Fibocom
PERFECT WIRELESS EXPERIENCE

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WIRELESS MODULES FOR IOT APPLICATIONS

ENABLE YOUR FIRST STEP INTO DIGITAL TRANSFORMATION



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About Us

We Are R&D-Driven
70% Employees Are R&D;
Technology Patents of Hundreds.

IoT First Mover
20 years+ M2M and IoT Expertise;
5G First Mover.

Global Go-To-Market Capability
Global Telecom Operators' TAs;
Global Sales and Technical Support Network.

Business Success
First Stock-Listed Wireless Module Supplier in China;
Fast Growth in Sales

Founded in 1999, Fibocom is a leading global provider of IoT (Internet of Things) wireless solution and wireless communication modules. We are committed to bringing reliable, accessible, secure, and intelligent wireless solutions to every IoT application scenario for the increasingly digitalized industries and enriched smart life of the whole society. In 2017, Fibocom become the first stock-listed (Stock Code: 300638) wireless module provider in China.

We provide technically advanced and high-performance 5G, 4G, NB-IoT/eMTC, 3G, and 2G, smart, auto-grade, GNSS, Wi-Fi/BT wireless modules. By technically embedding Fibocom's wireless solutions into IoT devices that will become smart and remotely manageable with stable data transmission between devices and operation center, we empower the intelligent future of all industries that mainly include smart retail, ACPC (Always Connected PC), industry 4.0, smart grid, smart homes, smart agriculture, smart cities, telemedicine, metering, smart security surveillance, and the intelligently connected cars, etc. We have many long-term industry customers including Fortune Global 500 enterprises, which is an important driven power of our fast development.

Fibocom is headquartered in Shenzhen, China, and has R&D centers in both Shenzhen and Xi'an. We are globally located with more than 30 subsidiaries and regional operation centers in China, Americas, EMEA, and Asia Pacific Regions. Currently, we have more than 1000 global employees, and provide products and services in more than 100 countries and regions.



We Empower Industries

Public Security
Police Enforcement System
Smoke Detector
Access Control
Burglar Alarm
Drone
POC
IPC

Smart Cities
Refrigeration and Tracking
Environment Monitoring
Smart Transportation
Smart Parking
Smart Lighting
Shared Bicycle

Smart Energy
Smart Charging Pile
Smart Meter
Smart Grid

Vehicle & Transportation
Fleet Management
T-Box
ADAS
C-V2X
DVR
UBI
ITS
IVI

Connectivity Equipment
Domestic/ Industrial Gateway
Domestic/ Industrial Router
Domestic/ Industrial CPE
5G SD-WAN

Home & Healthcare
Wearable Devices
Smart Appliance
Telemedicine
Smart Lock

Smart Retail
5G Smart Dressing Mirror
Vending Machine
Digital Signage
POS

Industry 4.0
Smart Manufacturing
Flexible Manufacturing
Predictive Maintenance

Mobile Office
Mobile Tablet
ACPC

Product Name	FG150-AE	FM150-AE
Category	NR Sub6	
Region	Asia/Europe/Australia(Except China)	Asia/Europe/Australia(Except China)
Picture		
Basic Features		
Package	LGA	M.2
Dimension (mm)	41.0 x 44.0 x 2.75	30.0 x 52.0 x 2.3
Sub-6	n1/3/5/7/8/20/28/38/40/41/77/78/79	n1/3/5/8/20/28/38/41/77/78/79
mmWave	/	/
LTE FDD	B1/3/5/7/8/18/19/20/28/32	B1/3/5/7/8/19/20/28
LTE TDD	B38/40/41/42/43	B38/40/41/42/43
LAA	/	/
WCDMA	B1/3/5/8/19	B1/3/5/8/19
Operation mode	NSA & SA	NSA & SA
Antenna	6 +1(GPS)	4
Power Supply	3.3V ~ 4.4V, Typical 3.8V	3.135V ~ 4.4V, Typical 3.3V
Operating Temp.	-30°C ~ +75°C	-30°C ~ +75°C
Key Functions		
NR MIMO	DL 4 x 4 MIMO: n1/3/7/38/40/41/77/78/79 UL 2 x 2 MIMO: n41/77/78/79	DL 4 x 4 MIMO: n1/38/41/77/78/79 UL 2 x 2 MIMO: n41/77/78/79
LTE MIMO	DL 4 x 4 MIMO: B1/3/7/32/38/40/41/42/43 UL 1 x 1 MIMO	DL 4 x 4 MIMO: B1/38/41/42/43 UL 1 x 1 MIMO
NR SA（Mbps）	2100(DL)/900(UL)	2100(DL)/900(UL)
NR ENDC（Mbps）	2500(DL)/600(UL)	2500(DL)/600(UL)
LTE（Mbps）	1000(DL)/150(UL)	1000(DL)/150(UL)
WCDMA（Mbps）	42(DL)/5.76(UL)	42(DL)/5.76(UL)
Functions		
Voice	Volte	Volte
SMS	SMS over IP(IMS)	SMS over IP(IMS)
Audio	●	●
FOTA	●	●
OS Drivers	Linux/Andriod	Windows/Linux/Android
GNSS	GPS/GLONASS/Galileo/BeiDou/QZSS	GPS/GLONASS/Galileo/BeiDou/QZSS
Interfaces		
USB	USB3.1/3.0 & USB2.0	USB3.1/3.0 & USB2.0
PCIe	PCIe3.0	PCIe3.0
UART	●	
SPI	●	
GPIO	●	●
I2S	●	
SDIO	●	
UIM	●	●
I2C	●	●
MIPI	●	●
RGMII	●	
Approvals		
Regulation	CE*/RCM*/NCC*/KC*/RoHs*	CE*/RCM*/NCC*/KC*/RoHs*
Operator	Optus*/Telstra*/DT*/Carriers(TBD)	Optus*/Telstra*/DT*/Carriers(TBD)
Industry	GCF*/HF*	GCF*/HF*

Note: * = Planning

Product Name	FM150-NA
Category	NR Sub6
Region	North America
Picture	
Basic Features	
Package	M.2
Dimension (mm)	30.0 x 52.0 x 2.3
Sub-6	n2/5/7/12/25/41/48/66/71/77*/78
mmWave	/
LTE FDD	B2/4/5/7/12/13/14/17/25/26/29/30/66/71
LTE TDD	B41/42/43/48
LAA	B46
WCDMA	B1/2/4/5/8
Operation mode	NSA & SA
Antenna	4
Power Supply	3.135V ~ 4.4V, Typical 3.3V
Operating Temp.	-30°C ~ +75°C
Key Functions	
NR MIMO	DL 4 x 4 MIMO: n2/7/25/66/41/48/78/71 UL 1 x 1 MIMO
LTE MIMO	DL 4 x 4 MIMO: B2/4/7/25/30/41/42/43/48/66/71 UL 1 x 1MIMO
NR SA（Mbps）	2100(DL)/450(UL)
NR ENDC（Mbps）	4100(DL)/525(UL)
LTE（Mbps）	2000(DL)/150(UL)
WCDMA（Mbps）	42(DL)/5.76(UL)
Functions	
Voice	Volte
SMS	SMS over IP(IMS)
Audio	●
FOTA	●
OS Drivers	Windows/Linux/Android
GNSS	GPS/GLONASS/Galileo/BeiDou/QZSS
Interfaces	
USB	USB3.1/3.0 & USB2.0
PCIe	PCIe3.0
UART	
SPI	
GPIO	●
I2S	
SDIO	
UIM	●
I2C	●
MIPI	●
RGMII	
Approvals	
Regulation	FCC*/IC*/RoHs*
Operator	TMO*/AT&T*
Industry	GCF*/HF*/PTCRB*

