

StackChan Core

SKU:C156





Description

StackChan Core is the main controller for the StackChan robot and is intended for mainboard replacement. It uses an ESP32-S3 controller with a 240 MHz dual-core processor, built-in 16MB Flash and 8MB PSRAM, and native Wi-Fi + BLE wireless communication. The board integrates many built-in peripherals: a rugged 2.0-inch capacitive touch screen, a 0.3 MP camera, proximity sensor, ambient light sensor, and nine-axis IMU; it also provides a microSD card slot, an onboard 1W speaker, dual microphones, power and reset buttons, and is suitable as a direct replacement for the original controller in StackChan AI desktop robots.

Note

Stackchan App

The Stackchan App supports connections only to original StackChan core controllers, including those in the standard StackChan unit and the Remote Controller Kit, as well as the separately sold StackChan Core replacement controller. Before use, the StackChan user firmware must be flashed to the device. Note that this app cannot connect to non-original core models such as CoreS3, CoreS3-SE, and CoreS3-Lite.

Features

- Main controller replacement for StackChan
- Based on ESP32 with Wi-Fi @16MB Flash, 8MB PSRAM
- Integrated camera, proximity sensor, speaker, real-time clock, I2S amplifier, dual microphones, capacitive touch screen, power button, reset button, and gyroscope
- Rugged glass-based construction
- Supports OTG and CDC
- Uses AXP2101 power management for a low-power design

Includes

- 1 x StackChan Core
- 1 x Hex Key L-Shape 1.5mm (For M2 Screw)
- 1 x Hex Key L-Shape 2.5mm (For M3 Screw)

