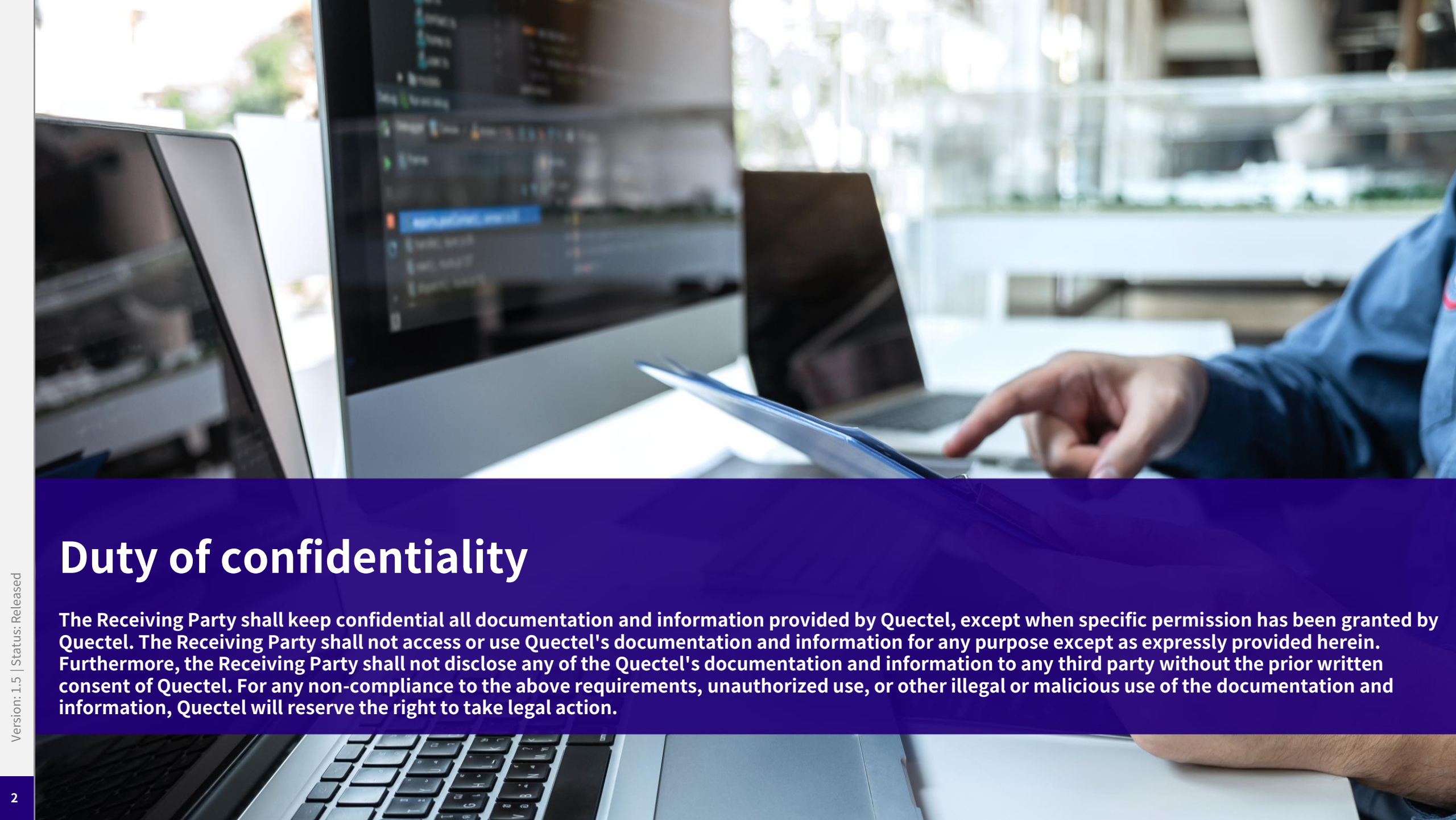


Quectel SC668S Series Smart Module

Introduction





Duty of confidentiality

The Receiving Party shall keep confidential all documentation and information provided by Quectel, except when specific permission has been granted by Quectel. The Receiving Party shall not access or use Quectel's documentation and information for any purpose except as expressly provided herein. Furthermore, the Receiving Party shall not disclose any of the Quectel's documentation and information to any third party without the prior written consent of Quectel. For any non-compliance to the above requirements, unauthorized use, or other illegal or malicious use of the documentation and information, Quectel will reserve the right to take legal action.