Product Name	WG600-GL
Category	WiFi 6/BT 5.1
Region	Global
Picture	
Basic Features	
Package	LGA
Dimension (mm)	19.5 x 21.5 x 2.1
Chipset	Qualcomm QCA6391
WiFi Frequency	2.4/5GHz
WiFi Standard	802.11a/b/g/n/ac/ax
BT Protocol	BT5.1
Modulation mode	Max 1024QAM
Encryption mode	WPA3
Operation mode	AP/STA
Max access point	32
Voltage	VDD_RF: 3.85VDD_IO: 1.8V
Operating Temp.	-40°C ~ +85°C
Antenna	2
WiFi Data Rate	802.11a: Max 54Mbps 802.11b: Max 11Mbps 802.11g: Max 54Mbps 802.11n: Max 600Mbps 802.11ac: Max 866Mbps 802.11ax: Max 1774.5Mbps
BLE transfer rate	2Mbps
Interfaces	
SDIO	/
DBG_TXD	●
32KHz_IN	/
PICE	●
UART	●
PCM	●
Approvals	
Regulation	SRRC*/RoHs*/CE*/Reach*/RCM*
Operator	/
Regulation	HF*

Note: * = Planning

Fibocom LTE A Module Series

Product Name	NL952-NA-00	NL952-NA-20	NL952-EAU-20
Category	LTE Cat 20	LTE Cat 12	LTE Cat 12
Region	North America		Asia/Europe/Australia
Picture			
Basic Features			
Package	M.2		M.2
Dimension (mm)	30.0 x 52.0 x 2.3		30.0 x 52.0 x 2.3
Sub-6	/		/
mmWave	/		/
LTE FDD	B2/4/5/7/12/13/14/17/25/26/29/30/66/71		B1/3/5/7/8/18/19/20/28/32
LTE TDD	B41/48		B38/40/41/42/43/48
LAA	B46		/
WCDMA	B2/4/5		B1/5/6/8/19
Operation mode	/		/
Antenna	4		4
Power Supply	3.3V ~ 4.4V(Typical 3.8V)		3.3V ~ 4.4V(Typical 3.8V)
Operating Temp.	-30°C ~ +70°C		-30°C ~ +70°C
Key Functions			
NR MIMO	/	/	/
LTE MIMO	DL 4 x 4 MIMO: B2/4/7/25/30/41/48/66	DL 4 x 4 MIMO: B2/4/7/25/30/41/48/66	DL 4 x 4 MIMO: B1/3/7/32/38/40/41/42
NR SA（Mbps）	/	/	/
NR ENDC（Mbps）	/	/	/
LTE（Mbps）	2000(DL)/150(UL)	600(DL)/150(UL)	600(DL)/150(UL)
WCDMA（Mbps）	/	/	/
Functions			
Voice	Volte		Volte
SMS	●		●
Audio	●		●
FOTA	●		●
OS Drivers	Linux/Andriod		Linux/Andriod
GNSS	GPS/GLONASS/Galileo/BeiDou		GPS/GLONASS/Galileo/BeiDou
Interfaces			
USB	USB3.0		USB3.0
PCIe	PCIe2.0		PCIe2.0
UART	/		/
SPI	/		/
GPIO	●		●
I2S	/		/
SDIO	/		/
UIM	●		●
I2C	●		●
MIPI	●		●
RGMII	/		/
Approvals			
Regulation	IC/FCC		CE/RCM/RoHs/HF
Operator	AT&T/Verizon/TMO		/
Industry	PTCRB/GCF		GCF

Note: * = Planning

Product Name	L860-GL	L850-GL
Category	LTE Cat 16	LTE Cat 9
Region	Global	Global
Picture		
Basic Features		
Package	M.2	M.2
Dimension (mm)	42.0 x 30.0 x 2.3	42.0 x 30.0 x 2.3
LTE FDD	B1/2/3/4/5/7/8/12/13/14/17/18/19/20/21/25/26/28/29/30/32/66	B1/2/3/4/5/7/8/11/12/13/17/18/19/20/21/26/28/29/30/66
LTE TDD	B38/39/40/41/42	B38/39/40/41
WCDMA	B1/2/4/5/8	B1/2/4/5/8
TD-SCDMA		
EVDO		
CDMA2000 1X		
GSM/GPRS/EDGE		
Power Supply	3.135V ~ 4.4V(Typical 3.3V)	3.135V ~ 4.4V(Typical 3.3V)
Operating Temp.	-10°C ~ +55°C	-10°C ~ +55°C
Data Transmission		
SA 5G/NR Sub-6 Peak (Gbps)		
NSA Peak (Gbps)		
LTE FDD (Mbps)	1Gbps(DL)/75(UL)	450(DL)/50(UL)
LTE TDD (Mbps)	756Mbps(DL)/45(UL)	347(DL)/30(UL)
DC-HSPA+(Mbps)	42(DL)/11.5(UL)	42(DL)/5.76(UL)
HSPA/HSPA+(Mbps)	21(DL)/5.76(UL)	21(DL)/5.76(UL)
UMTS(kbps)	384(DL)/384(UL)	384(DL)/384(UL)
TD-SCDMA (Mbps)		
EVDO(Mbps)		
CDMA2000 1X(kbps)		
EDGE(Kbps)		
GPRS(Kbps)		
Functions		
eSIM	●	●
Remote SIM		
eCALL		
OpenCPU		
MUX		
Jamming Detection		
USSD	●	●
STK	●	●
LBS	●	●
FOTA		
OS Drivers	Windows/Linux*	Windows/Linux/Chrome
GNSS	●	●
MMS		
CSD		
TTS		
SMS	●	●
Analog Audio		
Digital Audio		
Voice Code		
Audio Play/Record		
Protocols	NCM/MBIM	NCM/MBIM
Interfaces		
SIM	x2, 1.8V/3.0V	x1, 3V/1.8V
USB	USB 2.0(For debug)	USB 2.0/USB 3.0(Android*/Linux*)
PCIe	●	●
UART		
SPI		
ADC		
GPIO	I2S(Reserved)	I2S(Reserved)/I2C(Reserved)
Approvals		
Regulation	IC/FCC/RoHS/CE/NCC/NAL&CCC&SRRC/JATE&TELEC/ANATEL/ENACOM/ACMA/MCIT/DWLF&M/TU/MOCI/ATT/Bocra/AITI/MPTC/ART/CRC/NTRA/TAF/ARCEP/NCA/CONATEL/POSTEL/CMC/ARTCI/SMA/TRC/CA/KC/CITRA/MPTC/MOT/SIRIM/ICTA/IFETEL/ANRCETI/ANRT/INCM/NTA/Curacao/NCC/TRA/PTA/CONATEL/MTC/NTC/ictQATAR/EAC/CITC/ARTP/RATEL/IMDA/ICASA/KC/TRCSL/SCCOM/TCRA/NBTC/TATT/MINCOM/UkrSEPRO/TRA/URSEC/TASHKENT/CONATEL/MIC/POTRAZ	CCC/SRRC/RoHS/FCC/CE/CB/ENACOM/MINCOM/RCM/Anatel/TRA/DOC/EAC/IC/TRC/SUBTEL/CRC/ARCOTEL/VOC/SDPPI/MOC/JPA&JRF/TRC/CCK/KCC/MOC/Lebanon/SIRIM/IFT/Morocco/NTA/PTA/MTC/NTC/CRA/FSS/FAC/ICASA/RATEL/CITC/IDA/NCC/NBTC/UkrSEPRO/Uzbekistan/Uruguay/Dealer Registration/VC/CONATEL/Ecuador/Nigeria
Operator	AT&T/Verizon/Sprint/DTAG/Vodafone/Telefonica/Swisscom/DoCoMo/KDDI/Softbank/Telstra/Optus	AT&T/ Verizon/ DCM/Softbank/KDDI/Optus/Telstra/Swisscom/DT/TEF/Vodafone
Industry	GCF/PTCRB/CB	GCF/PTCRB/HF/CB

