

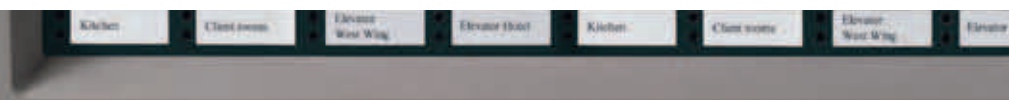


# Cerberus PRO – enjoy protecting



Answers for infrastructure.

**SIEMENS**





## Cerberus PRO – enjoy protecting

Protecting people and assets. Securing business processes and continuity. This is what fire protection is all about. Cerberus® PRO is a powerful fire protection system for fast, reliable fire detection, alarm signaling, and control. Its wide portfolio of innovative products provides clever technology with extensive safety features for small to very large applications. So you can be sure to meet your application with confidence.

# Meeting various requirements

## ■ Protecting people and assets reliably with products from Siemens

The Cerberus PRO family comprises different control panels, fire detectors, peripheral devices, and accessories. They all have one thing in common: smart, unique safety features. For example, all peripheral devices, even fire terminals, have built-in isolators. Thus, even with faults such as an open or a short circuit the system remains fully operational and faults can be quickly located. Degrade mode functionality is integrated throughout the system, ensuring detection, control, alarming, and fire brigade communication even in the event of a processor failure.

Cerberus PRO fire detectors also increase safety thanks to their distributed intelligence: important decisions are made on the spot in the detector. As a result, unshielded cabling can be used, making Cerberus PRO easy to plan and install – saving you both time and money. In short: Cerberus PRO is the smart answer to your fire safety needs.

## ■ Creating networks in various sizes

Cerberus PRO is a straightforward fire protection system. It offers all from stand-alone to networkable control panels. The uniform hardware concept of the control panels facilitates the planning process. Even large, campus-wide networks can be easily realized with little additional planning. Simply connect up to 14 clusters (C-WEB/SAFEDLINK) to an EN 54-approved fiber-optic backbone (C-WEB/LAN). The industrial LAN technology also enables you to optimally adapt Cerberus PRO to any building or process structure. In addition, Cerberus PRO can be integrated into your existing IT network. Information can then be distributed across your network, further enhancing system usability.

Commissioning of the system is safe and easy thanks to auto-configuration. This function enables instant fire protection during the construction phase, supporting on-time hand-over of buildings. Moreover, Cerberus PRO can be integrated into the danger management system from Siemens. You can integrate fire protection with other security-related subsystems such as access control or intrusion detection from Siemens. Your benefit: All solutions follow the same philosophy, as all come from one source.

## ■ Planning and commissioning made easy and cost-efficient

Whatever the project size or requirements, with Cerberus PRO they can be easily realized with little additional planning effort. For example the floor repeater terminals are loop-powered which results in less planning regarding connection and power supply. The networkable control panels allow easy network expansion at a later point in time. Thanks to complex Boolean functions, cascade functions or dynamic controls, no additional Programmable Logic Controls are necessary.

Enhanced remote operating functions are available for system diagnosis and monitoring. They reduce on-site visits and thus save valuable time.

## ■ Answering versatile challenges with powerful fire protection

Cerberus PRO offers excellent detector technology with selectable parameter sets. A variety of special detectors are available for difficult applications. So whatever your requirement, the Cerberus PRO detector range offers the right choice for reliable detection.

## ■ Relying on experience

Siemens is known for innovation power, technology leadership, and high quality. We were the first manufacturer to offer automatic fire detectors. Our products are backed by decades of experience and know-how. We will continue to further extend our Cerberus PRO product portfolio. Compatibility of all future add-ons is a matter of course – making Cerberus PRO a safe investment.

## Highlights

- Smart, unique safety features – such as built-in isolators and integrated degrade mode
- Easy planning – even for campus-wide networks
- Extended network possibilities for widely distributed or complex buildings
- Safe and easy commissioning – thanks to auto-configuration
- Integration into the danger management system from Siemens possible
- Broad range of fire detectors – to cover various requirements
- Cerberus PRO portfolio – reliable, high-quality products from Siemens





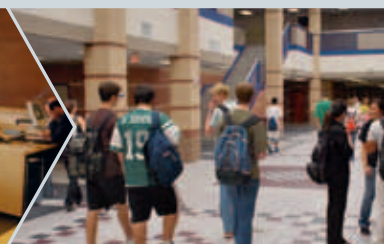


#### Very simple systems



- Audible alarm only
- Any alarm causes the whole building to evacuate
- Programming may be limited to customer texts only

#### Fire brigade calling systems



- Simple audible alarm
- Fire brigade communication concept
- Verification mode when system is manned
- Pre-configured

## Ensuring comprehensive safety with powerful panels

Cerberus PRO fire control panels combine high security standards with the latest technology. Competitive for simple applications, yet powerful enough for every application – they are the ideal choice whatever the size and complexity of your project.

