Industrial & Scientific › Test, Measure & Inspect › Temperature & Humidity › Temperature Probes & Sensors

HiLetgo 5pcs DS18B20 Temperature Sensor Temperature Probe Stainless Steel Package Waterproof 1M

Visit the HiLetgo Store

★★★★½ ⌄   142 ratings | 18 answered questions

Price: **$10.99** + No Import Fees Deposit & $7.80 Shipping to Hong Kong (**FREE Shipping** to Hong Kong when you spend over $49.00 on eligible items) Details

- HiLetgo DS18B20 Temperature Sensor
- 9 to 12 adjustable resolution
- Wide temperature range of -55 °C ~ +125 °C
- 3.0V ~ 5.5V power supply

Roll over image to zoom in

Compare with similar items

💬 Report incorrect product information.

AtlasScientific™
Environmental Robotics

:= Shop Now
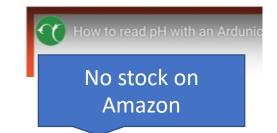
ome / Embedded Solutions / EZO™ pH Circuit

EZO™ pH Circuit
#EZO-pH

Patent Protected

$41.99

- 1 +

ADD TO CART

How to read pH with an Arduino

No stock on Amazon

Reads	pH
Range	.001 – 14.000
Resolution	.001
Accuracy	+/- 0.002
Response time	1 reading per sec
Supported probes	Any type & brand
Calibration	1, 2, 3 point
Temp. compensation	Yes
Data protocol	UART & I2C
Default I2C address	99 (0x63)
Operating voltage	3.3V – 5V
Data format	ASCII
Circuit dimensions	13.97mm x 20.16mm (0.55" x 0.79")
Weight:	1.76 grams
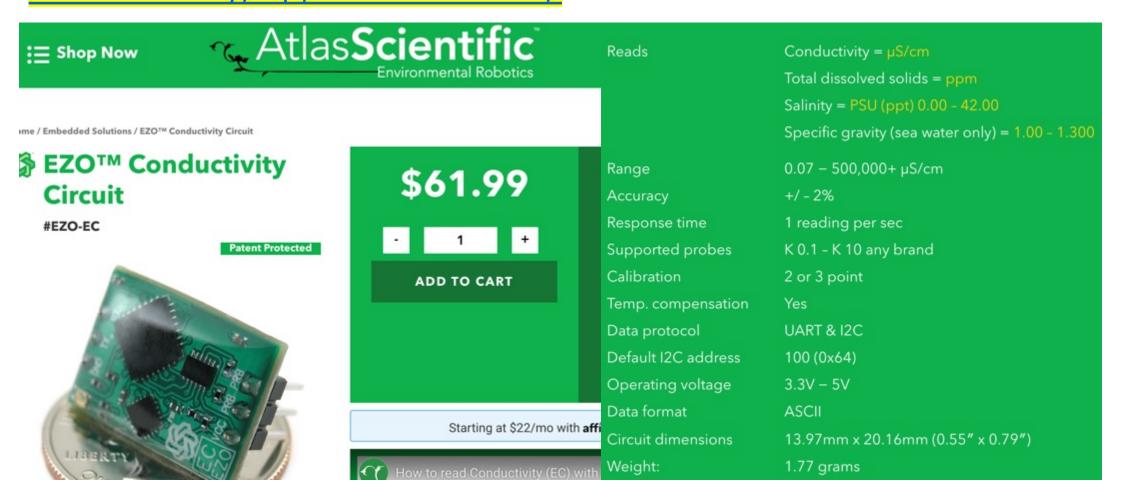
Industrial & Scientific › Industrial Electrical › Sensors › Flow Sensors

DIGITEN G1/2" Water Flow Hall Sensor Switch Flow Meter Flowmeter Counter 1-30L/min

Visit the DIGITEN Store

⭐⭐⭐⭐½ ⌄ 62 ratings | 33 answered questions

List Price: $11.99 Details

Price: $8.99 + No Import Fees Deposit & $7.92 Shipping to Hong Kong (FREE Shipping to Hong Kong when you spend over $49.00 on eligible items) Details

You Save: $3.00 (25%)

- Flow range:1-30L/min, Sensor:Hall effect
- Allow compression:Water pressure 1.75 Mpa below
- Working voltage range:DC 5-18 V
- Output Waveform:Square Wave,output pulse signal.
- Work for Android and PI system.