Note: * = Planning

Fibocom LTE A Module Series

Product Name	FG621-EA	NL678-E
Category	LTE Cat 6	LTE Cat 6
Region	EMEA/Australia	Europe
Picture		
Basic Features		
Package	LGA	MiniPCIe
Dimension (mm)	37.0 x 39.5 x 2.8	51.0 x 30.0 x 4.3
LTE FDD	B1/3/5/7/8/20/28	B1/3/5/7/8/20/28/32
LTE TDD	B38/40/41(100MHz)	B38/40/41
WCDMA	B1/3/5/8	B1/3/5/8
TD-SCDMA		
EVDO		
CDMA2000 1X		
GSM/GPRS/EDGE		
Power Supply	3.4V ~ 4.3V(Typical 3.8V)	3.1V ~ 4.4V(Typical 3.3V)
Operating Temp.	-30°C ~ +75°C	-30°C ~ +75°C
Data Transmission		
LTE FDD (Mbps)	300(DL)/50(UL)	300(DL)/50(UL)
LTE TDD (Mbps)	260(DL)/30(UL)	260(DL)/30(UL)
DC-HSPA+(Mbps)	42(DL)/11(UL)	42(DL)/5.76(UL)
HSPA/HSPA+(Mbps)		
WCDMA(kbps)	384(DL)/384(UL)	384(DL)/384(UL)
TD-SCDMA (Mbps)		
EVDO(Mbps)		
CDMA2000 1X(kbps)		
EDGE(Kbps)		
GPRS(Kbps)		
Functions		
eSIM		
Remote SIM		
eCALL		
OpenCPU		
MUX		
Jamming Detection		
USSD	●	Optional
STK		
LBS		
FOTA	DFOTA	DFOTA
OS Drivers	Linux/ Android*/Windows*	Linux/Windows*/Android*
GNSS		Optional
MMS		
CSD		
TTS		
SMS	●	●
Analog Audio		●
Digital Audio	●	Optional
Voice Code		Optional
Audio Play/Record		
Protocols	DHCP/TCP*/UDP*/HTTP(S)*/FTP(S)*/IPv4/IPv6/SSL*/ECM/NCM/RNDIS	DHCP/TCP*/UDP*/HTTP(S)*/FTP(S)*/IPv4/IPv6/SSL*/PPP/ECM/RNDIS/ GobiNet/QMI_WWAN
Interfaces		
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	x 1, USB2.0	x 2, USB 2.0/USB 3.0
PCIe		●
UART	x 4	x 2
SPI	●	
ADC	x 2	
GPIO	●	
SDIO	●	
PCM	●	●
SGMII		
Approvals		
Regulation	RoHS/CE/RCM/JATE*/TELEC*/KC*	RoHS/REACH/CE/RCM/NCC
Operator	DT*/BT*/H3G*/EE*/Telefonica*/Vodafone*/Swisscom*/Optus*/ DOCOMO*/SoftBank*/KDDI*/SKT*/KT*/LG U+*	
Industry	HF/GCF	HF/GCF

Note: * = Planning

Fibocom LTE Module Series

Product Name	NL652-EU	NL668-EAU	NL668-EAU MiniPCIe	NL668-EAU-00-M2-10
Category	LTE Cat 4			
Region	Europe	Europe/Australia		
Picture				
Basic Features				
Package	M.2	LCC+LGA	MiniPCIe	M.2
Dimension (mm)	42.0 x 30.0 x 2.5	29.0 x 32.0 x 2.4	30.0 x 51.0 x 4.9(Analog Audio) 30.0 x 51.0 x 3.7(Digital Audio)	42.0 x 30.0 x 4.6
LTE FDD	B1/3/5/7/8/20/28	B1/3/5/7/8/20/28	B1/3/5/7/8/20/28	B1/3/5/7/8/20/28
LTE TDD	B38/40/41	B38/40/41	B38/40/41	B38/40/41
WCDMA	B1/3/5/8	B1/5/8	B1/5/8	B1/5/8
TD-SCDMA				
EVDO				
CDMA2000 1X				
GSM/GPRS/EDGE	850/900/1800MHz	850/900/1800MHz	850/900/1800MHz	850/900/1800MHz
Power Supply	3.15V ~ 4.3V (typical 3.3V)	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)	3.15V ~ 4.3V (typical 3.3V)
Operating Temp.	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C
Data Transmission				
LTE FDD (Mbps)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)
LTE TDD (Mbps)	130(DL)/30.5(UL)	130(DL)/30.5(UL)	130(DL)/30.5(UL)	130(DL)/30.5(UL)
DC-HSPA+(Mbps)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)
HSPA/HSPA+(Mbps)				
WCDMA(kbps)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)
TD-SCDMA (Mbps)				
EVDO(Mbps)				
CDMA2000 1X(kbps)				
EDGE(Kbps)	296(DL)/ 236.8(UL)	296(DL)/236.8(UL)	296(DL)/236.8(UL)	296(DL)/236.8(UL)
GPRS(Kbps)	107(DL)/85.6(UL)	107(DL)/85.6(UL)	107(DL)/85.6(UL)	107(DL)/85.6(UL)
Functions				
eSIM				
Remote SIM				
eCALL		●	●	
OpenCPU				
MUX	●	●	●	●
Jamming Detection				
USSD	●	●	●	●
STK				
LBS	●	●	●	●
FOTA	DFOTA	DFOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android
GNSS		●	●	
MMS				
CSD		●	●	
TTS		●	●	
SMS	●	●	●	●
Analog Audio		Optional	Optional	
Digital Audio		●	●	
Voice Code		●	●	
Audio Play/Record		●	●	
Protocols	HTTP(S)*/FTP(S)*/TCP(S)*/UDP*/ IPv4*/IPv6*/MQTT*/PPP/ECM/ RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/ IPv6/SSL/TLS/MQTT/PING/NTP/FFS/ NITZ/PPP/ECM/RNDIS/GobiNet/ QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/ IPv6/SSL/TLS/MQTT/PING/NTP/FFS/ NITZ/PPP/ECM/RNDIS/GobiNet/ QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/ IPv6/SSL/TLS/MQTT/PING/NTP/FFS/ NITZPPP/ECM/RNDIS/GobiNet/ QMI_WWAN
Interfaces				
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	x1, USB2.0	x 1, USB 2.0	x 1, USB 2.0	x1, USB2.0
PCIe				
UART		x 2	x 2	
SPI		●	●	
ADC		x 2		
GPIO	●	●		
SDIO		●		
PCM		●	●	
SGMII		●		
Approvals				
Regulation	CE/RoHS	RoHS/CE-RED/NCC/RCM/ANATEL	RoHS/CE-RED/NCC/RCM/ANATEL	RoHS/CE-RED/NCC/RCM/ANATEL
Operator		DTAG/Vodafone	DTAG/Vodafone	DTAG/Vodafone
Industry	HF/GCF	HF/GCF	HF/GCF	HF/GCF

