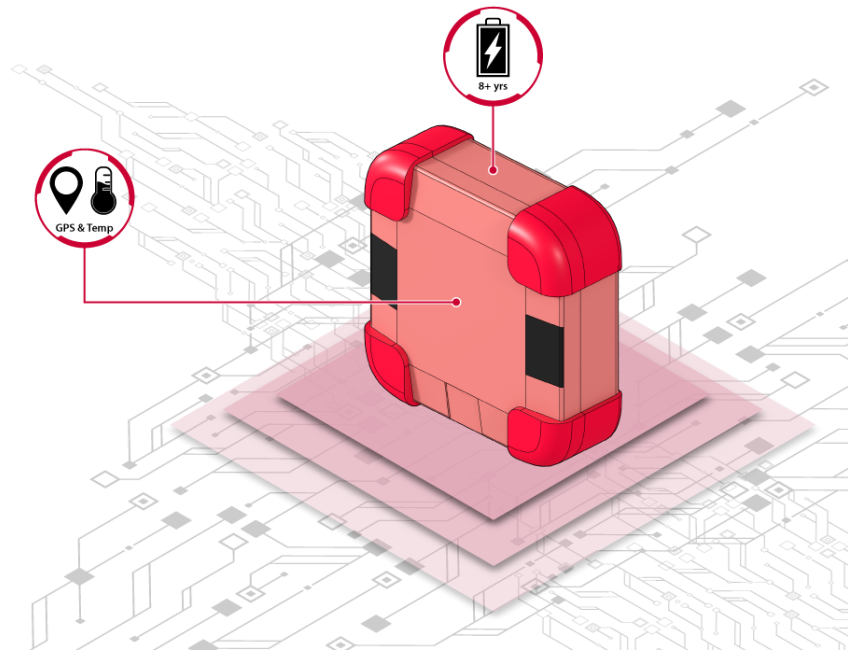# SENT.IO™

Product Catalog

Integrator Edition

D6 Labs
Engineered IoT Solutions

425 North Meridian Ave
Oklahoma City, Oklahoma 73107
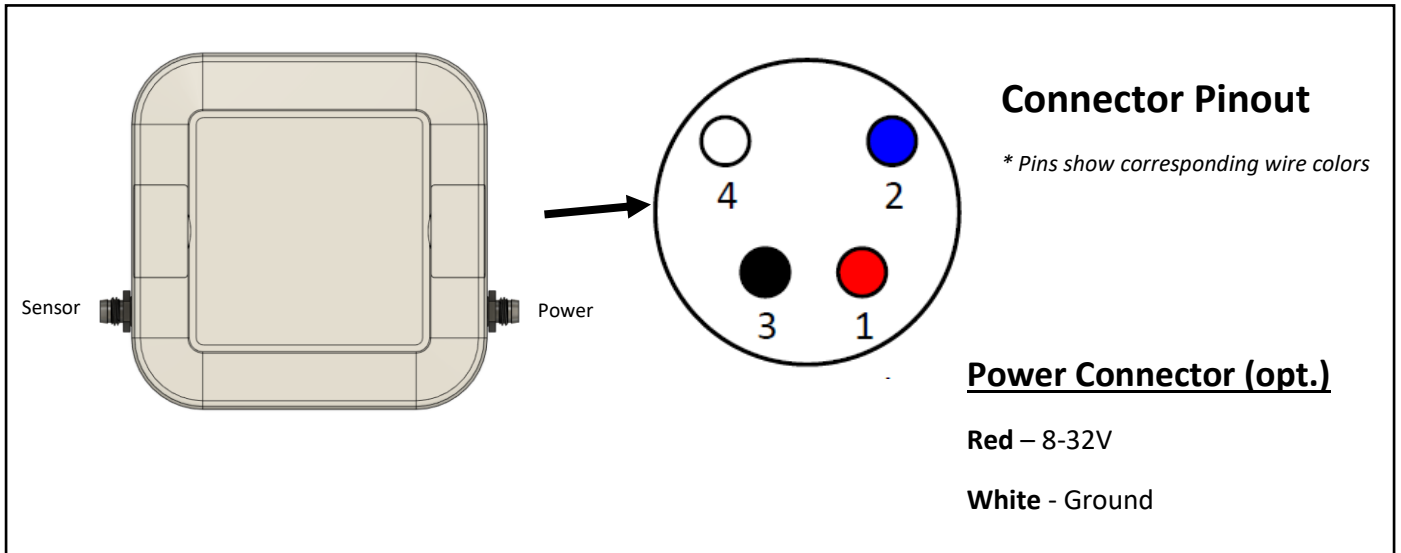**1-844-365-8647**
www.d6labs.com