Specifications for this item

Roll over image to zoom in

HiLetgo G1/2" Water Flow Hall Sensor Switch 1-30L/min 1.75MPa Flow Meter Flowmeter Counter Water Flow Sensor

Visit the HiLetgo Store

⭐⭐⭐⭐½ ⌄ 11 ratings

Price: $7.99 + No Import Fees Deposit & $7.66 Shipping to Hong Kong (FREE Shipping to Hong Kong when you spend over $49.00 on eligible items) Details
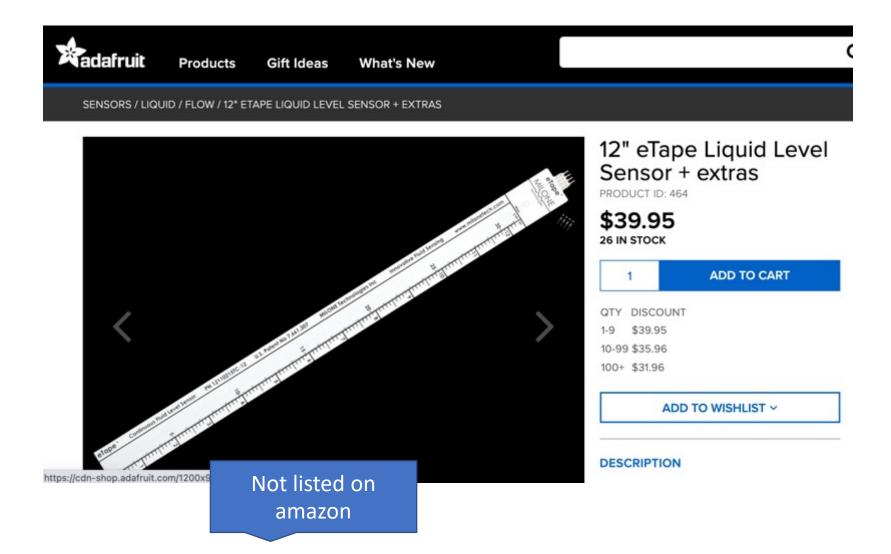
- 1-30L/min 1.75MPa 1/2" Hall Effect Flowmeter Control Water Flow Sensor
- The lowest rated working voltage: DC4.5 5V-24V
- Maximum operating current: 15 mA (DC 5V)
- Working voltage range: DC 5~18 v
- Load capacity: 10 mA (DC 5V)

No stock on Amazon

Is this an alternative?

https://www.adafruit.com/product/464
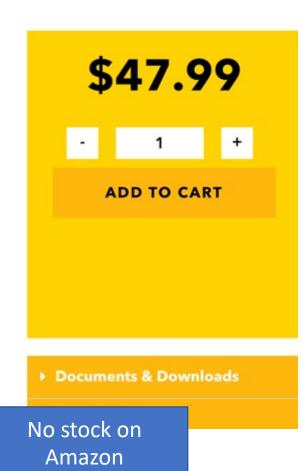
ome / Embedded Solutions / EZO™ Dissolved Oxygen Circuit

EZO™ Dissolved Oxygen Circuit

#EZO-DO

Patent Protected

$47.99

- 1 +

ADD TO CART

▸ **Documents & Downloads**

No stock on Amazon

Reads	Dissolved Oxygen
Range	0.01 – 100+ mg/L 0.1 – 400+ % saturation
Accuracy	+/- 0.05 mg/L
Response time	1 reading per sec
Supported probes	Any galvanic probe
Calibration	1 or 2 point
Temp. compensation	Yes
Salinity compensation	Yes
Pressure compensation	Yes
Data protocol	UART & I2C
Default I2C address	97 (0x61)
Operating voltage	3.3V – 5V
Data format	ASCII
Circuit dimensions	13.97mm x 20.16mm (0.55" x 0.79")
Weight:	1.77 grams

Roll over image to zoom in

HiLetgo 2pcs DHT22/AM2302 Digital Temperature And Humidity Sensor Module Temperature Humidity Monitor Sensor Replace SHT11 SHT15 for Arduino Electronic Practice DIY

Visit the HiLetgo Store

★★★★½ ✓   423 ratings

| 12 answered questions

Amazon's Choice for "dht22"

