

A7670X_R5 Specification

Core Series 4G Communication Core Board



Introduction

Core-A7670X

A7670X R5 is a small-sized, feature-rich core board. It takes "data transmission" as its core function and is highly easy to use. It adopts a 7PIN plug-in package, which allows users to quickly and easily integrate it into their own systems. This core board has complete functions and covers most application scenarios. Users only need to configure the product through simple AT commands to connect to the Internet. It supports communication protocols such as TCP, UDP, HTTP, FTP, and MQTT, and supports voice, dial-up Internet access, SMS and other functions.

Support Models:

Series	Model	PN	Platform	RAM+Flash	Frequency Band	GNSS	BLE	WiFi	OPEN	DS
A7670C series (24*24*2.4mm)	A7670C - LANV	S2-10CWM	ASR1606C	4+4	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	N	N	Y	Y	N
	A7670C - MANS	S2-10CWJ	ASR1606S	8+8	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	Y	N	Y	Y	N
	A7670C - FANS	S2-10DH9	ASR1606S	8+8	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	Y	Y	Y	Y	N
	A7670C - LNNV	S2-10D95	ASR1602S	4+4	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	N	N	Y	Y	N
	A7670C - LNNY	S2-10D97	ASR1602C	4+2	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	N	N	N	Y	N
	A7670C - MNNV	S2-10D96	ASR1602S	4+4	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	Y	N	Y	Y	N
	A7670C - MNNY	S2-10D98	ASR1602C	4+2	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	Y	N	N	Y	N
	A7670C - LNNY - PCIE	S2-10DKA	ASR1602C	4+2	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41	N	N	N	N	N
A7670E series (24*24*2.4mm)	A7670E - LASE	S2-10DE2	ASR1603E	16+16	LTE-FDD B1/B3/B5/B7/B8/B20 GSM/GPRS/EDGE 900/1800 MHz	N	N	N	Y	N
	A7670E - LASC	S2-10D6H	ASR1603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	N	Y	Y
	A7670E - LASC - DS	S2-10DE7	ASR1603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	N	Y	Y

	A7670E - MASC	S2-10DA4	ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	Y	N	N	Y	N
	A7670E - BASC	S2-10D6S	ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	Y	N	Y	N
	A7670E - FASE	S2-10DAX	ASR1 603E	16+16	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	Y	Y	N	Y	N
	A7670E - LASA	S2-10F8J	ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	Y	Y	N
	A7670E - MASA	S2-10F8H	ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	M	N	Y	Y	N
	A7670E - LBSA	S2-10CE1	ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 TDD:B34/B38/B39/B40/B41 GSM:900/1800	N	N	Y	Y	N
	A7670E - MAMS	S2-10DVA	ASR1 606S	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	Y	N	Y	Y	N
	A7670E - LAMS	S2-10DVC	ASR1 606S	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	N	N	Y	Y	N
	A7670E - MAMV	S2-10DVT	ASR1 606C	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	Y	N	Y	Y	N
	A7670E - LAMV	S2-10DVV	ASR1 606C	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	N	N	Y	Y	N
	A7670E - MNMV	S2-10DKS	ASR1 602S	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28*	Y	N	Y	Y	N
	A7670E - LNMV	S2-10DKT	ASR1 602S	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28*	N	N	Y	Y	N
A7670SA series (24*24*2.4mm)	A7670SA -LASC	S2-10D6K	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	N	N	Y	N
	A7670SA -MASC	S2-10D6J	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	Y	N	N	Y	N
	A7670SA -BASC	S2-10DE1	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	Y	N	Y	N
	A7670SA -FASE	S2-10DAW	ASR1 603E	16+16	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	Y	Y	N	Y	N
	A7670SA -LASA	S2-10F8A	ASR1 603C	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	N	Y	Y	N
	A7670SA -MASA	S2-10F8G	ASR1 603C	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	M	N	Y	Y	N

[illegible]

					TDD:B34/B38/B39/B40/B41 GSM:900/1800 LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41 GSM:900/1800					
					LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41					
					LTE - FDD:B1/B2/B3/B4/B5/B7/B8/ B12/ B13/B18/B19/B20/B25/B26/B 28/B66 LTE - TDD:B34/B38/B39/B40/B41 LTE - FDD:B1/B2/B3/B4/B5/B7/B8/ B12/ B13/B18/B19/B20/B25/B26/B 28/B66 LTE - TDD:B34/B38/B39/B40/B41					
	SIM7670 G-LNGV	S2- 10DG1	QCX 216	1.25+4	B13/B18/B19/B20/B25/B26/B 28/B66 LTE - TDD:B34/B38/B39/B40/B41	N	N	Y	N	N
	SIM7670 NA- MNGV	S2- 10DG4	QCX 216	1.25+4	LTE- FDD:B2/B4/B5/B12/B13/B66	Y	N	Y	N	N
	SIM7670 NA- LNGV	S2- 10DG5	QCX 216	1.25+4	LTE- FDD:B2/B4/B5/B12/B13/B66	N	N	Y	N	N
	SIM7670 E- MNGV	S2- 10DG2	QCX 216	1.25+4	LTE- FDD:B1/B3/B5/B7/B8/B20/B2 8	Y	N	Y	N	N
	SIM7670 E-LNGV	S2- 10DG3	QCX 216	1.25+4	LTE- FDD:B1/B3/B5/B7/B8/B20/B2 8	N	N	Y	N	N
	A7672C - LNNY - PCIE		ASR1 602C	4+2	LTE -FDD:B1/B3/B5/B8 LTE - TDD:B34/B38/B39/B40/B41 LTE-FDD	N	N	N	N	N
	A7672E- LASE		ASR1 603E	16+16	B1/B3/B5/B7/B8/B20 GSM/GPRS/EDGE 900/1800 MHz	N	N	N	Y	N
A7672E series (24*24*2.4m m)	A7672E - LASC		ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	N	Y	Y
	A7672E - LASC - DS		ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	N	Y	Y
	A7672E - MASC		ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	Y	N	N	Y	N
	A7672E - BASC		ASR1 603S	16+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	Y	N	Y	N
	A7672E - FASE		ASR1 603E	16+16	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	Y	Y	N	Y	N
	A7672E - LASA		ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	N	N	Y	Y	N

