

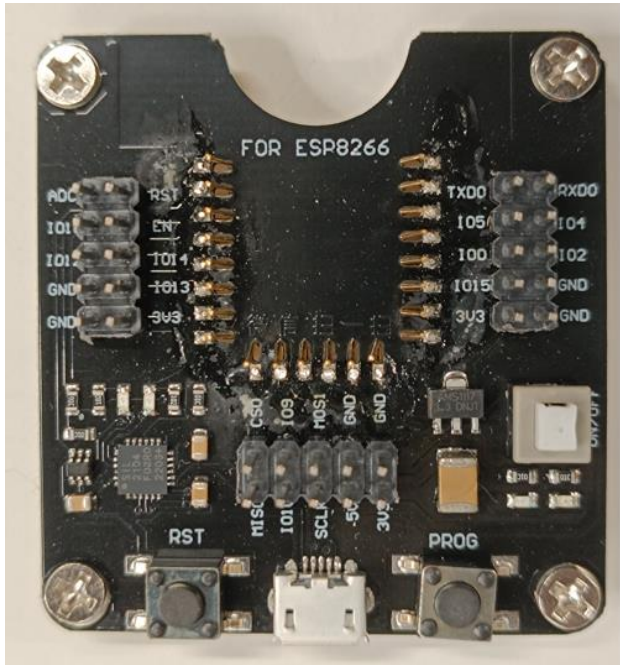
ESP32C Flashing,
Provisioning and Line
Test with C3 Flasher

Pre-Requisites

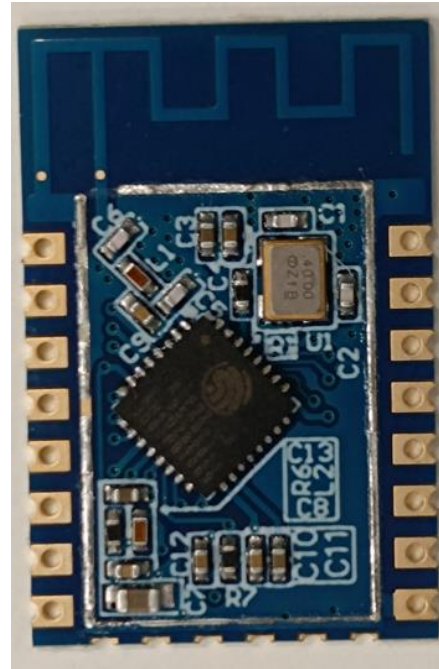
- ☐ C3 Flasher
- ☐ ESP32C Hardware
- ☐ Flashing and Provisioning Tool – Windows Software
- ☐ Line Testing using AC Simulator
- ☐ AC Simulator for Commission then RAC
- ☐ Type B USB Cable
- ☐ FTDI Chip
- ☐ Mini USB A Cable
- ☐ Jumper Cables