Contents

SC668S series specifications

SC668S series typical applications

SC668S series highlights



Multi-region variants:

- Multiple global certifications
- Multiple memory configurations

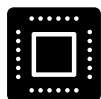


LCC + LGA form factor: 43.0 × 44.0 × 2.85 mm



Operating systems:

Android 10/ 11/ 13/ 15



Chipset platform: QCM6125.
Powerful system performance,
multimedia, LTE Cat 4,
Wi-Fi 802.11ac, Bluetooth, GNSS



Product lifecycle:
Till the year of
2033



Compatible with SC600Y,
SC600T, SC606T, SC66,
SC680A and SC686A series

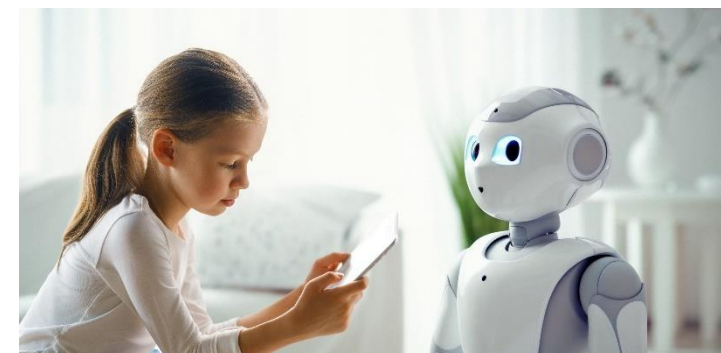
SC668S variants (pin-to-pin compatible)

Variant		SC668S-EM	SC668S-NA	SC668S-WF	SC668S-JP	SC668S-CN
Region		EMEA/ South Korea/ South Asia/ Latin America/ India/ Australia/ New Zealand/ South Africa	North America	Global (Wi-Fi only)	Japan	China/ India
LTE	FDD band	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 66/ 71	-	B1/ 3/ 5/ 8/ 11/ 18/ 19/ 21/ 26/ 28	B1/ 3/ 5/ 8
	TDD band	B38/ 39/ 40/ 41 (200 MHz)	B41 (200 MHz)	-	B41	B34/ 38/ 39/ 40/ 41 (200 MHz)
UMTS	WCDMA band	B1/ 2/ 4/ 5/ 8	-	-	B1/ 6/ 8/ 19	B1/ 8
EVDO/ CDMA		-	-	-	-	BC0
GSM/ EDGE		850/ 900/ 1800/ 1900 MHz	-	-	-	900/ 1800 MHz
GNSS		Supported	Supported	-	Supported	Supported
Wi-Fi/ Bluetooth		Supported	Supported	Supported	Supported	Supported
Certification		Regulatory/ conformance: CE/ RCM/ UKCA/ KC/ GCF	Carrier: Verizon/ AT&T Regulatory/ conformance: FCC/ IC/ GCF/ PTCRB	Regulatory/ conformance: CE/ FCC/ IC/ RCM/ UKCA	Carrier: NTT DOCOMO Regulatory/ conformance: TELEC/ JATE	Regulatory/ conformance: SRRC/ NAL/ CCC
Product stage		MP	MP	MP	MP	MP

SC668S series features and interfaces

Key features		Interfaces	
CPU	QCM6125, custom 64-bit ARM v8.0 application processor (Qualcomm® Kryo™ 260 CPU) 4 × A73 @ 2.0 GHz + 4 × A53 @ 1.8 GHz	LCM	One 4-lane MIPI DSI with up to 1920 × 1200 @ 60 fps or 2050 × 1080 @ 60 fps + Native DP with 1920 × 1200 @ 60 fps
GPU	Qualcomm® Adreno™ 610 Graphics Processing Unit @ 950 MHz	Camera	Three 4-lane MIPI CSIs, with up to 2.1 Gbps/ lane, Each 4-lane can be divided into (2-lane + 1-lane); Up to 6 cameras, 2 of which can work concurrently; Dual-ISP, up to (16 MP + 16 MP) or up to 24 MP
NPU	1.1 TOPS		
Video	Decoding: 4K @ 30 fps; HEVC/ H.264/ VP8/ VP9 1080P @ 30 fps; MPEG-2 Encoding: 4K @ 30 fps; HEVC/ H.264/ VP8	Touch panel	Capacitive touch panel
Memory	4 GB + 64 GB (LPDDR4X uMCP, default) 8 GB + 128 GB (LPDDR4X UFS, optional) 4 GB + 64 GB (LPDDR4X UFS, optional)	Audio	Analog channels: 3 inputs: MIC1, MIC2, MIC3 (including 1 noise-canceling MIC) 3 outputs: Line Out, earpiece, headphone
OS	Android 10/ 11/ 13/ 15	USB	× 1, USB 3.1 Type-C, compatible with USB 2.0; native DP
Wi-Fi	2.4 & 5 GHz, 802.11a/ b/ g/ n/ ac	(U)SIM	× 2, 1.8/ 2.95 V (U)SIM cards, (U)SIM card hot swap detection, DSDS
Bluetooth	2.1 + EDR/ 3.0/ 4.1 LE/ 4.2 BLE/ 5.0 LE	UART	× 3, Debug UART: 2-wire serial port, only for debugging UART03: 2-wire serial port UART00: 4-wire serial port, RTS and CTS hardware flow control with up to 4 Mbps
GNSS	GPS/ GLONASS/ BDS/ Galileo/ QZSS/ SBAS	SD card	× 1, SD 3.0, 4-bit SDIO
Modem	3GPP Release 12	I2C/ SPI/ ADC/ GPIO/ PWRKEY	Supported
Battery charge	Not supported	Antenna	× 4, main, rx-diversity, GNSS, Wi-Fi/ Bluetooth antennas (SC668S-WF: × 1, Wi-Fi/ Bluetooth antenna)

