ML307A-GSLN—OC Development Board

--Specifications v0.1

ML307A-GSLN—OC Development Board Specificatios-v0.1

Mainboard Model:	ML307A-OC-YOUJIA V0.4 YeaCreate
Development Board	4G Module Multi-Functional
Function:	Development Board
Operating System:	OpenCPU OS
Security Level:	Public

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List

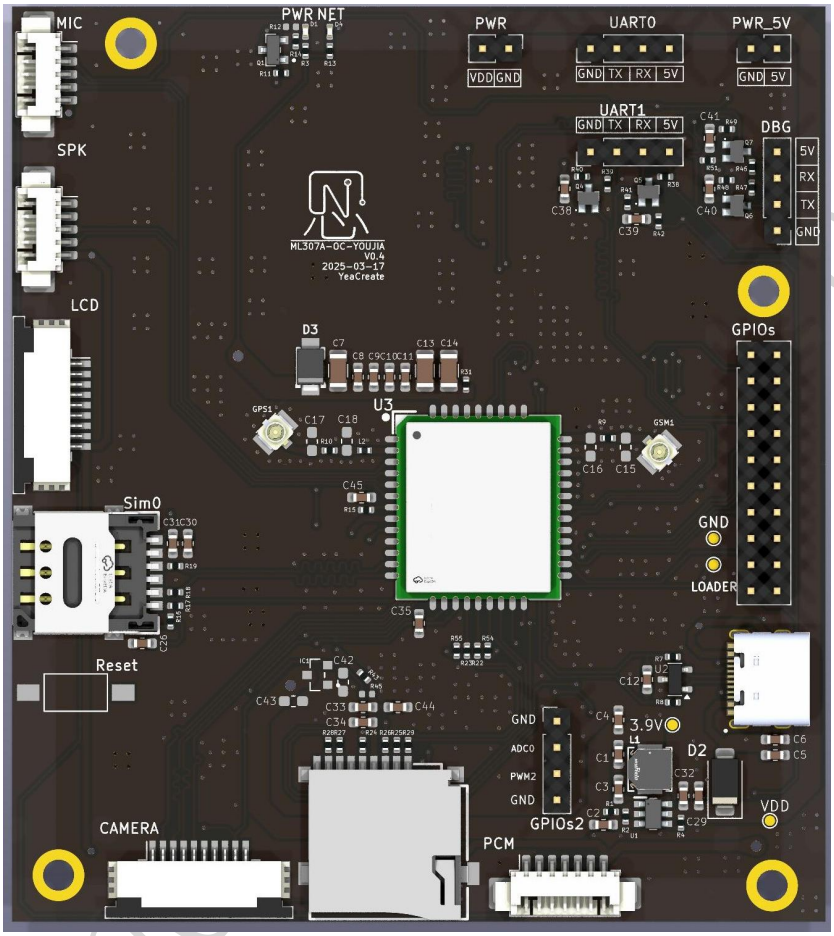
1 Foreword

YeaCreate Lot Co., Ltd is committed to provide smart home solutions to create a smarter and more convenient life for people. As an embedded application technology innovator, Yeacreate keep on innovating solutions about home interconnection and intelligent interconnection. The ML307A-GSLN-OC 4G is a Multi-Functional 4G development board, it can provide stable and good user experience with the ultra-low hardware configuration by running the OpenCPU operating system.

Unless otherwise specified, the product complies with the specifications described in this document.