### ■ Protecting the smart way

Cerberus PRO protects people and assets right from the start. Thanks to auto-configuration even during the construction phase. How does it work? The control panels automatically configure and import data from all connected detectors and peripheral devices. They also automatically assign them to zones.

In addition, all control panels have an integrated degrade mode. This means that even in case of processor failure, the detector communicates an alarm to the panel, setting off all connected sounders including loop sounders. It also activates the remote transmission to the fire brigade and sets the I/O to the predefined status.

Control panels and fire terminals also offer a standby functionality. In case the connection to the management station or to another station should fail, they take over display and operation functionality.

Thanks to the integrated short circuit isolator in every fire detector, sounder, I/O, other peripheral devices, and even in floor repeater terminals, open or short circuits can be easily located. So you see, Cerberus PRO offers smart safety features for very high safety.

### ■ Realizing solutions simply and quickly

Cerberus PRO provides a competitive range of control panels. They all offer unique features aimed at putting a system into operation quickly and safely from one access point. If parameter sets of detectors in certain rooms or areas have to be adjusted, this can be easily done manually at the control panel thanks to smart assignments. So you see, Cerberus PRO is a neat 'plug & play' system for on-time hand-over.

### ■ Creating very large and complex networks

With Cerberus PRO, you can protect very large and complex campus facilities. Powerful cause and effect programming allows solutions that normally require integration of Programmable Logic Controls – with the added benefit of full EN 54 compliance. This enables you to protect people and assets in a fully automated way and with a specific timing pattern – for example phased evacuation within shopping centers or the integration of smoke and fire damper controls within high-rise buildings.

In addition, Cerberus PRO offers an EN 54-approved, industrial LAN technology – also called backbone (C-WEB/LAN). Up to 14 clusters can be connected to a backbone and up to 64 panels can be networked. Cerberus PRO can be optimally adapted to any building or process structure, and campus-wide solutions can be easily realized. Over-voltage-immune fiber-optic cables ensure highest possible system availability and make the backbone a cost-efficient solution. Moreover, one central access point is sufficient to connect the entire system to a remote transmission to the fire brigade, pager, and a danger management system.

### Plant control



- Plant control shuts off, ventilation systems shut down, doors controlled, and lifts returned
- Some plants may only be shut down after a time delay or if fire is detected in a particular area
- Basic cause and effect programming required

### Phased evacuation



- Areas most at risk are evacuated first, followed by adjacent areas
- Phases can be preset via timing functions
- They can also be manually overridden by security staff or fire brigade
- Sophisticated cause and effect programming required

### Smoke and fire damper control



- Smoke control systems and fire dampers are activated
- Dampers, smoke controls, ventilation motors etc. are monitored to warn user of any critical device that has failed
- Intensive programming from a complex cause and effect matrix required

#### ■ Operating control panels intuitively for greater comfort

Emergency situations are stressful situations. However, quick and reliable action is essential to save people and assets. This is why Cerberus PRO control panels and fire terminals are easy and intuitive to operate. They display the required information in a comprehensible way – centrally or locally on floor level. Visibility can be individually configured to display tailored messages in selected areas, for example a nursing station. In the event of an alarm, customized intervention texts facilitate correct actions.

