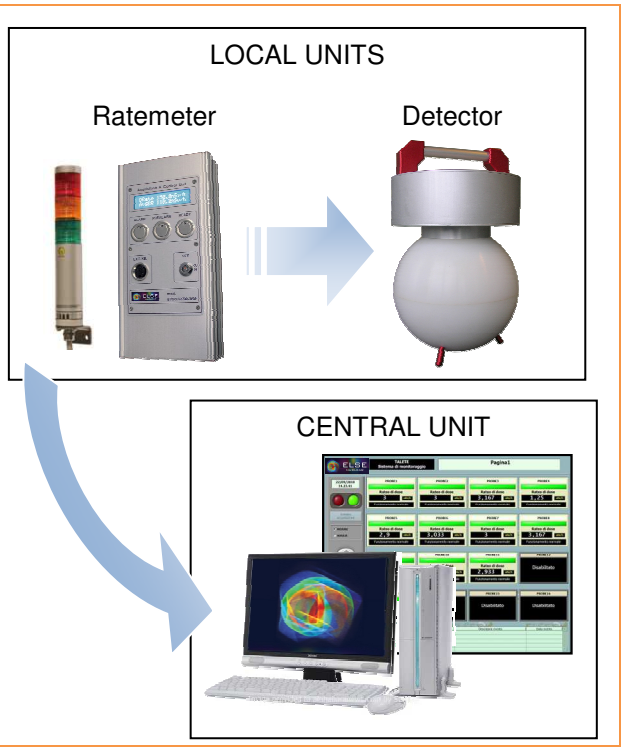
ENVIRONMENTAL MONITORING SYSTEM

PITAGORA 5700

MAIN FEATURES

- PC based Central control station
- User friendly remote management software, with easy access to the archives
- Ethernet connection (for distances < 100 m) or RS485 (for distances > 100 m)
- One connection cable required for each local unit (data transmission)
- Monitors can be up to 1 km far
- Supports all available detectors
- Local visualization of measuring data of all local units
- Remote management of all local units (setup of parameters and alarm thresholds)
- Continuous control and real-time display visualization of equipment's status
- Storage every minute on daily files of instantaneous, average, maximum dose rate, and integrated dose
- Graphical display of stored data with calculation tools



DESCRIPTION

The **PITAGORA 5700** environmental monitoring system is a modular and flexible system, consisting of wall mountable equipment, specifically designed to detect area and air radioactivity. The system allows both dose-rate monitoring of gamma/neutron fields (Area monitoring) and activity measurements of air contamination (Air and/or Stack monitoring).

The basic structure of the **PITAGORA 5700** is composed of local units (detector + SATURN ratemeter) and a central unit (CPC computer + 5700 sMON software + Junction Box).

The recommended distance between detectors and the connected ratemeter is about 15-30 m. Each local unit can be provided with an alarm column, composed by red, yellow and green lamps and siren, indicating alarm and pre-alarm status, probe's malfunction and good operation. The system supports also the NAUSICAA 5301 IC series, the gamma-neutron monitoring station SATURN 5702, and ELSE NUCLEAR Pulsed Field monitoring equipment.

The system's central unit collects the data of all the local units of the **PITAGORA 5700**. The connected units may be the local ratemeters (area and stack monitoring) and the APU control unit of the MISTRAL XM air monitor.

The local units are connected to the central unit via Ethernet cables, or RS485 for distances > 100 m. This connection cable allows data acquisition, while the power supply of the local units is provided by local mains sockets. The Junction Box houses a network switch where all data cables are connected, to be then channeled in the CPC. If required by the Customer, it is also possible to provide power supply to the local units through a second cable connecting them to the central unit.

All main monitoring functions are available to the User both locally and remotely at the central unit. The supplied 5700 sMON software provides data acquisition, processing, displaying, and storage. Furthermore, it allows setting operational parameters, verifies alarm thresholds, produces reports, and recalls historical data.

