# Protocols

SDI12 – Serial protocol for sensor communications.

Modbus – RS485/RS322

# Sensors Supported by EnviroDIY

## Complete List

* [Apogee SQ-212: quantum light sensor, via TI ADS1115](https://github.com/EnviroDIY/ModularSensors/wiki/Apogee-SQ212)
* [AOSong AM2315: humidity & temperature](https://github.com/EnviroDIY/ModularSensors/wiki/AOSong-AM2315)
* [AOSong DHT: humidity & temperature](https://github.com/EnviroDIY/ModularSensors/wiki/AOSong-DHT)
* [Atlas Scientific EZO Sensors](https://github.com/EnviroDIY/ModularSensors/wiki/Atlas-Sensors)
  + EZO-CO2: Carbon Dioxide and Temperature
  + EZO-DO: Dissolved Oxygen
  + EZO-EC: Conductivity, Total Dissolved Solids, Salinity, and Specific Gravity
  + EZO-ORP: Oxidation/Reduction Potential
  + EZO-pH: pH
  + EZO-RTD: Temperature
* [Bosch BME280: barometric pressure, humidity & temperature](https://github.com/EnviroDIY/ModularSensors/wiki/Bosch-BME280)
* [Campbell Scientific OBS-3+: turbidity, via TI ADS1115](https://github.com/EnviroDIY/ModularSensors/wiki/Campbell-OBS3)
* [Meter Environmental ECH2O 5TM (formerly Decagon Devices 5TM): soil moisture](https://github.com/EnviroDIY/ModularSensors/wiki/Meter-ECH2O-5TM)
* [Meter Environmental Hydros 21 (formerly Decagon Devices CTD-10): conductivity, temperature & depth](https://github.com/EnviroDIY/ModularSensors/wiki/Meter-Hydros-21)
* [Decagon Devices ES-2: conductivity](https://github.com/EnviroDIY/ModularSensors/wiki/Decagon-ES2)
* [External I2C Rain Tipping Bucket Counter: rainfall totals](https://github.com/EnviroDIY/ModularSensors/wiki/I2C-Tipping-Bucket)
* [External Voltage: via TI ADS1115](https://github.com/EnviroDIY/ModularSensors/wiki/TI-ADS1115-Voltage)
* [Freescale Semiconductor MPL115A2: barometric pressure and temperature](https://github.com/EnviroDIY/ModularSensors/wiki/Freescale-MPL115A2)
* [Keller Submersible Level Transmitters: pressure and temperature](https://github.com/EnviroDIY/ModularSensors/wiki/Keller-Level)
  + Acculevel
  + Nanolevel
* [MaxBotix MaxSonar: water level](https://github.com/EnviroDIY/ModularSensors/wiki/MaxBotix-MaxSonar)
* [Maxim DS18: temperature](https://github.com/EnviroDIY/ModularSensors/wiki/Maxim-DS18)
* [Maxim DS3231: real time clock](https://github.com/EnviroDIY/ModularSensors/wiki/Maxim-DS3231)
* [Measurement Specialties MS5803: pressure and temperature](https://github.com/EnviroDIY/ModularSensors/wiki/Measurement-Specialties-MS5803)
* [TI INA219: current, voltage, and power draw](https://github.com/EnviroDIY/ModularSensors/wiki/TI-INA219)
* [Yosemitech: water quality sensors](https://github.com/EnviroDIY/ModularSensors/wiki/Yosemitech-Sensors)
  + Y502-A or Y504-A: Optical DO and Temperature
  + Y510-B: Optical Turbidity and Temperature
  + Y511-A: Optical Turbidity and Temperature
  + Y514-A: Optical Chlorophyll and Temperature
  + Y520-A: Conductivity and Temperature
  + Y532-A: Digital pH and Temperature
  + Y533: ORP, pH, and Temperature
  + Y550-B: UV254/COD, Turbidity, and Temperature
  + Y4000 Multiparameter Sonde
* [Zebra-Tech D-Opto: dissolved oxygen](https://github.com/EnviroDIY/ModularSensors/wiki/ZebraTech-DOpto)
* [Processor Metrics: battery voltage, free RAM, sample count](https://github.com/EnviroDIY/ModularSensors/wiki/Processor-Metadata)

## Yosemitech Sensors

These are distributed by EnviroDIY. They have only recently go them working.

* A Chinese company that makes a whole range of sensors and Sondes.
* All use a ModBus integration protocol.
* Y502-A or Y504-A Optical Dissolved Oxygen Sensors
* Y510-B Optical Turbidity Sensor
* Y511-A Optical Turbidity Sensor with Wiper
* Y514-A Chlorophyll Sensor with Wiper
* Y520-A 4-Electrode Conductivity Sensor
* Y532-A Digital pH Sensor
* Y533 ORP Sensor
* Y550-B UV254/COD Sensor with Wiper
* Y4000 Multiparameter Sonde

## Campbell

* CampbellOBS3 is an analog turbidity sensor

## Atlas Scientific



https://www.atlas-scientific.com/kits.html

EZO-EC: Conductivity. - ~$200.00

EZO-pH: PH man $50- $300

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| --- | --- | --- | --- | --- | --- |
|  |  | Specs | Interface |  | Notes |
| Hydros 21  CTD-10 | Conductivity,  Temperature  Liquid level | 0-10 Meters  0-120 dS/m | Serial (TTL) |  | Easy to interface with PI |
| DC24V  (Amazon) | Liquid level | 0-5 meters | 4-20ma  (Analog) |  | Analog input |
| G1/2 Sensor | Conductivity | 0 ~ 2000 mu S/cm | 4-20ma  (Analog) |  |  |
|  |  |  |  |  |  |





