

## COLOR DIAGRAM

- Chip Pin Number
- GPIO Number
- Touch Channel
- ADC Channel
- SCL
- SDA
- SPI
- DAC
- Ground
- Power
- ~ PWM Enabled Pin

# GroundStudio Carbon D4

Features ESP32 based **Pico D4** SiP with **2.4GHz Wifi, V4.2 Bluetooth, 8MB external SPI PSRAM, 520kB internal SRAM, 448kB ROM, 14 GPIO, 8 ADC and 6 touch sensitive pins, I<sup>2</sup>C 3V3 adapter, RGB smart LED, 1 cell LiPo/Lilon battery charger with optional battery connector**



## BATTERY CHARGER

BRCL4054CME is a complete constant-current/constant voltage linear charger for single cell **4.2V LiPo/Lilon** batteries

## EXTERNAL PSRAM

LY68L6400 Pseudo-SRAM external memory chip adding **8MB** of extra **PSRAM** over SPI connection

## ESP32 PICO D4

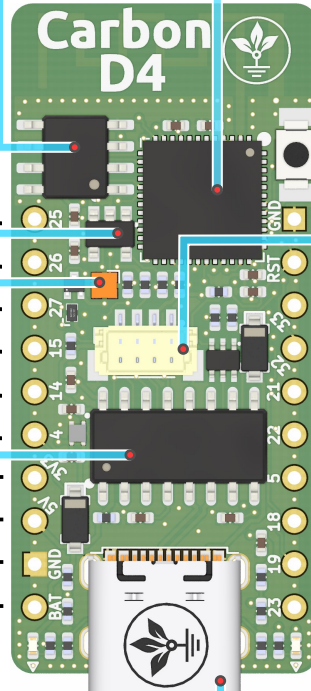
System-in-Package (SiP) based on ESP32

## RGB LED

ADC2 CH5	GPIO12	18	Data
ADC2 CH4	GPIO13	20	Power

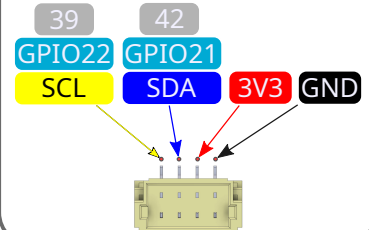
ADC2 CH8	DAC 1	GPIO25	14
ADC2 CH9	DAC 2	GPIO26	15
ADC2 CH7	TOUCH 7	GPIO27	16
ADC2 CH3	TOUCH 3	GPIO15	21
ADC2 CH6	TOUCH 6	GPIO14	17
ADC2 CH0	TOUCH 0	GPIO4	24

3V3  
5V  
GND  
BAT



## I<sup>2</sup>C 3V3

I<sup>2</sup>C SH adapter with 1.0mm pitch, **Qwiic** and **StemmaQT** compatible



## USB DRIVER

CH340C with built-in 12MHz clock generator

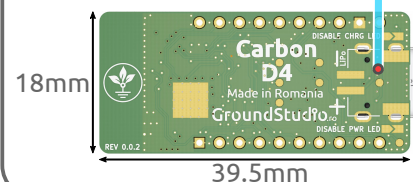
## USB C

USB 2.0 **type C** for double-sided connection

## BATTERY PADS

Optional **PH 2.00mm** connector pads for one cell **4.2V LiPo/Lilon** battery connection

## BACK SIDE



GroundStudio.ro

Board:

"GroundStudio Carbon D4" LUMUHR\_GS REV 0.0.2

Credits:

"TinyPICO Rev: V2 P2" by Unexpected Maker

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Pinout REV: 1