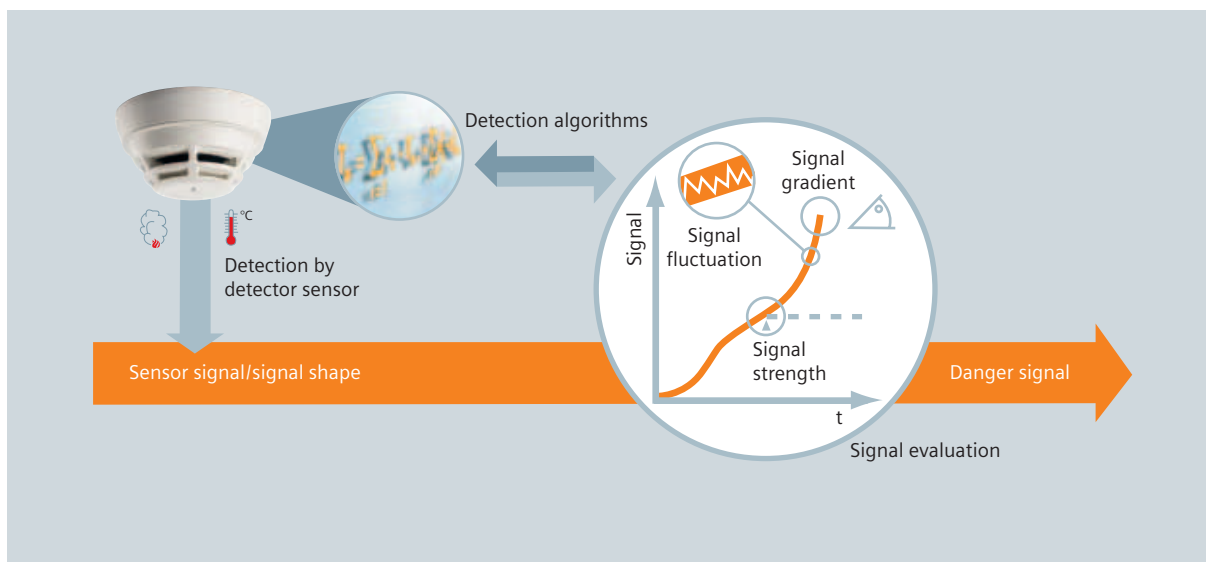
Remote operation via Ethernet allows control of your system from any location, for example if you want to isolate a zone for maintenance work. You can also evaluate the system status remotely and initiate appropriate actions if necessary. All this can be done with a standard PC. And less on-site visits increase cost efficiency.

#### ■ Integrating Cerberus PRO into the danger management system from Siemens

All Cerberus PRO networkable control panels can be easily integrated into the danger management system from Siemens. The benefits are many, including guided alarm treatment, navigation on floor plans or with menu trees, a history database for further analysis, and integration with other security-related systems.

### Highlights

- Protect people and assets from the start – with auto-configuration
- Panels have integrated degrade mode – communicate alarms even in case of a failure
- Detectors and other devices have integrated short circuit isolators – an open or short circuit can be easily located and correct operation is still granted
- Realize campus-wide networks – redundant and EN 54-approved
- Remote access via Ethernet – to operate systems from any location
- Integration into the danger management system from Siemens



# Providing fast reliable detection with patented technology

Nursing homes, office buildings or production areas – Cerberus PRO offers a detector for your application.

## ■ Relying on dependable detection based on global know-how

All Cerberus PRO fire detectors offer innovative technology: special algorithms and selectable parameter sets. The patented labyrinth within the fire detectors reduces the background light in the chamber, making it more resistant to dust. The benefits include not only a longer detector life, but also highest possible detection reliability and minimized false alarms.

Siemens can look back on more than 150 years in fire safety. All Cerberus PRO detectors are backed by the experience and application know-how we have gained with projects around the world – and with more than 60 million detectors installed worldwide.

## ■ Multi-sensor smoke detector

The multiple criteria fire detector OH720 features an optical and a thermal sensor. This combination optimizes detection reliability by analyzing signals from both sensors. OH720 detects all types of fires early whether they generate light, dark, or even no smoke at all. The OH720 has selectable parameter sets including a 'Robust' setting that provides increased immunity against transient deceptive phenomena such as cigarette smoke.

## ■ Optical smoke detector

The OP720 is a wide-spectrum smoke detector with an optical sensor. It responds quickly to slow-burning, smoke-generating fires. This makes it well suited for applications such as corridors, living rooms or offices.

## ■ Heat detectors

The Cerberus PRO detector family provides two heat detectors: HI720 and HI722. Both feature a thermal sensor that responds should temperature exceed a preset value. In addition, the HI720 also recognizes rapid temperature increases. Heat detectors are ideal for applications with a high level of deceptive phenomena.

