Telemetry 1

I/O Interface

User Guide
Revision history—90001056

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<th>Revision</th>
<th>Date</th>
<th>Description</th>
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<tr>
<td>A</td>
<td>April, 2009</td>
<td>Initial release of the document.</td>
</tr>
<tr>
<td>B</td>
<td>March, 2011</td>
<td>Made content improvements.</td>
</tr>
<tr>
<td>C</td>
<td>March, 2012</td>
<td>Improved and corrected graphics.</td>
</tr>
<tr>
<td>D</td>
<td>August, 2017</td>
<td>Rebranded the document and made minor editorial changes.</td>
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## Software
Telemetry 1 I/O Interface

The Telemetry 1 I/O Interface is a general purpose digital I/O interface for the TransPort WR41, WR44, and WR44 R.

Features

1. **Voltage Monitoring Port** - Measures the input voltage level and the internal temperature of the unit. It can also be used to provide a power source for the Digital-In port.

2. **Relay I/O Port** - The relay will make or break a circuit depending on the state of the Digital-In port.

3. **Digital-In Port** - A sensor such as a PIR or other switch / signal input device can be connected to this interface.

4. **Digital-Out Ports** - Can be programmed using Python to make or break a circuit.

All the ports are classified as SELV ports that do not use or generate voltage greater than 60 VDC. However, an isolation of a minimum of 1500 VRMS is supported.
Accessories

A 14-terminal female connector helps to facilitate wiring, cable management, and installation. Wires are secured to the connector via screw-down slots, and the connector is affixed tightly to the TransPort unit by tapered terminals. The recommended wire size is 16-26 AWG.
Hardware

The following section outlines the specifications and configuration of the Telemetry 1 I/O Interface.

Schematic

Voltage monitoring port (DC In)

Voltage supplied to this port powers an on-board micro-controller that measures the input voltage level and the internal temperature of the device. It can also be used to provide a power source for the Digital-In port. The maximum voltage is 24 VDC.

**Note** Terminal A should be connected to the common reference (typically earth/ground). For TransPort WR41 models that support the isolated wide range power supply input, the polarity of the supply voltage is non-critical.
Relay I/O port

The Relay I/O port is capable of carrying up to 5A at 30 VDC resistive load. It is independent of the Voltage Monitoring Port.

Digital-In port

The Digital-In port has two modes of operation:

- **Internal Power Mode** - The voltage input from the Voltage Monitoring Port is used to power a downstream passive device, such as a micro-switch. Maximum voltage is 24 VDC.
- **External Power Mode** - An external power source is used. Maximum voltage supplied is 24 VDC.

The default mode of operation is Internal Power Mode. These schematics show how each mode operates.
Digital-Out ports

The Digital-Out ports present a transistor emitter and collector output pair. The diagram illustrates the typical application of a Digital-Out port. Maximum collector current is 12 mA.
Software

You can use CLI (command line interface) commands to configure the Telemetry 1 I/O Interface. If you choose, you can build these commands into Python or Basic scripts to automate functionality, or you can enter them manually via the CLI or SMS. **ANACONDA** is the main command for the interface.

Example

ANACONDA [-y 0|1] {-o1-4 0|1|pwm} [-r 0|1]

Here are some frequently used commands. Commands are case sensitive.

- **ANACONDA** Current status of the interface
- **ANACONDA ?** Command usage
- **ANACONDA -y 0** Set the relay (-y) to open (default state)
- **ANACONDA -y 1** Set the relay (-y) to closed (switch something on)
- **ANACONDA -o1 1** Turn on digital output 1 (-o1 = digital output 1, -o2 = digital output 2, and so on)
- **ANACONDA -o1 pwm** Set digital output 1 to PWM mode (PulseWave Modulation)
- **PWM 100 10** Set PWM frequency and ratio (light runs at 10% brightness)
- **PWM 100 100** Set PWM frequency and ratio (light runs at 100% brightness)