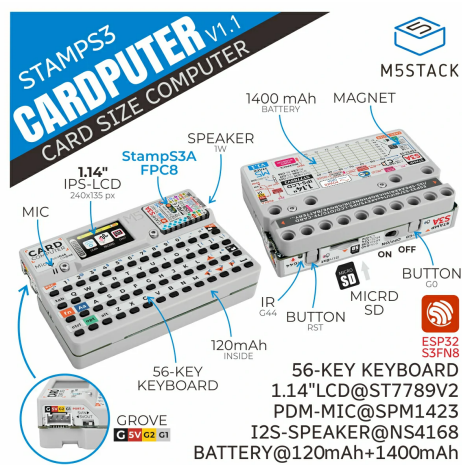
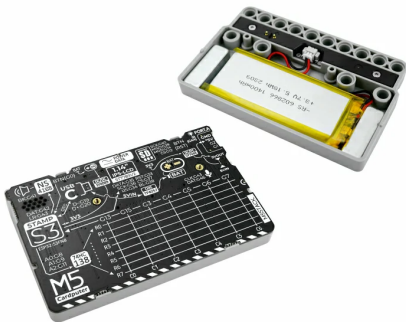
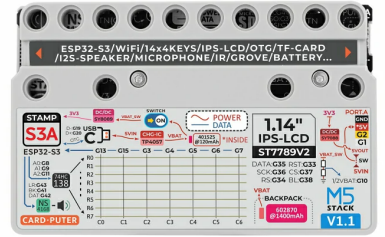
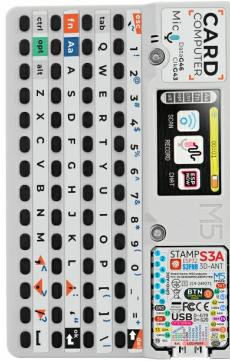
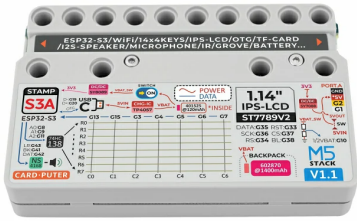


Cardputer v1.1

SKU:K132-V11





Description

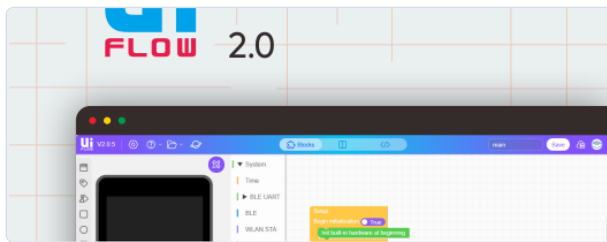
Cardputer v1.1 is a high-performance card computer designed for engineers, offering a comprehensive upgrade over the original Cardputer. The new version adopts the brand new **Stamp-S3A** main controller, with optimized antenna and button design for the core module, significantly improving system stability and user operation experience. In terms of control and interaction, it features a **56-key** keyboard and a 1.14-inch **TFT** display for efficient operation and display; a built-in SPM1423 digital MEMS **microphone** supports recording and wake-up functions, while a cavity **speaker** outputs audio; an infrared emitter enables external **infrared** control interactions. For expansion, the built-in Grove interface allows for custom sensor extensions; storage is supported via a Micro **SD** card slot for storage expansion. The power system consists of a built-in 120mAh battery and a 1400mAh base **lithium battery**, with integrated charging and power conversion circuits for greatly improved battery life. The base has an integrated magnet for metal surface attachment and is compatible with LEGO hole extensions. This product is applicable to scenarios such as rapid function verification for engineers, industrial control, and home control systems.

Tutorial



Arduino IDE

This tutorial will introduce how to program and control the Cardputer v1.1 device using the Arduino IDE.



UiFlow2

This tutorial will introduce how to control the Cardputer v1.1 device using the UiFlow2 graphical programming platform.

