

FEATURES

- Gateway for RS210 family of radio nodes
- 2.4GHz and 900Mhz versions available
- Back-haul to Internet via GSM/GPRS modem, CDMA or 802.11 WiFi
- Solar input port and built-in PWM solar charge controller (6A)
- 1 RS-232 serial port
- 1 RS-485 serial port
- 6 multi-function sensor ports
- OPTIONAL: 4 relay control ports
- OPTIONAL: 2 line Digital Video Recorder with dedicated 12V power.
- 16 gauge steel enclosure, NEMA 3R rated
- Approved for use in US, Australia, Japan and Europe

APPLICATIONS

- Weather station
- Micro-climate tracking
- Soil moisture tracking
- Frost alerting
- Wireless valve control
- Remote Camera Monitoring

DIFFERENTIATORS

- Multi-function unit
- More reliable than UHF/900MHz
- Longer local node range than other 802.15/mesh technologies
- Maintenance and upgrade “over-the-air” (cellular terminal server)
- Relay/Valve control capability
- Durable steel construction
- Built-in solar charger

DESCRIPTION

The RM210 is a family of telemetry base stations designed specifically for outdoor applications where cellular connectivity needs to be shared among a number of telemetry sites, while maintaining reliable 7x24 operation at a comparatively low cost .

The RM210 is unique in its versatility: it can simultaneously act as a weather station, local radio gateway, camera host and irrigation valve controller.

Compared to other telemetry networking gateways RM210 provide longer range to substations, more robust construction, and are easier to install and maintain. Compared to traditional UHF telemetry receivers and gateways, RM210 systems provide higher bandwidth, more advanced two-way feature set and more reliable operation at significantly lower cost.



GATEWAY FUNCTION

The RM210 functions as a gateway between the cellular network and up to 35 local RS210 wireless sensor nodes. A variety of radio options are available, with 2.4GHz and 900MHz being the prevalent systems in the US. Range is 1 - 3 miles depending on terrain.

SERVER SUPPORT

The RM210 comes ready to communicate with the on-line Ranch Systems server software. Units can be configured for either open standards synchronization via SMTP and HTTP, or for a low-level, proprietary Ranch Systems sync protocol providing for extremely low cellular data usage as compared to TCP/IP based sync.

WEATHER STATION

The RM210 base station can play the additional role of a complete weather station. Because weather data is essential in most outdoor applications, this capability reduces the overall cost by eliminating extra telemetry nodes.

RELAY OPTION

The RM210 station has the option to add 4 relay ports capable of switching a range of low voltage loads, including driving 24 VAC and 9-12 VDC latching valve solenoids.

DVR/CAMERA OPTION

The RM210 station has the option for capturing JPEG still images from 2 composite video input channels, and can also provide 12VDC power for the cameras, providing a completely stand-alone video monitoring solution.

INSTALL & MAINTENANCE

In-field configuration and testing of a system based on RM210 is facilitated by easy-to-use command line interfaces available via both serial ports and local radio modem.

Furthermore, complete remote maintenance – including new firmware downloads - is possible “over-the-air” by using the Ranch Systems terminal server software.

SPECIFICATIONS

Radio Options	
Server Connection	GSM, CDMA, 802.11b
Local sensor network	2.4 Ghz (½ - 1 mile range) 900 Mhz (1 – 3 mile range) Other options globally
Sensor Ports	
Excitation voltage	5V
ADC Resolution	12 bit
Connectors	SwitchCraft Micro-Con-X 3pin and 5pin female
Relay Ports (OPTIONAL)	
Switching options	N.O., 12V DC Latching, 12V digital output
Maximum 12V capability	1A (fused)
Maximum switched power	48V, 0.5A
Connectors	SwitchCraft Micro-Con-X 2 pin male
DVR/Camera Board (OPTIONAL)	
Video Input	2Ch composite 1V p-p
Video Power Output	12V/1A DC unregulated
Image Resolution	640x480 (JPEG)
Power	
Solar charger	PWM charger, up to 6A (panel not included)
Internal battery	12V lead acid, 12 Ah
Run time without sunlight	2-4 days (typical) Hibernation mode available
General	
Dimensions (H x W x D)	13" x 10" x 5.5" (without antennas)
Weight	18.6 lbs
Approvals	USA, Canada, Australia, Europe, Japan (Restrictions apply in Europe)

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