

The RAWC – Remote Access Wireless Control system - is a portable radio base-station. Its hard-shell enclosure accommodates a laptop computer running RavTrack PC tracking software or alternative tracking solution for easy transport and immediate deployment anytime and anywhere.

Together with the ATLAS series of battery-powered personnel trackers it creates a truly self-contained tracking system for professionals that operate under extreme conditions.



Product Overview

Long-Range Operation

Operating in the VHF 136-155MHz frequency band (other UHF/VHF bands available), the RAWC works over 60 miles point-to-point and many miles with omni-directional antennas. The base station supports store-and-forward repeating for wide-area coverage.

Battery Powered & Mobile Charging

The RAWC will provide hours of visibility into your critical operations without the need for external power and can easily be charged through vehicle-power cable.

High Speed and High Efficiency

The RAWC operates with user-selectable over-the air data rates of 800 to 19200bps: Faster rates for higher efficiency or lower-speed for increased coverage.

12-Channel GPS

The RAWC's internal 12-Channel GPS chip features extremely fast startup times and high performance in foliage canopy and urban canyon environments.

Fully Programmable

The RAWC's radio settings are configured via serial connection using industry-standard AT commands. Parameters such as network IDs, unit ID and transmission rate are easily configured. In addition the radio might easily be configured through the included RadioManager software.

Digital Base Band

RAWC provides digitally programmable data rate, modulation, and bandwidth settings. Wide (25kHz) and narrow (12.5kHz) bandwidths may be user-configured. The over-the-air data rate may be adjusted to suit a particular application.

Real-time diagnostics and statistics

Channel performance, RSSI, RF power, packet counters, and radio configuration are easily accessed via the serial port or remotely over-the-air.

Very Low Power Consumption

The RAWC's advanced VHF transceiver is equipped with a powerful 32-bit microprocessor, featuring very low power consumption, and sleep modes that allow it to be active and still consume very little resources.

Flexible Addressing and Error Correction

The RAWC's radio unit uses a 16 bit address with a 16 bit network mask, allowing for many devices to be co-located without receiving each other, as well as the creation of sophisticated network topologies.

Antennas

The RAWC features an internal GPS antenna which is hot-swappable with an external GPS antenna through TNC port inside of the case.

Enclosure

The enclosure of the RAWC is made of Ultra High-Impact ABS Plastic but weighs less than 30lbs (with laptop), and features a retractable handle for convenient transport and deployment.

Laptop

The RAWC includes a reliable consumer-grade laptop equipped with the RavTrack PC tracking solution. Additional options are rugged laptops and third part tracking software.

General Specifications

Model: RV-SML-Vx-oo (x=band) (oo=options)

Weight: 29lbs (13.15kg)

AC Power:
100-240VAC

DC Power:
12-15VDC

Power Consumption:
20W average (30W peak)

Frequency Band:

Band	Frequency	Model
A	136-155MHz	-A
B	150-175MHz	SRS-M7-VA

Available Frequencies:

Serial Port Baud Rates (programmable)
1.2k, 2.4k, 4.8k, 9.6k, 19.2k, 38.4k, 57.6k, 115.2k

Over-the-air baud rates (programmable)
Narrow IF: 800, 1200, 2000, 2400, 4.8k, 5142, 8K, 9.6k
Wide IF: 1200, 2000, 2400, 4.8k, 8k, 9.6k, 19.2k

Operating Mode
Simplex or Half-duplex

Full Spec Operating Temperature range
-30°C to +60°C

TX-RX and RX-TX turn-around time
<5mS

Wake-up time
<500mS from OFF
<5mS from Sleep

Top Panel LED
Radio Power, RF Status

RF I/O Connector
N-type

Addressing
Individual address: 65,536
Groups: 254

Sizes:
(Outside) 19.69" x 16.73" x 9.06" / 500 x 425 x 230 mm
(Inside) 18.88" x 14.17" x 8.27" / 480 x 360 x 210 mm

Transmitter Specifications

RF Power Output 500mW – 5.0 W
(programmable)

Maximum Duty Cycle 100% @ 2W to 40C, 25% @5W

Frequency Deviation ± 2.2kHz (N) ± 3.3kHz (W)

RF Bandwidth Full-band without tuning
Occupied bandwidth 11 kHz (-N) 16kHz(-W)
TX Spurious outputs < -70dBc
TX Harmonic outputs < -80dBc
Occupied Bandwidth Per FCC

FCC Emissions Designator 11K0F1D (narrowband mode)
15K0F1D (wideband mode)

Frequency Stability Better than ±2.5ppm

Receiver Specifications

RX sensitivity (1% PER, N) 9600bps < -108dBm
4800bps < -114dB
1200bps < -118dB

RF No-tune bandwidth Full-band without tuning

Adjacent Channel Selectivity -70dB (1200bps Wide)
Adjacent Channel Selectivity -65dB (1200bps Narrow)
Adjacent Channel Selectivity -60dB (4800bps Narrow)
Alternate Channel Selectivity -70dB
Blocking and spurious rejection -80dB
RX intermodulation rejection -75dB (4800bps Narrow)
RX intermodulation rejection -80dB (1200bps Narrow)

Interface Specifications

AT Commands Overview
Channel Number, Operating Frequency, IF bandwidth
Modem Statistics
Power-savings modes
Unit Address and Destination address
Network Address Mask
ARQ error correction on/off
Baud Rate, parity, stop bits
Select Packet or Streaming mode of data transmission
Store-and-forward Repeating configuration
Hardware flow control operation
LEDs operation or disabled