Price: **$14.49** ($7.25 / Count) + No Import Fees Deposit & $7.58 Shipping to Hong Kong (**FREE Shipping** to Hong Kong when you spend over $49.00 on eligible items) Details
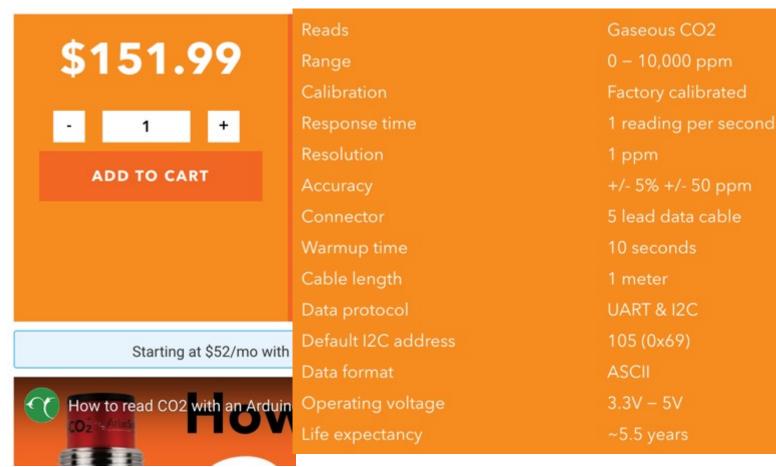
https://atlas-scientific.com/co2-sensor/
https://www.amazon.com/Atlas-Scientific-EZO-CO2-Embedded-Sensor/dp/B07KJMZ6YH/

EZO-CO2™
Embedded Carbon Dioxide Sensor

#EZO-CO2

$151.99

- 1 +

ADD TO CART

Starting at $52/mo with

How to read CO2 with an Arduin... **How**

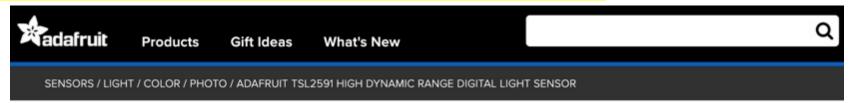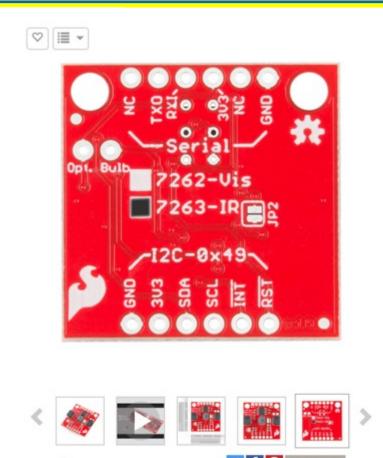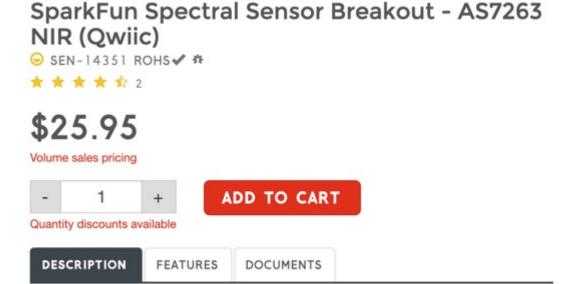|	
Reads	Gaseous CO2
Range	0 – 10,000 ppm
Calibration	Factory calibrated
Response time	1 reading per second
Resolution	1 ppm
Accuracy	+/- 5% +/- 50 ppm
Connector	5 lead data cable
Warmup time	10 seconds
Cable length	1 meter
Data protocol	UART & I2C
Default I2C address	105 (0x69)
Data format	ASCII
Operating voltage	3.3V – 5V
Life expectancy	~5.5 years

https://www.adafruit.com/product/1980
https://www.amazon.com/Adafruit-TSL2591-Dynamic-Digital-ADA1980/dp/B00XW2OFWW/

SparkFun Spectral Sensor Breakout - AS7263 NIR (Qwiic)

SEN-14351 ROHS ✓

★ ★ ★ ★ ½ 2

$25.95

Volume sales pricing

| - | 1 | + | ADD TO CART |

Quantity discounts available

DESCRIPTION   FEATURES   DOCUMENTS

The SparkFun AS7263 Near Infrared (NIR) Spectral Sensor Breakout brings spectroscopy to the palm of your hand, making it easier than ever to measure and characterize how different materials absorb and reflect different wavelengths of light. The AS7263 Breakout is unique in its ability to communicate by both an I²C interface and serial interface using AT commands. Hookup is easy, thanks to the Qwiic connectors attached to the board --- simply plug one end of the Qwiic cable into the breakout and the other into one of the Qwiic shields, then stack

https://www.amazon.com/Infrared-Vision-Camera-Raspberry-Webcam/dp/B07T22X3PQ

Electronics › Computers & Accessories › Computer Components › Single Board Computers