Applications

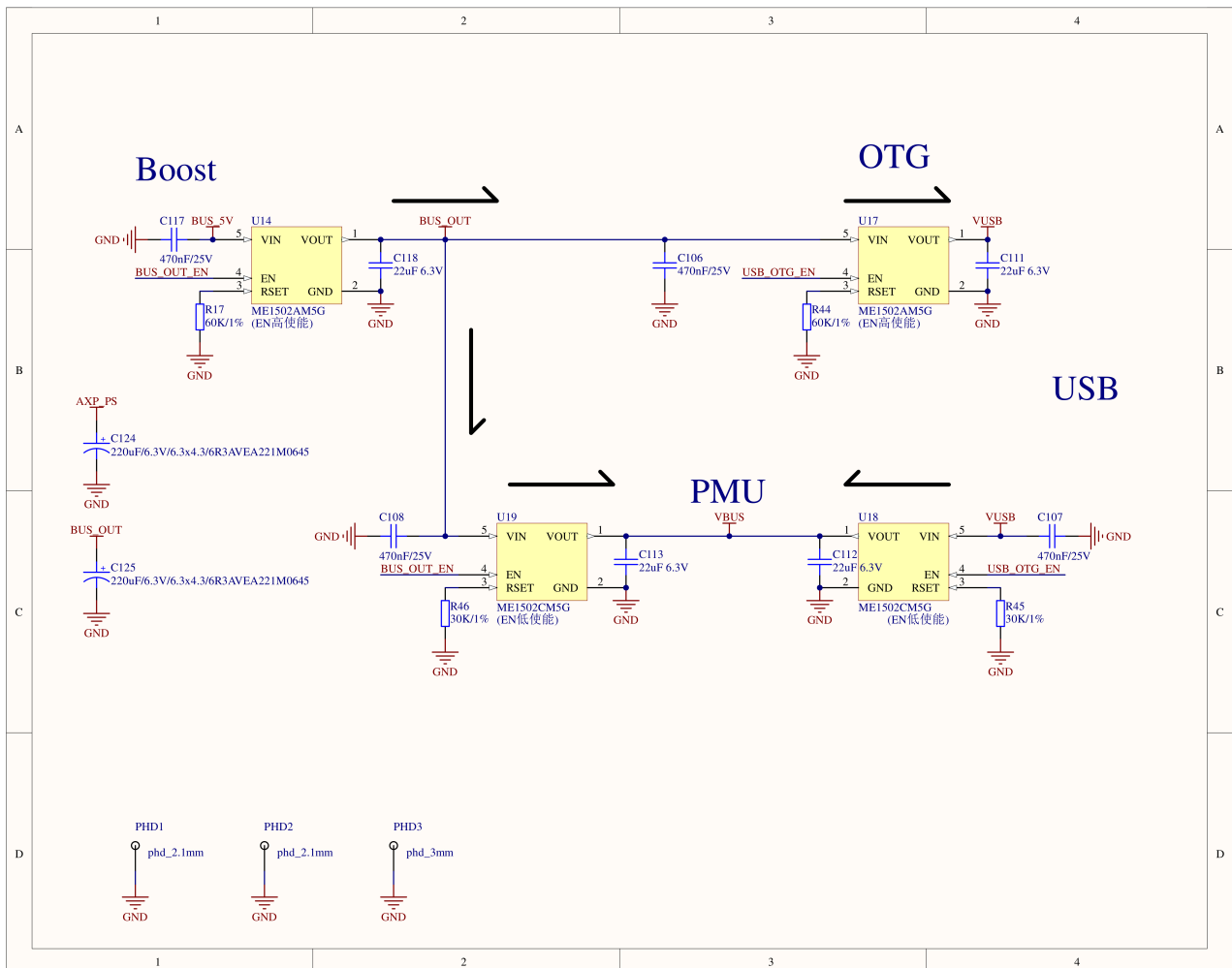
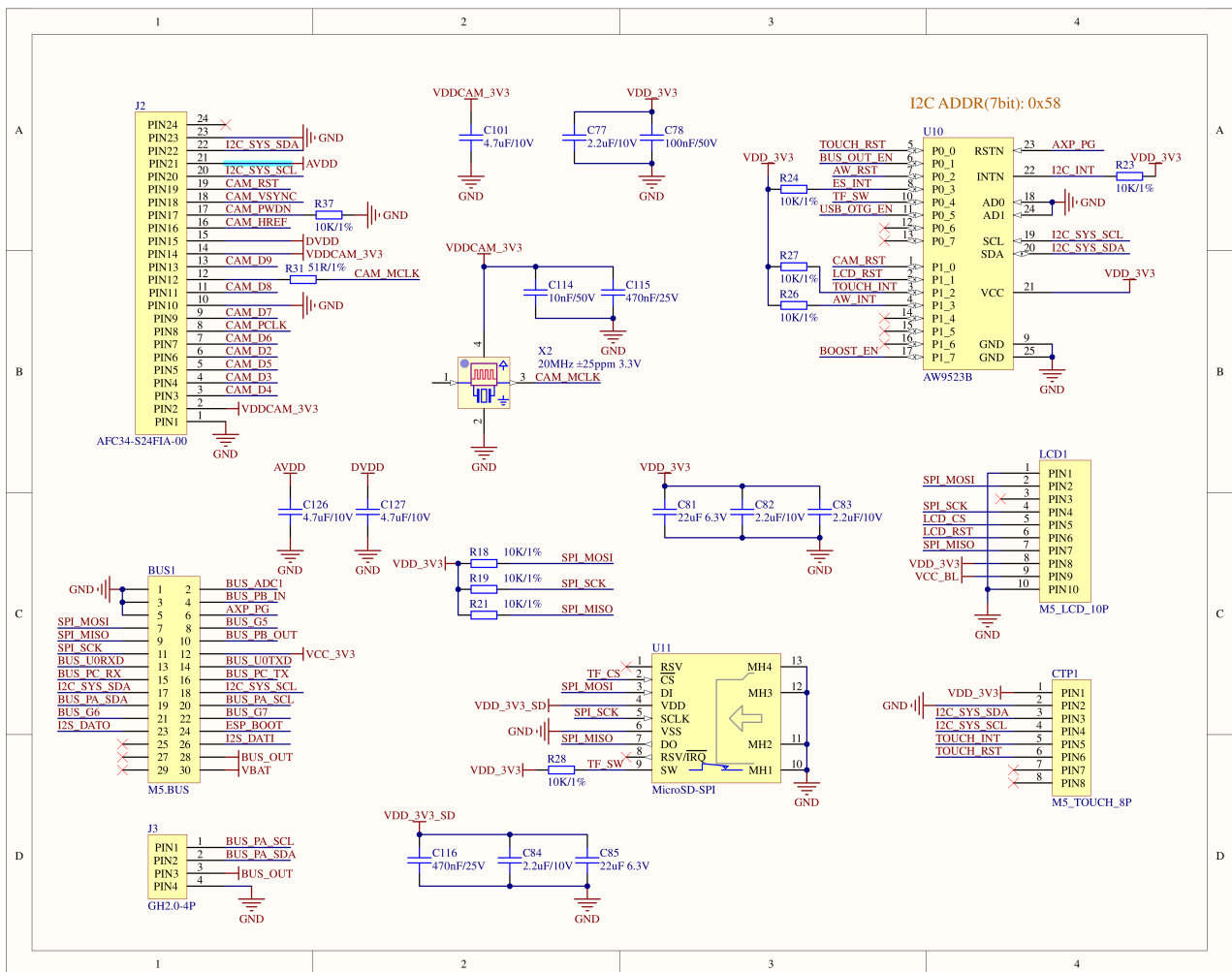
- StackChan main unit replacement

