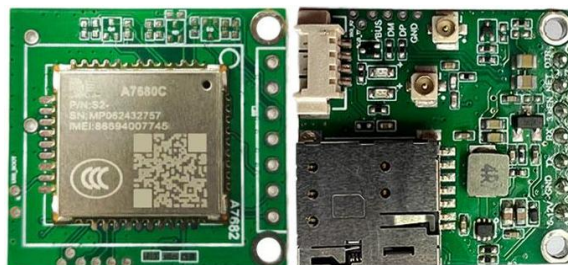


4G Cat.1 Core Board

Core-A7680X Specification



Introduction

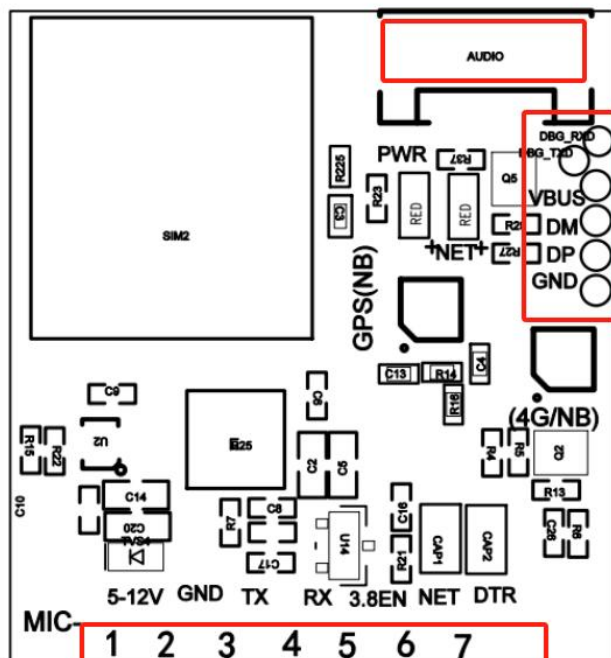
Core-A7680X is a compact and feature-rich core board designed and developed based on SIMCOM 4G Cat.1 communication module. A7680 takes "data transparent transmission" as its core function, integrates DC-DC, level conversion, antenna, SIM card and hardware protection circuits, adopts 7PIN pin package, is highly easy to use, and users can integrate it into their own system conveniently and quickly.

The core board has complete functions. It can be powered on and connected by serial port access to realize the data transmission function of serial port communication between the device and the core board. The core board supports communication protocols such as TCP, UDP, MQTT, HTTP, and GPS satellite positioning, covering most application scenarios, greatly improving the user's development efficiency and product stability.

Details of Product

Basic Information	Name	A7680X Core Board
	PN	Core-A7680CG
	Operator	China Mobile 4G、China Unicom4G、China Telecom4G
Hardware interface	Package	Pin Type:7PIN
	Power	5V~12V
	LED	Power indicator light, network indicator light
	SIM port	Automatically pop up Nano card Slot
	4G antenna	1 st generation IPEX pedestal
	GPS antenna	1 st generation IPEX pedestal
	UART	3.3V TTL
		BPS: 9600 , 115200
Outlook scale	Dimension	28.0*26.0*12.44mm (Including height of Pin)
Temperature and Humidity Range	Temperature for work	-35°C~75°C
	Temperature for storage	-40°C~85°C
	Working humidity	5%~95% (No dew)
Standard	Communication speed	Download maximum 10Mbps /Upload maximum 5Mbps
Band	LTE-TDD	B34/B38/B39/B40/B41
	LTE-FDD	B1/B3/B5/B8

Software	Protocol	TCP/UDP/HTTP/MQTT and so on
	Configuration Method	AT command
	Audio Interface	4PIN Audio Interface
	Positioning Function	Base Station Positioning、GPS Positioning



Pin Definition

Name	Description
1-VIN	Power output positive terminal, support 5V~12V
2-GND	Power input negative terminal
3-TX	4G module port TX, connecting with the MCU RX Pin
4-RX	4G module port RX, connecting with the MCU TX Pin
5-3.8EN	Module 3.8V power switch enable control, high level on/low level off.
6-NET	Module network indication signal output.
7-DTR	Module sleep control pin, pull low to wake up the module, and keep low level normally.

Function Description:

5-12V; Power input, range from 5V to 12V。

GND; Connect with GND

TX; 4G module port TX, connecting with MCU RX Pin

RX; 4G module port RX, connecting with MCU TX Pin

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

NET; Module network indication signal output, please refer to A7680 Hardware Design Manual for details

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 A7680, then DTR pin is pulled high and the module automatically enters sleep mode. For detailed application, please refer to A7680 hardware manual and AT application manual.

DBG_RXD:Module operation LOG input pin

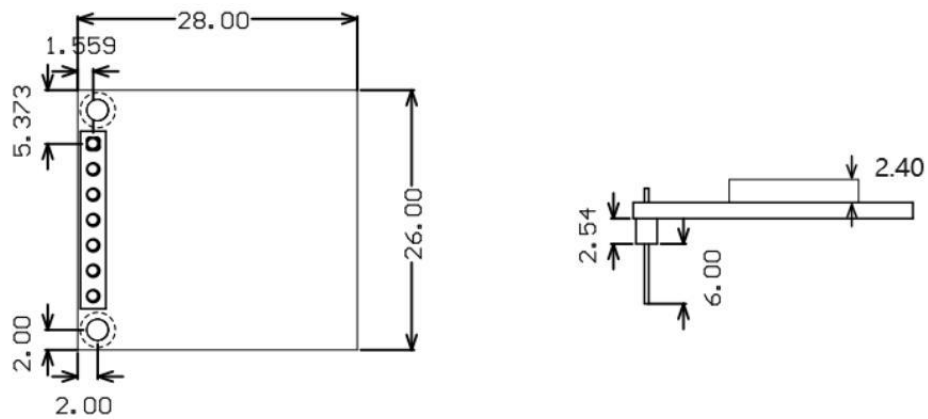
DBG_TXD:Module operation LOG output pin

VBUS:Connect to VBUS of USB
DM:Connect D- of USB
DP:Connect D+ of USB
GND:Connect GND

SPK+:Connect Speaker+
SPK-:Connect Speaker-
MIC-:Connect Microphone-
MIC+:Connect Microphone+

4G/NB:A7680 4G antenna base, NB module SIM7080G module wireless network antenna base
GPS/NB:GPS antenna base for A7680 module/GPS antenna base for SIM7080G module
SIM:SIM card slot, NanoSIM

Dimension



Unit: mm