

# ProTAACS

## Serial MODBUS Gateway

### Technical Overview



### General Description

The ProTAACS Serial MODBUS Gateway (SMG) acts as a data concentrator for ProTAACS wireless sensor networks. This device allows you to connect up to 50 wireless sensing devices, per gateway, to your existing serial MODBUS RS-232C and RS-485 sensing and control infrastructures.

ProTAACS has recognized the importance of using open standards like MODBUS, allowing ProTAACS wireless sensors to be used in the majority of industrial applications. Modbus is often used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA) systems. Modbus allows for communication between many (approximately 247) devices connected to the same wired network. Therefore, ProTAACS SMG's allows for seemingly unlimited wireless expansion of a traditional wired network.

A system incorporating a ProTAACS SMG would consist of the following:

- MODBUS Master – PLC, SCADA, etc.
- Existing RS-232C or RS-485 Infrastructure.
- ProTAACS Serial MODBUS Gateway (SMG).
- ProTAACS Wireless Sensors

### Applications

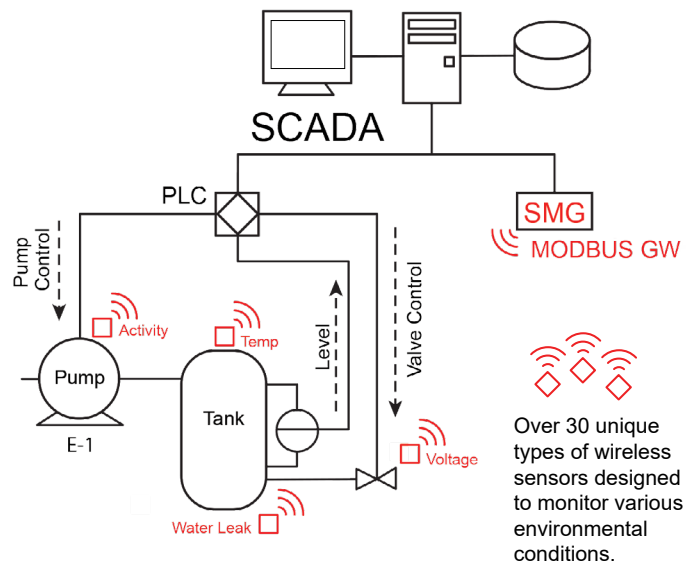
- Process automation protocols
- Industrial control system protocols
- Building automation protocols
- Power system automation protocols
- Automatic meter reading protocols
- Automobile / Vehicle protocol buses
- In any existing MODBUS system

### Features

- Works with ProTAACS 900, 868 and 433MHz Sensor Networking Solutions
- Communicates with MODBUS RTU / ASCII Serial Protocols
- Supports RS-232C / RS-485 Interfacing
- LED Status Indicators
- NEMA 4X / IP65 Rated Enclosure
- RP SMA Antenna Connector (Antenna Included)

### Example Network Integration

ProTAACS wireless sensors integrate with existing MODBUS systems allowing for additional environmental variables to be monitored.



## ProTAACS Serial MODBUS Gateway Specifications

### General

ProTAACS Radio Support	RFSC1 Module by ProTAACS Frequencies: 433, 868 and 900 MHz (Future support for WiFi and 500 mW modules)
Antenna	Connector: SMA Gain: 5.0 dBi Standard

### 3 Wire Communication Interface

RS-232C	TXD (OUT), RXD (IN), and Ground / Common
RS-485	D+, D-, and Ground / Common
Protocol Selector	Jumper for RS-232 and RS485




### Power

Input Voltage Range	4.5 - 36.0 VDC
Minimum Current Required	100mA (500mA Recommended)

### Mechanical

LEDs	Wireless Activity, Wired Activity, System Status
Reset Feature	Communication / Factory Settings Reset Jumper
Enclosure	Durable, Impact-Resistant UV Stabilized Polycarbonate (IP65 of IEC 529 and NEMA 1, 2, 4, 4x, 12 and 13 Rated)
Dimensions	179.603 x 90.678 x 41.30 mm
Weight	16 ounces

### Environmental

Operating Temperature	-40 to +85°C (-40 to 185°F)
Storage Temperature	-40 to +85°C (-40 to 185°F)
Certifications:	<p>    Industry Canada </p> <p> 900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1.  868 and 433 MHz product tested and found to comply with:  CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05). </p>