Note: * = Planning

Product Name	NL668-EU	NL668-EU MiniPCIe	NL668-AM	NL668-AM MiniPCIe
Category	LTE Cat 4			
Region	Europe		North America	
Picture				
Basic Features				
Package	LCC+LGA	MiniPCIe	LCC+LGA	MiniPCIe
Dimension (mm)	29.0 x 32.0 x 2.4	30.0 x 51.0 x 4.9(Analog Audio) 30.0 x 51.0 x 3.7(Digital Audio)	29.0 x 32.0 x 2.4	30.0 x 51.0 x 4.9(Analog Audio) 30.0 x 51.0 x 3.7(Digital Audio)
LTE FDD	B1/3/5/7/8/20	B1/3/5/7/8/20	B2/4/5/12/13/17/66/71	B2/4/5/12/13/17/66/71
LTE TDD	B38/40/41	B38/40/41		
WCDMA	B1/5/8	B1/5/8	B2/4/5	B2/4/5
TD-SCDMA				
EVDO				
CDMA2000 1X				
GSM/GPRS/EDGE	850/900/1800MHz	850/900/1800MHz		
Power Supply	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)
Operating Temp.	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C
Data Transmission				
LTE FDD (Mbps)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)
LTE TDD (Mbps)				
DC-HSPA+(Mbps)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)
HSPA/HSPA+(Mbps)				
WCDMA(kbps)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)
TD-SCDMA (Mbps)				
EVDO(Mbps)				
CDMA2000 1X(kbps)				
EDGE(Kbps)	296(DL)/236.8(UL)	296(DL)/236.8(UL)		
GPRS(Kbps)	107(DL)/85.6(UL)	107(DL)/85.6(DL)		
Functions				
eSIM				
Remote SIM				
eCALL	●	●	Optional	Optional
OpenCPU				
MUX	●	●	●	●
Jamming Detection				
USSD	●	●	●	●
STK				
LBS	●	●	●	●
FOTA	DFOTA	DFOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android
GNSS	●	●	●	●
MMS				
CSD	●	●		
TTS	●	●	●	●
SMS	●	●	●	●
Analog Audio	Optional	Optional	Optional	Optional
Digital Audio	●	●	●	●
Voice Code	●	●	●	●
Audio Play/Record	●	●	●	●
Protocols	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN
Interfaces				
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	x 1, USB 2.0	x 1, USB 2.0	x 1, USB 2.0	x 1, USB 2.0
PCIe				
UART	x 2	x 2	x 2	x 2
SPI	●	●	●	●
ADC	x 2		x 2	
GPIO	●		●	
SDIO	●		●	
PCM	●	●	●	●
SGMII	●		●	
Approvals				
Regulation	CE-RED/ROHS	CE-RED/ROHS	FCC/RoHS/IC	FCC/RoHS/IC
Operator			Verizon/AT&T/T-Mobile	Verizon/AT&T/T-Mobile
Industry	GCF/HF	GCF/HF	GCF/HF/PTCRB	GCF/HF/PTCRB

Note: * = Planning

Fibocom LTE Module Series

Product Name	NL668-LA	NL668-LA MiniPCIe	NL668-JP	NL668-JP MiniPCIe
Category	LTE Cat 4			
Region	Latin America		Japan	
Picture				
Basic Features				
Package	LCC+LGA	MiniPCIe	LCC+LGA	MiniPCIe
Dimension (mm)	29.0 x 32.0 x 2.4	30.0 x 51.0 x 4.9(Analog Audio) 30.0 x 51.0 x 3.7(Digital Audio)	29.0 x 32.0 x 2.4	30.0 x 51.0 x 4.9(Analog Audio) 30.0 x 51.0 x 3.7(Digital Audio)
LTE FDD	B1/2/3/4/5/7/8/12/17/28/66	B1/2/3/4/5/7/8/12/17/28/66	B1/3/8/11/18/19/21/26/28	B1/3/8/11/18/19/21/26/28
LTE TDD	B38/40	B38/40	B41	B41
WCDMA	B1/2/3/4/5/8	B1/2/3/4/5/8	B1/6/8/19	B1/6/8/19
TD-SCDMA				
EVDO				
CDMA2000 1X				
GSM/GPRS/EDGE	850/900/1800/1900MHz	850/900/1800/1900MHz		
Power Supply	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)	3.3V ~ 4.3V (Typical 3.8V)
Operating Temp.	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +75°C
Data Transmission				
LTE FDD (Mbps)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)	150(DL)/50(UL)
LTE TDD (Mbps)	130(DL)/30.5(UL)	130(DL)/30.5(UL)	130(DL)/30.5(UL)	130(DL)/30.5(UL)
DC-HSPA+(Mbps)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)
HSPA/HSPA+(Mbps)				
WCDMA(kbps)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)	384(DL)/384(UL)
TD-SCDMA (Mbps)				
EVDO(Mbps)				
CDMA2000 1X(kbps)				
EDGE(Kbps)	296(DL)/236.8(UL)	296(DL)/236.8(UL)		
GPRS(Kbps)	107(DL)/85.6(UL)	107(DL)/85.6(DL)		
Functions				
eSIM				
Remote SIM				
eCALL	Optional	Optional	Optional	Optional
OpenCPU				
MUX	●	●	●	●
Jamming Detection				
USSD	●	●	●	●
STK				
LBS	●	●	●	●
FOTA	DFOTA	DFOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android
GNSS	●	●	●	●
MMS				
CSD				
TTS	●	●	●	●
SMS	●	●	●	●
Analog Audio	Optional	Optional	Optional	Optional
Digital Audio	●	●	●	●
Voice Code	●	●	●	●
Audio Play/Record	●	●	●	●
Protocols	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN	TCP/UDP(S)/HTTP(S)/FTP(S)/IPv4/IPv6/SSL/TLS/MQTT/PING/NTP/FFS/NITZ/PPP/ECM/RNDIS/GobiNet/QMI_WWAN
Interfaces				
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	x 1, USB 2.0	x 1, USB 2.0	x 1, USB 2.0	x 1, USB 2.0
PCIe				
UART	x 2	x 2	x 2	x 2
SPI	●	●	●	●
ADC	x 2		x 2	
GPIO	●		●	
SDIO	●		●	
PCM	●	●	●	●
SGMII	●		●	
Approvals				
Regulation	RoHS/FCC	RoHS/FCC	RoHS/JATE/TELEC	RoHS/JATE/TELEC
Operator			DOCOMO/Softbank/KDDI	DOCOMO/Softbank/KDDI
Industry	HF	HF	HF	HF

Note: * = Planning

Fibocom LTE Module Series

Product Name	L610-EU	L610-EU MiniPCIe	L610-LA	L610-LA MiniPCIe
Category	LTE Cat 1			
Region	Europe		Latin America	
Picture				
Basic Features				
Package	LCC+LGA	MiniPCIe	LCC+LGA	MiniPCIe
Dimension (mm)	28.0 x 31.0 x 2.35	50.8 x 29.85 x 3.4	28.0 x 31.0 x 2.35	50.8 x 29.85 x 3.4
LTE FDD	B1/3/7/8/20/28*	1/3/7/8/20/28*	B1/2/3/4/5/7/8/28/66	B1/2/3/4/5/7/8/28/66
LTE TDD				
WCDMA				
TD-SCDMA				
EVDO				
CDMA2000 1X				
GSM/GPRS/EDGE	900/1800MHz	900/1800MHz	850/900/1800/1900MHZ	850/900/1800/1900MHZ
Power Supply	3.4V ~ 4.3V (Typical 3.8V)	3.4V ~ 4.3V (Typical 3.8V)	3.4V ~ 4.3V (Typical 3.8V)	3.4V ~ 4.3V (Typical 3.8V)
Operating Temp.	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Data Transmission				
LTE FDD (Mbps)	10(DL)/5(UL)	10(DL)/5(UL)	10(DL)/5(UL)	10(DL)/5(UL)
LTE TDD (Mbps)				
DC-HSPA+(Mbps)				
HSPA/HSPA+(Mbps)				
UMTS(kbps)				
TD-SCDMA (Mbps)				
EVDO(Mbps)				
CDMA2000 1X(kbps)				
EDGE(Kbps)				
GPRS(Kbps)	85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)
Functions				
eSIM				
Remote SIM				
eCALL				
OpenCPU	●		●	
MUX	●	●	●	●
Jamming Detection				
USSD				
STK				
LBS				
FOTA	DFOTA	DFOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android	Linux/Windows/Android
GNSS				
MMS				
CSD				
TTS				
SMS	●	●	●	●
Analog Audio	●	●	●	●
Digital Audio	●	●	●	●
Voice Code	HR/FR/EFR/AMR/Call display, Call forwarding, Call holding, Call waiting and ulti party call	HR/FR/EFR/AMR/Call display, Call forwarding, Call holding, Call waiting and ulti party call	HR/FR/EFR/AMR/Call display, Call forwarding, Call holding, Call waiting and ulti party call	HR/FR/EFR/AMR/Call display, Call forwarding, Call holding, Call waiting and ulti party call
Audio Play/Record	●	●	●	●
Protocols	TCP/UDP(S)/HTTP(S)/FTP(S)/ IPV4/IPV6/SSL/MQTT/NTP	TCP/UDP(S)/HTTP(S)/FTP(S)/ IPV4/IPV6/SSL/MQTT/NTP	TCP/UDP(S)/HTTP(S)/FTP(S)/ IPV4/IPV6/SSL/MQTT/NTP	TCP/UDP(S)/HTTP(S)/FTP(S)/ IPV4/IPV6/SSL/MQTT/NTP
Interfaces				
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	x 1, USB2.0	x 1, USB2.0	x 1, USB2.0	x 1, USB2.0
PCIe				
UART	x 2	x 2	x 2	x 2
SPI	●	●	●	●
ADC	●		●	
GPIO	●		●	
Approvals				
Regulation	RoHS/CE*	RoHS/CE*	RoHS/FCC/Anatel*	RoHS/FCC/Anatel*
Operator				
Industry	GCF*	GCF*	HF	HF

