

# CrioSystem Supervisor



**CrioSystem Supervisor** is a vertical IOT platform (Internet of Things), specially designed to meet the needs of remote monitoring for Medical and Industrial gas storage and distribution. The platform is the result of the knowledge acquired by AMBRA Sistemi s.r.l. within the specific applications for over 25 years.

Peculiar features are: specificity, simplicity, versatility, completeness and high capacity of communication functions.

**CrioSystem Supervisor** can simultaneously manage telemetry systems based on CrioNet family peripherals connected to each other in RS485 and dedicated compact devices to monitoring cryogenic storages (MiniCRIOTEL) or compressed gas cylinders (GASTEL).

Platform connectivity is guaranteed by TCP-IP protocol, used to exchange data with peripherals equipped with M2M SIM CARD on a GPRS network, managing data transmission over a multi-points packet-switched network.

An IRV (GSM VOIP Gateway) module is rather appropriately configured to manage communication flows in order to transfer information for maintenance operators and logistic staff by a voice messaging system managed by a text to speech voice synthesizer, besides to SMS and e-mail. Thanks to this system, operators in charge receive on their mobile phone, alarms and related place of origin notices.

**CrioSystem Supervisor** development has considered the enormous data flow which interests the platform, as well as all the needs of acquiring, sharing, storing and protecting the amount of data.

The **CrioSystem Supervisor** platform is normally installed at the Ambra Sistemi s.r.l. data center, but can be installed, on specific request, directly at the customer's data center.

**CrioSystem Supervisor** monitoring is available through a client interface, developed on a WebAPP, which does not require any download or user-level installation.

The WebAPP can be open simply by using one of the most popular browsers, such as Chrome, FireFox, Mozilla, Safari, and Edge on PC, tablet and smartphone.



**WebAPP CrioSystem Supervisor** is developed in HTML 5, it's responsive and automatically configures itself for optimization with various mobile devices, that have smaller screens and touch-screen functions.

It has a simple interface, with easy to locate and clickable buttons, displaying only the necessary information.



There are five different application access profiles, each protected by login and password and with different levels of authorization.

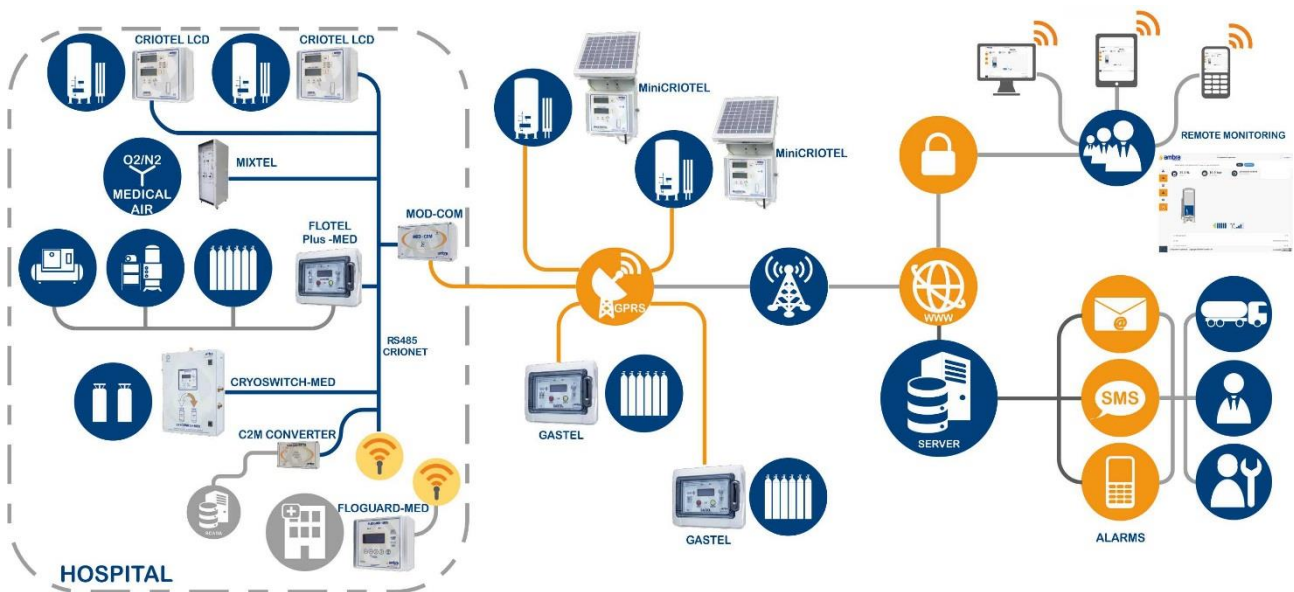
For each user, except for the Administrator, it's possible to associate the visibility of a specific subset of peripheral devices, selected among the system archive, as well as to allow access to data, according to specific tasks and responsibilities.

