

Wireless monitoring system
Spylog PLUS





- SpyLOG PLUS is the monitoring system that combines state of the art technologies and advanced software to obtain absolute control on stored samples and reagents.
- Spylog PLUS acquires and monitors all the relevant chemical and physical conditions of laboratory environments and equipment.
- Spylog PLUS is an indispensable tool for the accreditation of your laboratory in compliance with ISO, GLP and other directives.



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GLOBAL MANAGEMENT MONITORING SYSTEM

SpyLOG PLUS delivers EFFICIENCY, FLEXIBILITY and SAFETY

- Absolute freedom in alarm management, with the possibility to alert an unlimited number of people simultaneously or in succession. You can choose how to display the alarms, by pop-ups on your PC or by e-mail, voice box, SMS or fax.
- Easy local alarm identification by the association of each measurement channel with pictures of instrument or maps of the monitored laboratories.
- Secure bidirectional communication between software and transmitters, thanks to Secure PLUS (Secure encrypted transmission of data). The software sends an acknowledge signal to each transmitter for any received data. In the absence of acknowledge signal, each transmitter can record up to 15,000 readings in its own local memory (Data Logger).
- The “Watchdog” alarm controls of the correct operation of the PC, allowing to establish a “live” connection through USB port and activate a ON-OFF contact alarm in case of PC or software deadlocks.
- Use of a calibration tool to manage all the calibration probes independently. One or more calibration points available.
- Monitoring of calibration expiration for each channel by visual messages.



Main features

FIELD OF APPLICATION / The usual appliance is the control of environment and equipment in the following sectors:

Hospitals or clinical institutes.

- Transfusion centers.
- Laboratories of analysis, Microbiology, Pathological anatomy.
- Environment control of Steril Chambers, Operating-Theatres.

Pharmaceutical, Chemical, Food and Aerospace companies.

- Quality Control Laboratories.
- Control of Manufacturing area, Warehouses and Pounds.

Universities, Research centers, States of territorial control, Animals Health Institutes, museums.

- Development and research laboratories.
- Environments controls.

SpyLOG PLUS will keep constantly monitored refrigerators, freezers, blood banks, chambers and environments where the precious samples and medicines are stored, as well as stoves, incubators and other equipment in which the chemical/physical parameters are key for obtaining results.

Several chemical-physical parameters can be acquired and monitored:

- Temperature.
- Relative humidity %.
- Pressure.
- Environments and instruments values of O₂%, CO₂%, N%.
- Air flow velocity.
- Measures of absolute and differential pressure.
- Environment measures of volatile gas.
- Lighting value (Lux).



THE SOFTWARE / The software is used to display and record, in a SQL Structured Query Language database (Extra and CFR21 versions) protected by a password, data coming from numerous channels of measure. The main page of the software gives the real situation of all monitored channels/parameters. During the normal running conditions, the display has a uniform colour. When there is a situation of alarm, the specific measure channel changes its colour. Each alarm code has its own colour.

EASY AND PRACTICAL USE / The Software is provided with numerous functions and instruments as follows:

- Display of the data as graphics or tables.
- Splitting up of data in groups (per parameters, uses, rooms, etc).
- Separate management of the alarms for each measured parameter.
- Display of the data recorded in hours, days, weeks or months.
- Printing and transfer of data in usual formats as EXCEL, PDF and HTML.
- Recording of the historical alarms as table, filtered according to the type of the alarm, to the monitored parameter, etc.
- Accurate recording of the users access and of all operations carried out in an Audit Trail file (CFR21 version).

THREE VERSIONS OF Spylog PLUS: BASE, EXTRA and CFR21 / The Spylog PLUS software is available in three different versions to satisfy any kind of request:

- The Spylog PLUS BASE version has been designed to monitor a limited quantity of instruments or environments. It is an easy and cheaper software which substitutes graphic recorders or data logger. It is used in case there is no particular need of remote management of alarms.
- The software Spylog PLUS EXTRA is a complete software with numerous functions. It has been designed for the monitoring of medium/large uses and it is used to manage the sending of remote alarms (SMS, vocal messages, Fax, etc).
- The software Spylog PLUS CFR21 is the most complete and is in accordance to the standard GLP and FDA CFR21 part 11. It is used by pharmaceutical companies and by certified GLP centres.

MAPPING INSTRUMENT / Further to the three software version, it is available a plugin (optional) able to carry out the mapping until 16 points of an equipment or of a room, according to the calculation modalities indicated in the international standards AFNOR and IEC.

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01. SpyLOG PLUS main page, showing all monitored parameters of a single channel.
02. Channels details with colored identification.