The software 5700 sMON is a complete, Windows compatible, remote software package for real time control, display and management of the entire monitoring network. The graphic interface presents four management windows: Main, Parameters, Command and Graphics. Virtual keys and selectors are available for user friendly access to the functions.

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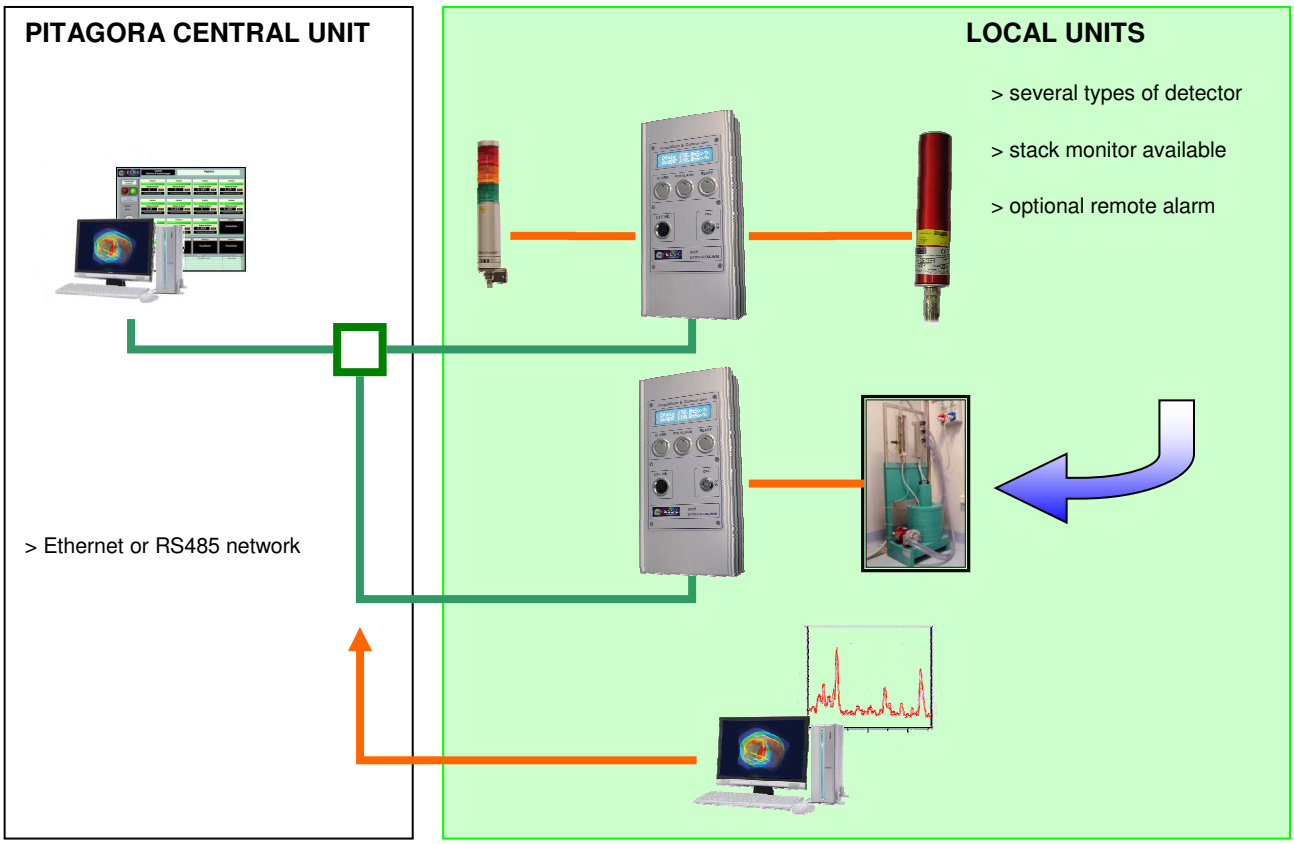
CONFIGURATION