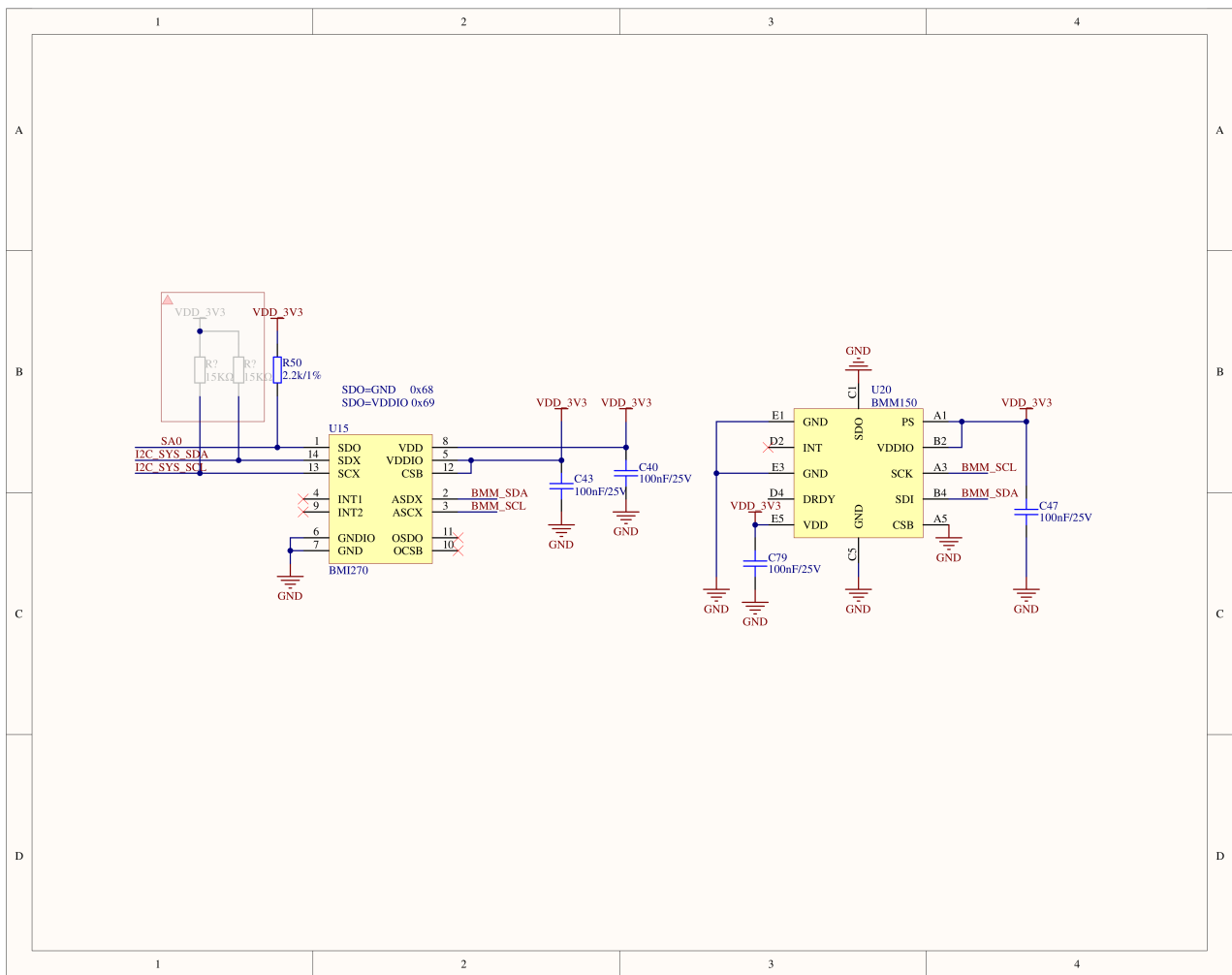
Specifications

Specification	Parameter
SoC	ESP32-S3 @ Xtensa® 32-bit LX7 dual-core processor, clock frequency 240MHz
Flash	16MB
PSRAM	8MB Quad
Wi-Fi	2.4 GHz Wi-Fi
Touch IPS LCD	2.0" @320 × 240 ILI9342C
Camera	GC0308 0.3MP
Proximity Sensor	LTR-553ALS-WA
Power Management	AXP2101
6-axis IMU	BMI270
3-axis Magnetometer	BMM150