	A7672E - MASA	ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 GSM:900/1800	M	N	Y	Y	N
	A7672E - LBSA	ASR1 603C	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20 LTE - TDD:B34/B38/B39/B40/B41 GSM:900/1800	N	N	Y	Y	N
	A7672E - MAMS	ASR1 606S	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	Y	N	Y	Y	N
	A7672E - LAMS	ASR1 606S	8+8	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	N	N	Y	Y	N
	A7672E - MAMV	ASR1 606C	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	Y	N	Y	Y	N
	A7672E - LAMV	ASR1 606C	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28	N	N	Y	Y	N
	A7672E - MNMV	ASR1 602S	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28*	Y	N	Y	Y	N
	A7672E - LNMV	ASR1 602S	4+4	LTE - FDD:B1/B3/B5/B7/B8/B20/B28*	N	N	Y	Y	N
A7672SA series (24*24*2.4m m)	A7672SA -LASC	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	N	N	Y	N
	A7672SA -MASC	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	Y	N	N	Y	N
	A7672SA -BASC	ASR1 603S	16+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	Y	N	Y	N
	A7672SA -FASE	ASR1 603E	16+16	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	Y	Y	N	Y	N
	A7672SA -LASA	ASR1 603C	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	N	N	Y	Y	N
	A7672SA -MASA	ASR1 603C	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900	M	N	Y	Y	N
	A7672SA -MAMS	ASR1 606S	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	Y	N	Y	Y	N
	A7672SA -LAMS	ASR1 606S	8+8	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	N	N	Y	Y	N
	A7672SA -MAMV	ASR1 606C	4+4	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	Y	N	Y	Y	N
	A7672SA -LAMV	ASR1 606C	4+4	LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	N	N	Y	Y	N

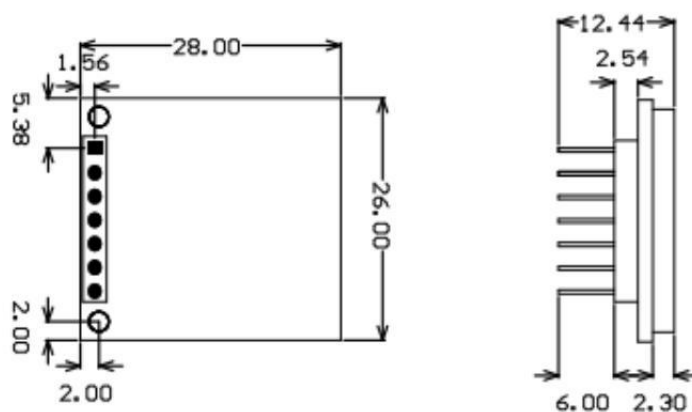
	A7672SA-MNMV		ASR1 602S	4+4	66 LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	Y	N	Y	Y	N
	A7672SA-LNMV		ASR1 602S	4+4	66 LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66	N	N	Y	Y	N
A7672G series (24*24*2.4mm)	A7672G-LABC		ASR1 603S	16+8	66 LTE -FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66 LTE - TDD:B34/B38/B39/B40/B41 GSM:850/900/1800/1900	N	N	N	Y	N
SIM7672G series (24*24*2.4mm)	SIM7672G-LNGV	S2-10DG1	QCX 216	1.25+4	66 LTE -FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66 LTE - TDD:B34/B38/B39/B40/B41	Y	N	Y	N	N
	SIM7672G-LNGV	S2-10DG1	QCX 216	1.25+4	66 LTE -FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66 LTE - TDD:B34/B38/B39/B40/B41	N	N	Y	N	N
	SIM7672NA-MNGV	S2-10DG4	QCX 216	1.25+4	66 LTE-FDD:B2/B4/B5/B12/B13/B66	Y	N	Y	N	N
	SIM7672NA-LNGV	S2-10DG5	QCX 216	1.25+4	66 LTE-FDD:B2/B4/B5/B12/B13/B66	N	N	Y	N	N
	SIM7672E-MNGV	S2-10DG2	QCX 216	1.25+4	66 LTE-FDD:B1/B3/B5/B7/B8/B20/B28	Y	N	Y	N	N
	SIM7672E-LNGV	S2-10DG3	QCX 216	1.25+4	66 LTE-FDD:B1/B3/B5/B7/B8/B20/B28	N	N	Y	N	N

