



Overview

The SENSYS+ is a multi-purpose, compact, low-cost measurement and control telemetry device. This compact solution, with its rich instruction set, can measure most hydrological, meteorological, environmental and industrial sensors. It will concentrate data, making it available over varied networks and deliver it using your preferred protocol. The SENSYS+ also performs automated on-site or remote decision making for control and M2M communications. The SENSYS+ is ideal for small applications requiring long-term, remote monitoring and control.

Benefits and Features

- Setup easily with PC software and USB connectivity
- Measure analog and digital sensors with confidence
- Internet ready Email, FTP, HTTP/Web, TCP
- Integral surge and ESD protection
- Network wirelessly to another node or Internet gateway with integrated radio option
- Communicate from anywhere when using a cellular or satellite peripheral
- Save money and space using the integrated 12 V-battery solarcharge regulator
- Measure smart sensors using RS-232 or SDI-12
- Connect with PakBus, Modbus, DNP3, GOES, and other standard communication protocols
- Analyze and control with programmability and multiple general purpose I/O
- Notify with event driven communications and physical outputs

General Specifications

- **CPU:** ARM Cortex M4, running at 144 MHz
- **Internal Memory:** 30 MB flash for data storage, 80 MB flash for CPU drive/programs, 2 MB flash for operating system
- **Clock Accuracy:** ± 1 min per month
- **USB micro B** for direct connection to PC (limited power source during configuration), 2.0 full speed, 12 Mbps
- **RS-232** for connecting RS-232 modems or serial sensors
- **Battery Terminal Pair (-BAT+)** for regulated 12 V power input or rechargeable 12 V VRLA for UPS mode
- **Charge Terminal Pair (-CHG+)** for 16 to 32 V from dc power converter or 12 or 24 V solar panel (10 W)

RF900 250mW Specifications

Frequency Hopping Spread Spectrum Radios (FHSS)

- **Input Voltage:** 9 to 16 Vdc
- **Power Output:** 5 to 250 mW, software selectable
- **Frequency Range:** 902 to 928 MHz (US, Canada)
- **Power Output:** 5 to 250 mW, software selectable
- **Hopping Channels:** 7 25-channel hop sequences sharing 64 available channels
- **RF Data Rates:** 200 kbps
- **Receive Sensitivity:** -101 dBm
- **Antenna Connector:** Reverse polarity SMA (RPSMA) jack (external antenna required)
- **Operating Temperature Range:** -40° to 70°C

RF900 1W Specifications

The RF900 1W consists of a radio module manufactured by FreeWave Technologies compatible with FreeWave FGR radio networks.

Frequency Hopping Spread Spectrum Radios (FHSS)

- **Input Voltage:** 7 to 28 Vdc
- **Power Output:** 10 to 1,000 mW, user selectable
- **Frequency Range:** 902 to 928 MHz (US, Canada)
- **Power Output:** 10 to 1,000 mW, user selectable
- **Hopping Channels:** 50 to 111, user selectable (applicable to FCC ID KNYAMM0921TT)
- **Hopping Channels:** 15 per band, 105 total, user selectable
- **RF Data Rates:** Selectable speeds, 115.2 or 153.6 kbps
- **Receive Sensitivity:** -108 dBm at 115.2 kbps for 10⁻⁴ BER; -103 dBm at 153.6 kbps for 10⁻⁴ BER
- **Antenna Connector:** Reverse polarity SMA (RPSMA) jack (external antenna required)
- **Operating Temperature Range:** -40° to 85°C

Cellular Modem

*Compatible with Raven XT or similar serial modems.
Integrated Cellular Modems with data plans are optional.*