The application is available in three different languages: Italian, English and Spanish, freely customized for each individual user.

**WebAPP CrioSystem Supervisor** has been conceived as assistance tool for technical staff and logistic department. In fact, there are specific consultation pages for all the technical alarms and tank levels, accessible through specific buttons.

The access to plants consultation and / or modification pages by users is protected by personalized password and login.

**WebAPP CrioSystem Supervisor** is a strategic marketing tool to improve the gas supply company's service offer too.

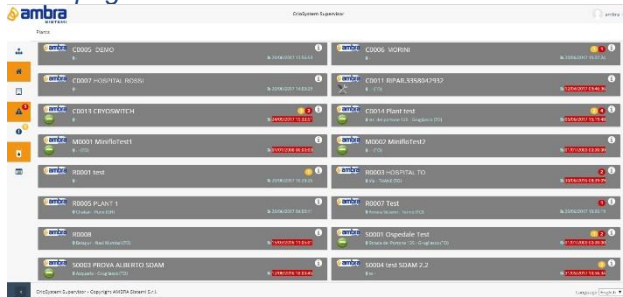


The devices managed by the **CrioSystem Supervisor** are:

- **CRIOTEL LCD, MiniCRIOTEL**: monitoring of cryogenic tanks;
- **FLOTEL / FLOTEL Plus -MED**: monitoring of gas cylinders, vacuum and compressed air systems;
- **GASTEL**: monitoring of gas cylinders;
- **MIXTEL**: monitoring and control system for F.U. Synthetic Medical Air production;
- **CRYOSWITCH-IND / CRYOSWITCH-MED**: monitoring and control system for gas supply with dewars;
- **LIQ-SWITCH**: monitoring and control system for LN2 dewars;

For illustrative purpose, there are some screenshot pages of the application, as following:

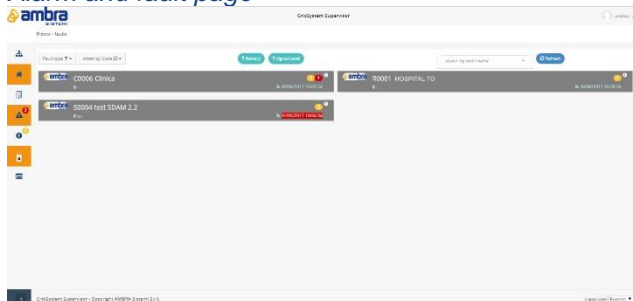
**Plant page**



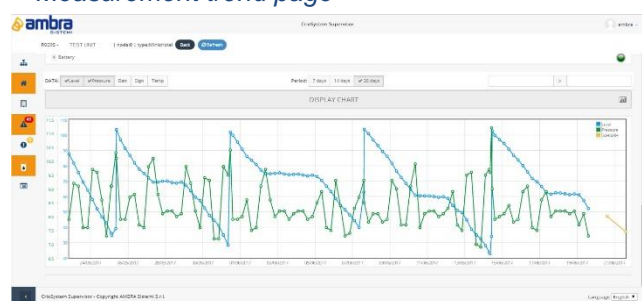
**Status page**



**Alarm and fault page**



**Measurement trend page**



**CrioSystem Supervisor** allows the following advantages:



- ✓ More cost-effectiveness and prompt deliveries
- ✓ Semitrailer tank road itinerary optimization
- ✓ Fuel economy
- ✓ Prompt filling managing
- ✓ Gain increasing
- ✓ More competitiveness on the market
- ✓ Industrial and hospital plants monitoring
- ✓ Data exchange with third party managing systems and/or logistic planning systems
- ✓ Better managing of primary product production
- ✓ Delivery product quantity optimization
- ✓ Better plants safety