2 Appearance and Dimensions

2.1 Appearance Figure is as follows：



2.2 Dimensions

Length：78.6500mm

Width：88.5600mm

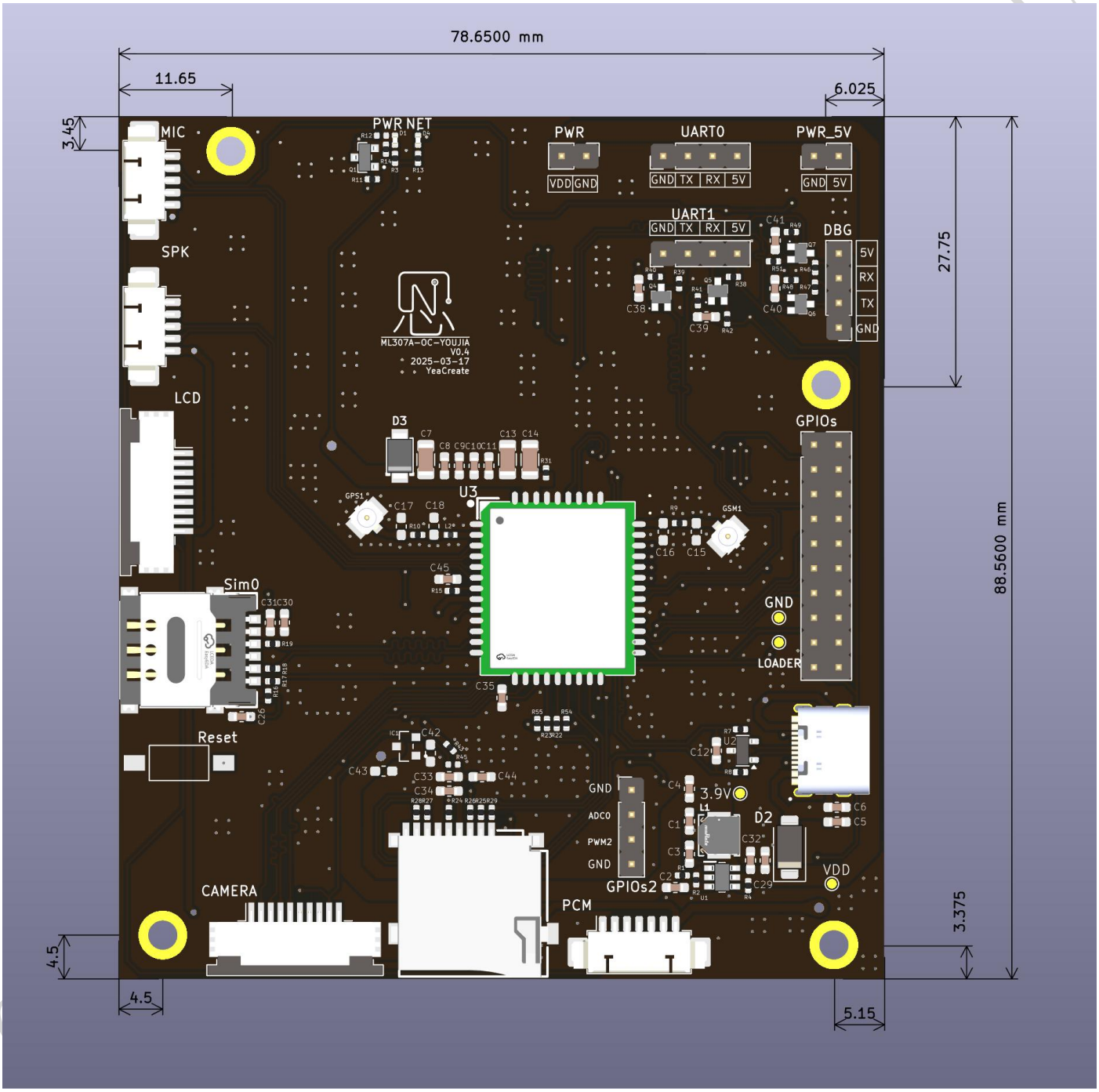
Total module thickness：1mm

Tolerance：±0.5mm

Mounting hole pitch：

Table 2.1 Mounting hole pitch

Top-left hole (adjacent to MIC)	Top-right hole (adjacent to GPIOs)	Bottom-left hole (adjacent to CAMERA)	Bottom-right hole (adjacent to PCM)
Distance from left edge: 11.65 mm	Distance from right edge: 6.025 mm	Distance from left edge: 4.5 mm	Distance from right edge: 5.15 mm
Distance from top edge: 3.45 mm	Distance from top edge: 27.75 mm	Distance from bottom edge: 4.5 mm	Distance from bottom edge: 3.375 mm



3 Application Guide

This chapter mainly introduces the use of the development board, including:

- Development Board Functions
- Development Board Configuration
- Development Board Power Supply
- Development Board Backside

