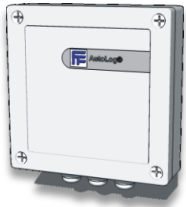


AUTOLOG® Wireless Sensor Network (869 MHz)

WIRELESS SENSOR NETWORK

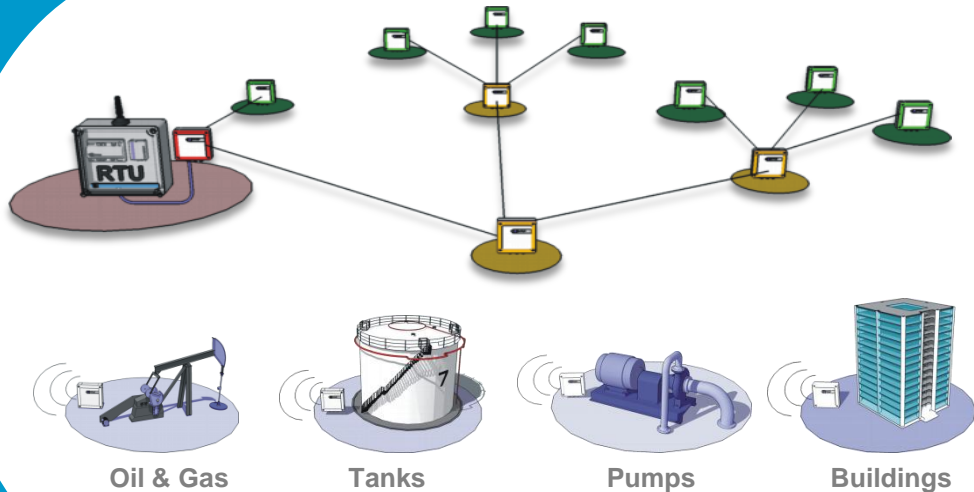


**AutoLog
Wireless Sensor
Network Module:**

- 3 AI
- 2 DI (norm./pulse)
- 2 DO
- + Battery Monitor
- + Temperature
- + Humidity
- ZigBee compatible
- 869 MHz
- Automatic Routing
- Modbus RTU interface
- Diagnostics

Wireless Sensor Network developed by FF-Automation can transfer temperature-, pressure-, switching- and other data to PLC, control room SCADA, database or other systems. The data is sent wirelessly and bi-directionally to/from the AutoLog WSN Master Unit, from which it can be asked using standard Modbus RTU protocol.

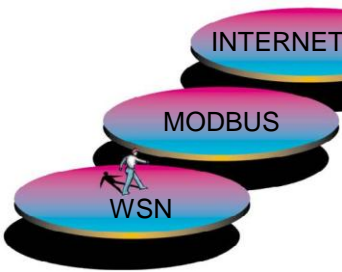
FF-Automation's wireless sensor system can be used with any automation system (e.g. PLC, SCADA, HMI) on the market which support Modbus RTU protocol. (>95% of all automation systems support this).



Environmental, ground water, cathodic protection, dams, docks, depots, stations, areas, trucks, valves, humidity & temperature etc.

FF-Automation can offer also complete solutions to system integrators and end customers. Complete solution includes not only the Wireless sensors but also data gateway unit (which puts data into e.g. TCP/IP-, GSM/GPRS-, Internet- or TETRA network) and suitable control room (SCADA / HMI) solution. Ask more!

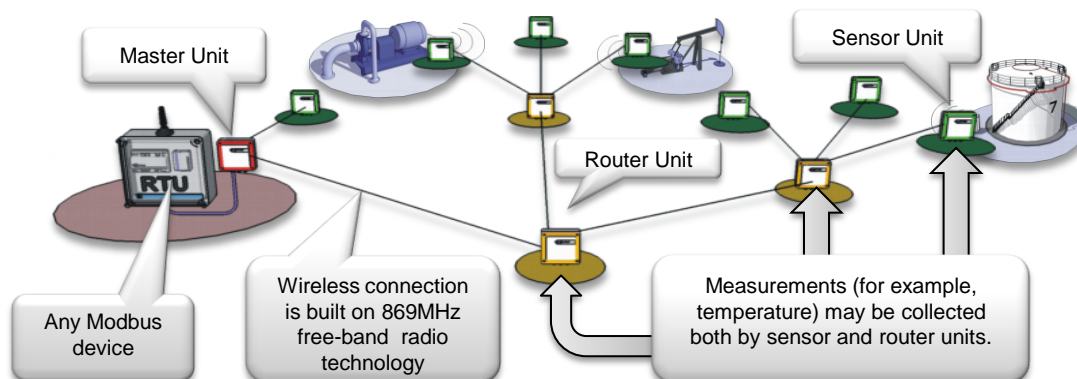
Wireless sensors open new fields of remote monitoring and control applications! Traditional monitoring and control application which needed expensive wirings can be re-budgeted to fraction of total costs!



**Wireless
M2M**

Wireless Sensor Network

AUTOLOG® Wireless Sensor Network (869 MHz)



Wireless Sensor Network Module (WSN-869)		
I/O	Value	Description
Analog inputs	3 + Build-in temperature and humidity sensors	When ordering define the analog input type
Analog input type	4...20mA / Temperature / Current / Voltage Flow / Level / Pressure / etc.	When ordering define the analog input type
Digital inputs	2	operates as normal DI or pulse counter
Digital outputs	2	24VDC/0.3A
Network	Value	Description
Standard	IEEE 802.15.4	ZigBee compatible
Frequency	869 MHz, Tx power 10mW	License free frequency in Europe and several other countries
Network topology	Tree topology. master-, router- and sensor units.	max. 30 nodes in 1 network. 1 master / network.
Routing	Best route is selected automatically based on signal quality. Allows max. 9 "jumps" between routers.	Slave nodes can connect to any router or directly to master. Route is changing dynamically if low signal quality.
Max. distance	Over 300m between routers (line of sight.) About 30-50m between routers (indoor)	Max distance can be increased using routers.
Interfaces	Value	Description
Modbus	Master unit has Modbus RTU interface (RS-232)	Speed 9600 bps, 8 data bits, parity none
USB	Devices have USB interface for configuration	Graphical configuration tool for Windows
General	Value	Description
Powering	7-15 VDC (Wired) / 3.6 VDC (Battery)	Define the used power source when ordering
Power consumption	Powering: 12V 30mA 3.6V 7uA Sleep mode: 30mA Measur. mode: 55mA 25mA	In measurement mode the total power consumption depends on meas. interval and used sensors. Sensors were not included to calculation. Battery life-time with build-in sensors can be 10 years. Ask more!
Operating temperature	-20...+65°C	IP protection class: IP65 (default)



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