Note: * = Planning

Fibocom WCDMA/HSPA+ Module Series

Product Name	H330S	H330S MiniPCIe
Category	WCDMA/HSPA+	
Region	Europe/North America/Brazil/Japan/Australia	
Picture		
Basic Features		
Package	LGA	MiniPCIe
Dimension (mm)	33.8 x 27.8 x 2.45	50.95 x 30.0 x 3.45
LTE FDD		
LTE TDD		
WCDMA	B1/2/5/8	B1/2/5/8
TD-SCDMA		
EVDO		
CDMA2000 1X		
GSM/GPRS/EDGE	850/900/1800/1900MHz	850/900/1800/1900MHz
Power Supply	3.3V ~ 4.2V(Typical 3.8V)	3.0V ~ 3.6V(Typical 3.3V)
Operating Temp.	-40°C ~ +85°C	-40°C ~ +85°C
Data Transmission		
LTE FDD (Mbps)		
LTE TDD (Mbps)		
DC-HSPA+(Mbps)		
HSPA/HSPA+(Mbps)	21 or 7.2(DL) / 5.76 (UL)	21 or 7.2(DL) / 5.76 (UL)
UMTS(kbps)		
TD-SCDMA (Mbps)		
EVDO(Mbps)		
CDMA2000 1X(kbps)		
EDGE(Kbps)	296(DL)/236.8(UL)	296(DL)/236.8(UL)
GPRS(Kbps)	107(DL)/85.6(UL)	107(DL)/85.6(UL)
Functions		
eSIM		
Remote SIM	●	●
eCALL		
OpenCPU		
MUX	●	●
Jamming Detection		
USSD	●	●
STK	●	●
LBS		
FOTA	●	●
OS Drivers	Android/Linux/Windows	Android/Linux/WinCE
GNSS		
MMS		
CSD	●	●
TTS		
SMS	●	●
Analog Audio	●	●
Digital Audio	●	
Voice Code	HR/FR/EFR/AMR	HR/FR/EFR/AMR
Audio Play/Record	●	
Protocols	TCP/UDP/SSL/FTP/NTP/HTTP/PPP	TCP/UDP/SSL/PPP/FTP/NTP/HTTP
Interfaces		
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	USB 2.0	USB 2.0
PCIe		●
UART	x 2	x 2
SPI		
ADC	●	
GPIO	●	
Approvals		
Regulation	CE-RED/FCC/PTCRB/RoHS/Anatel/JRF/RCM/CCC	CE-RED/FCC/PTCRB/RoHS/Anatel/JRF/RCM/CCC
Operator		
Industry	GCF	GCF

Note: * = Planning

Fibocom GSM/GPRS Module Series

Product Name	G510-Q50	G500-Q50
Category	GSM/GPRS	
Region	Global	China/Brazil
Picture		
Basic Features		
Package	LCC	LCC+LGA
Dimension (mm)	20.2 x 22.2 x 2.5	18.7 x 16.0 x 2.4
LTE FDD		
LTE TDD		
WCDMA		
TD-SCDMA		
EVDO		
CDMA2000 1X		
GSM/GPRS/EDGE	850/900/1800/1900MHz	850/900/1800/1900MHz
Power Supply	3.3V ~ 4.5V(Typical 3.8V)	3.3V ~ 4.5V(Typical 3.8V)
Operating Temp.	-40°C ~ +85°C	-40°C ~ +85°C
Data Transmission		
LTE FDD (Mbps)		
LTE TDD (Mbps)		
DC-HSPA+(Mbps)		
HSPA/HSPA+(Mbps)		
UMTS(kbps)		
TD-SCDMA (Mbps)		
EVDO(Mbps)		
CDMA2000 1X(kbps)		
EDGE(Kbps)		
GPRS(Kbps)	85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)
Functions		
eSIM	●	
Remote SIM		●
eCALL		
OpenCPU	●	●
MUX	●	●
Jamming Detection	●	●
USSD	●	●
STK		
LBS	●	●
FOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows	Linux/Windows
GNSS		
MMS		
CSD		
TTS	●*	●*
SMS	●	●
Analog Audio	●	●
Digital Audio		
Voice Code	HR/FR/EFR/AMR	HR/FR/EFR/AMR
Audio Play/Record		
Protocols	TCP/UDP/NTP/NITZ/SSL/TLS/PPP/MQTT/FFS/FTP(S)/HTTP(S)/IPv6*	TCP/UDP/NTP/NITZ /HTTP(S)/MQTT/FFS/FTP(S)/SSL/TLS/PPP/IPv6*
Interfaces		
SIM	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB		
PCIe		
UART	x 3	x 3
SPI		
ADC		x 2
GPIO	●	●
Approvals		
Regulation	CE/RoHS/SRRC/NAL/CCC/Anatel	CE-RED/RoHS/ SRRC/NAL/CCC/Anatel
Operator		
Industry	HF/ GCF	

Note: * = Planning

Fibocom LPWA Module Series

Product Name	MA510-GL	N510-GL	N510-EAU
Category	LTE Cat M	NB-IoT	
Region	Global		Europe/Asia/Australia
Picture			
Basic Features			
Package	LCC+LGA	LCC+LGA	LCC+LGA
Dimension (mm)	22.2 x 20.2 x 2.1	22.2 x 20.2 x 2.1	22.2 x 20.2 x 2.1
LTE FDD	Cat M1: B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85 Cat NB2: B1/2/3/4/5/8/12/13/18/19/20/25/26/28/66/71/85	Cat NB2: B1/2/3/4/5/8/12/13/17/18/19/20/25/26/28/66/71/85	Cat NB1: B1/3/8/20/28
LTE TDD			
WCDMA			
TD-SCDMA			
EVDO			
CDMA2000 1X			
GSM/GPRS/EDGE	850/900/1800/1900MHz		
Power Supply	3.3V ~ 4.5V(Typical 3.8V)	3.3V ~ 5.0V (Typical 3.8V)	3.3V ~ 5.0V (Typical 3.8V)
Operating Temp.	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Data Transmission			
LTE FDD (Mbps)	Cat-M1 R14: 375(DL)/1119(UL) Cat-NB2 R14: 126.8(DL)/158.5(UL)	Cat-NB1 R13: Multi-tone: 26.15(DL)/62.5 (UL); Single-tone:15.6 (UL) Cat-NB2 R14: Multi-tone: 126.8 (DL)/158.5 (UL); Single-tone:18.1 (UL)	Cat NB1 Multi-tone: 26.15(DL)/62.5(UL) Single-tone: 15.6(UL)
LTE TDD (Mbps)			
DC-HSPA+(Mbps)			
HSPA/HSPA+(Mbps)			
UMTS(kbps)			
TD-SCDMA (Mbps)			
EVDO(Mbps)			
CDMA2000 1X(kbps)			
EDGE(Kbps)	296Kbps(DL)/236.8Kbps(UL)		
GPRS(Kbps)	107Kbps(DL)/85.6Kbps(UL)		
Functions			
eSIM			
Remote SIM			
eCALL			
OpenCPU		●	
MUX	●	●	●
Jamming Detection	●		
USSD			
STK			
LBS	●	●*	●*
FOTA	DFOTA	DFOTA	DFOTA
OS Drivers	Linux/Windows/Android	Linux/Windows	Linux/Windows
GNSS	●		
MMS			
CSD			
TTS			
SMS	●	●	●
Analog Audio			
Digital Audio	●		
Voice Code	HR/FR/EFR/AMR		
Audio Play/Record			
Protocols	TCP/UDP(S)/HTTP(S)/MQTT/FFS/FTP(S)/IPV6/SSL/TLS/PING/NTP/NITZ/LwM2M/CoAP/Cell ID	TCP/UDP/HTTP(S)/LwM2M/MQTT/SSL/TLS/IPV4/IPV6/NTP/NITZ/Cell ID	TCP/UDP/HTTP(S)/LwM2M/MQTT/SSL/TLS/IPV4/IPV6/NTP/NITZ/Cell ID
Interfaces			
SIM	x 1, 1.8V	x 1, 1.8V/3.0V	x 1, 1.8V/3.0V
USB	USB 2.0		
PCIe			
UART	x 3	x 2	x 2
SPI	●	●	●
ADC	x 2	x 2	x 2
GPIO	●	●	●
Approvals			
Regulation	RoHS/RCM/NCC/IC/Reach/Anatel/CE/TELEC/JATE	CE-RED/RoHS/FCC/NCC	CE-RED/ROHS/NCC
Operator	Sprint/AT&T/Verizon/SoftBank*/Docomo*/KDDI/DT/Vodafone/Telefonica*/Telstra*	DT/Verizon*/Vodafone*/TMO	DT
Industry	HF/GCF/PTCRB	HF/PTCRB/GCF	HF/GCF