Product Catalog

Table Of Contents

Sent.io™ Analog

1 Analog

Connector Pinout

* Pins show corresponding wire colors

Power Connector (opt.)

Red – 8-32V

White - Ground

Part Number	Sensor Connector Pin Descriptions				Description
	Pin 1	Pin 2	Pin 3	Pin 4	
	Power	Channel 1	Channel 2	Ground	
SIO-EX-MC-SE-SINNNNNN-XR	NA	NA	NA	NA	Ambient temperature sensor[1]
SIO-EX-MC-SE-SI44NNNN-XR	V_{sensor}[2]	4-20mA	4-20mA	GND	2x 4-20mA analog sensor[3]
SIO-EX-MC-SE-SI55NNNN-XR	V_{sensor}[2]	0-5V	0-5V	GND	2x 0-5V analog sensor[3]
SIO-EX-MC-SE-SI11NNNN-XR	V_{sensor}[2]	0-10V	0-10V	GND	2x 0-10V analog sensor[3]

Notes: 1. Ambient temperature sensor is not configured with I/O connector and does not include a 3-meter cable.

2. **Vsensor** - +18V power for external sensor. Switched on prior to sampling.

3. Includes 3 meter cable with M8 connector on one end and color coded wires on the other.

4. External battery packs should be connected to power connector on right of device. Only use D6 Labs supplied battery packs

1.1   Analog Specifications

- V_{sensor} – switched 18V power for external sensor. Maximum current draw is 25mA.
- Analog inputs are fused with poly resettable fuses. 60mA trip current, 20mA hold current.
- 0-5 and 0-10V Input impedance is 10K max

2 Digital

I/O Connector Pinout

* Pins show corresponding wire colors

Power Connector (opt.)

Red – 8-32V

White - Ground
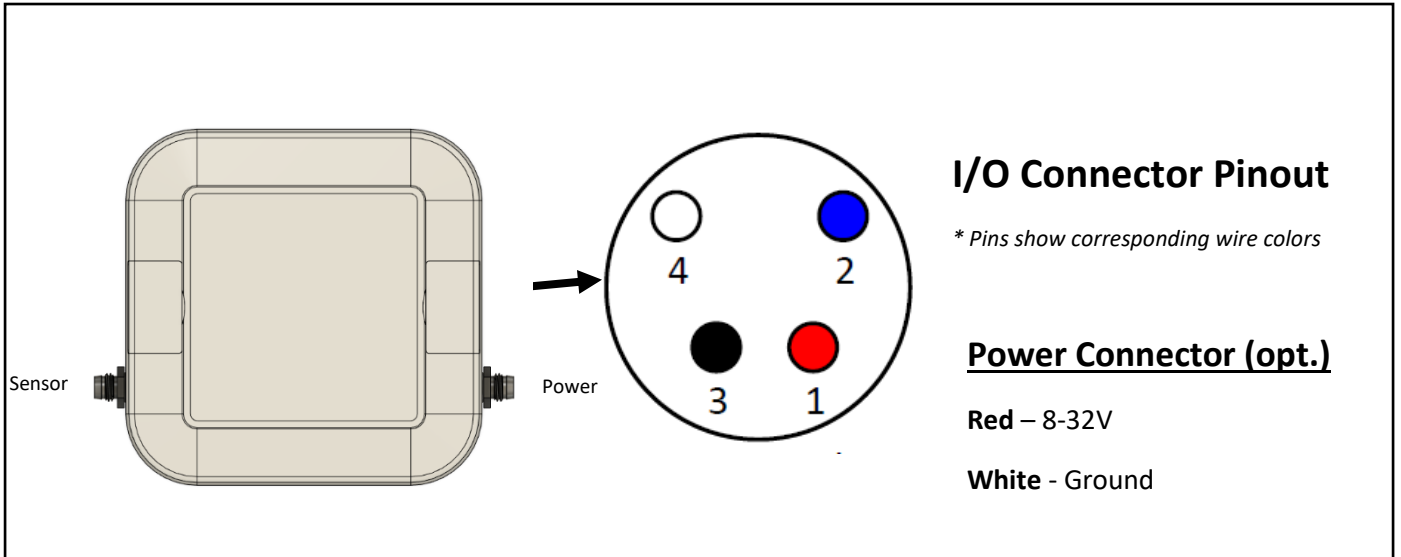
Part Number	Pin 1	Pin 2	Pin 3	Pin 4	Description
	Power	Channel 1	Channel 2	Ground	
SIO-EX-MC-SE-SIIINNNN-XR	VIN[1]	DIN1	DIN2	GND	2x 24VDC Opto In
SIO-EX-MC-SE-SIOONNNN-XR	NA	DOUT1	DOUT1	GND	2x Digital Out