Infrared Night Vision IR Camera for Raspberry Pi 4, Pi 3b+ Video Webcam with Case Suits for 3D Printer

Visit the Jun-Electron Store

★★★★☆ ⌄   76 ratings | 4 answered questions

Price: **$18.19** + No Import Fees Deposit & $7.82 Shipping to Hong Kong (**FREE Shipping** to Hong Kong when you spend over $49.00 on eligible items) Details
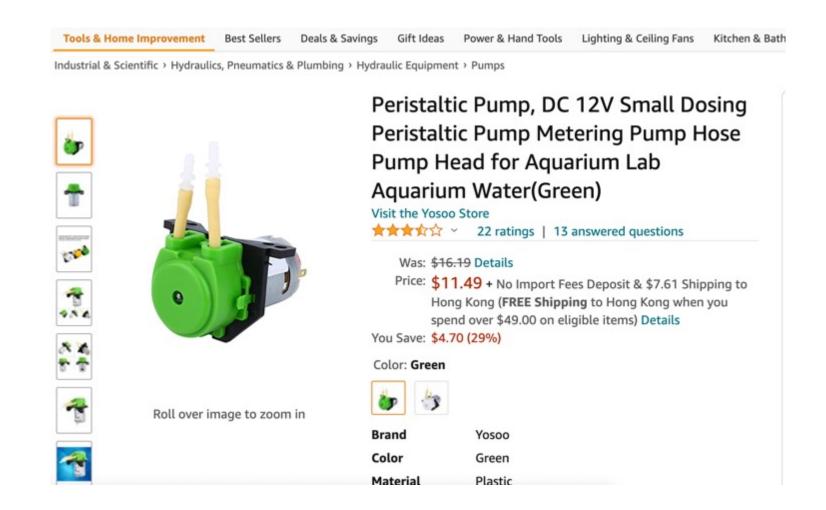
Brand	JUN-ELECTRON
Special Feature	Infrared
Lens Type	Standard
Product Dimensions	4.72 x 3.15 x 1.97 inches; 3.56 Ounces
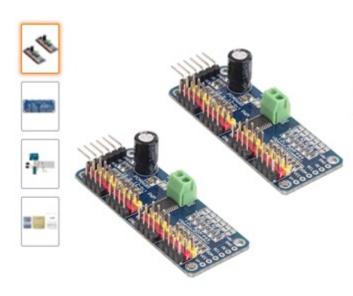
Roll over image to zoom in

- Compatible with all series, fit for Raspberry pi 4, Pi 3 B+ with 100cm FFC Camera Cable, and match 30cm FPC Cable for Pi Zero, also can works with your 3D printer to observe the Print progress
- HD resolution, the night vision camera is capable of 2592*1944 pixel static images, and also supports 1080P 30fps, 720P 60fps and 640*480P 60/90fps video recording
- Better low light performance, IR corrected lens to reduce focus shift at night, and IR LED illuminator to improve the lightning condition
- Typical usage scenarios, Home security and surveillance, motion detection, 3D printer observe, time-lapse photography and other Raspberry Pi camera projects

Industrial & Scientific › Industrial Electrical › Controls & Indicators › Motor Drives

Roll over image to zoom in

HiLetgo 2pcs PCA9685 16 Channel 12-Bit PWM Servo Motor Driver IIC Module for Arduino Robot

Visit the HiLetgo Store

★★★★½ ⌄   135 ratings | 10 answered questions

Amazon's Choice for "pca9685"

Was: $15.99 Details

Price: **$13.99** ($7.00 / Item) + No Import Fees Deposit & $7.66 Shipping to Hong Kong (**FREE Shipping** to Hong Kong when you spend over $49.00 on eligible items) Details

You Save: $2.00 (13%)

- Communication Interface: IIC
- 16-way steering gear control
- Voltage: DC5-10V power supply
- The PCA9685 chip is wrapped in the center of the board
- All PWM output lines have a 220 ohm series resistor protection and can easily drive LED.

