

Thinger.io ClimaStick v1.0

Quick start guide

This board is a complete Internet of Things development kit, that integrates a full programable WiFi transmissor and all environmetal and inertial sensors you will need to create tons of connected projects easily than ever, thanks to thinger.io libraries and infraestructure.

1. GENERAL INFORMATION

SIDE A (Top)

- Light sensor
- XYZ Axis mark
- PCB WiFi antenna
- ESP12-F
- Reset button
- Battery connector
- User / flash button
- Voltage In connector
- Micro USB-B Connector

SIDE B (Bottom)

- Acel-gyro
- Environmental sensor
- Magnetometer
- User / flash button
- Reset button
- Battery charger calibration resistor

Feature	Spec			
Dimensions	37 x 17 x 5 mm			
Weight	4 g			
Core	AI-thinker ESP12-E module.			
	Expressif ESP8266 cortex M0			
	Clock speed: 80Mhz			
	Flash: 4MB			
Conectivity	Ram: 160KB			
	802.11b/g/n WiFi			
Power supply	CP2102 USB Serial Port (115200) baud			
	Voltage	min	3.7	Vdc
		max	6	
	Current	min	100	mAh
		max	300	
	Connector	sleep	10	
		Micro USB-B or 2p 2mm VIN		
Available battery	3.7Vdc (1 cell) 500mah Li-Poli or Li-ion battery. *see battery powering section.			
Work tested conditions	(-5 to 50) ^o Celsius, 0-90% humidity *see working temperature section.			

Feature	Spec					
	Sensor	Variable	Range	Resolution	Accuracy	Condition
Embedded Sensors (I2C)	BME280	Temperature	(-40 , 85) °C	0.01 °C	(±0.5 , ±1) °C	*See temperature sampling section
		Relative humidity	(0 , 100) %Rh	0.01 %Rh	(±1 , ±3) %Rh	(0 , 60) °C
		Barometric pressure	(300 , 1100) hPa	0.18 hPa	(±0.1 , ±1)hPa	TCOP 25-65 °C, 900 hPa
	TSL2561	Light	(0 , 65535) Lux	0.01 Lux	±3.5 lux	(-30,70)°C (0,95)%Rh
	HMC5883	Magnetometer	(-8 , 8) gauss	(0.73 , 4.35) milli-gauss	(230 ,1370) LSB/gauss	
	MPU6050	Accelerometer	±16 g	2048 LSB/g	15 LSB/g	
		gyroscope	±2000°/sec	16.4°/sec	0.005dps/√Hz	
Voltaje sensor	ADC	VIN / BAT voltaje	(0 , 5) Vdc	0.01 Vdc (10 bit ADC)	0.1 Vdc	
Buttons	1 Reset button		Pulled-up to 3.3Vdc, ground when is push			
	1 Flash / User button (GPIO-0)		Pulled-up to 3.3Vdc, ground when is push			
Other	Full RGB user programable LED		Up to 1024 analogic stepping per colour			
	Serial Port Tx LED					