Notes: 1. Sent.io DC power input. This voltage is equal to the voltage powering the Sent.io. If this is greater than 16V, it can be used with dry contact for optocoupled inputs.

2. All Sent.io devices configured with digital inputs or outputs come with 3 meter cable with M8 connector on one end and color coded wire ends on the other.

3. External battery packs should be connected to power connector on right of device. Only use D6 Labs supplied battery packs.

2.1 Digital Specifications

- Optocoupled digital inputs – on when digital input voltage is greater than 14VDC, off when voltage is below 8VDC
- Optocoupled digital inputs are DC only. They will not work with AC.
- Digital Outputs:
  - Current sink when on
  - Maximum current is 200mA
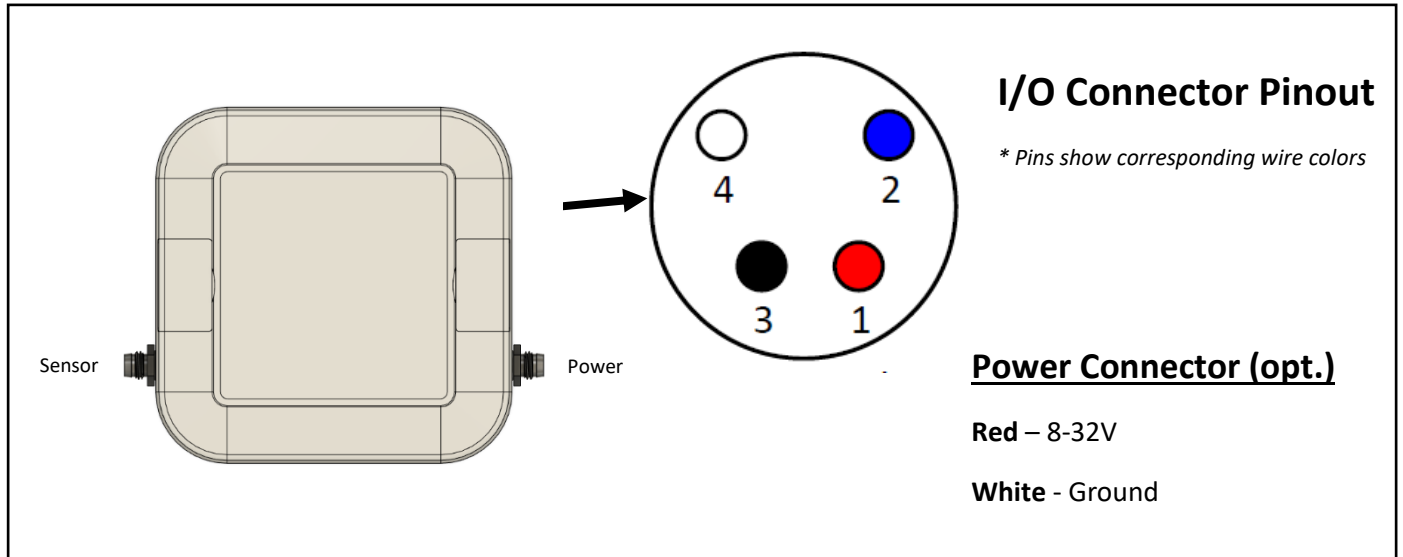 - Maximum voltage is 50V