Note: * = Planning

Product Name	SS808-EAU	SS808-NA	SS808-JP*
Category	Smart(LTE Cat 4)		
Region	Europe/Asia/Australia/Brazil	North America	Japan
Picture			
Basic Features			
Package	152 LCC+ 80 LGA		
Processor	Qualcomm’s® SDM450, ARM® Cortex™-A53 8-core 64-bit CPU up to 1.8GHz, one quad with 512 KB L2 cache, one quad with 512 KB L2 cache		
GPU	Adreno506		
Memory(Default)	2GB LPDDR3 RAM; 16GB eMMC Flash		
Dimensions (mm)	41.0 x 41.0 x 2.8		
Frequency	LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41 WCDMA: B1/2/5/8 GSM: 850/900/1800/1900MHz	LTE-FDD: B2/4/5/7/12/13/17/25/26/66 LTE-TDD: B41 WCDMA: B2/4/5	LTE-FDD: B1/3/6/8/9/18/19/21/26/28 LTE-TDD: B41 WCDMA: B1/6/8/9/19
WIFI	2.4G+5G, 802.11a/b/g/n/ac		
BT	BT4.2 (BR/EDR+BLE)		
GNSS	GPS/GLONASS/Beidou		
OS	Android P/Q*		
Power Supply	3.5V ~ 4.2V		
Weight	About10.3g		
Operating Temp.	-30°C ~ +75°C		
Storage Temp.	-40°C ~ +85°C		
Data Transmission			
LTE FDD (Mbps)	Max 150(DL)/Max 50(UL)		
LTE TDD (Mbps)	Max 130(DL)/Max 30(UL)		
UMTS/HSPA/HSPA+ (Mbps)	HSUPA Max 5.76(UL) HSPA+ Max 42(DL)		
TD-SCDMA (Mbps)	Max 4.2(DL)/2.2 (UL)		
CDMA EVDO (Mbps)	Max 3.1(DL)/1.8(UL)		
EDGE/GPRS(Kbps)	EDGE:Max 296(DL)/236.8(UL) GPRS:Max 107(DL)/85.6(UL)		
WIFI (Mbps)	up to 433		
Video Processing			
Video Encoding	1080p@60fps (H.264/H.265/VP8)		
Video Decoding	1080p@60fps(H.264/H.265/VP8/VP9)		
Interfaces			
Hardware Interface	UART/SPI(Mbps)	3 x UART Up to 4; SPI Up to 50	
	I2C(Kbps)	Up to 400; For CTP/Camera/Sensor	
	USB	1 x USB2.0 high-speed interface,support USB OTG(Require 5V power supply)	
	SDIO	Support SD3.0 protocol; Support 4 bit SD card	
	CAM	2 x MIPI_CSI 4lane(Up to 2.1G) MIPI_CSI 4lane (Up to 21Mp)	
	GPIO	21 GPIOs	
	Display	MIPI_DSI x 2,Dual LCD; Up to 1920x1200	
Audio Interface	Speaker	1 x Mono, differential 1W CLASS-D	
	Receiver	1 x Mono, AB	
	Mic	2 x analog microphones	
	Handset	1x Stereo, single-ended output	
SIM card interface	USIM	2 x SIM card, support dual-card, dual-standby	
Key	Keys	Power on/off/Volume up/Volume down/Reset	
Advantages		1、Octa-core A53 processor with up to 1.8GHz CPU Clock Speed 2、Support dual-LCD and multipath camera	
Applications		Smart Cash Register,Security Monitoring, High-end Police or Law Enforcement Equipment, Vehicle-mounted Equipment	
Approvals			
Regulation	CE*/Anatel*/RCM*/NCC*	RoHS/FCC	JATE*/TELEC*
Operator	Telstra*	AT&T*/Verizon*	DCM*/KDDI*/Softbank*
Industry	GCF*	PTCRB	

Note: * = Planning

Product Name	SQ808-EAU	SQ808-NA	SQ808-JP
Category	Smart(LTE Cat 4)		
Region	Europe/Asia/Australia/Brazil	North America	Japan
Picture			
Basic Features			
Package	148 LCC+84 LGA		
Processor	Qualcomm's® QCM2150, ARM® Cortex-A53 Quad-core 64-bit CPU up to 1.3GHz		
GPU	Adreno 308		
Memory(Default)	1GB/2GB LPDDR3 RAM; 8GB/16GB eMMC Flash		
Dimensions (mm)	41.0 x 41.0 x 2.8		
Frequency	LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41 WCDMA: B1/2/5/8 GSM: 850/900/1800/1900MHz	LTE-FDD: B2/4/5/7/12/13/17/25/26/66 LTE-TDD: B41 WCDMA: B1/2/4/5/8 GSM: 850/900/1900MHz	LTE-FDD: B1/6/8/9/18/19/21/26/28 LTE-TDD: B41 WCDMA: B1/6/8/9/19
WIFI	2.4G+5G, 802.11a/b/g/n/ac		
BT	BT4.2 (BR/EDR+BLE)		
GNSS	GPS/GLONASS/Beidou		
OS	Android Q		
Power Supply	DC 3.5V ~ 4.2V		
Weight	About10.4g		
Operating Temp.	-30°C ~ +75°C		
Storage Temp.	-40°C ~ +85°C		
Data Transmission			
LTE FDD (Mbps)	Max 150(DL)/Max 50(UL)		
LTE TDD (Mbps)	Max 130(DL)/Max 30(UL)		
UMTS/HSPA/HSPA+ (Mbps)	HSUPA Max 5.76(UL) HSPA+ Max 42(DL)		
TD-SCDMA (Mbps)	Max 4.2(DL)/2.2 (UL)		
CDMA EVDO (Mbps)	Max 3.1(DL)/Max 1.8(UL)		
EDGE/GPRS(Kbps)	EDGE: Max 296(DL)/Max236.8(UL) GPRS: Max 107(DL)/Max85.6(UL)		
WIFI (Mbps)	up to 433		
Video Processing			
Video Encoding	1080p 30 fps (H.264)		
Video Decoding	1080p 30 fps (H.264, HEVC, VP8)		
Interfaces			
Hardware Interface	UART/SPI(Mbps)	3 x UART Up to 4; SPI Up to 50	
	I2C(Kbps)	Up to 400; For CTP/Camera/Sensor	
	USB	1 x USB2.0 high-speed interface,support USB OTG(Require 5V power supply)	
	SDIO	Support SD3.0 protocol; Support 4 bit SD card	
	CAM	2 x 4-lane MIPI_CSI，Up to 2.1G 4-lane MIPI_CSI0 connect 1 main camera，up to 13MP; 4-lane MIPI_CSI1 connect 1/2 vice camera	
	GPIO	21 GPIOs	
	Display	4-lane MIPI_DSI DSI，Up to HD+ (1440 × 720) 60 fps	
Audio Interface	Speaker	1 x Mono, differential 1W CLASS-D	
	Receiver	1 x Mono, AB	
	Mic	2 x analog microphones	
	Handset	1 x Stereo, single-ended output	
SIM card interface	USIM	2 x SIM card, support dual-card dual-standby	
Key	Keys	Power on/off/Volume up/Volume down/Reset	
Advantages		1、Quad-core A53 processor with up to 1.3GHz CPU Clock Speed 2、Android Q 3、Support HD+ Display	
Applications		Wireless Intelligent Payment, Intelligent Robot, Smart Home, Smart City and Smart Industries	
Approvals			
Regulation	CE/RoHS/REACH/POPs/NCC/KC	FCC/RoHS/IC/ISED/NOM	MIC/RoHS/TELEC/JATE
Operator		AT&T*/Bell*/T-Mobile*/Verizon*/Telus*/ Rogers*/Telcel*	Softbank*/KDDI*/NTT Docomo*
Industry	GCF	PTCRB/GCF*	