Note

- LCD and RGB LED usage note: Since RGB and LCD backlight share the same power source, when the LCD backlight brightness is below 100%, RGB will not be powered properly. Please use the RGB function when the backlight is at full brightness.

Features

- Stamp-S3A microcontroller
- 56-key keyboard
- 1.14-inch TFT display
- Cavity speaker and SPM1423 digital MEMS microphone
- Infrared emitter for infrared control interactions
- HY2.0-4P interface
- microSD card slot
- Built-in 120mAh and base 1400mAh lithium batteries
- Base with magnets
- LEGO hole expansion compatibility
- Development Platform
 - UiFlow2
 - Arduino IDE
 - ESP-IDF
 - PlatformIO

Includes

- 1 x Cardputer V1.1
- 1 x Hex Key L-Shape 1.5mm (For M2 Screw)

Applications

- Rapid function verification and prototyping
- Industrial control and automation
- Home control systems
- Data acquisition and sensor monitoring
- Embedded system development and learning
- Wireless communication and IoT projects

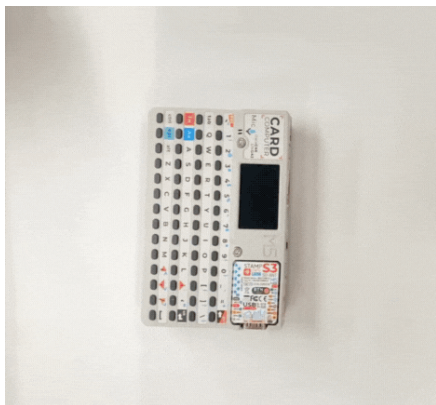
Specifications

Specification	Parameter
SoC	ESP32-S3FN8 @ Xtensa® 32-bit LX7 dual-core processor, clock frequency 240MHz
USB	USB OTG, USB Serial/JTAG
Flash	8MB
Wi-Fi	2.4 GHz Wi-Fi
External Storage Expansion	microSD
Keyboard	56 keys (4 x 14)
Buttons	1 x Reset button + 1 x User button
Grove	1 x HY2.0-4P
Battery Capacity	120mAh + 1400mAh (in base)
Display	ST7789V2@1.14 Inch, 240 x 135px
Cavity Speaker	8Ω@1W I2S@NS4168
Microphone	MEMS microphone @SPM1423
Infrared Transmission Distance	Infrared transmission distance at ∠0° (straight line): 410cm At ∠90°: 66cm At ∠45°: 170cm
Sleep Current	DC 4.2V@0.15uA
Operating Current	In IR transmission mode: DC 4.2V/148.07mA In key mode: DC 4.2V/138.93mA
Operating Temperature	0 ~ 40°C
Product Size	84.0 x 54.0 x 19.7mm
Product Weight	90.0g
Package Size	145.7 x 95.0 x 20.7mm
Gross Weight	106.8g

Learn

Enter Download Mode

To enter download mode, set the side power switch of the Cardputer v1.1 to the **OFF** position, then hold down the **GO** button before powering on the device, release it after the device is powered on, and the device will enter download mode.