## Highlights

- Detectors with innovative technology – special algorithms and selectable parameter sets
- Patented labyrinth – for high reliability and minimized false alarms
- Multi-sensor smoke detector – for all types of fires
- Optical smoke detector – for slow-burning, smoke-generating fires
- Heat detectors – to detect rapid temperature increases
- Siemens has more than 150 years experience in fire safety – more than 60 million detectors installed worldwide



## Offering a wide range of special detectors

The detector portfolio of Cerberus PRO includes a broad range of special detectors. Meeting your needs, from hazardous areas to high bay warehousing.

### ■ Linear smoke detector

In areas with limited access such as in high bay warehouses or atria point type detectors can prove impractical. Here, linear smoke detectors are the ideal choice. Cerberus PRO linear smoke detectors work on a reflection principle. This means that they only have to be connected at one end, saving cables and installation costs.

### ■ Flame detection

Areas containing highly flammable materials, such as engine test beds or flammable stores, are better covered with flame detectors. The Cerberus PRO flame detector range includes both single-channel IR for simple applications as well as 3-channel IR for areas with deceptive phenomena such as halogen lamps, bright sunlight or welding.

### ■ Ex detectors

Cerberus PRO offers a complete range of detectors and other peripheral devices that can be used to protect areas subject to explosion hazards such as oil refineries, flour mills or battery rooms.

### ■ Aspirating smoke detection

These detectors are ideal for areas that require very high sensitivity such as computer suites or for areas that have limited accessibility or a complex structure such as high bay automated storage facilities. With LaserFOCUS, Cerberus PRO offers an integrated solution.

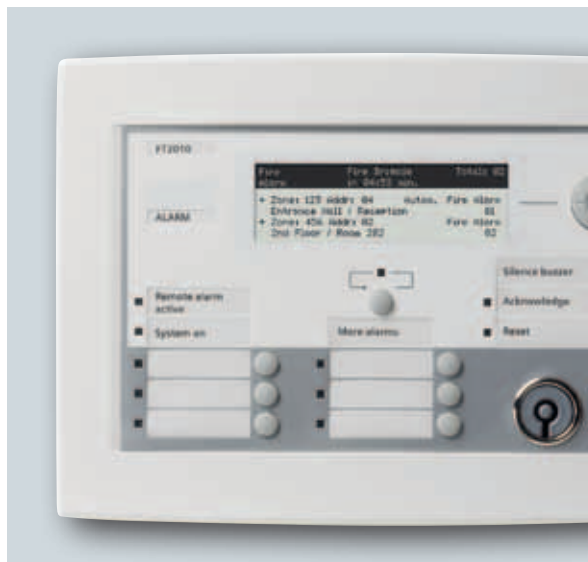
### ■ Radio fire detectors

They are the ideal choice for applications such as churches, museums or congress halls where for structural or esthetic reasons or for reasons of architectural conservation only restricted use of cable or conduit is permitted. Up to 30 radio fire detectors can be connected on a radio gateway and they can be combined with wired detectors in one system.

## Highlights

- Broad range of special detectors – to cover your application
- Linear smoke detector – for high ceiling areas with limited accessibility
- Flame detection – for areas with highly flammable materials
- Ex detectors – for areas subject to explosion hazards
- Aspirating smoke detection – for areas requiring high sensitivity
- Radio fire detectors – for historical buildings and other special applications





# Connecting smart peripherals to the detection loop

A wide variety of peripheral devices rounds off our Cerberus PRO family. Whether for detection, evacuation control or display – all devices are connected on the C-NET.

## ■ Sounders

Loop-powered sounders are available as wall-mounted devices in red or white. They all have an adjustable sound output of up to 99 dBA and 11 selectable tones. Any two tones can be selected to provide escalation from alert to evacuation.

## ■ Sounder beacons

The FDS229 sounder beacons provide all the features of the loop-powered sounders mentioned above – plus an additional integrated flashing beacon. They are available in red and orange and are very light intense (max. 3.2 cd).

## ■ Sounder base

Cerberus PRO detectors can be used with the DBS720 sounder base, providing a neat detector/sounder combination as a single unit. The sounder base has the same features as the wall sounders and a maximum sound output of 88 dBA.