Note: * = Planning

Product Name		SU808-EAU
Category		Smart(LTE Cat 4)
Region		Europe/Asia/Australia/Brazil
Picture		
Basic Features		
Package		148 LCC+ 84 LGA
Processor		UNISOC's® SL8541E, ARM® Cortex™-A53 Quad-core up to 1.4GHz
GPU		Mali T820
Memory(Default)		1GB/2GB LPDDR3 RAM; 8GB/16GB eMMC Flash
Dimensions (mm)		41.0 x 41.0 x 2.8
Frequency		LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41（2535 ~ 2655MHz） WCDMA: B1/2/5/8 GSM: B2/3/5/8
WIFI		2.4GHz 802.11 b/g/n
BT		BT4.2 (BR/EDR+BLE)
GNSS		GPS/Beidou
OS		Android Q
Power Supply		DC 3.5～4.2V
Weight		About9.5g
Operating Temp.		-20°C ~ +75°C
Storage Temp.		-40°C ~ +85°C
Data Transmission		
LTE FDD (Mbps)		Max 150(DL)/Max 50(UL)
LTE TDD (Mbps)		Max 130(DL)/Max 30(UL)
UMTS/HSPA/HSPA+ (Mbps)		HSUPA Max 11(UL) HSDPA Max 21(DL)
TD-SCDMA (Mbps)		
CDMA EVDO (Mbps)		
EDGE/GPRS(Kbps)		EDGE: Max 296(DL)/Max 236.8 (UL) GPRS: Max 107(DL)/Max 85.6(UL)
WIFI (Mbps)		up to 72.2
Video Processing		
Video Encoding		1080p 30 fps (H.264, MPEG4, H.263)
Video Decoding		1080p 30 fps (H.264, MPEG4, H.263,VP 8)
Interfaces		
Hardware Interface	UART/SPI(Mbps)	3 x UART Up to 3
	I2C(Kbps)	4 x I2C Up to 3.4Mbps
	USB	1 x USB2.0 support OTG
	SDIO	1 x SD3.0
	CAM	1 x MIPI_CSI1 (up to 13Mp CSI1 4lanes) 1 x MIPI_CSI0 (up to 8Mp CSI0 4lanes)
	GPIO	25 GPIOs
	Display	4-lane MIPI_DSI; Up to HD+(1440 x 720)@60fps
Audio Interface	Speaker	1 x Mono, differential 1W CLASS-D
	Receiver	1 x Mono, AB
	Mic	2 x analog microphones
	Handset	Stereo CLASS AB
SIM card interface	USIM	2 x SIM card, support dual-card, dual-standby
Key	Keys	Power on/off /Volume up /Volume down /Reset
Advantages		1、Android Q 2、China local chipset
Applications		Smart Cash Register, Security Monitoring, High-end Police or Law Enforcement Equipment, Vehicle-mounted Equipment
Approvals		
Regulation		RoHS/CE/Anatel
Operator		Claro*/Vivo*
Industry		GCF*

Note: * = Planning

Product Name		SC806-AE	SC806-AB	SC806-AM
Category		Smart(LTE Cat 4)		
Region		Europe/Asia	Australia/Brazil	North America
Picture				
Basic Features				
Package		146 LCC pin + 64 LGA pin		
Processor		Qualcomm's® MSM8909, Quad-ARM® Cortex™-A7 application processors up to 1.1GHz		
GPU		Adreno 304		
Memory(Default)		1GB/2GB LPDDR3 RAM; 8GB/16GB eMMC Flash		
Dimensions (mm)		40.5 x 40.5 x 2.8		
Frequency		LTE-FDD: B1/3/5/7/8/20 LTE-TDD: B38/40/41 WCDMA: B1/2/3/5/8 CDMA2000 1X/EVDO: BC0/EVDO Rev.A GSM: 850/900/1800/1900MHz	LTE-FDD: B1/3/5/7/8/28 LTE-TDD: B40 WCDMA: B1/2/5/8 GSM: 850/900/1800/1900MHz	LTE-FDD: B2/4/5/12/13/17WCDMA: B2/4/5
WIFI		2.4G+5G, 802.11a/b/g/n		
BT		BT 4.1/4.2(Nougat)BLE		
GNSS		GPS/GLONASS/Beidou		
OS		Android L/N		
Power Supply		DC 3.5V ~ 4.2V		
Weight		About 9.2g		
Operating Temp.		-30°C ~ +75°C		
Storage Temp.		-40°C ~ +85°C		
Data Transmission				
LTE FDD (Mbps)		Max 150(DL)/50(UL)		
LTE TDD (Mbps)		Max 130(DL)/30(UL)		
UMTS/HSPA/HSPA+ (Mbps)		HSUPA Max 5.76(UL) HSPA+ Max 42(DL)		
TD-SCDMA (Mbps)		Max 4.2(DL)/2.2(UL)		
CDMA EVDO (Mbps)		Max 3.1 (DL)/1.8(UL)		
EDGE/GPRS(Kbps)		EDGE: Max 296(DL)/236.8(UL) GPRS: Max 107(DL)/85.6(UL)		
WIFI (Mbps)		up to 150		
Video Processing				
Video Encoding		H.264BP/MP–720P,30@fps; MPEG-4SP/H.263P0–WVGA,30@fps; VP8–WVGA,30@fps		
Video Decoding		Up to 1080P @30fps; H.264BP/MP/HP–RES,30fps; MPEG-4SP/ASP–RES,30fps; DivX4x/5x/6x–RES,30fps H.263P0–WVGA,30fps; VP8-RES, 30fps; (HEVC) H.265 MP 8-bit-RES,30fps		
Interfaces				
Hardware Interface	UART/SPI(Mbps)	2 x UART Up to 4		
	I2C(Kbps)	3 x I2C Up to 3.4		
	USB	1 x USB2.0 up to 480, Support OTG(Require 5V power supply)		
	SDIO	1 x SD3.0		
	CAM	1 x 2-lane MIPI_CSI (up to 8Mp) 1 x 1-lane MIPI_CSI (up to 2Mp)		
	GPIO	32 GPIOs		
	Display	1 x 4-lane MIPI_DSI 720P		
Audio Interface	Speaker	1 x Mono, differential 800mW CLASS-D		
	Receiver	1 x Mono, AB		
	Mic	3 x analog microphones		
	Handset	1 x Stereo, single-ended output		
SIM card interface	USIM	2 x SIM card, support dual-SIM dual-standby(Default Single)		
Key	Keys	Power on/off, Volume up, Volume down, Reset		
Advantages		1、Quad-core A7 processor with 1.1GHz CPU Clock Speed 2、Support global application with multiple band configuration 3、Support Andriod L&N version 4、Long-term lifecycle supply guarantee		
Applications		Wireless Intelligent Payment, Intelligent Robot, Smart Home, Smart City and Smart Industries		
Approvals				
Regulation		RoHS/CE	RoHS/CE/RCM*	RoHS/FCC
Operator				AT&T*/Verizon*
Industry		GCF		PTCRB*