3.1 Development Board Functions

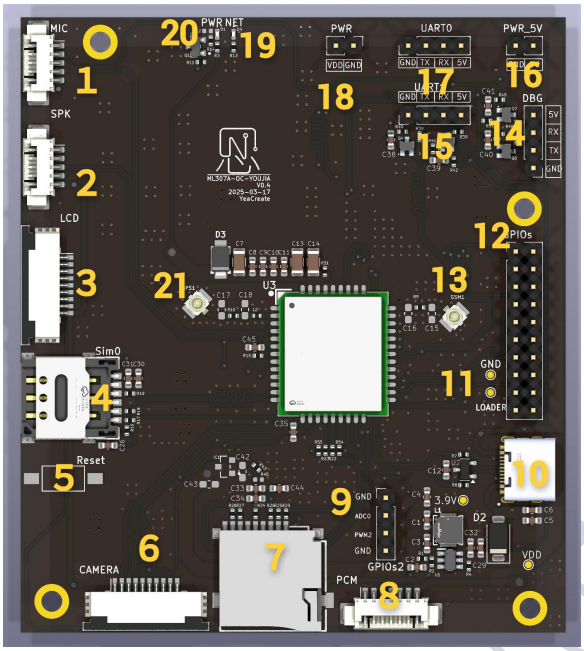


Table3.1 Function List

Component numbering	Description
1	MIC Interface(Optional)
2	SPK Interface(Optional)
3	LCD Interface(Optional), Supports FTF screen resolution：320 * 240, using SPI mode driver.
4	SIM Card Interface
5	Reset Button
6	CAMERA Interface (Optional, Only 8+8MB version support, currently adjusted GC032A, support 300,000-pixel).
7	TF Interface

8	PCM Interface(Optional)
9	GPIOs2(GND、ADC0、PWM2、GND)
10	Type-C Power Supply & Flash
11	GND and LOADER bonding pads short-circuit for flashing
12	GPIO Expansion Port
13	GSM Antenna Connector (4G Antenna)
14	DBG Serial Port
15	UART1 Serial Port
16	Communication Reference Voltage Input
17	UART2 Serial Port
18	VDD Input Voltage
19	Network Status LED
20	Power Status LED
21	GPS Antenna Connector(GPS Outdoor Positioning Function)

3.2 Development Board Configuration

Table3.2 Development Board Configuration

Project	Model	Remark
MCU	ASR1606	
CPU	624MHz Cortex-R5	
RAM	3135KB	

PSRAM	8M	4M/8M (Optional)
QSPI Flash	8M	4M/8M (Optional)
Code Storage Place	1M	

3.3 Development Board Power Supply

The development board can be powered in two ways: USB power supply or external VDD power supply, as the following figure.

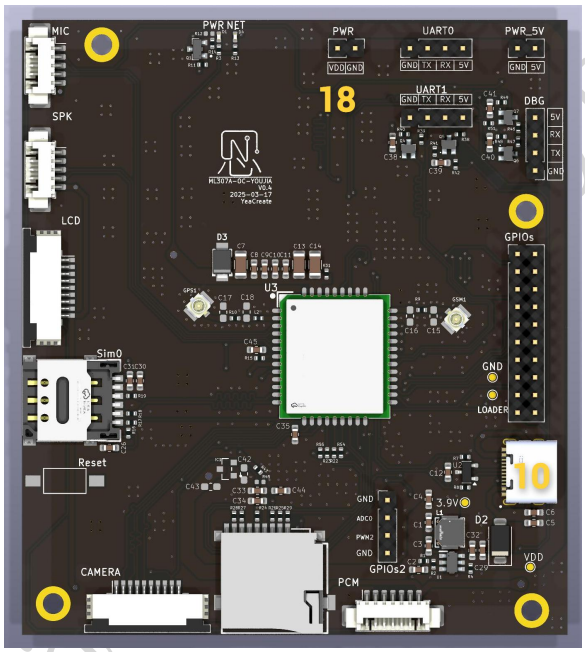
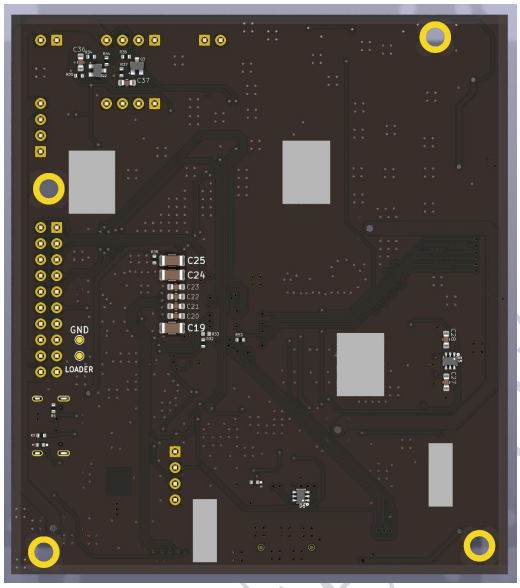


Table3.3 Development Board Voltage

Project	Voltage	Remark
USB Power Supply	5 V	
VDD External Power Supply	Voltage Range: 5 V<VDD<20V	

3.4 Development Board Backside

The backside of the development board was added part of conductive film to enhance shielding and anti-interference effect.



4 Software Introduction

The software can run on RTOS platform, developed by using C/C++ languages. It has outstanding performance in various fields, such as environmental monitoring, trackers, smart speaker, network camera, shared device, smart meter, smart grid, vehicle application, POS machine, cash register, cloud speaker, remote control, online upgrade, and various forms of smart hardware.