



2G IOT Gateway

Open Source Hardware for ESP32 + GSM SIM800C 2G with Battery and I/O Ports, Best Suitable for quick to market IOT products. Comprising of Industrial Standard ESP32 Wifi and SIM800C – 2G GSM with minimum form factor and quick to market OEM device has excellent on-board power management of its class, which has micro USB Interface for Programming and Battery Charging. White Labelling is offered on MOQ orders.

First Use Guide:

Charge the device before the first power ON for the best performance.

Insert the Nano Sim card in the dedicated SIM slot.

Download and install drivers for CP2102 on your computer.

Power “ON” the switch.

In order to use the hardware in programming mode, just plug the USB cable and start dumping the code from the Arduino IDE Console by selecting the appropriate com port from the tools.

Blue LED Indicates the status of the GSM network,

3 Sec Blinking = Indicates Successful connection of the network.

Orange LED indicates charging of the battery through the USB cable. Battery Capacity is 1000 mAh.

And Green LED indicates charging completed and the battery is full.

Dedicated I/O pins on board can be used to interface external sensors and other I/O devices conveniently by soldering berg strips on board.

Features:

- Programming through CP2102 without any need for pressing reset.
- Power Switch to turn ON/OFF the device.
- On board Wifi antenna for ESP32 with Wide Antenna Internal cut for longer range.
- External 2G Main Antenna for SIM800C
- Nano Sim card Holder.
- IO16 of ESP32 that is PIN11 is connected to SIM800C-RXD
- IO17 of ESP32 that is PIN12 is connected to SIM800C-TXD
- Select Library for UART2
- OLED is connected to GPIO22 that is PIN36 of ESP32 = SCL
- GPIO21 that is PIN33 of ESP32 = SDA
- Rest and Boot Button.

The Board has very robust industrial grade power section with 3.3V 500mA and 4.2V Battery power of 1000mAh, 5V 0.4A from direct USB main Source, All these power supplies are also available for the end user in order to interface other devices along with Common Ground Plain.

Following LED Indicators are available

- POWER LED,
- TEST LED (Can be programmed through GPIO2 pin 24 of ESP32)
- N/W LED (Network LED of the SIM800C Modem)
- STDBY LED for Battery full indication.
- Charging LED for Battery Charging Status.

Following Pins of the ESP32 has been pulled out for the interfacing of the external peripherals.

IO4, IO16, IO17, IO5, IO18, IO19, IO23, IO15, IO8, IO7, IO6, IO13, IO12, IO14, IO27, IO26, IO25, IO33, IO35, IO34 and IO36.

Robust and Industrial Grade Design with casing.

Note: This device can also be customised and printed with your company Logo based on the customer’s request. Will also provide complete product support. White labelling with MOQ orders.

Application:

IOT Gateways, IOT Nodes, Temperature and Humidity sensors, Asset Tracking, Device Tracking, Data logging, Analytics, Machine learning, Data Acquisition, Sending data to cloud from remote location and many more similar types of applications, limit of this device application is your thinking ability.

