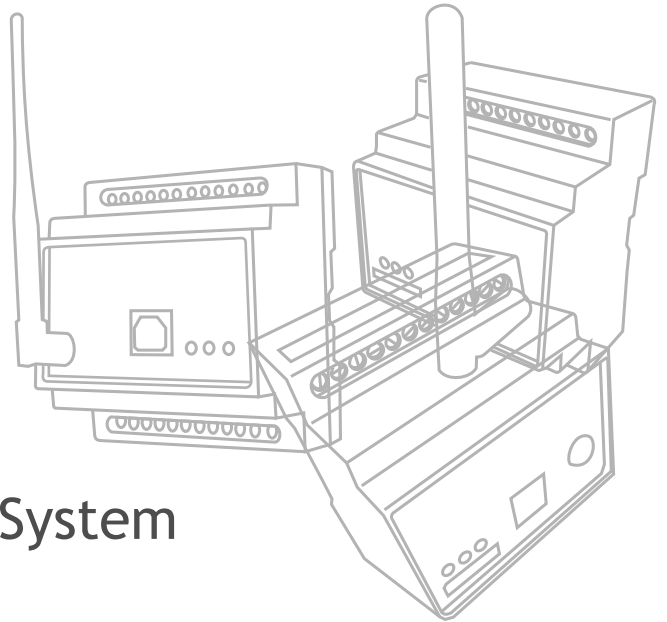


w Remote



ZigBee Wireless Telemetry System 2.4GHz

Contact

www.exemys.com

Av. Juan B. Justo 4054 - C1416DJU
Ciudad Autónoma de Buenos Aires
Argentina

Tel: (+5411) 4585-7585

Fax: (+5411) 4585-7278

E-mail: info@exemys.com

- Argentine Business, founded in 1998
- Certification ISO9001:2008 (Quality)
- Certification of Products UL 60950 (Electrical Safety)
- Certification of Products CE (European Community suitable)
- Global Product Exportation
- Own Designs and Know How

ISO 9001:2008
Certification



GESTION
DE LA CALIDAD
RI-9000-6174
OAA



UL 60950
Products Certification



SOFTWARE PROMOTION LAW
Company Approved





wRemote

Dispositivo de Monitoreo y Control con comunicación ZigBee 2.4GHz

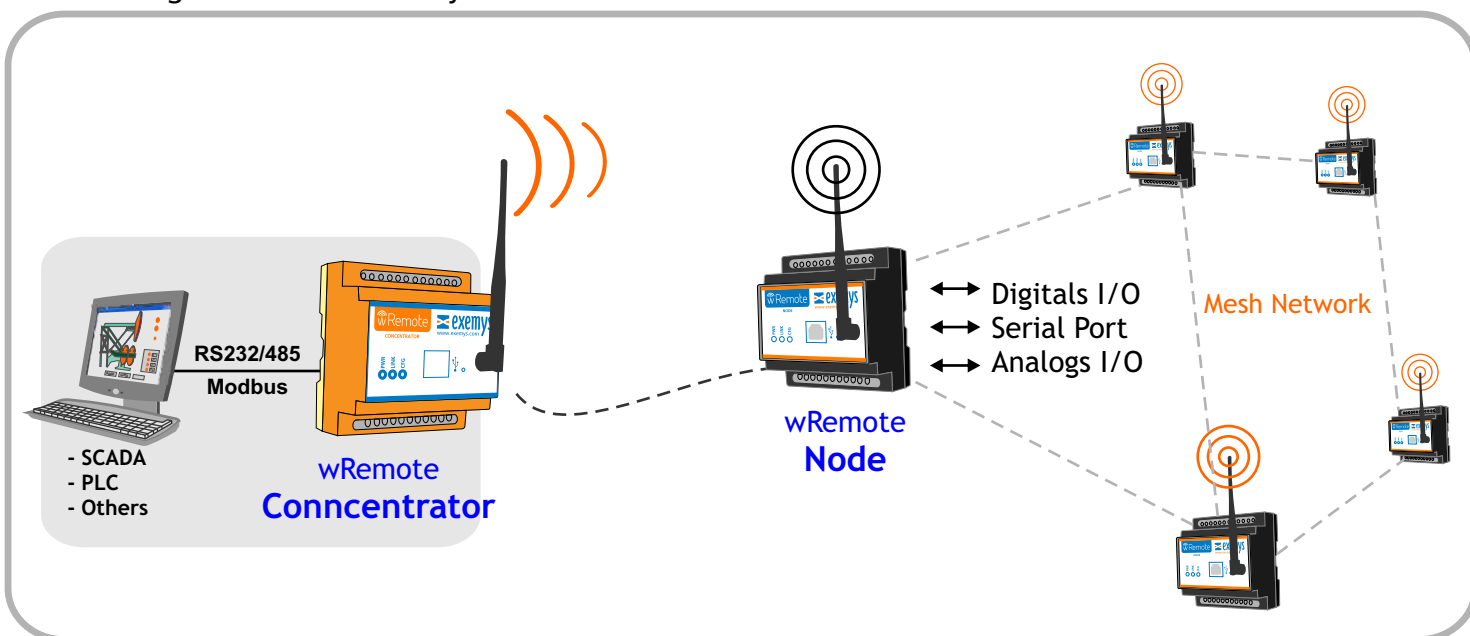
wRemote is a new concept of Wireless Telemetry, based on mesh networking technology.