## ■ Loop-powered floor repeater terminals and mimic displays

A unique feature of Cerberus PRO is the repeat panel indication via loop-powered floor repeater terminals. This enables you to add important information in a most cost-efficient and secure way. Future additions can be incorporated by simply tapping off the nearest detector, call point, sounder etc. The floor repeater terminals come in two models: The FT2011 gives a detailed overview of all alarms and messages. In addition, the FT2010 offers the same main operating functions as the control panel. A loop-powered mimic display allows mimic diagrams to be added to the system as well.

## ■ Input/output modules

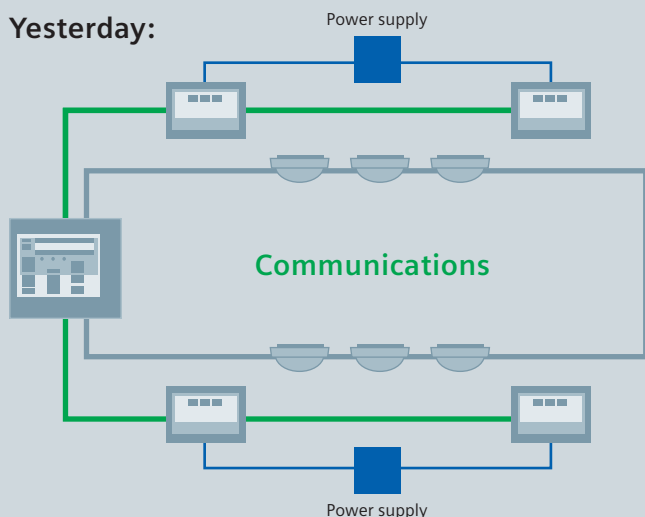
The Cerberus PRO system allows connection of the full range of Siemens modules including: single input module, single input and output module, four way input module, four way input/output module (incl. AC 230 V rated contacts) as well as a dual conventional zone or dual sounder circuit controller (requires DC 24 V supply).

## Highlights

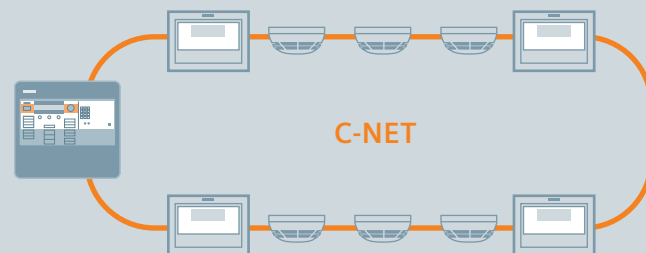
- A wide portfolio of peripheral devices – all connected via C-NET
- Loop-powered sounders – with 11 different tones
- Loop-powered sounder beacons – for visual warning
- Sounder base – combines a detector with a sounder powered by the C-NET
- Loop-powered floor repeater terminals – to safely display information where needed



### Yesterday:



### Today:



## Benefiting from the many advantages of smart technology

Cerberus PRO is a powerful system that provides advanced technology for increased fire safety. Numerous features make it a cost-efficient solution for your requirement.

### ■ Connecting the clever way with C-NET

All fire detectors and peripherals communicate via and are powered by the C-NET, reducing wiring costs. Additionally, distributed intelligence enables the use of unshielded cables – substantially reducing cabling and costs. Cerberus PRO devices can also be easily integrated into existing installations thanks to the free topology wiring of the C-NET detector loop.

The maximum loop wiring length of 3.3 km with up to 126 peripherals helps reduce the numbers of loops, making system designs more compact and straightforward. In addition, you can split one loop into two separate loops with the loop extension card.

### ■ Increasing cost efficiency through fast installation

Cerberus PRO fire detectors stand for clever fire protection. However, they offer more than that. Short installation time, less cabling, and minimal operating costs are also a big plus – making Cerberus PRO an attractive solution.