Pre-Requisites

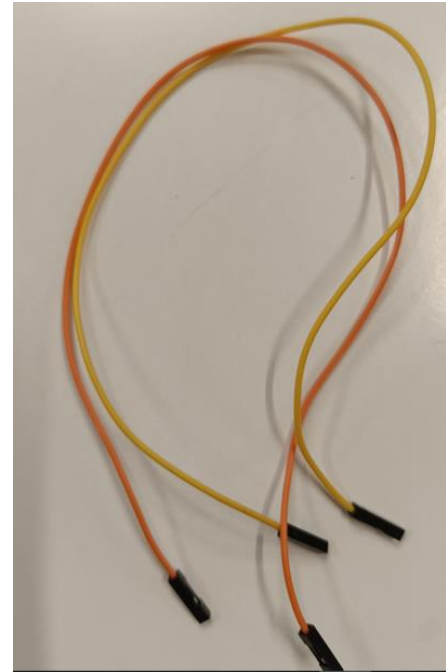
C3 Flasher



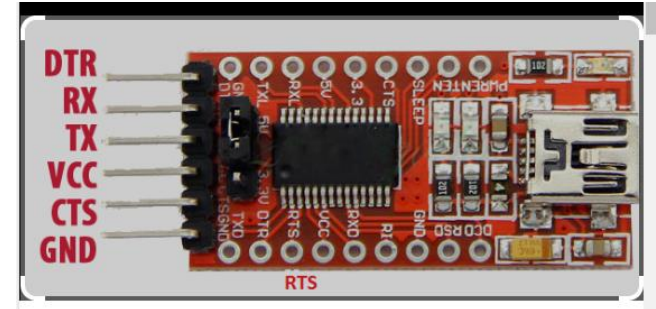
ESP32C



Jumper Cable



FTDI




Flashing and Provisioning Tool – Windows Software

❑ Please install OpenSSL and Set Environmental Path as per attached instructions file



❑ Open Tool from given folder – Shown as per below

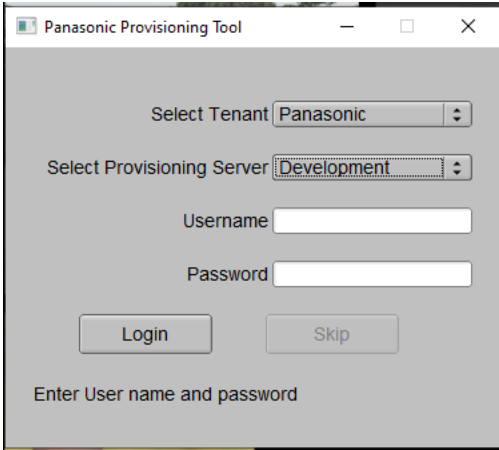
	devprovision	18-09-2023 17:34	Application	5,452 KB
---	--------------	------------------	-------------	----------

❑ Select Tenant and Environment

Enter below username and password

❑ Username -

❑ Password :-



The screenshot shows a window titled "Panasonic Provisioning Tool". It contains two dropdown menus: "Select Tenant" with "Panasonic" selected, and "Select Provisioning Server" with "Development" selected. Below these are two text input fields labeled "Username" and "Password". At the bottom, there are "Login" and "Skip" buttons, and a label "Enter User name and password".

Flashing and Provisioning Tool – Windows Software

❑ Copy firmware in folder as per given example without space

C:\Matter

❑ Select Product AC

❑ Input SSID and Password [2.4 GHz]

