



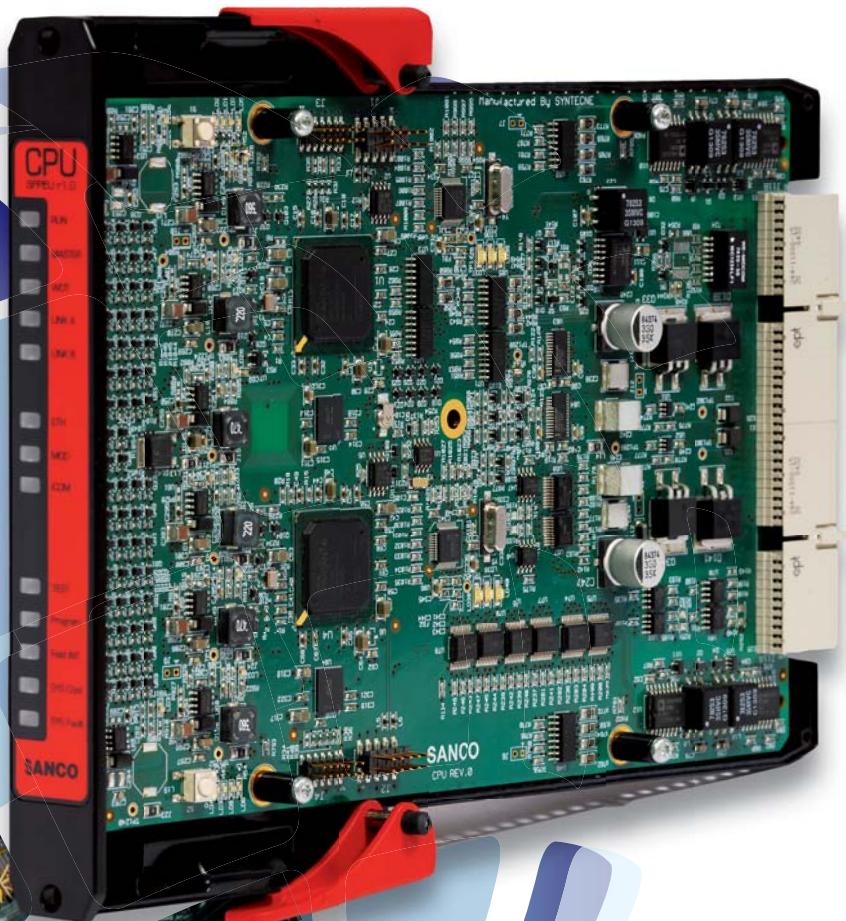
SANCO

Fire & Gas Detection and Fire Suppression

"infinity"



Advanced Panel



one single source for a safer protection

The individual customer satisfaction is our target.

Since its beginning, SANCO has been working in close cooperation with his customers in order to supply suitable customized solutions, thus ensuring the highest quality standards and punctually fulfilling his commitments. SANCO's philosophy is not conceived to supply ordinary products, but to design and manufacture comprehensive tailored solutions by fitting together an innovative F&G system and a trustworthy fire suppression system (water, foam, dry chemical and gases).



a step ahead to the future

The propensity to continuous improvement

and the wish to anticipate forthcoming requests related to fire safety have been pushing SANCO to develop an advanced, reliable and customizable fire alarm control panel. The former well-known control panel FB6100 has been already largely welcomed by the market and thousands units have been sold during these years.

For this reason SANCO R&D team has designed and produced the new control panel "infinity". This electronic modular unit can be totally configurable, and it is designed and manufactured in order to attain a system that integrates supervisory control, fire detection and suppression in a commercial and/or industrial environment demanding the highest intrinsically functional safety level.

Modular architecture, flexible configuration, easy programming and adaptability of intervention rules according to the different system events make the panel **suitable to every fire system protection layout**.



The design method that has been employed, its components and its circuitry have been chosen in order to **minimize any risk of failure (MTBF)**.

Innovative methods for checking data integrity, self-diagnosis and redundancy ensure the **system control in the most critical conditions too**.

design



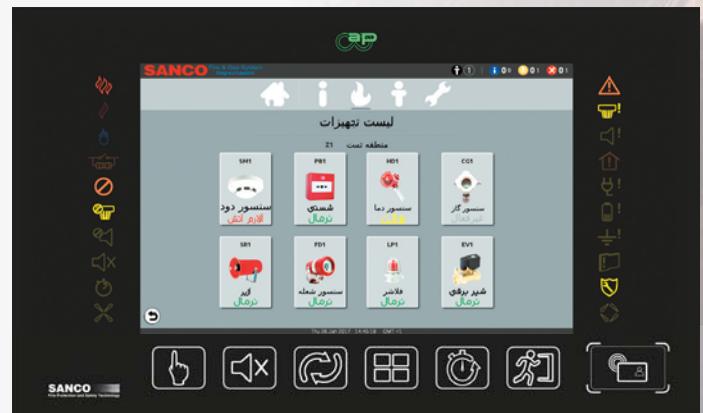
and it can be made with one or more 19" racks in order to insert several module boards. In order to extend the functions and the number of boards, up to 7 racks can be added (8 in total), thus reaching:

- **Maximum quantity of programmable zones: 250 physical zones**
- **Maximum quantity of I/O for each detection zone: 1024 detectors (input) + 1024 actuators (output)**

The insertion slots are located on the back of the panel in order to make it **physically safer against possible sabotage actions**.

