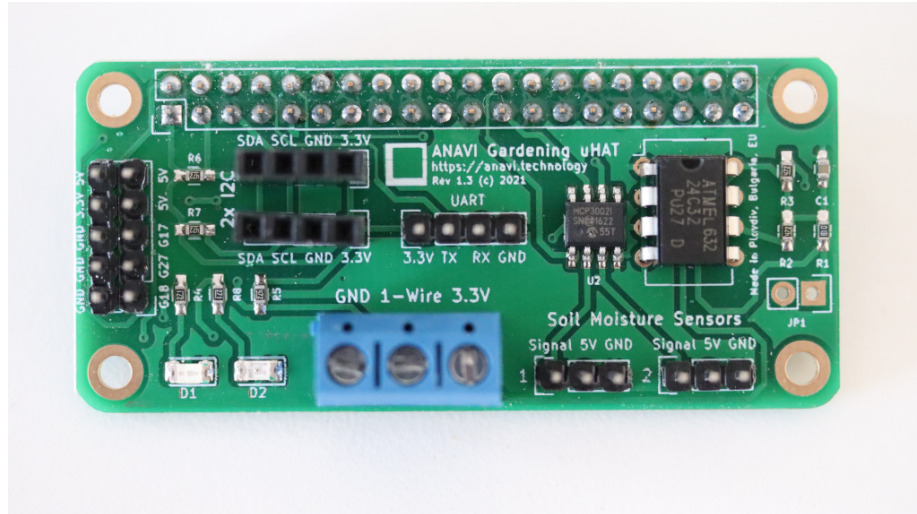


ANAVI Gardening uHAT

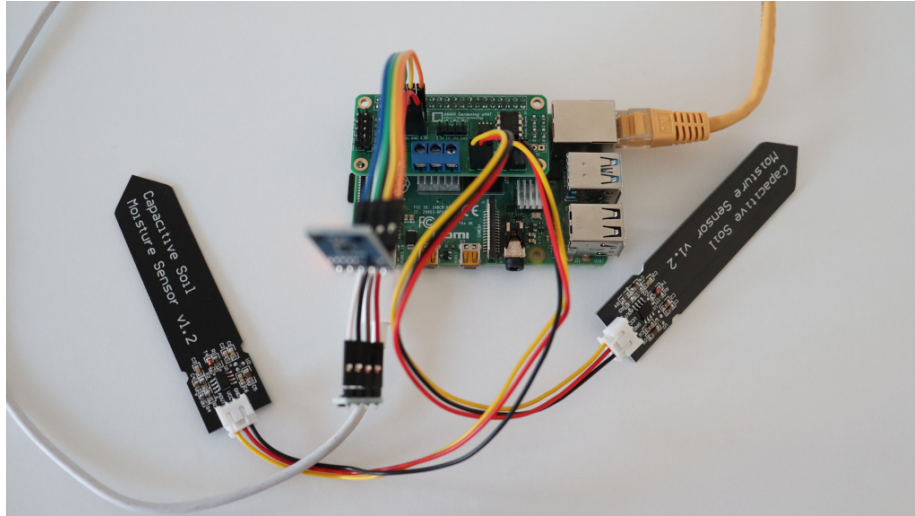
DATASHEET



ANAVI Gardening uHAT is a low-cost, open source Raspberry Pi add-on board that helps you develop smart solutions for monitoring and growing plants.

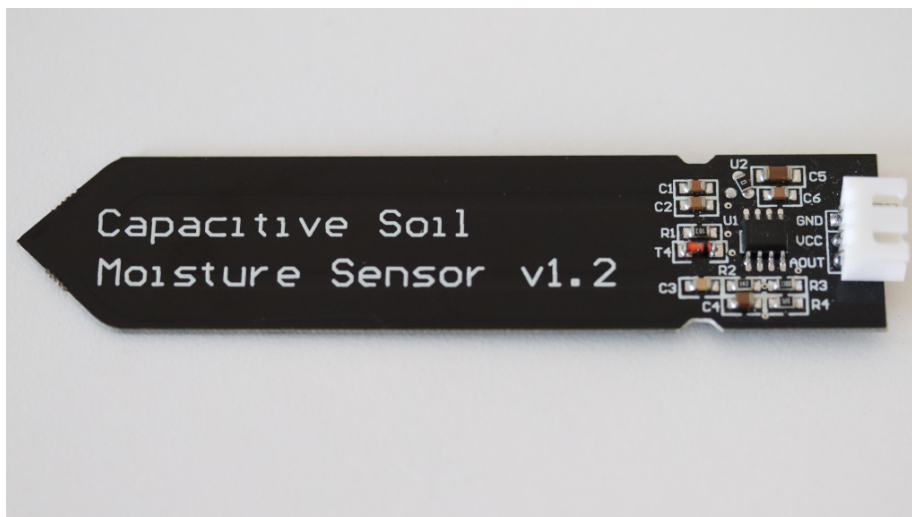
ANAVI Gardening uHAT supports multiple sensors for soil moisture, temperature, humidity, barometric pressure, and light. No soldering is required. Getting started is easy. You just plug it into a Raspberry Pi with your bare hands (no tools needed) and follow the steps from the user manual.

