 3.8 V
<b>Power Consumption</b>	80 μA @ power off, typ. 3.6 mA @ sleep mode