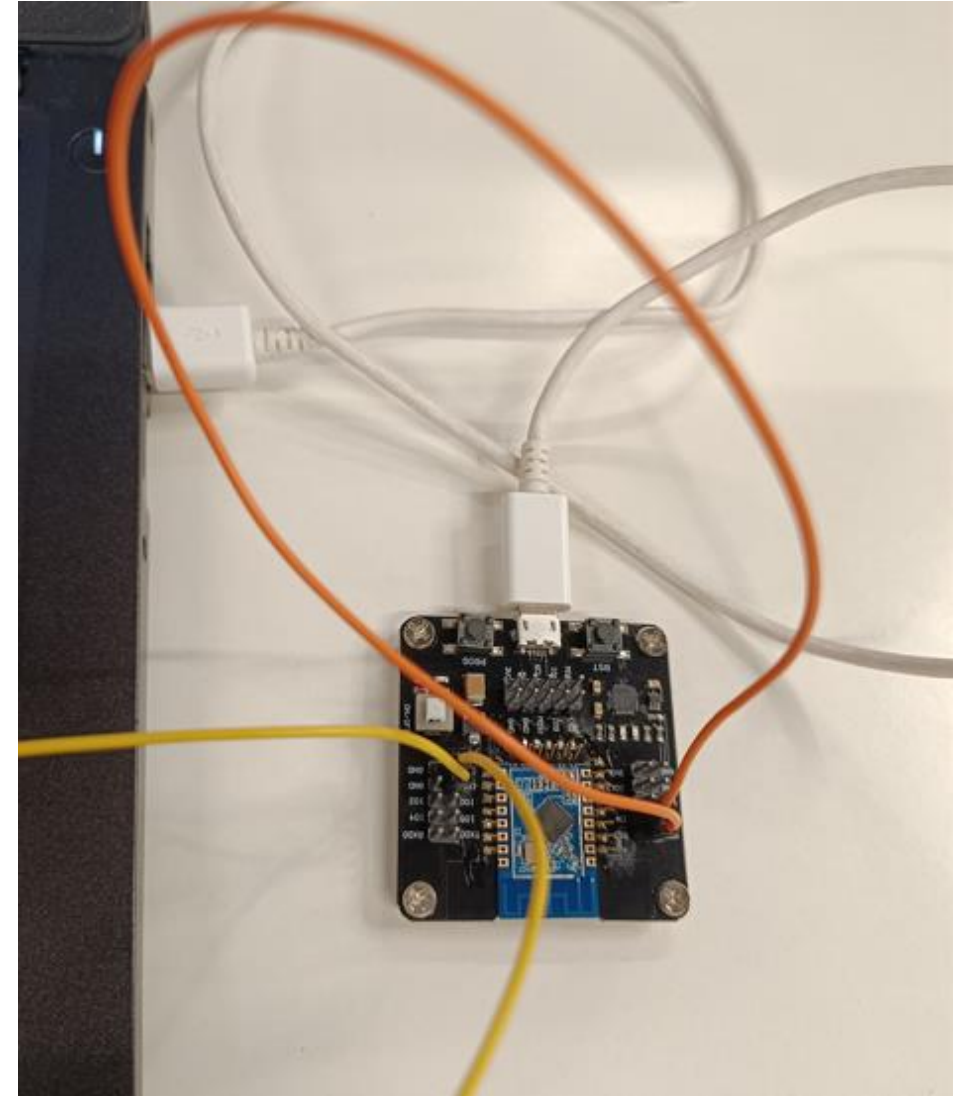
❑ Input UART Port [Get it from Device Manager]

The screenshot shows the Panasonic Provisioning Tool window. At the top right is the Panasonic logo. Below it, the interface displays the following fields and controls:

- Tenant: Panasonic | Service: Development | Firmware Version: | Tool Version: 2.1
- Firmware Path: C:\Matter (with a browse button)
- Product: PANASONIC (dropdown) | Brand: PANASONIC | Category: AC | Model: ESPWIFILE
- WiFi SSID (2.4 GHz): IICNET | Test WiFi Password: (masked)
- ☐ Get Firmware from flash | | | ☒ Provision
- UART Port: COM4 (with a "Ready" status indicator) | UART Port: (empty) (with a "Ready" status indicator)
- Below the first UART Port, there is a large empty text area for logs.
- UART Port: (empty) (with a "Ready" status indicator) | UART Port: (empty) (with a "Ready" status indicator)
- Below the second UART Port, there is another large empty text area for logs.
- A large green "START" button is located at the bottom center.

Flashing and Provisioning Tool – Windows Software

- ❑ Connect Jumper wires on Flasher as per show below picture
- ❑ Connection 1 : RST – EN
- ❑ Connection 2 : 3V3 – IO15
- ❑ Place ESP32C Module on C3 Flasher as per Shown in picture
- ❑ Connect C3 Flasher with USB Port on laptop
- ❑ Search Port in Device Manager and Enter Same COM port in Panasonic Provisioning Tool



Flashing and Provisioning Tool – Windows Software

Flashing progress

Panasonic Provisioning Tool

Panasonic

Tenant : Panasonic Service : Development Firmware Version : 3.00 Tool Version : 2.1

Firmware Path : C:\Matter

Product : PANASONIC Brand : PANASONIC Category : AC Model : ESPWIFIBLE

WiFi SSID (2.4 GHz) : IICNET Test WiFi Password :