The control panel "infinity" works with a GSM (Graphical Service Module) operator interface module that is autonomous and connected to the system by a proprietary bus system handling all the functions for signaling, notification, control and interface with the operator.

This subsystem can work independently, which means that in case of display malfunction both signals and controls will perfectly work. Moreover, it can be repeated in more than one unit in order to monitor the control of the system in case of installations covering very large areas and/or installations including several buildings or to create a supervising network spread along the whole safety system.



The graphic interface, **multi-language** and conceived in order to be **user-friendly** also for the operator on site, is composed by:

- **a 13.3" graphic display with WXGA resolution of 1280x800 pixels**, placed in the middle part;
- **a touchscreen keyboard with 6 feedback lights function keys** for the fire system main controls, placed in the upper part;
- **10 luminous LED icons reporting the system operation status**, placed in the left part;
- **10 luminous LED icons reporting any system anomalies and faults**, placed in the right part;
- **a luminous icon reporting the presence of the main power supply** from the panel, placed in the upper part;
- **an area reporting the user level and the electronic RFID badge identification**, placed in the lower-right part.

why choosing infinity

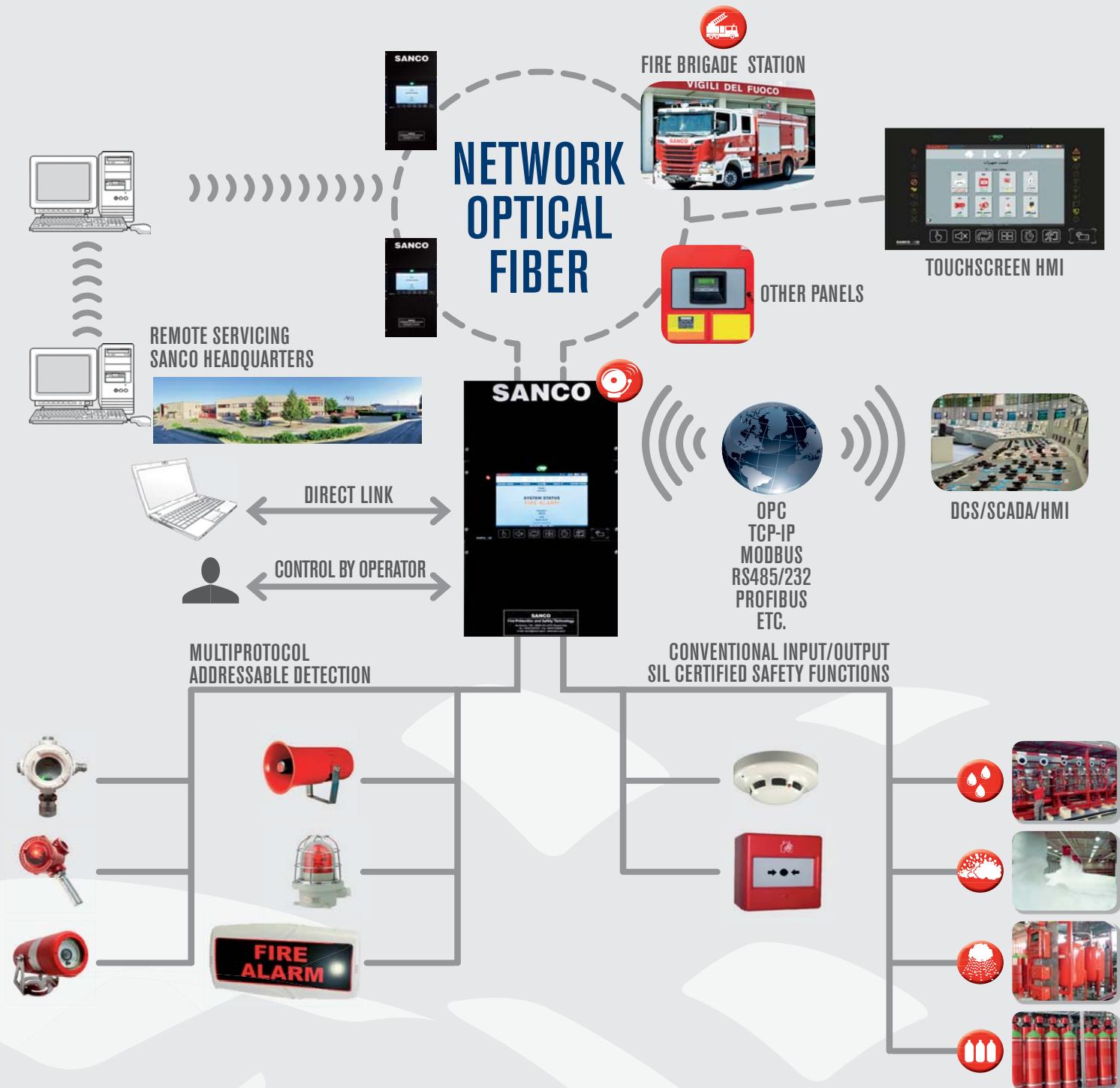
- ✓ SANCO Safety-Pro software package is based on an application program external to the system, thus allowing the programming in a safe way from any computer thanks to a complete and user-friendly operator interface. The online GSM graphic module advanced interface can be used for the improvement of the existing programming. This module uses several operator levels (login by password or magnetic card) in order to control and avoid significant or undesired modifications.
- ✓ Each card comes with a **dual control logic** (two distinct logic units) that implement the functions of **intrinsic redundancy**.
- ✓ Up to **3 CPUs** working in modular redundancy mode (that is, up to 6 different logic subsystems) can be installed in the system, thus implementing advanced redundancy functions (**arbitrage function**) and control functions (**voting logics**).
- ✓ Logic solver is a programmable unit based on the architecture of all cards thanks to Sanco protocol language by using **100% testable hardware synthesis tools**.
In such way uncontrolled behaviors generally coming from software implementation (which does not allow a complete covering level) are reduced.
- ✓ The **double communication link on SSDL (SANCO Syncronous Data Link)** bus system used by the several subsystems has been studied by our R&D team in order to allow the two logics of each card to operate in an independent way.