The system was designed for industrial or open field, where you need to collect remote and dispersed information in a reliable and low cost per point.

Benefits

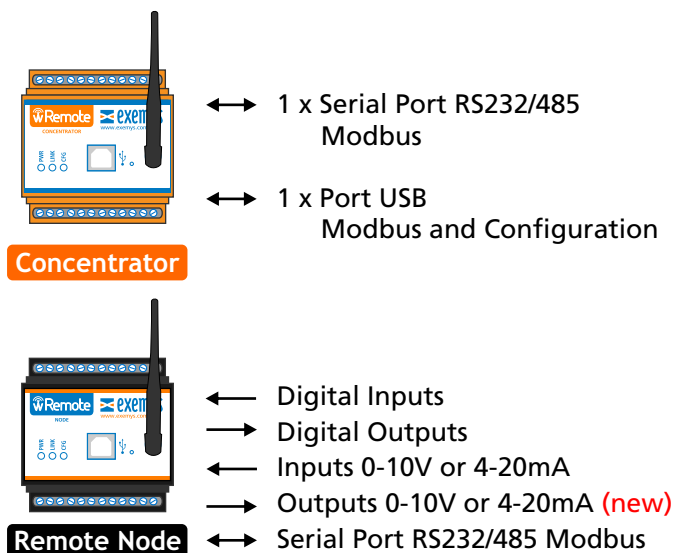
- Secure Wireless Communication
- Multiple Remote nodes in one area
- Low cost of installation by point
- Mesh Network technology (redundancy and better range)
- Connecting Transducers directly

- Mesh Technology
- Modbus Communications Protocol
- Digital and Analog inputs and outputs



General Characteristics

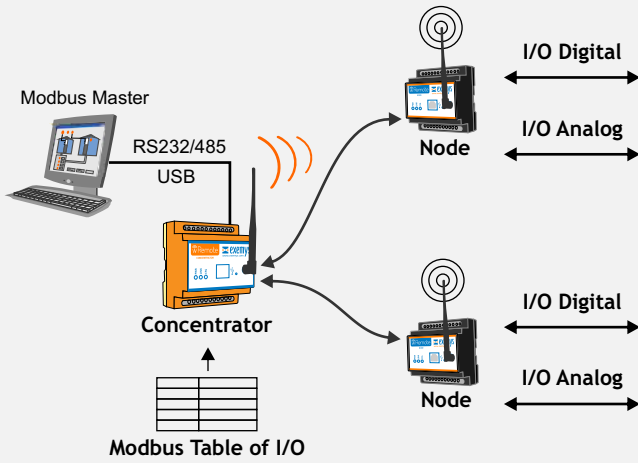
- Models: **Concentrator** and **Remote Nodes**
- Suitable for industrial environments
- Communication IEEE 802.15.4 in 2.4GHz
- Mesh Network between devices
- Digital Inputs and Outputs
- Analog Inputs of 0-10V and 4-20mA
- Serial Port RS232/485 for Modbus slaves
- Port USB for Modbus slaves and configuration
- Access to I/O and Serial Port in Modbus