The PITAGORA 5700 system may be configured on the basis the following components:

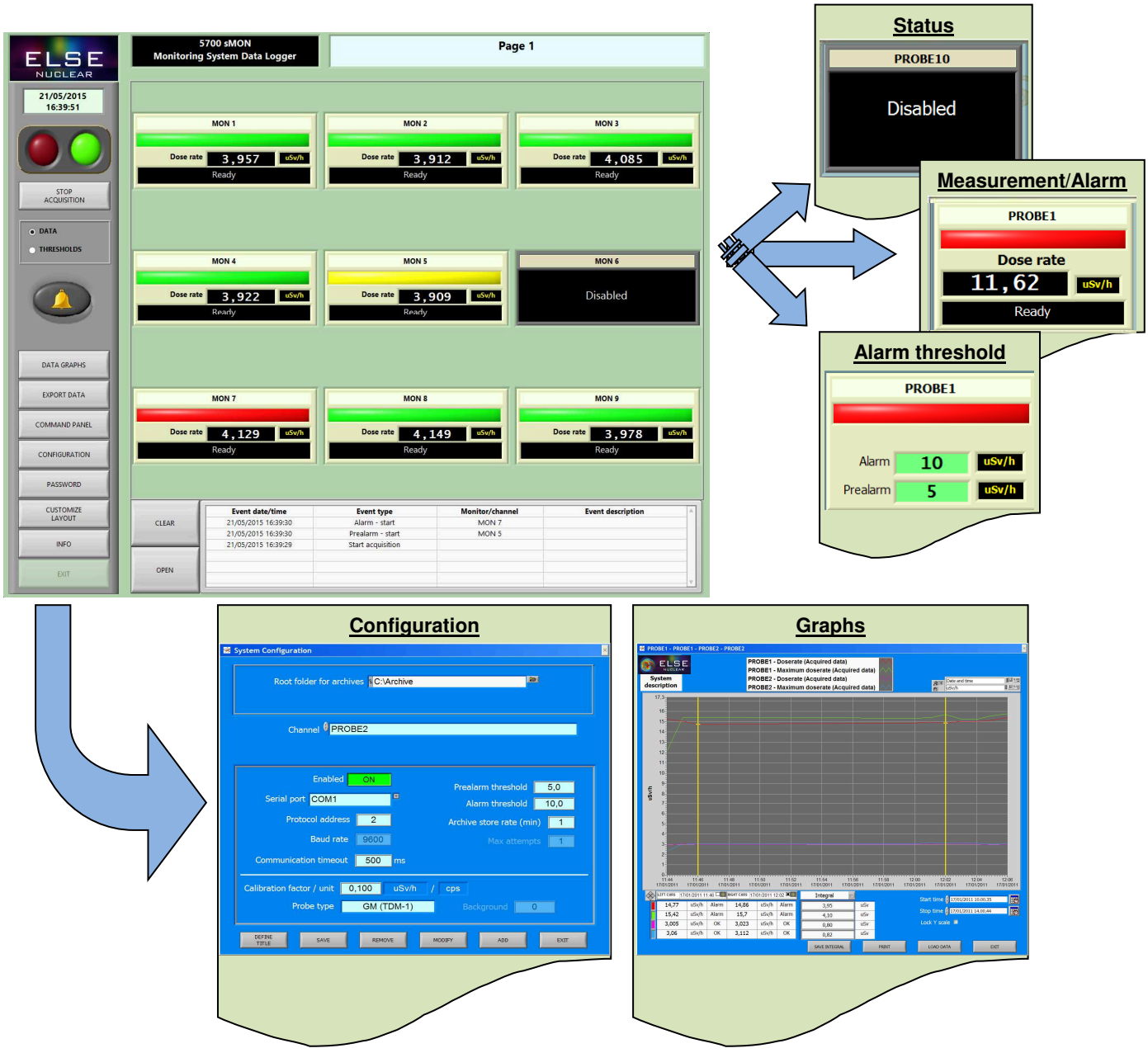
- PITAGORA CENTRAL UNIT control station including:
  - Power supply and Ethernet/RS485 network unit (Junction Box with switch)
  - CPC Data concentrator PC
  - 5700 sMON Software
- Local units: area monitors, air monitors and/or stack monitors
- Area dose monitors, composed by:
  - SATURN ratemeter (local acquisition and control unit)
  - Gamma or Neutron detector (NAUSICAA 5301 IC and SATURN 5702 don't need the external ratemeter)
  - ALU alarm unit (optional)
- Stack monitors, composed by:
  - SATURN ratemeter (local acquisition and control unit)
  - PNAI 2"x2" NaI(Tl) scintillation detector
  - PNAI-ATH Air-tight enclosure
  - SDU-1M Off-line mounting set for high-sensitivity stack monitoring (optional)
  - ALU alarm unit (optional)
  - STACK-DFM Flowmeter for released activity calculation (optional)
- MISTRAL XM Stack monitor, composed by:
  - APU Local acquisition and control unit for multichannel stack monitoring
  - PNAI-MC 2" x 2" NaI(Tl) scintillation detector and multichannel electronics
  - SDU-XM Off-line mounting set for high-sensitivity stack monitoring
  - 1 ALU alarm unit (optional)
  - STACK-DFM Flowmeter for released activity calculation (optional)
- Connection cables



