

Flipper Zero Quad Module User Manual

=====

I. Module Components

1. 433M RF Module

- Model: A07
- Power: 10dBm

2. ESP32-S2 Module

- Default firmware: Predator
- Programming port: Front left Type-C (Label B)

3. GPS Module

- Power mode: Dual-source switching
- Toggle switch: Front left (Label C)

4. 2.8" Predator Screen

- Charging port: Front top Type-C (Label A)
- Power switch: Right side (Label D)

II. Module Configuration

■ 433M RF Module

1. Insert into Flipper Zero
2. Go to Sub-Ghz menu → Advanced Settings
3. Change RF module to "External"

■ ESP32-S2 Module Programming

1. Press and hold BOOT button (Label 1) on back right
2. While holding, connect USB cable to front left Type-C port (Label B)
3. Release button after computer detects device

■ GPS Power Switching (Switch C)

- Down position: Flipper Zero power (MUST use when connected)
- Up position: Internal battery power (Standalone mode only)

■ Predator Screen

- Charging status:
 - Charging: Indicator light on
 - Fully charged: Indicator light solid
- Activation: Turn on right-side power switch (Label D)
- GPS sharing: Shares data with Flipper Zero, power managed by Switch C

III. First-Time Setup

◆ GPS Module (Flipper Zero connection)

1. Set Switch C to Down position
2. Insert into Flipper Zero
3. Navigate: Momentum → Protocol Settings → GPIO Pin Settings → GPS Pins
4. Change pins to 13 and 14
5. Open APP → GPIO → [NAME] GPS and wait for positioning
(GPS antenna located front top left)

◆ 433M RF Module

Repeat steps 1-3 from "Module Configuration" section

◆ ESP32-S2 Module (Flipper Zero connection)

1. Insert into Flipper Zero
2. Navigate: Momentum → Protocol Settings → GPIO Pin Settings → ESP32 Pins
3. Change pins to 15 and 16
4. Open APP → GPIO → ESP32 WiFi Marauder

◆ Predator Screen Standalone Use

1. Set Switch C to Up position
2. Turn on right-side switch (Label D)

IV. Troubleshooting

▼ Issue 1: ESP32-S2 scroll errors (0x*****, len*****)

Cause: Flipper Zero firmware incompatible with module version

Solution: Reflash firmware, recommended version: mntm-007 Chinese-20241010 (Predator v1.2.1)

▼ Issue 2: Firmware programming failure

◇ Predator Screen programming:

1. Prepare SH1.0 to 2.54mm adapter cable
2. Connect to back left 4Pin port (Label E)
3. Press and hold BOOT button inside back left hole (Label 2)
4. Connect programmer to computer



◇ ESP32-S2 Module programming:

1. Press and hold BOOT button (Label 1)
2. Connect to front left Type-C port (Label B)
3. Release button after computer detection

V. Interface Identification

Label	Function	Location
1	ESP32-S2 BOOT button	Back right
2	Predator BOOT button	Inside back left hole
A	Predator charging port	Front top Type-C
B	ESP32-S2 programming port	Front left Type-C
C	GPS power toggle switch	Front left
D	Predator power switch	Right side
E	Predator programming port	Back left 4Pin SH1.0

VI. Critical Notes

1. GPS power rules:

- When connected to Flipper Zero: Switch C MUST be Down
- Standalone mode: Switch C MUST be Up

2. Programming requirements:

- ESP32-S2: Simultaneous use of Button 1 + Port B
- Predator screen: Requires adapter cable + Button 2

3. Positioning requirements:

- First-time use requires open outdoor area
- Keep top antenna clear of metal obstructions

4. Safety warnings:

- Disconnect all cables before switching power modes
- Maintain >50% battery during programming

5. Firmware compatibility:

- Use only recommended firmware versions
- Confirm successful programming before use