RTC	BM8563
Speaker	16-bit I2S amplifier AW88298 @1W
Audio Codec	ES7210, dual-microphone input
Product Size	54.0 x 54.0 x 15.5mm
Product Weight	40.6g
Package Size	134.0 x 91.0 x 20.5mm
Gross Weight	60.0g

Schematics

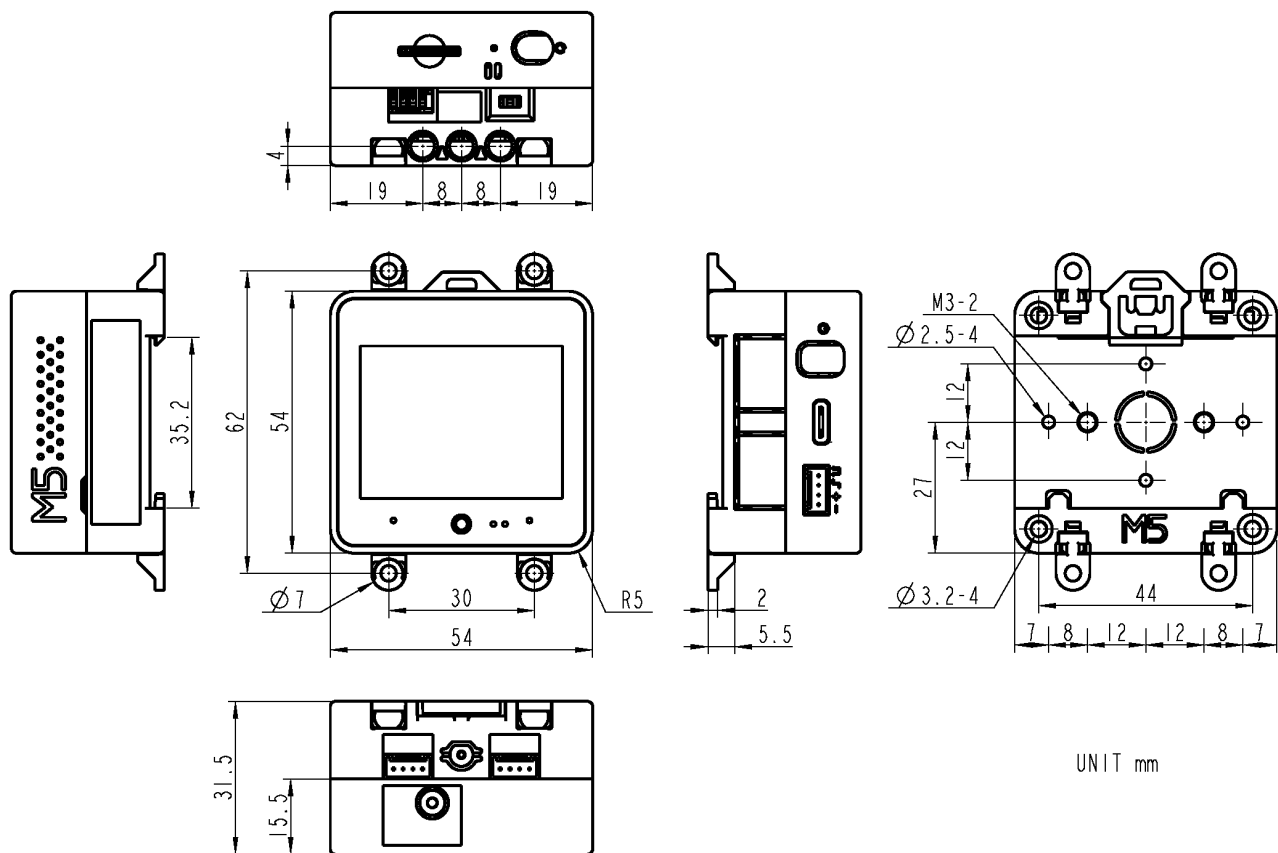
- [StackChan Core Schematics PDF](#)





Model Size

- StackChan Core Model Size DXF



Video