☐ Get Firmware from flash ☒ Provision

UART Port : COM27 In Progress

UART Port : Ready

UART Port : Ready

UART Port : Ready

START

Write: 3072 bytes (183 compressed) at 0x0000c000 in 0.1 s
Hash of data verified.
Compressed 1659056 bytes to 995031...
Writing at 0x00020000... (1 %)
Writing at 0x0002dd8f... (3 %)

Panasonic Provisioning Tool

Panasonic

Tenant : Panasonic Service : Development Firmware Version : 3.00 Tool Version : 2.1

Firmware Path : C:\Matter

Product : PANASONIC Brand : PANASONIC Category : AC Model : ESPWIFIBLE

WiFi SSID (2.4 GHz) : IICNET Test WiFi Password :

☐ Get Firmware from flash ☒ Provision

UART Port : COM27 In Progress

UART Port : Ready

UART Port : Ready


UART Port : Ready

START


Hash of data verified.
Leaving...
Hard resetting via RTS pin...
Waiting for Module to Boot

Flashing and Provisioning Tool – Windows Software

Provision Pass



Tenant : Panasonic Service : Development Firmware Version : 3.00 Tool Version : 2.1

Firmware Path 

Product Brand Category Model

WiFi SSID (2.4 GHz) Test WiFi Password

☐ Get Firmware from flash ☒ Provision

UART Port **SUCCESS**

Hard resetting via RTS pin...
Waiting for Module to Boot
Provisioning Process Started. Please Wait.
Module Information Provisioned to MirAle Cloud
Successfully provisioned WIFI Module


UART Port **Ready**

UART Port **Ready**

START

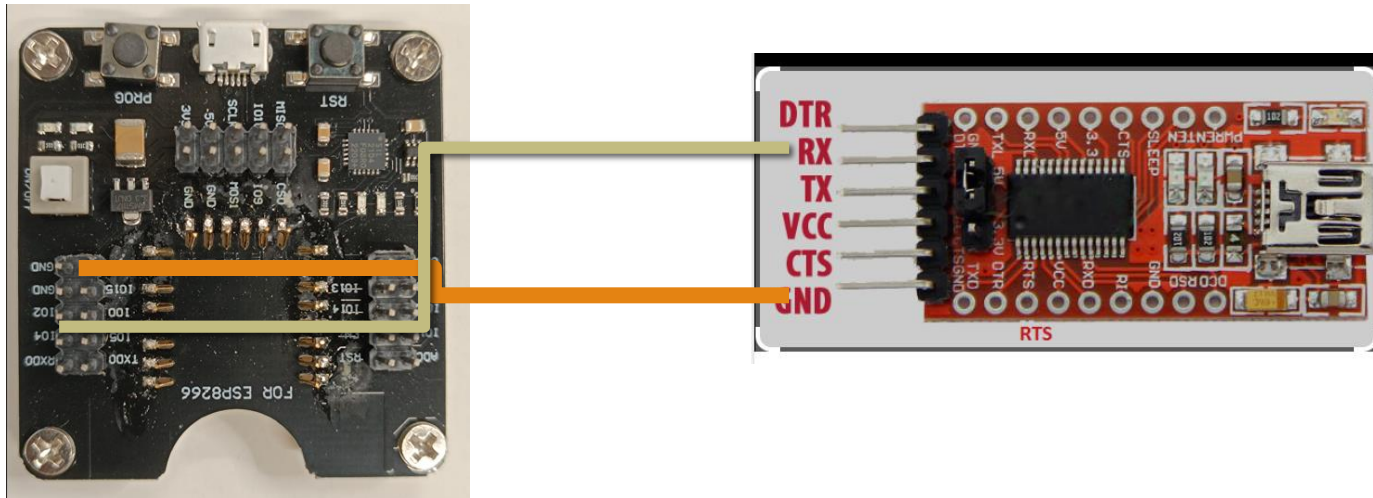
Line Test – Using AC Simulator

- ❑ Precondition – User must have Python installed in System
- ❑ Open AC Simulator Tool and Input COM Port e.g. COM27 [Shown in Device Manager]