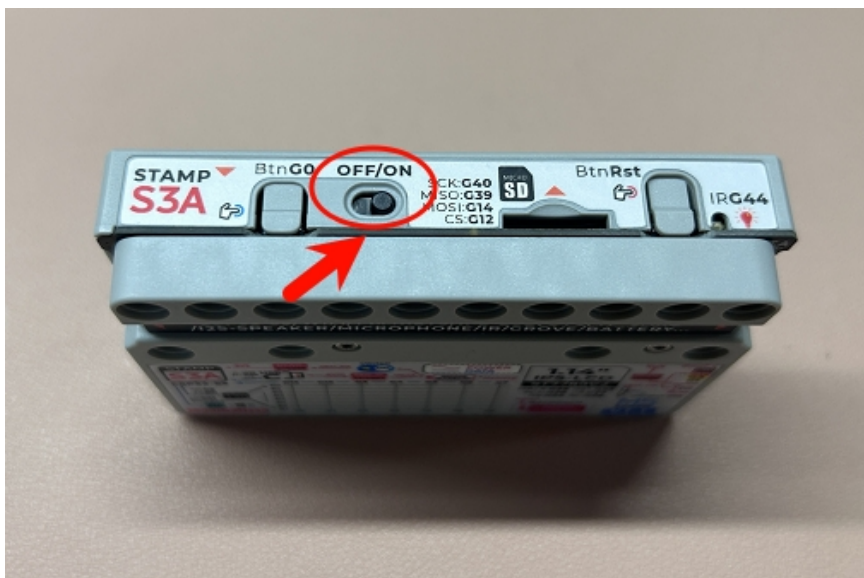
RGB LED Power Supply

RGB LED Power Supply Instructions

The device uses **Stamp-S3A** as its main controller. To optimize overall power consumption, Stamp-S3A adds an independent electronic switch for the RGB LED power supply compared with the previous Stamp-S3. Before controlling the RGB LED in software, set GPIO38, which controls this switch, to a high level.

Charging Notes

When charging the Cardputer v1.1, please switch the power to **ON**.