DIGITEN G1/2" Water Flow Hall Sensor Switch Flow Meter Flowmeter Counter 1-30L/min

Visit the DIGITEN Store

★★★★⯪ ∨   62 ratings | 33 answered questions

List Price: ~~$11.99~~ Details

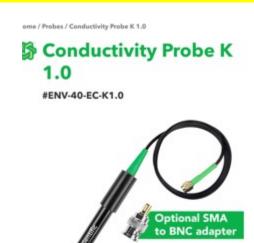Price: **$8.99** + No Import Fees Deposit & $7.92 Shipping to Hong Kong (**FREE Shipping** to Hong Kong when you spend over $49.00 on eligible items) Details
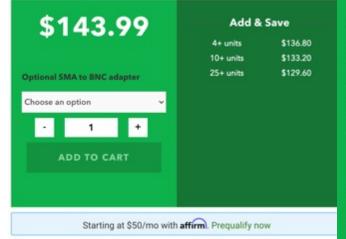
You Save: $3.00 (25%)

- Flow range:1-30L/min, Sensor:Hall effect
- Allow compression:Water pressure 1.75 Mpa below
- Working voltage range:DC 5-18 V
- Output Waveform:Square Wave,output pulse signal.
- Work for Android and PI system.

Roll over image to zoom in

ome / Probes / Conductivity Probe K 1.0

Conductivity Probe K 1.0

#ENV-40-EC-K1.0

Optional SMA to BNC adapter

$143.99

Add & Save

4+ units	$136.80
10+ units	$133.20
25+ units	$129.60

Optional SMA to BNC adapter

Choose an option

−   1   +

ADD TO CART

Starting at $50/mo with affirm. Prequalify now

Reads	Conductivity
Range	5 – 200,000 μS/cm
Accuracy	+/ – 2%
Response time	90% in 1s
Temperature range °C	1 – 110 °C
Max pressure	3,447 kPa (500PSI)
Max depth	352m (1,157 ft)
Connector	Male SMA / Male BNC *(optional)*
Cable length	1 meter
Internal temperature sensor	No
Time before recalibration	~10 years
Life expectancy	~10 years

Home / Probes / Lab Grade Dissolved Oxygen Probe

Lab Grade Dissolved Oxygen Probe

#ENV-40-DOX

Optional SMA to BNC adapter

$223.99

Optional SMA to BNC adapter

Choose an option ⌄

- 1 +

ADD TO CART

Starting at $77/mo with

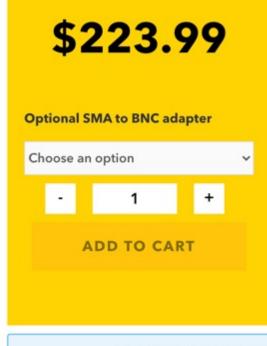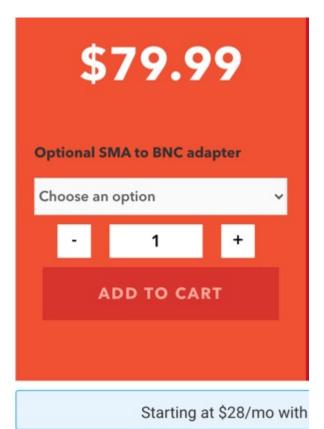|	
Reads	Dissolved Oxygen
Range	0 – 100 mg/L
Accuracy	+/- 0.05 mg/L
Response time	~0.3 mg/L/per sec
Temperature range °C	1 – 60 °C
Max pressure	3,447 kPa (500PSI)
Max depth	352m (1,157 ft)
Connector	Male SMA / Male BNC (optional)
Cable length	1 meter
Internal temperature sensor	No
Time before recalibration	~1 Year
Life expectancy	~4 Years
Maintenance	~18 Months

https://atlas-scientific.com/ph-probe/
https://www.amazon.com/Atlas-Scientific-pH-Probe-14/dp/B00YD81JS2/