Name	Date modified	Type	Size
 ac_sim_1.7	27-09-2023 16:02	Python File	42 KB

- ❑ Install Putty or Hercules to capture UART Logs for progress on line Test
- ❑ For Capture logs connect GND pin from C3 Flasher

To GND pin of FTDI and IO2 pin from C3 Flasher to RX pin of FTDI



```
COM4 - PuTTY
I (257362) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (257370) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 c5
E (262376) ICM_COMM_TASK: ICM send CMD failed, retries = 3
E (262376) ICM_COMM_TASK: ICM CMD UNLOCK
E (262676) ICM_COMM_TASK: ICM CMD LOCK
I (262676) ICM_COM_PROTO: CMD frame data
I (262676) app_util: 01 33 00 06 01 01 00 00 00 00 00 00 00 00 00 00
I (262681) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (262688) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (262695) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (262702) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 c4
I (267708) ICM_COM_PROTO: CMD frame data
I (267708) app_util: 01 34 00 06 01 01 00 00 00 00 00 00 00 00 00 00
I (267708) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (267715) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (267722) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (267730) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 c3
I (272736) ICM_COM_PROTO: CMD frame data
I (272736) app_util: 01 35 00 06 01 01 00 00 00 00 00 00 00 00 00 00
I (272736) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (272743) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (272750) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I (272758) app_util: 00 00 00 00 00 00 00 00 00 00 00 00 00 c2
```

Line Test – Using AC Simulator

- ❑ Open AC Simulator Tool and Input COM Port e.g. COM27 [Shown in Device Manager]
- ❑ Update QR code string field by given QR code e.g.
MT:A3L90Q1Y00XZ.52AE4P0OUYH0O9ZR1S2QC29YC421GDG2PIBU100
- ❑ Click on 'Send' button next to QR code.

Panasonic AC Simulator v1.7

Comp Port:

☐ Nano-e/g ☐ Powerful Mode ☐ Multi CMD

AC Temp (16 - 30)

Fan Speed (0 - 6)

Raw Command, Value

Line Test PSN (Non-Matter)

Line Test QRCode (Matter)

AC Mode: ☐ Auto ☒ Cool ☐ Dry ☐ Fan ☐ Heat

***** AC STATUS *****

Power Status	ON	Display	ON
AC Temp	24	Room Temp	26
Mode	Cool	Fan Speed	Auto
Nano E/G	OFF	Powerful Mode	OFF
PSN			

Line Test – Using AC Simulator

❑ Check Putty Log with logs prints . If it shows then Line Test Pass

```
D (482299) nvs: nvs_open_from_partition chip-factory 1[[0m
D (482304) nvs: nvs_set_str product-name CS-CU-HU18AKYF[[0m
[[0;32mI (482310) chip[DL]: NVS set: chip-factory/product-name = "CS-CU-HU18AKYF"[[0m
D (482317) nvs: nvs_close 80[[0m
D (482320) CHIP[DL]: matter_mfg_write_nvs_data:nvs_type=17[[0m
D (482326) nvs: nvs_open_from_partition chip-factory 1[[0m
D (482331) nvs: nvs_set_str mfg-date 20230921IN[[0m
[[0;32mI (482336) chip[DL]: NVS set: chip-factory/mfg-date = "20230921IN"[[0m
D (482342) nvs: nvs_close 81[[0m
[[0;32mI (482445) LINE_TEST: [[0;33mlinetest_parse_http_response, EXIT heap sz: 97764[[0m
D (482445) event: no handlers have been registered for event ESP_HTTP_CLIENT_EVENT:6 p
D (482454) event: no handlers have been registered for event ESP_HTTP_CLIENT_EVENT:6 p
[[0;32mI (482462) LINE_TEST: LT API Success[[0m
```