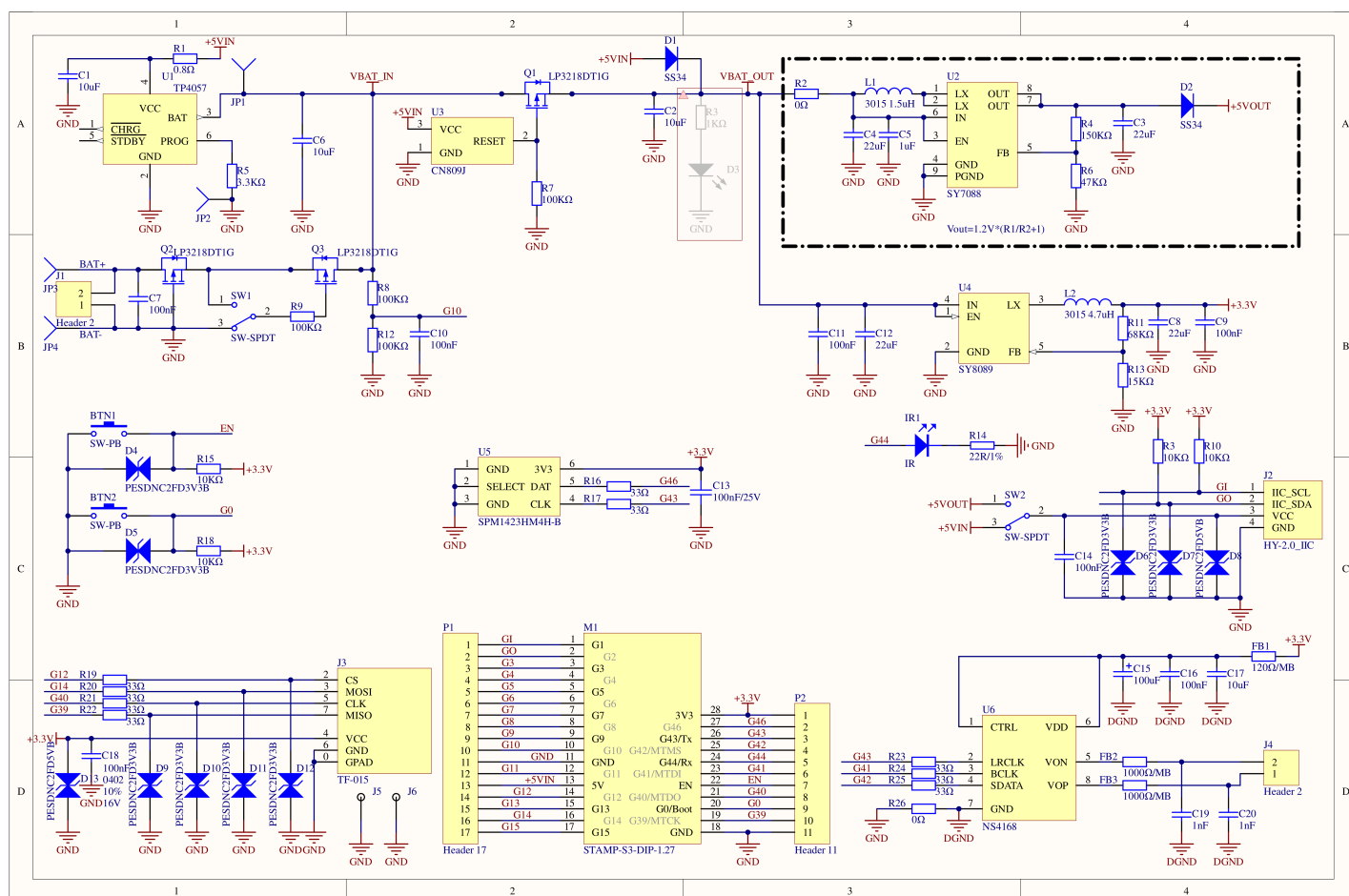


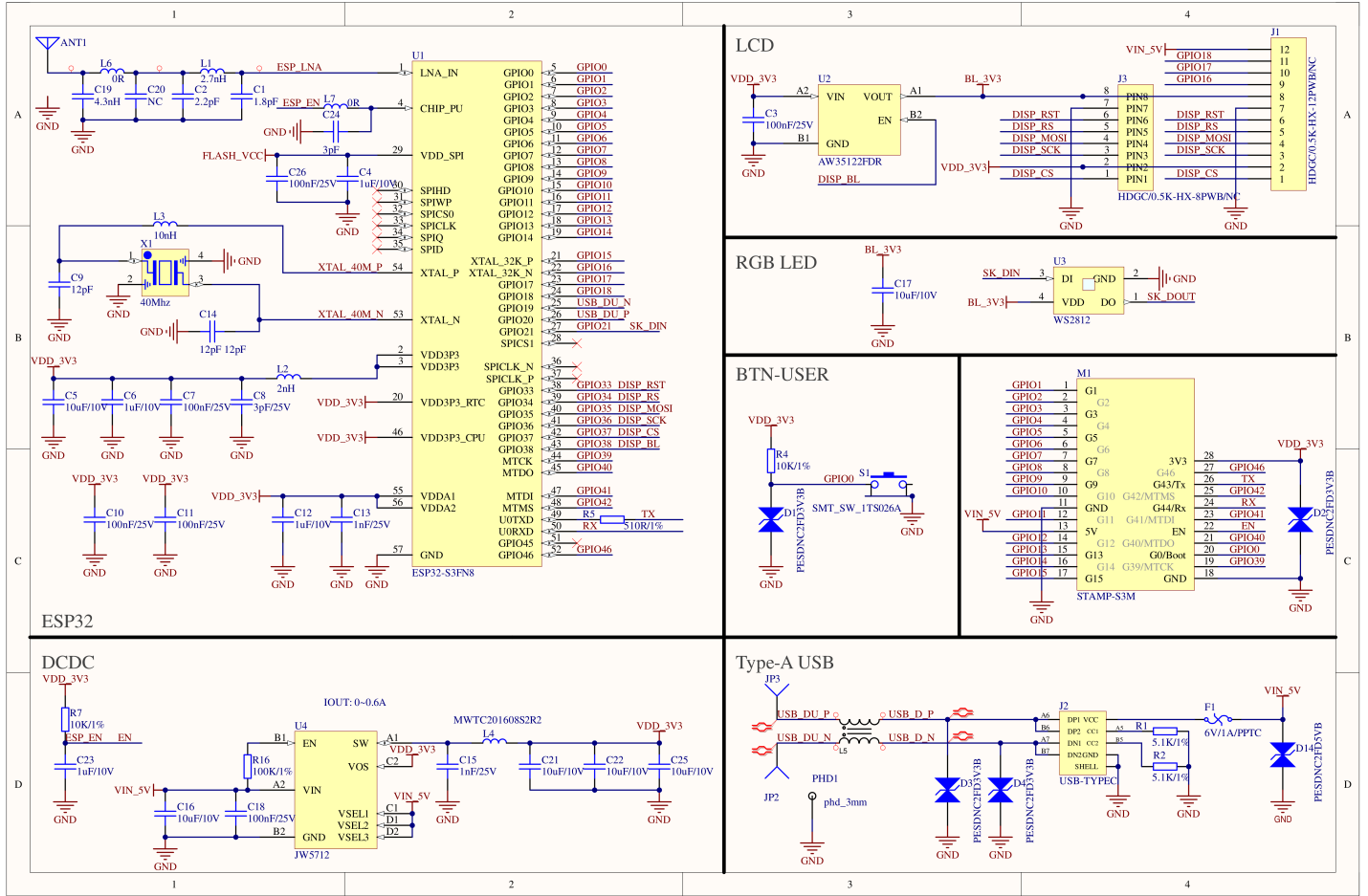
Disassembly Notes

When removing the Stamp-S3A on the panel, be careful with the FPC cable and connector on the back. Gently lift them up, otherwise the socket for the display connection may be damaged. Refer to the operation video in [Cardputer Accessory Kit](#) for guidance.

Schematics

- [Cardputer V1.1 Schematics PDF](#)
- [Cardputer V1.1 Base Schematics PDF](#)





PinMap

SPM1423 MIC

ESP32-S3FN8	G46	G43	3.3V	GND
SPM1423	DAT	CLK	VCC	GND

microSD Socket

ESP32-S3FN8	G12	G14	G40	G39
microSD Socket	CS	MOSI	CLK	MISO

ST7789V2 & RGB LED

ESP32-S3FN8	G38	G33	G34	G35	G36	G37
ST7789V2	DISP_BL	RST	RS	DAT	SCK	CS
RGB LED	VDD					

Keyboard & Battery Detect

Datasheets

- [SPM1423](#)
- [NS4168](#)
- [ST7789V2](#)

Softwares

Arduino

- [Cardputer v1.1 Arduino Quick Start](#)
- [Cardputer v1.1 Arduino Library](#)

UiFlow2

- [Cardputer v1.1 UiFlow2 Quick Start](#)

PlatformIO

```
[env:m5stack-cardputer]
platform = espressif32@6.7.0
board = esp32-s3-devkitc-1
framework = arduino
upload_speed = 1500000
build_flags =
    -DESP32S3
    -DCORE_DEBUG_LEVEL=5
    -DARDUINO_USB_CDC_ON_BOOT=1
    -DARDUINO_USB_MODE=1

lib_deps =
    M5Cardputer=https://github.com/m5stack/M5Cardputer
```

ESP-IDF

- [Cardputer v1.1 Factory Firmware](#)

Easyloader

Easyloader	Download	Note
Cardputer v1.1 User Demo Easyloader	download	/

Video

Product Comparison

Product Compare



Cardputer v1.1
Stamp-S3A

Cardputer
StampS3

Core Module		
RGB LED Control Logic	RGB LED shares power with screen backlight, optimized control logic	Powered immediately upon power-on
Antenna Design	Optimized antenna design, better signal reception	Standard antenna design
StampS3 Module Boot Key	Improved key feel, key size 4.0 x 3.0 x 2.0mm	Key size 2.6 x 1.6 x 0.55mm
Power Consumption	Optimized for lower power consumption	Standard design

To compare information on the Cardputer series products, you can visit the [Product Selection Table](#), check the target products, and get the comparison results. The selection table covers key information such as core parameters and functional features, and supports comparison of multiple products simultaneously.

Version Change

Release Date	Product Changes
2025.8.2	Key operating force changed from 260gf to 160gf
/	First release