Dimension

Name	A7670X/A7672X/SIM7000X/SIM7070X/SIM7670X/SIM7672X	
Hardware Interface	Package	Pin Type:7PIN
	Power	5V~12V
	LED	Power indicator light, network indicator light
	SIM Interface	Flip-top Nano Card slot
	Audio Interface	4PIN Audio Interface
	Antenna	1 st generation IPEX pedestal

	UART	TTL (usually use 3.3V, can support 5V also)
		BPS: 9600, 115200 and so on
Scale	Dimension	28.00*26.00*12.44mm (Including height of Pin)
	Weight	around 6g
Temperature and Humidity Range	Temperature for work	-30°C~80°C (Extreme operating temperature -40°C~85°C)
	Temperature for storage	-40°C~85°C
	Working humidity	5%~95% (No dew)
Standard	LTE-TDD	8.96Mbps(DL Maximum)/3.1Mbps(UL Maximum)
	LTE-FDD	10Mbps (DL Maximum)/5Mbps (UL Maximum)
	GPRS / EDGE	236.8Kbps(DL Maximum)/236.8Kbps(UL Maximum)
Software	Protocol	TCP、UDP、HTTP、FTP、MQTT、DNS and so on
	Message	TEXT and PDU
	System	Support Windows/Linux/Android
	Positioning	Optional

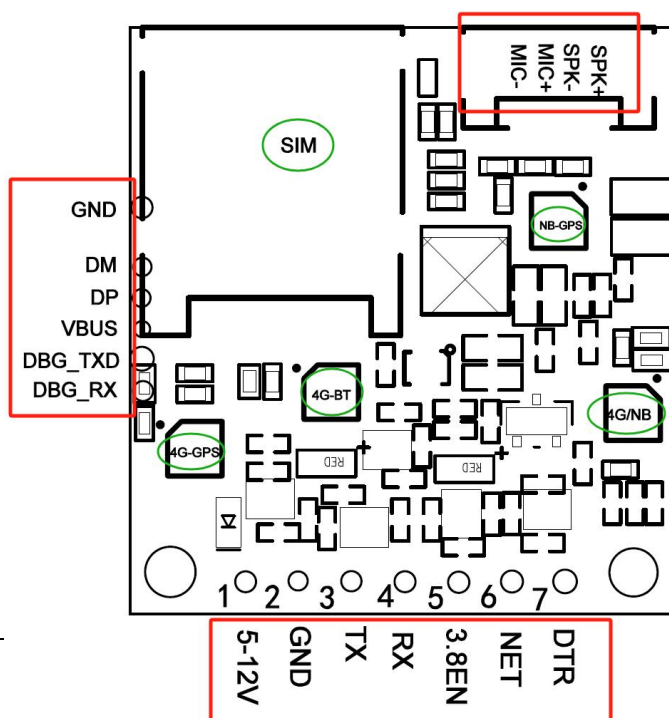
Dimension



Unit: mm error: +/-0.2mm

Pin Definition

Pin No.	Name	Description
1	VIN	Power input positive pole, supports 5V~12V
2	GND	Power input negative pole
3	TX	The 4G module serial port TX is connected to the MCU's RX pin, and the default level is 3.3V.
4	RX	The 4G module serial port RX is connected to the MCU's TX pin, and the default level is 3.3V.
5	3.8EN	Module 3.8V power switch enable control, high level on/low level off.
6	NET	Network status indicator
7	DTR	Control module sleep and wake-up



Function:

DTR: Module sleep control pin, pull low to wake up the module, keep low level normally, send the activation module sleep function command AT+CSCLK=1 to A7670, and then the DTR pin is pulled high, and the module automatically enters sleep mode. For detailed application, please refer to A7670 hardware manual and AT application manual.

NET: Module network indication signal output, please refer to A7670 Hardware Design Manual for details.

3.8EN: Module 3.8V power switch enable control, high level on/low level off.

RX: 4G module serial port RX, connected to MCU's TX pin.

TX: 4G module serial port TX, connect to MCU's RX pin.

GND: Connect GND

5-12V: Power input, input range 5V to 12V.

DM: Connect to D- of USB

DP: Connect to D+ of USB

VBUS: Connect to VBUS of USB

DBG_TXD: Module operation LOG output pin

DBG_RXD: Module operation LOG input pin

SPK+: Connect the speaker+

SPK-: Connect the speaker-

MIC-: Connect the microphone-

MIC+: Connect the microphone+

4G/NB: LTE/4G antenna base, NB/CATM module antenna base

4G-GPS: GPS antenna mount for LTE/4G module

NB-GPS: GPS antenna base for NB/CATM modules

4G-BT: Bluetooth antenna base for LTE/4G module

SIM: SIM Card Slot, NanoSIM Card
