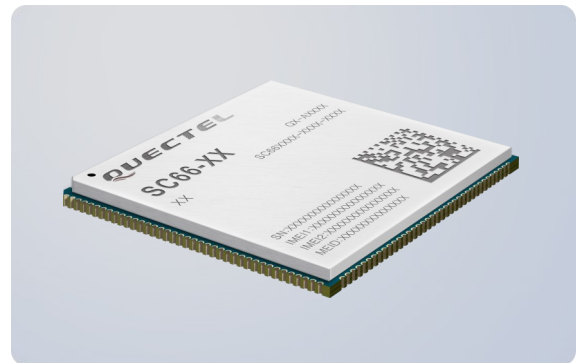


Quectel SC66

Multi-mode Smart LTE Cat 6 Module with Wi-Fi & Bluetooth



SC66 is Quectel’s new generation of multi-mode Smart LTE Cat 6 module with Android 9.0 OS. Based on Qualcomm ARM Kryo™ 260 64-bit octa-core high-performance processor with built-in Adreno™ 512 GPU, SC66 is well suited for a wide range of industrial and consumer applications with high data-rate and multimedia requirements. SC66 contains five variants: SC66-CE*, SC66-E*, SC66-A*, SC66-J* and SC66-MW*.

SC66 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, AI, police and law enforcement equipment, in-car video streaming and entertainment systems, etc.

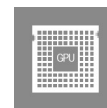


Key Benefits

- ✓ Support LTE Cat 6 and 2 × 20MHz carrier aggregation, with maximum downlink speed up to 300Mbps
- ✓ Worldwide LTE, UMTS/HSPA+, TD-SCDMA, CDMA/EVDO and GSM/GPRS/EDGE coverage
- ✓ Support MIPI_DSI (up to 2560 × 1600 @60fps) and DP over USB Type-C (up to 4096 × 2160 @30fps) for Dual Independent Display
- ✓ Support MIPI_DSI0 (1920 × 1080 @60fps) and MIPI_DSI1 (1920 × 1080 @60fps) for Dual Independent Display as an option
- ✓ Support up to 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 4k videos at 30fps



SDM660
64-bit Processor
(Octa-core)



Qualcomm®
Adreno™ 512 GPU



Android 9.0



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



IEEE 802.11
a/b/g/n/ac



BT5.0



GPS + GLONASS +
BeiDou



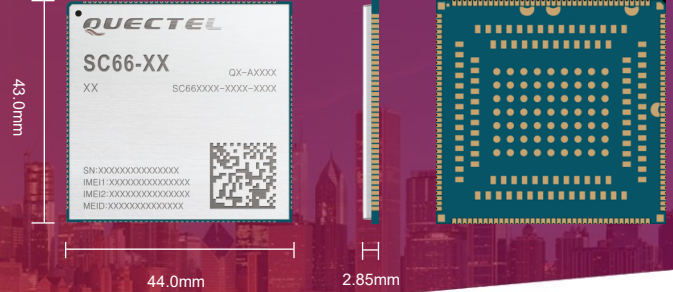
Powerful Multimedia
Function



LCC + LGA Package

Quectel SC66

Multi-mode Smart LTE Cat 6 Module with Wi-Fi & Bluetooth



Variant for China/India

SC66-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: 1800/900MHz

Variant for EMEA/Korea/Thailand

SC66-E*:

LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28(A+B)
LTE TDD: B38/B39/B40/B41^①
WCDMA: B1/B2/B4/B5/B8
GSM: 850/900/1800/1900MHz

Variant for North America

SC66-A*:

LTE FDD: B2/B4/B5/B7/B12/B13/B14/B17/B25/
B26/B66/B71
LTE TDD: B41^①
WCDMA: B2/B4/B5

Variant for Japan

SC66-J*:

LTE FDD: B1/B3/B5/B8/B11/B18/B19/B21/B26/
B28(A+B)
LTE TDD: B41^②
WCDMA: B1/B6/B8/B19

Variant for the Global

SC66-MW*

Only Support 2 x 2 Wi-Fi MIMO & BT

Data

LTE:

Cat 6 FDD: Max 300Mbps (DL)/50Mbps (UL)
Cat 6 TDD: Max 265Mbps (DL)/30Mbps (UL)
Cat 4 FDD: Max 150Mbps (DL)/50Mbps (UL)
Cat 4 TDD: Max 130Mbps (DL)/30Mbps (UL)

UMTS:

DC-HSDPA: 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, Typ.4.0V

Power Consumption: TBD

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 (dBm):

LTE FDD B1: -101	LTE FDD B2: TBD
LTE FDD B3: -101	LTE FDD B4: TBD
LTE FDD B5: -101.5	LTE FDD B7: TBD
LTE FDD B8: -101.5	LTE FDD B11: TBD
LTE FDD B12: TBD	LTE FDD B13: TBD
LTE FDD B14: TBD	LTE FDD B17: TBD
LTE FDD B18: TBD	LTE FDD B19: TBD
LTE FDD B20: TBD	LTE FDD B21: TBD
LTE FDD B25: TBD	LTE FDD B26: TBD
LTE FDD B28A: TBD	LTE FDD B28B: TBD
LTE FDD B66: TBD	LTE FDD B71: TBD
LTE TDD B34: -101	LTE TDD B38: -100.5
LTE TDD B39: -101	LTE TDD B40: -100.5
LTE TDD B41: -100.5	WCDMA B1: -110
WCDMA B2: TBD	WCDMA B4: TBD
WCDMA B5: TBD	WCDMA B6: TBD
WCDMA B8: -110	WCDMA B19: TBD
GSM850: TBD	EGSM900: -109
DCS1800: -108	PCS1900: TBD
TD-SCDMA B34: -109	
TD-SCDMA B39: -109	
EVDO/CDMA BCO: -109	

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 4K at 30fps
Wi-Fi Display Support up to 1080P at 30fps for Encoding and Decoding

Interfaces

LCM: 2560 x 1600 @60fps primary display + 4K @30fps over DP
24 bpp RGB; Dual MIPI_DSI
Camera: 3 Groups of 4-lane MIPI_CSI, support 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 three Microphones (including one Noise-canceling Microphone) for Analog Audio
USB: USB3.1 x 1, USB2.0 x 1
I2C: x 5
(U)SIM: x 2 (1.8V/2.95V)
UART: x 4,
Each of the four UARTs supports up to 4Mbps
One of the four UARTs supports Hardware Flow Control
SD Card: x 1 (3.0, 4-bit SDIO)

PWRKEY: x 1, 1.8V, Pulled-up Internally

SPI: x 1

ADC: x 2

GPIO: x 21

Antenna: x 5

Main/Rx-diversity/GNSS/Wi-Fi & BT Antenna interfaces and MIMO Wi-Fi Antenna interface (SC66-CE does not support MIMO Wi-Fi)

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/BT5.0

GNSS: GPS/GLONASS/BeiDou

LTE Cat 6 Modem with 2 x 20MHz CA

Support Rx-diversity, DL MIMO 2 x 2

Support 3GPP E-UTRA Release 12

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

Build-in Charge IC & Fuel Gauge

Support Qualcomm Quick Charge

Support Dual Independent Display

Support Dual SIM Dual Standby

A/B OTA Firmware Upgrade via USB

General Features

OS: Android 9.0

Memory: 32GB eMMC + 3GB LPDDR4X (Default)
64GB eMMC + 4GB LPDDR4X (Optional)

Operating Temperature: -35C ~ +65°C

Dimensions: 43.0mm x 44.0mm x 2.85mm

Package: LCC + LGA Package

Weight: Approx. 12.0g

Approvals

Carrier:

Verizon*/AT&T* (North America)

Regulatory:

GCF* (Global)

CE* (Europe)

FCC (North America)

IC (Canada)

Anatel* (Brazil)

CCC/SRRC*/NAL* (China)

JATE*/TELECOM* (Japan)

RCM* (Australia/New Zealand)

Others:

RoHS Compliant

①: Only 200MHz bandwidth is supported

②: Only 120MHz bandwidth is supported

* Under Development