Lab Grade pH Probe
#ENV-40-pH

Optional SMA to BNC adapter

$79.99

Optional SMA to BNC adapter

Choose an option ⌄

| - | 1 | + |

ADD TO CART

Starting at $28/mo with

Double junction silver / silver chloride	
Reads	pH
Range	0 – 14
Resolution	+/- 0.001
Accuracy	+/- 0.002
Response time	95% in 1s
Temperature range °C	-5 – 99 °C
Max pressure	100 PSI
Max depth	70m (230 ft)
Connector	Male SMA / Male BNC (optional)
Cable length	1 meter
Internal temperature sensor	No
Time before recalibration	~1 Year
Life expectancy	~2.5 Years +
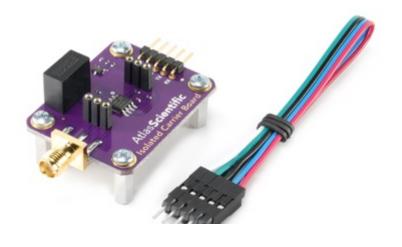
Home / Carrier Boards / Electrically Isolated EZO™ Carrier Board
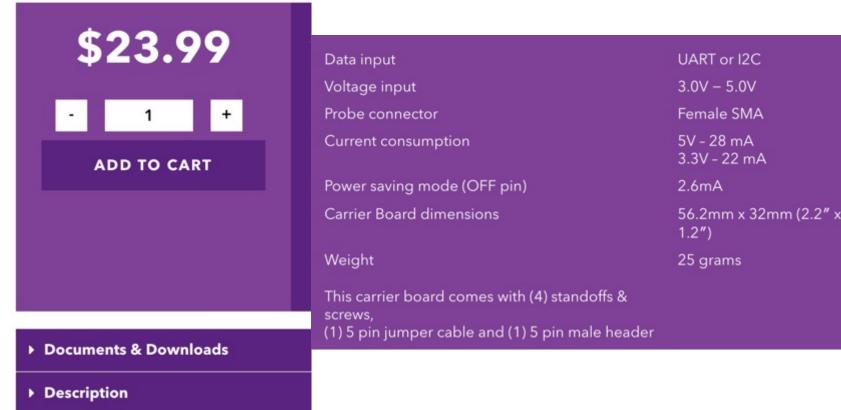
Electrically Isolated EZO™ Carrier Board

#ISCCB-2

$23.99

[-] 1 [+]

ADD TO CART

▸ **Documents & Downloads**

▸ **Description**

Data input	UART or I2C
Voltage input	3.0V – 5.0V
Probe connector	Female SMA
Current consumption	5V – 28 mA 3.3V – 22 mA
Power saving mode (OFF pin)	2.6mA
Carrier Board dimensions	56.2mm x 32mm (2.2" x 1.2")
Weight	25 grams

This carrier board comes with (4) standoffs & screws,
(1) 5 pin jumper cable and (1) 5 pin male header

weight

substrate   hydroponics   aeroponics

10 cm   'Dasusheng'

Purpose is to measure the lettuce or whatever crop and measure the fresh weight. So we can know what the results is in certain systems. For example we know that this lettuce comes from e.g. x1 y2 (e.g. second plant hole) and then we capture the weight. Ideally this will be directly be saved where the UI is all on the dashboard

Max 2 KG

microphone

Microphone is for ambient sound detection (the quieter the better). It could be in the future for voice recognition, but ignore voice recognition for now. I d rather have people call us through whatsapp or other means using their phone

power consumption

We want to measure the power consumption of the system and especially the actuators (lights, fans, pump etc). This enables us to see how energy efficient we grow and also make it easier to calculate operating expense. and in the future if we want solar panels, we know what our power needs are

Main voltage input can range from 100-240VAC, 50-60Hz, ofcourse the devices such as lighting itself will run often at 24V.

The max power should be 150amp

Control of actuators

For this I am not sure

Thermal pad

https://www.amazon.com/VIVOSUN-Seedling-Digital-Thermostat-Standard/dp/B016MKY7C8/

24cm/9.45''

52cm/20.47''

Thermal pad is under the seedling area, it is only for the germination of the seeds, the max temperature that the mat will be is 20 to 30 degree Celsius

Can this be controlled with relay?

Speaker

https://www.amazon.com/Dayton-Audio-ND91-4-Aluminum-Full-Range/dp/B005FMXUZ0/

Dayton Audio Speakers - Dayton Audio ND91-4 3-1/2"

Aluminum Cone Full-Range Neo Driver 4 Ohm

Bluetooth® connected

Weather resistant ABS plastic enclosure and aluminum grills

Polypropylene 5-1/4" woofer Metaled Mylar 1" dome tweeter

Reference spec

The speaker is actually for the staff, so they can play some music while they work.

But we also plan to do some experiment with sounds to see how plants respond.