SC668S series typical applications



Smart retail



Applications



Finance



Restaurant



Food & beverage



Medical services



Supermarket



Transportation

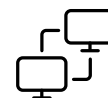
Features



Secure payment processing
Built-in security architecture for NFC and mobile digital payments



Versatile connectivity
Cellular, Wi-Fi & Bluetooth



Independent dual displays
Independent dual displays engineered for countertop POS applications



Cross-platform modular design
Modular, cross-platform design to ensure seamless terminal migration and frictionless system upgrades

Recommended solutions



Entry, medium and high levels

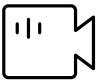


PCBA

Vehicle aftermarket



Features



Automotive cameras

360° surround view system, multi-channel video stitching, on-board DVR/ mobile DVR, instant reverse camera activation, HDR imaging



Automotive multimedia

Asynchronous multi-screen display & synchronization, advanced A/V (audio/ video) enhancement, wireless casting & screen mirroring (Wi-Fi/ Bluetooth), Bluetooth hands-free calling



Internet of Vehicles

4G/ 5G, Wi-Fi 5/ 6E, and GNSS connectivity, fully certified for global markets



Automotive algorithms

ADAS & DMS, AEC & ANS, lens distortion correction, odd/even field merging

Recommended smart modules



4G/ quad-core
entry level



4G/ octa-core
medium and high levels



high-performance
5G high level

Smart home



Features



HD
screen



Smart
camera



Speech
recognition



Versatile
peripheral
interfaces



Smart visual
recognition



4G
communication



Wi-Fi
connectivity



Multi-OS
compatibility

Recommended smart modules



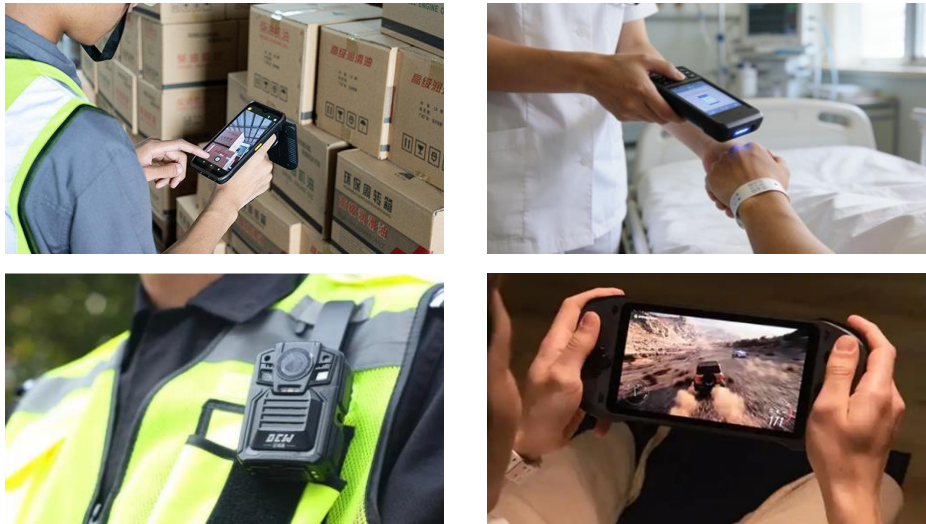
4G/ quad-core
entry level



Octa-core
medium and high levels

Handheld form factor

Applications



Features



Versatile I/O & Expandability
Multi-channel camera interfaces, modular data capture, contactless & RFID modules



Comprehensive portfolio & cross-series compatibility
Standardized form factors and cross-series compatibility, ensuring streamlined hardware selection and frictionless, scalable upgrades



Versatile integrated algorithms
Multi-mic noise suppression, EIS, and on-device TTS; select models capable of executing edge computing LLMs



Versatile wireless connectivity
Versatile wireless protocols for your deployment environment

Recommended solutions



Entry, medium and high levels



PCBA

End devices



Edge & industrial computing

Applications



Smart factory



Smart safety



Smart city



Unmanned retail

Product images



Features



Multiple integrated algorithms

Various edge computing algorithm development or integration for customers



Operating system optimization

Provide multiple operating systems to meet customer application development and optimize the systems as needed



LLM solution support

Provide customers with technical solutions such as large model fine-tuning, business process design, and localized deployment

Recommended smart modules



Premium level
48 TOPS and
Wi-Fi 7



5G high level
12 TOPS

Thank you

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