3 Modbus

I/O Connector Pinout

* Pins show corresponding wire colors
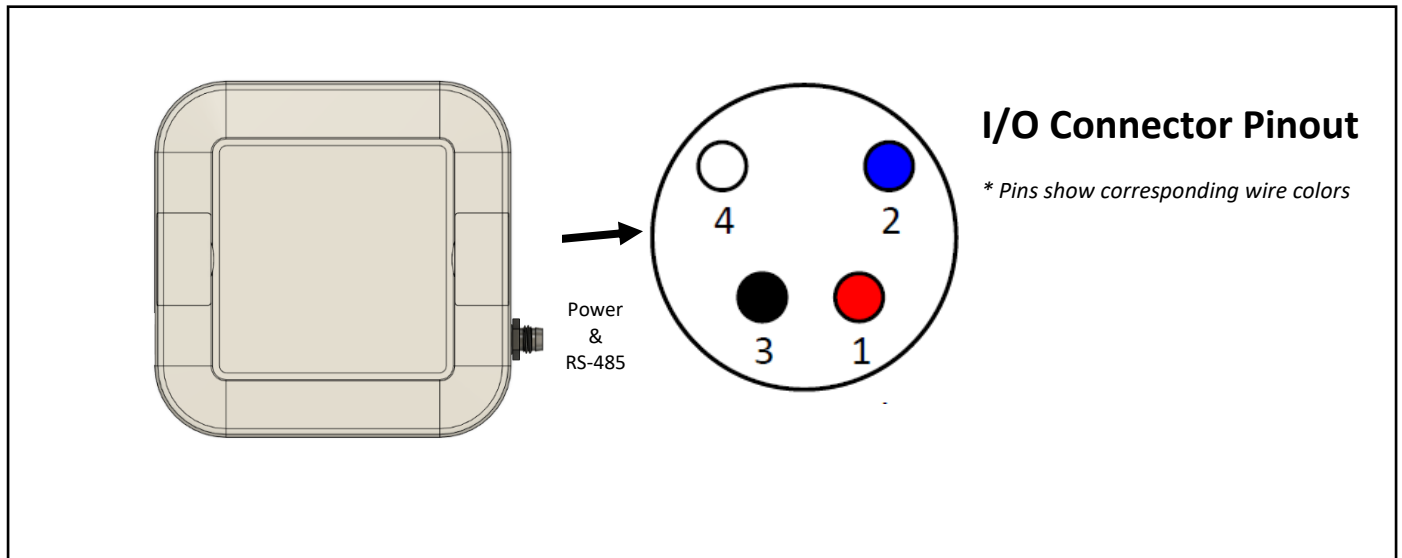
Power
&
RS-485

Part Number	Pin 1	Pin 2	Pin 3	Pin 4	Description
	Power	Channel 1	Channel 2	Ground	
SIO-EX-MC-SE-SIMMNNNN-XR	8-32VDC	A(+)	B(-)	GND	Modbus RS-485

Notes: 1. All Sent.io devices configured with Modbus RS-485 come with 3 meter cable with M8 connector on one end and color coded wire ends on the other.

4 2Smart™ Digital Sensor Interface

I/O Connector Pinout

* Pins show corresponding wire colors

Power Connector (opt.)

Red – 8-32V

White - Ground

Part Number	Pin 1	Pin 2	Pin 3	Pin 4	Description
	Power	Channel 1	Channel 2	Ground	
SIO-EX-MC-SE-SI22NNNN-XR	NA	D1	D2	GND	2Smart™ Interface

This Sent.io is configured with our proprietary 2Smart™ digital sensor interface. See section 5 for more information on the available smart probes.