Examples of Application

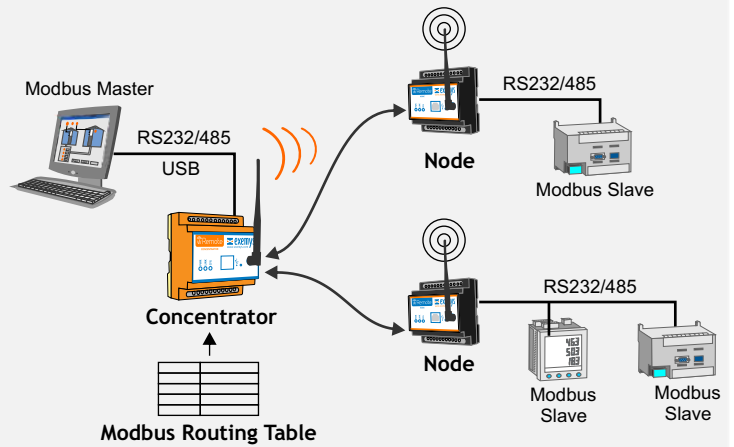
Monitoring of Inputs and Outputs

This solution allows us to monitor the physical inputs / outputs of the "Nodes" to conduct MODBUS to the internal slave (ID 247) that has the "Concentrator" referring to the same table by the configuration software.

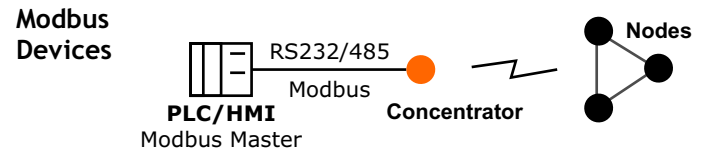
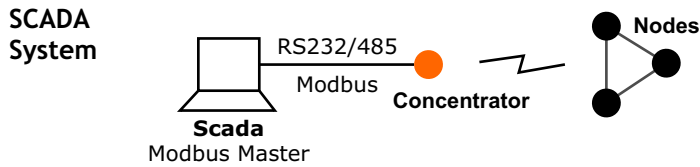


Access to Remote Serial Ports

This solution allows us to connect MODBUS devices to the "Nodes" either through the port RS232 or RS485 and make queries to the "Concentrator" that is in charge of referring them according to their configuration.

