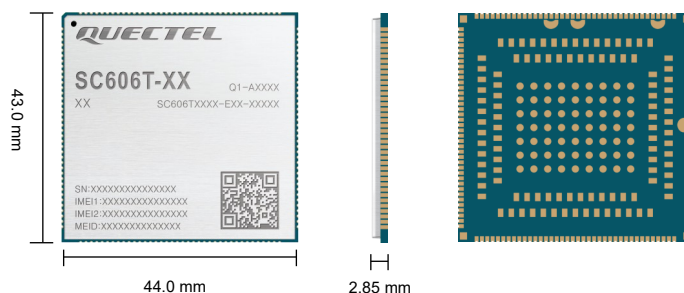


Quectel SC606T Series

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



SC606T is a series of multi-mode Smart LTE Cat 6 modules with built-in Yocto Linux (Kernel 3.18) OS. Based on Qualcomm octa-core ARM Cortex-A53 64-bit high-performance processors with built-in Adreno™ 506 GPU, the modules offer a leading performance and various multimedia features, and prove to be ideal solutions for both industrial and consumer applications requiring high data rates and multimedia functions. The series comes in three models: SC606T-NA, SC606T-EM and SC606T-WF.

The SC606T series support 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. These modules also combine high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GNSS (GPS, BDS, GLONASS and Galileo) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, SPK, UART, USB, I2C, and SPI) extend the applicability of the modules to a wide range of M2M applications, including smart POS, smart cash registers, smart home gateways, smart robots, smart wearables, smart safety, PDA & tablets, vending machines, delivery lockers, audio and video recorders, as well as in-car video streaming and entertainment systems.



Key Features

- ✓ LTE Cat 6 modem supporting 2 × 20 MHz carrier aggregation, with maximum downlink speed of 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
- ✓ Support up to three cameras, with two of them working simultaneously
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Support the recording and playback of 4 K videos @ 30 fps



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



Qualcomm®
Adreno™ 506 GPU



Yocto Linux
(Kernel 3.18)



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/BDS/
GLONASS/Galileo



Powerful Multimedia
Functions



LCC + LGA
Package

Quectel SC606T Series

LTE Cat 6	SC606T-NA	SC606T-EM	SC606T-WF
Region/Operator	North America	EMEA/India/Korea/Taiwan/South Asia/Latin America/ Australia/New Zealand/South Africa	Global
CPU	Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz	Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz	Octa-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz
Memory (MCP)	2 GB LPDDR3 + 16 GB eMMC	2GB LPDDR3 + 16 GB eMMC	2GB LPDDR3 + 16 GB eMMC
OS	Yocto Linux (Kernel 3.18)	Yocto Linux (Kernel 3.18)	Yocto Linux (Kernel 3.18)
Dimensions (mm)	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85
Temperature Range			
Operating Temperature	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
Frequency Bands			
LTE-FDD	B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B66/B71	B1/B2/B3/B4/B5/B7/B8/B20/B28	
LTE-TDD	B41	B38/B40/B41	
WCDMA	B2/B4/B5	B1/B2/B4/B5/B8	
GSM/EDGE	-	850/900/1800/1900 MHz	
WLAN	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
Bluetooth	Bluetooth 2.1 + EDR/3.0/4.1 LE/4.2 BLE	Bluetooth 2.1 + EDR/3.0/4.1 LE/4.2 BLE	Bluetooth 2.1 + EDR/3.0/4.1 LE/4.2 BLE
GNSS	GPS/BDS/GLONASS or GPS/BDS/Galileo	GPS/BDS/GLONASS or GPS/BDS/Galileo	
Certifications			
Carrier	America: Verizon/AT&T/T-Mobile*/Sprint* Canada: Rogers	TBD	TBD
Regulatory	Global: GCF North America: PTCRB America: FCC Canada: IC	Global: GCF Europe: CE Australia/New Zealand: RCM	
Others	RoHS/REACH	RoHS/REACH	RoHS/REACH
Data Transmission			
LTE-FDD Data Rate (Mbps)	300 (DL)/50 (UL)	300 (DL)/50 (UL)	
LTE-TDD Data Rate (Mbps)	265 (DL)/35 (UL)	265 (DL)/35 (UL)	
DC-HSPA+ Data Rate (Mbps)	42 (DL)/11.2 (UL)	42 (DL)/11.2 (UL)	
WCDMA Data Rate (kbps)	384 (DL)/384 (UL)	384 (DL)/384 (UL)	
EDGE Data Rate (kbps)	-	296 (DL)/236.8 (UL)	
GPRS Data Rate (kbps)	-	107 (DL)/85.6 (UL)	
Enhanced Features			
3GPP E-UTRA	Release 10	Release 10	
Bandwidth	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	
Rx-diversity	●	●	
DL MIMO 2 × 2	●	●	
(U)SIM Detection	●	●	
Dual SIM Dual Standby	●	●	
Firmware Upgrade via USB	●	●	●
OTA	●	●	●
General Features			
Supply Voltage Range	3.55–4.4 V, Typ. 3.8 V		
Power Consumption	80 μA @ power off, Typ. 3.6 mA @ sleep mode		
Package	LCC + LGA		
Weight (g)	Approx. 13.0		
Interfaces			
LCM	2 groups of 4-lane MIPI_DSI, WUXGA (1920 × 1200) @ 60 fps, Supports dual LCDs for independent display		
Camera	3 groups of 4-lane MIPI_CSI, up to 2.1 Gbps/lane, Supports 3 or 4 cameras, up to 24 MP with dual ISPs		
Touch Panel	× 2, Capacitive touch panel		
Audio	3 analog inputs: MIC1, MIC2, MIC3 (including one noise-cancelling MIC) 3 analog outputs: speaker, earpiece, headphone		
USB	Compliant with USB 3.0/2.0 specifications, Supports USB OTG		
(U)SIM	× 2, Supports 1.8/2.95 V (U)SIM cards, Supports (U)SIM card detection function and DS2S		
UART	× 4, up to 4 Mbps, Supports hardware flow control		
SD Card	× 1, SD 3.0, 4-bit SDIO		
ADC	× 1		
I2C	× 5		
SPI	× 2, Can be multiplexed into UART and I2S respectively		
PWRKEY	× 1, Pulled up to 1.8 V internally		
GPIO	× 19		
Antenna	× 4, Main/Rx-diversity/GNSS/Wi-Fi & Bluetooth antenna interface respectively		

NOTE:

- * means under development.
- means supported.