SENSORS / Spylog PLUS is equipped with a large range of sensors that monitor various physical an/or chemical entities. The temperature measurement is carried out by two probes that have the following features:

- PT1000: from -100°C to +100°C (accuracy: +/- 0,2°C).
- PT 100 HT: from -200°C to +260°C (accuracy: +/- 0,5°C).

The monitoring of environmental temperature and humidity is done by two probes installed inside the transmitter:

- Temperature probe: from 0°C to +80°C (accuracy: +/- 0,2°C).
- Relative humidity probe: from 0% to 100% (accuracy: +/- 2,5%).

For the monitoring of other parameters, a large range of sensors are available with 4-20mA output to interface directly to the transmitter (accuracy equal to +/- 2%) as:

- Converter for thermocouples type J/K (T until 1500°C).
- CO2% sensor.
- O2% sensor.
- Volatile gas sensor.
- Sensor for absolute and differential pressure (P).
- Relative humidity sensor (RH%).
- Lighting sensor (LUX).
- Particles counters.

A special accessory is at last available for the ON/OFF contacts and can be used for example for the lighting ON and OFF of a room or to check the door opening and closing. Sensors tested on a single point (0°C).

RECEIVERS / The Spylog PLUS system has three different types of receivers to satisfy any need.

- WLR-USB-PLUS / This receiver is connected directly to the PC through USB door. It is usually used for basic installations.
- WLRC-USB-PLUS / Further to technical features of the above-mentioned receiver, this one has a NO/ NC contact which manages the watchdog function. This device is used to control apart the good running of the PC and to inform the operator in case of block or failure through ON/OFF contact.
- WLR-LAN-PLUS / This receiver is used for complex installations. It is not connected to the PC but directly to the LAN net / Ethernet with TCP/IP protocol. External power supply 230V.

Feature List



Recording and sending data through radio waves and LANs, is guaranteed by innovative forms of transmission and acquisition.



Transmitters are equipped with analog and digital inputs and, in addition to temperature measurement, can be used to connect any type of sensors with 4-20mA output (e.i. sensors for relative humidity, pressure, CO2 concentration, ect...).