Features & Specifications



- Slots for up to two capacitive soil moisture sensors
- Slot for waterproof temperature sensor
- Slots for up to two plug-and-play I2C sensors
- UART pins for serial communication
- GPIO pins for controlling irrigation systems and peripherals
- Green and red indication LEDs
- Microchip MCP3002 Analog-to-Digital Converter (ADC)
- Follows uHAT mechanical specification with a valid ID EEPROM
- Excellent software support, documentation, and open source examples

Each kit contains two capacitive soil moisture sensors operating at 5V with analog output in the range 0 ~ 3V and made of corrosion resistant material.

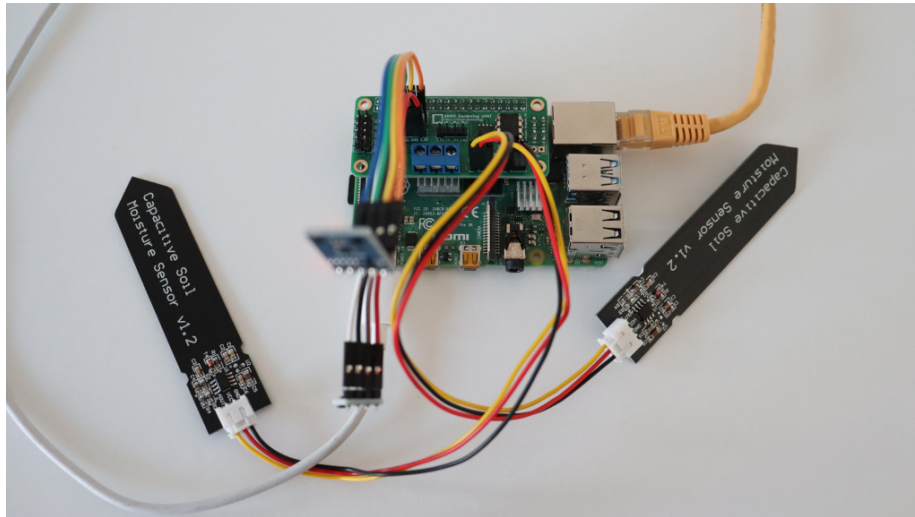


ANAVI Gardening uHAT follows Raspberry Pi Foundation HAT and uHAT design guides and requirements. ANAVI Gardening uHAT dimensions are 65x30mm with 3mm radius corners and 4 M2.5 mounting holes.

ANAVI Gardening uHAT is made in Plovdiv, Bulgaria, EU by ANAVI Technology Ltd.

Compatibility:

ANAVI Gardening uHAT works with any Raspberry Pi single board computer model and version with 40-pin header, including Raspberry Pi 4 and Raspberry Pi 0 W.



ANAVI Gardening uHAT officially supports the following sensor modules with:

- Capacitive soil moisture sensors
- Waterproof DS18B20 temperature sensor
- HTU21D sensor for temperature and humidity
- BH1750 sensor for light
- BMP180 sensor for barometric pressure

You may also attach any other I2C devices and sensors, but you will have to take care of their software integration.

Kit Configurations

ANAVI Gardening uHAT is available in three do-it-yourself kits.

	Starter Kit	Advanced Kit	Developer Kit
ANAVI Gardening uHAT	Yes	Yes	Yes
Capacitive soil moisture sensors	Yes	Yes	Yes
Light sensor	No	Yes	Yes
Temperature and humidity sensor	No	Yes	Yes
Waterproof temperature sensor	No	No	Yes
USB to serial debug cable	No	No	Yes

ANAVI Gardening uHAT Starter Kit (CS-ANAVI-GRDN-1)



The perfect kit to get started with gardening. Includes one ANAVI Gardening uHAT (1) and two capacitive soil moisture sensors (2).

ANAVI Gardening uHAT Advanced Kit (CS-ANAVI-GRDN-2)



Take your gardening skills to next level. Includes one ANAVI Gardening uHAT, two capacitive soil moisture sensors (2), I2C sensor for light (1), I2C sensor for temperature and humidity (1).

ANAVI Gardening uHAT Developer Kit (CS-ANAVI-GRDN-3)



Everything a developer needs to master gardening! Includes one ANAVI Gardening uHAT, two capacitive soil moisture sensors (2), one waterproof DS18B20 temperature sensor (1), I2C sensor for light (1), I2C sensor for temperature and humidity (1). Also comes with one USB-to-serial debug cable (1).

Hardware Schematics

ANAVI Gardening uHAT schematics are available at GitHub. It utilizes the following pins on Raspberry Pi:

Feature	Raspberry Pins
LED D1	GPIO22
LED D2	GPIO23
1-wire terminal	GPIO4
MCP3002 ADC	GPIO10, GPIO9, GPIO11, GPIO8
UART	GPIO14, GPIO15
I2C slots	GPIO2, GPIO3
I2C EEPROM	ID_SC, ID_SD

Resources

- KiCad board schematics
- Documentation
- Software
- For more information visit <https://anavi.technology/>