5700 sMON SOFTWARE

The 5700 sMON software main features are:

- Continuous data acquisition from the local monitors
- Real time display on a synoptic screen of acquired data, alarm and working status
- Alarm threshold setting
- Visual and acoustic warning in case of alarms and errors
- Average data computed on 3 different time bases
- Measurement and status storage on hard disk
- Graphic display and print of archived data
- Real time and stored data display from a remote station connected through local network



TECHNICAL SPECIFICATIONS

Power supply and Ethernet/RS485 network unit (Junction Box)

- Low-noise power supply: IN 220 VAC – 50 Hz / OUT 24 VDC
- Network: Ethernet or RS485
- Ethernet connection to local units: 1 Eth. data cable (+1 for power supply if required)
- RS485 connection to local units: 1 cable for 24 VDC power and RS485 data
- Dimensions: (WxDxH) 460x380x180 mm (typical)

CPC – Data concentrator PC

- Type: Tower PC
- Connectability: Ethernet LAN 100 Mbps

ALU – Alarm unit

- Type: LED with siren
- Height: 230 mm
- Diameter: 40 mm
- Green light: Good functioning
- Yellow light: Prealarm
- Red light/siren: Alarm
- Acoustic level: 85 dB at 1 m

For technical specifications of the other components, for specific options and accessories, please refer to the specific product data-sheet

ORDER GUIDE

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<tr><td rowspan="4">PITAGORA CENTRAL UNIT (PC + Junction Box)</td><td rowspan="4">PRINTER</td><td rowspan="2">Area dose monitor</td><td>SATURN series</td><td>(any)</td><td rowspan="2">ALU
SSD Calibration</td></tr>
<tr><td colspan="2">NAUSICAA 5301 IC Series and SATURN 5702 (no external ratemeter needed)</td></tr>
<tr><td>Stack monitor On-line</td><td>SATURN series</td><td>PNAI-ATH</td><td>ALU
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<tr><td>Stack monitor Off-line</td><td>SATURN series</td><td>PNAI
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<tr><td>Air/Stack monitor MISTRAL XM</td><td>APU</td><td>PNAI-MC
+ SDU-XM</td><td>ALU
STACK-DFM</td></tr>
</table>

OPTIONS

- Serial communication for long distances

ACCESSORIES AVAILABLE UPON REQUEST

1. Printer for the host PC
2. Alarm column ALU for the measurement points
3. Alarm column ALU for the central control unit
4. Warranty extension from 12 months to 24 months

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