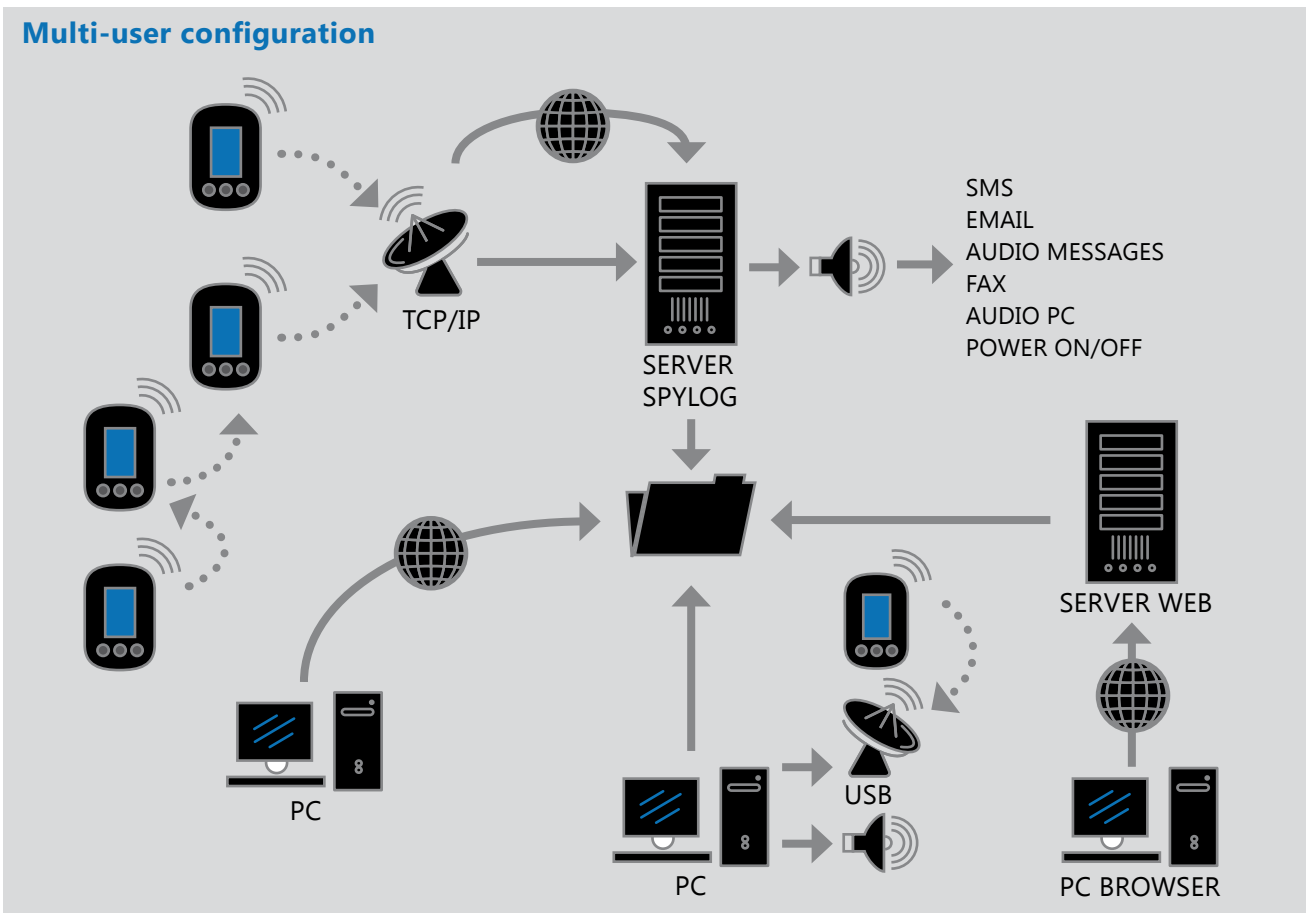
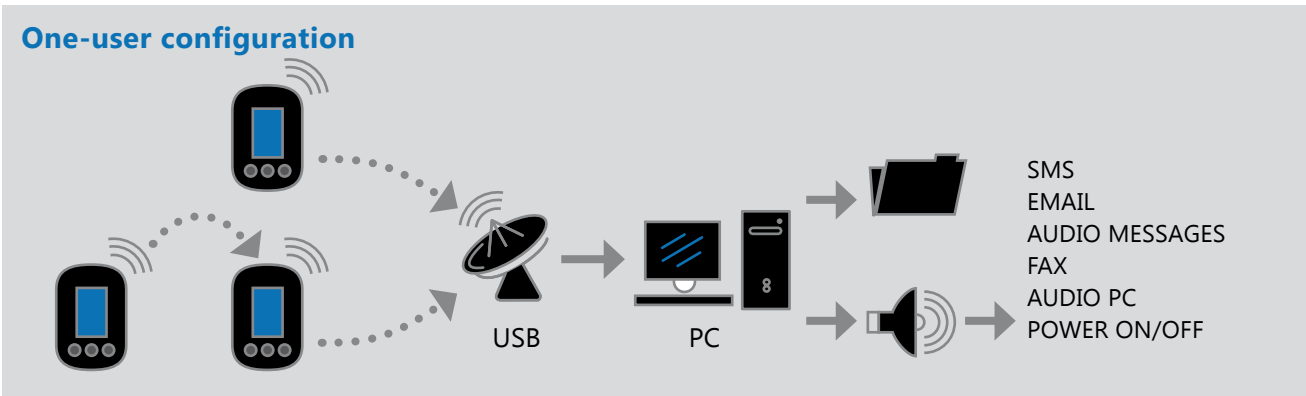
Each transmitters has non-rechargeable lithium batteries. You need to feed them from the mains through a suitable AC/DC power supply.



TRANSMITTERS / They are all equipped with double power supply (battery or feeder) and with LED that indicate the running state and possible alarms. The alarm situation may be acoustical or optical. Spylog PLUS transmitters are available with 1, 2 or 4 universal connectors which can be connected to temperature probes PT1000, input 4-20mA and ON/OFF contacts. They are designed with an easy interface, multifunction keys and large display.

- WLR232-PLUS / This transmitter is prearranged for a direct serial connection RS232 with THERMO SCIENTIFIC CO2 and O2 incubators, Heracell and BBDS serie (all models) from which it is possible to measure the following parameters:
 - T°C Temperature of operation.
 - T°C Temperature of sterilization cycle.
 - CO2%.
 - O2%.
 - R.H% (for BBD models only).

- WLR5485-PLUS / This transmitter is prearranged for the direct serial connection RS485 with ANGELANTONI INDUSTRIE equipment BIOGUARD line, from which it is possible to measure the following parameters:
 - Equipment features (model, serial number, inventory, etc.).
 - Operation temperature (with PT1000 sensor).
 - Event date.
 - Time of door opening.
 - Time of door closing.
 - Code of the user badge.





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