Note: * = Planning

Product Name	AN658-AE	AN958-EAU	AN958-NA
Category	Automotive（5G NR Sub6）		
Region	Asia(Except Japan)/Europe/Australia	Europe/Austrilia	America
Picture			
Basic Features			
Package	LGA	LGA	LGA
Dimension (mm)	41.0 x 44.0 x 2.75	48.0 x 48.0 x 2.75	48.0 x 48.0 x 2.75
Sub-6	n1/3/5/7/8/20/28/38/40*/41/77/78/79	n1/n2/n3/n7/n8/n20/n28A/n38/n40/n41/n78	n2/n5/n12/n25/n41/n66/n71/n78
mmWave	/	/	/
LTE FDD	B1/2/3/5/7/8/20/25/28/32	B1/3/5/7/8/20/28A/32	B1/2/3/4/5/7/12/13/14/25/26/28/29/30
LTE TDD	B34/38/39/40/41/42/43*	B38/40/41/42	B38/41/42/66/71
LAA	/	/	/
WCDMA	B1/2/5/8	B1/3/5/8	B1/2/4/5
TD-SCDMA			
GSM		850/900/1800/1900	850/1900
Operation mode	NSA&SA	NSA&SA	NSA&SA
Antenna	6 +1(GPS)	6 +1(GPS)	6 +1(GPS)
Power Supply	3.3V ~ 4.4V, Typical 3.8V	3.3V ~ 4.4V, Typical 3.8V	3.3V ~ 4.4V, Typical 3.8V
Operating Temp.	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Key Functions			
NR MIMO	DL 4 x 4 MIMO: n1/3/7/38/41/77/78/79 UL 2 x 2 MIMO: n41/77/78/79	DL 4 x 4 MIMO: n41/77/78/79 UL 2 x 2 MIMO: n41/77/78/79	DL 4 x 4 MIMO: n41/78 UL 2 x 2 MIMO: n41/78
LTE MIMO	DL 4 x 4 MIMO: B1/B3/B7/B32/B34/B38/B39/B40/B41/B42 UL: 1 x 1 MIMO	DL 4 x 4 MIMO: B1/3/7/38/40/41 UL 1 x 1 MIMO	DL 4 x 4 MIMO: B1/2/3/4/7 UL 1 x 1 MIMO
NR SA(Mbps)	2.12Gbps/900	2.12Gbps/900	2.12Gbps/900
LTE(Mbps)	1.6Gbps/200	1.6Gbps/200	1.6Gbps/200
WCDMA(Mbps)	42(DL)/5.76(UL)	42(DL)/5.76(UL)	42(DL)/5.76(UL)
TD-SCDMA(Mbps)	4.2(DL)/2.2(UL)	4.2(DL)/2.2(UL)	4.2(DL)/2.2(UL)
GSM(Kbps)	296(DL)/236.8(UL)	296(DL)/236.8(UL)	296(DL)/236.8(UL)
Functions			
Voice	VoLTE	VoLTE	VoLTE
SMS	SMS over IP(IMS)	SMS over IP(IMS)	SMS over IP(IMS)
Audio	●	●	●
FOTA	●	●	●
OS Drivers	Linux*/Andriod*	Linux*/Andriod*	Linux*/Andriod*
GNSS	GPS/GLONASS/Galileo/BeiDou	GPS/GLONASS/Galileo/BeiDou	GPS/GLONASS/Galileo/BeiDou
OpenLinux	●	●	●
A/B Dual system	●	●	●
Interfaces			
USB	USB3.1/3.0 & USB2.0	USB3.1/3.0 & USB2.0	USB3.1/3.0 & USB2.0
PCIe	PCIe3.0	PCIe3.0	PCIe3.0
UART	●	●	●
SPI	●	●	●
ADC	●	●	●
GPIO	●	●	●
I2C	●	●	●
SDIO	●	●	●
UIM	●	●	●
I2S	●	●	●
RGMII	●	●	●
V2X			
Approvals			
Regulation	CCC/SRRC/NAL	CE/ELV/e-Call	FCC/IC
Operator			
Industry		GCF	PTCRB

Note: * = Planning

Product Name	AX168
Category	Automotive (V2X)
Region	Global
Picture	
Basic Features	
Package	LGA
Dimension (mm)	40.0 x 42.0 x 3.4
LTE FDD	B47 5855 ~ 5925MHz
LTE TDD	
WCDMA	
TD-SCDMA	
EVDO	
CDMA2000 1X	
GSM/GPRS/EDGE	
Power Supply	4.4V ~ 5.5V(recommended value: 5V)or 3.0V ~ 3.6V(Recommended value: 3.3V)
Operating Temp.	-40°C ~ +95°C
Data Transmission	
LTE FDD (Mbps)	26(DL)/26(UL)
LTE TDD (Mbps)	
DC-HSPA+(Mbps)	
HSPA/HSPA+(Mbps)	
UMTS(kbps)	
TD-SCDMA (Mbps)	
EVDO(Mbps)	
CDMA2000 1X(kbps)	
EDGE(Kbps)	
GPRS(Kbps)	
Functions	
eSIM	
Remote SIM	
eCALL	
OpenCPU	
MUX	
Jamming Detection	
USSD	
STK	
LBS	
FOTA	FOTA/DFOTA
OS Drivers	
GNSS	
MMS	
CSD	
TTS	
SMS	
Analog Audio	
Digital Audio	
Voice Code	
Audio Play/Record	
Protocols	
Interfaces	
SIM	x 3
USB	x 2, USB2.0
PCM\I2S	/
PCIe	x 5
UART	x 3
SPI	x 1
ADC	x 2
GPIO	●
SDIO	x 1
RGMII	x 1
RMII	x 1
JTAG	x 1
Approvals	
Regulation	CCC*/SRRC*/RoHS*
Operator	/
Industry	

Note: * = Planning

Fibocom Automotive-Grade Module Series

Product Name	AW916-GL	W100-GL
Category	Automotive(Wi-Fi 6)	Automotive(Wi-Fi 4)
Region	Global	
Picture		
Basic Features		
Package	LGA	LGA
Dimension (mm)	23.0 x 23.0 x 2.65	16.6 x 13.0 x 2.1
Chipset	Qualcomm QCA6696	Qualcomm QCA1023
WiFi Frequency	2.4/5GHz	2.4/5GHz
WiFi Standard	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax
BT Protocol	BT5.1	BT4.2
Modulation mode	Max 1024QAM	BPSK/QPSK/CCK/16QAM/64QAM/256QAM
Encryption Mode	WPA3	WEP/TKIP/AES/WPA-PSK/WPA2-PSK
Operation mode	AP/STA	AP/STA
Max access point	32	16
Voltage	VDD_RF: 3.85V VDD_IO: 1.8V VDD_CORE_V(L: 0.95V; M: 1.35V; H: 1.95V)	operating voltage: 3.14 ~ 3.46V, Typical: 3.3V I/O PIN Supply voltage range: 1.71 ~ 1.89V, Typical: 1.8V
Operating Temp.	1	-40
Operation mode	3	2
WiFi Data Rate	802.11a: Max 54Mbps 802.11b: Max 11Mbps 802.11g: Max 54Mbps 802.11n: Max 150Mbps 802.11ac: Max 433Mbps 802.11ax: Max 600.5Mbps	802.11a: Max 54Mbps 802.11b: Max 11Mbps 802.11g: Max 54Mbps 802.11n: Max 150Mbps 802.11ac: Max 433Mbps
Antenna	2Mbps	1Mbps
Interfaces		
SDIO	\	●
DBG_TXD	●	●
32KHz_IN	\	●
PICE	●	
AURT	●	
PCM	●	
Approvals		
Regulation	SRRC/CE/IC/FCC	SRRC/CE/RoHS
Operator	\	\
Industry		

Note: * = Planning

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