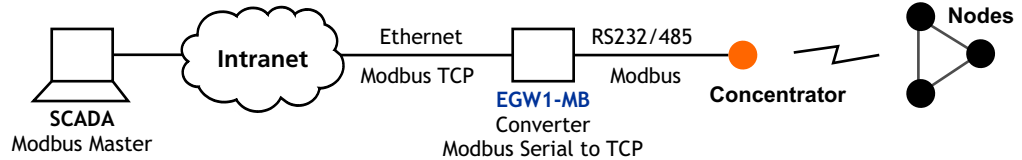


Concentrator connection

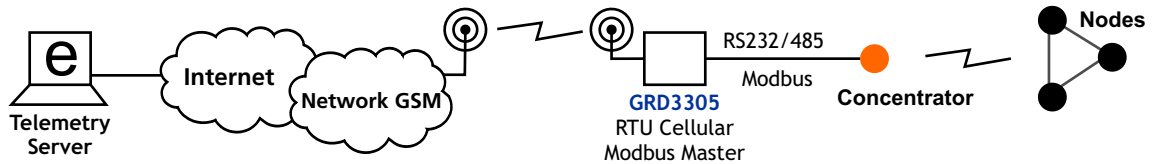


Connectivity with other Networks

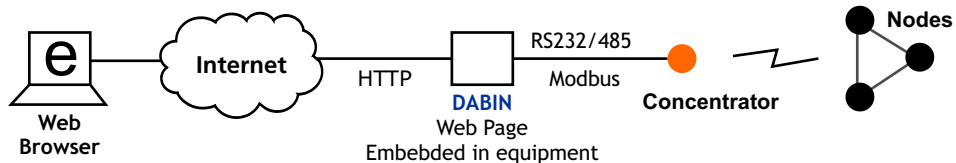
Connectivity to Ethernet Networks



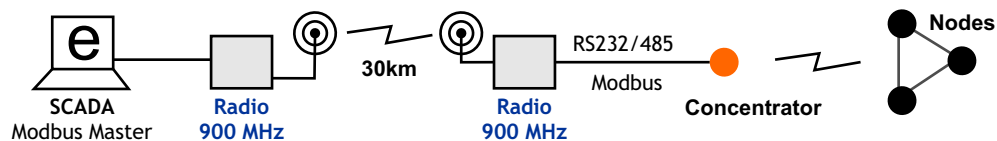
Web Connectivity, by Cellular



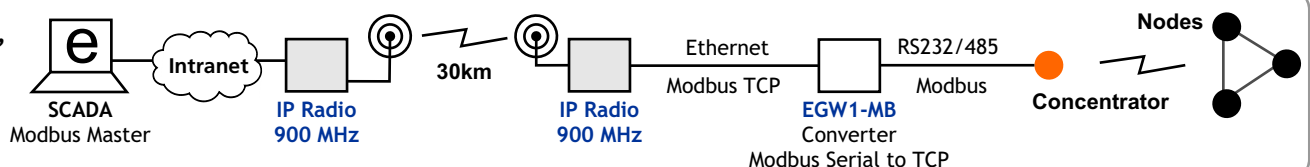
Web Connectivity, by Ethernet



Connectivity, by 900MHz Serial Radios



Connectivity, by 900MHz IP Radios



RF Wireless

- Protocol: IEEE 802.15.4
- Frequency: 2.4000 to 2.4835 Ghz Free Band
- Channels: 16
- Separation between channels: 5 MHz
- Transmission Power: +20 dBm (100 mW)
- Reception Sensitivity: -104 dBm
- Antenna: 2dBi Connector RP-SMA (other antennas optional)
- Scope: 2Km between nodes, with antenna of 2dBi and line of sight
- Module Certifications: FCC, IC, Europe/ETSI, Australia/Ctick
- Mesh Network - Amount of Nodes: Up to 50 max.
- Mesh Network - Repetition between nodes: Up to 4

General

- Indicators of Leds: On / Link / Data
- Cabinet: Industrial, Rail DIN
- Dimensions: 70 x 90 x 65 mm (Width x Height x Depth)
- Operation Temperature: -15°C to +65°C
- Guarantee: 1 year

Power

- Power Input: +10Vdc min. to +30 Vdc max.
- Average Consumption: 15mA@24Vdc, 25mA@12Vdc
- Maximum Consumption: 20mA@24Vdc, 30mA@12Vdc

Communications

- Serial Port: 1 Port RS232 / RS485, Modbus Protocol RTU/ASCII
- USB Port: 1 Port for configuration or Modbus slave (in the Concentrator)
- Configuration: For USB or for radio for the remote nodes.
- Modbus Slaves: 239 maximum slaves
- Encryption of information: Owner

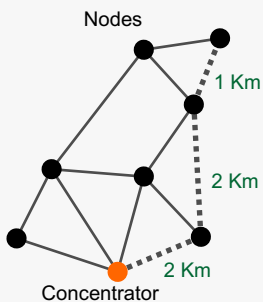
Inputs and Outputs

- Analog Inputs: Up to 2, configurables in 0-10V or 4-20mA
- Analog Inputs in 0-10Vdc: Precision 10mV, Impedance of input 10.7 Kohm
- Analog Inputs in 4-20mA: Precision 10uA, Resistance of Shunt 68 Ohms. Protection in the input against tension spikes
- Analog Outputs in 0-10Vdc: Precision 10V, load min. 500 Ω.
- Analog Outputs in 4-20mA: Precision 10μA, Shunt max. between 650 Ω & 1500 Ω depending on the power (13 to 30 Vdc)
- Digital Inputs: 4 to Transistor, Activation: +3,5Vdc min. to +28Vdc Max.-, Impedance: 2 Kohm, Max. pulse frequency: 1Khz.
- Digital Outputs: 2 to Transistor Open collector, +45Vdc max. input, 50mA max. Current

Available Models

Model	Function	Serial Puerto	USB	Analog Inputs	Analog Outputs	Digital Inputs	Digital Outputs	Nodes (max)
wRemote-1000-CN	Concentrator	RS232/RS485	yes	---	---	---	---	50
wRemote-3005-ND	Node	RS232/RS485	yes	4x Configurables 0-10V / 4-20mA	---	4	2	---
wRemote-5005-ND	Node	RS232/RS485	yes	2x Configurables 0-10V / 4-20mA	2x Configurables 0-10V / 4-20mA	4	2	---

Mesh Network



Advantages of Mesh Network

- It is possible to carry messages from one node to another by different paths.
- Each node has its own communications with the others.
- Each node extends the scope of communications.
- It is much safer. If a node fails, another will take over the traffic.

Other family devices

wTunnel



- Inputs and Outputs tunnel
- Tunnel ports RS232 and RS485
- Digital I/O, 0-10V and 4-20mA
- The entry of a computer, reflected in the output of the other