2Smart™ probes are pre-wired so no field wiring is required.

External battery packs should be connected to power connector on right of device. Only use D6 Labs supply battery packs.

5 2Smart™ Digital Sensor Probes

2Smart is a proprietary multi-drop, digital sensor interface that supports a variety of pre-wired, ready to go sensor probes for a variety of applications.

Part Number - **SSC-DT-GB02-01**

2Smart™ Digital Product Temperature Sensor

This plug-and-play digital temperature sensor is designed to monitor product temperature of refrigerated products. It includes two temperature sensors – one for air temperature and one that measures the temperature of the buffer solution. The buffer solution dampens the effect of sudden temperature changes and more accurately reflects product temperature in a refrigerator or freezer.

Specifications:

- -40 to +80 °C Measurement Range
- +/- 0.5°C Accuracy
- Does not require annual calibration
- Pre-assembled with 60CC glycol bottle
- Pre-wired with 2Smart M8 cable – plug and play

Part Number - **SSC-DT-PR05-01**

2Smart™ Digital Temperature Sensor

This plug-and-play digital temperature sensor is designed to monitor air or fluid temperature.

Specifications:

- -40 to +80 °C Measurement Range
- +/-0.5 °C Accuracy
- 6mm x 50mm temperature well
- Pre-wired with 2Smart M8 cable – plug and play

Part Number - **SSC-DT-PR20-01**

2Smart™ Digital Temperature Sensor

This plug-and-play digital temperature sensor is designed to monitor air or fluid temperature. At 200mm, the length of this probe makes it perfect for insertion into a temperature well to monitor hot water effluent, etc.

Specifications:

- -40 to +80 °C Measurement Range
- +/-0.5 °C Accuracy
- 6mm x 200mm temperature well
- Pre-wired with 2Smart M8 cable – plug and play

Part Number - **SSC-DE-PRNN-01**

2Smart™ Digital Environment Sensor

This plug-and-play digital sensor measures temperature, humidity and pressure. It is perfect for treatment rooms or any application where environmental conditions must be tightly controlled.

Specifications:

- -40 to +80 °C Temperature Range
- 0-95% Humidity Range
- 4.4 – 15.94 PSI Pressure Range
- +/- 1.5°C Accuracy (Temperature)
- +/- 3% Accuracy (Humidity)
- +/- 0.025 PSI Accuracy (Pressure)
- Pre-wired with 2Smart M8 cable – plug and play

6 Power Options

Part Number – **SPM-MU-3AH**

Whisker.io® MicroUPS

This microUPS (Uninterruptable Power Supply)is perfect for applications where high reliability and instant alert notification is required. Power is normally supplied from the attached wall transformer but if power is lost, an internal battery can provide 48+ hours of uninterrupted operation.

Minimum hours of battery backup	48
Period between recorded samples	5 minutes
Cloud update rate	5 minutes
Delay from alert condition to notification	<10 seconds[1]

Notes: 1. Delay could be longer due to connectivity issues and delays in pushing SMS through customer's provider.

Part Number – **SPM-BA-19AH**

Sent.io™ Battery Pack

This field replaceable battery pack provides continuous operation for 4-8 years, depending on the operating environment and sensors. It is generally used when power is not available at the monitoring location and provides a truly wireless solution.

Battery Life	4-8 years
Period between recorded samples	5 minutes
Cloud update rate	8 hours
Delay from alert condition to notification	5 minutes max. [1]

Notes: 1. Delay could be longer due to connectivity issues and delays in pushing SMS through customer's provider.

<div style="background-color:red; color:white;">

7 Accessories

</div>

Part Number – **ACC-DR-01**

DIN Rail Mounting clips for Whisker.Block® and Sent.io™. Kit includes 2 clips and screws.

Part Number – **ACC-CA-3M**

3 Meter, 4-pin M8 I/O cable. This can be used for power and I/O wiring for Whisker.Block® and Sent.io™.