SANCO
ensures an
answer



- ✓ **ERS (Extended Reliability Swap)** mode allows the recovery of events that did not enter in the computational queue and not to lose events in case, for example, of malfunctioning of one CPU, in case of CPU hot swap or during maintenance activities.

- ✓ Each card has its own RFID radio frequency TAG, in which serial number, manufacturing batch and a complete functioning log of the card (working hours, latter events, systems associated with the card) are saved. This information (that can be also controlled through smartphone while the card is turned off) allows the customer a **complete control against any sabotage of the devices**.



FULLTIME ASSISTANCE

SANCO organizes suitable training courses at its premises and on site for both operators and maintenance technicians.

Moreover, it is possible to monitor (not only supervise) all the systems from SANCO headquarters thanks to public TCP-IP connection.

This allows SANCO team, in case of need, to remotely intervene all around the world in a rapid way.

customer's satisfaction is our primary aim



reliability from the design to the realization

TECHNICAL FEATURES

| | |
|---|--|
| Types of implementable controllers | Fire/Gas/Technological/PLC-like logics CPU-integrated hardware lock for fire suppression dedicated to zones Solver low-latency programmable hardware |
| Maximum number of programmable zones | 250 physical zones + 250 virtual zones |
| Maximum number of points for each zone | 1024 sensors (inputs), 1024 actuators (outputs) |
| Maximum number of cards | 116 (addressable and conventional) I/O cards for each zone |
| Redundancy of CPU cards | Native with double logical path on each card. Optional up to 3 physical cards (2x3 levels) with Master Arbiter and Voting |
| Redundancy of communication bus | Native 3 physical paths on CPU boards + 1 virtual SBC board |
| Redundancy of I/O cards | Native with double logical path on each card Optional through two physical cards (2x2 levels) with dedicated Device Arbiter or non-voting replica |
| Hot swap of cards | Hot-swap for all types of cards, self-diagnosis and automatic re-initialization |
| Centralization between systems | Connection by dedicate protocol, OPC, RCP or Safe Ethernet (open Safety) |
| Supervision system | SCADA software with dedicate protocol, OPC or direct virtualization of addresses on Safe Ethernet |
| Host interface | Configurable Ethernet, RS232/485 |
| Network interface | 100BASE-TX for copper or fiber optic concentrator |
| Printer | USB optional or Serial (40 or 80 columns) |
| Time zone management | RTC hardware and UTC software |
| Supply voltages | Main 110-240 Vac (-15%/+10%) 50/60 Hz Internal 24 Vdc (-20%/+30% - 25.2 Vdc load target) |
| Certifications | EN54-2 EN54-4 EN12094-1 UL (under progress) SIL 2, SIL 3 (under progress) |



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