### ■ Enhancing security with intelligent safety features

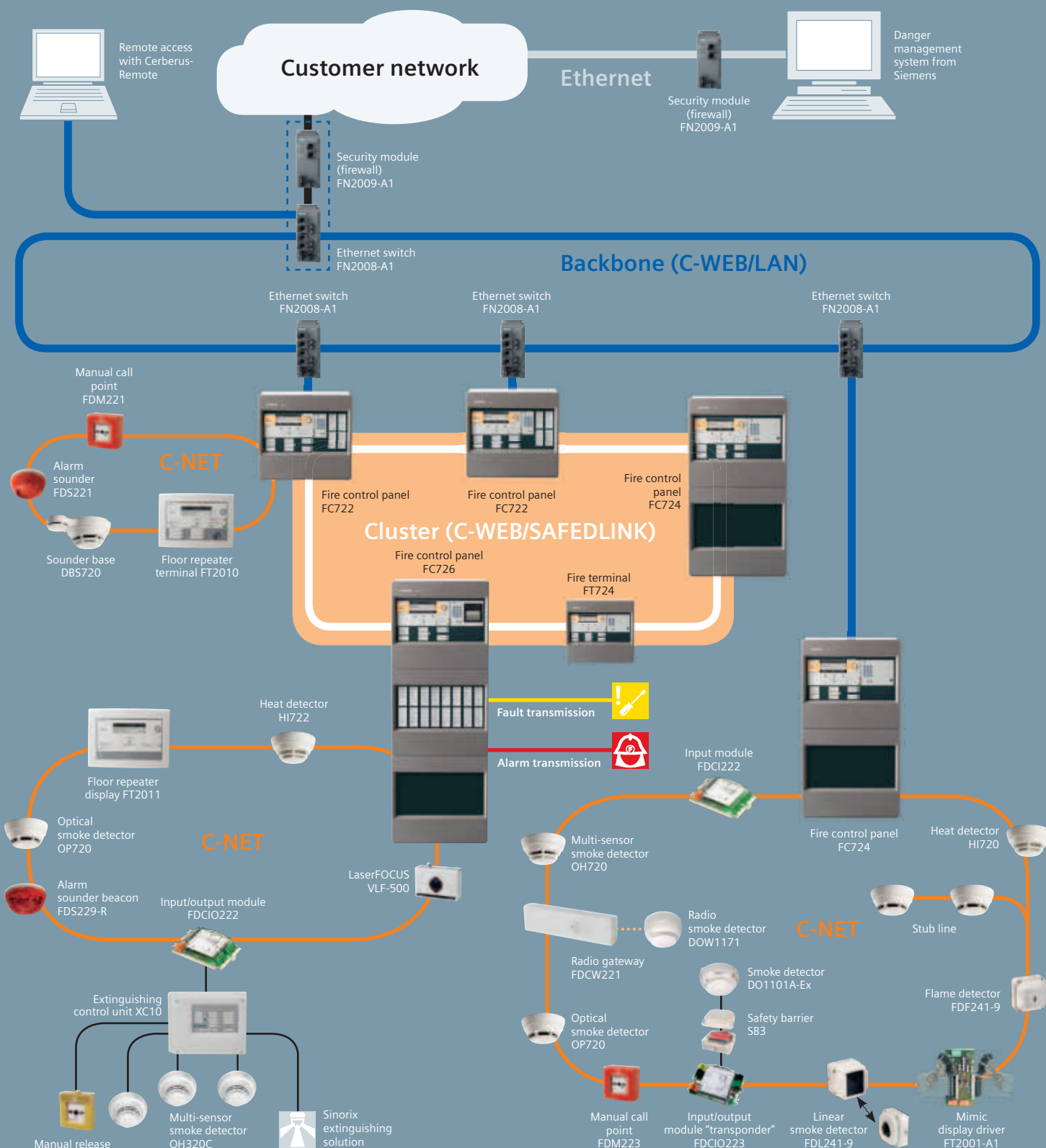
Every Cerberus PRO fire detector has an integrated short circuit isolator to easily spot open or short circuits. The C-NET increases safety even further because it is installed as a loop. In case a short circuit occurs, the defective part is detected and isolated. Alarms, however, will still be transmitted. Because if the line is interrupted at one point, information is redirected from the other end to the control panels and floor repeater terminals. This also results in faster fault finding, thereby reducing repair costs.

### Highlights

- Less wiring needed – as all detectors and peripheral devices are connected via C-NET
- Cost-efficient solution – thanks to short installation time, minimal cabling, and minimal operating costs
- Increased safety – because C-NET is installed as a loop and all peripherals are equipped with turbo isolators

# Cerberus PRO – enjoy protecting

Powerful control panels, clever fire detectors, and smart peripheral devices. This is what our comprehensive Cerberus PRO family offers. The brief overview below demonstrates the most important system components.



## Fire control panels



Cerberus PRO fire control panels process all messages generated by the system and trigger alarm signals. They also provide an extremely simple user interface with customized user prompting texts to support the correct action in case of an event. And because we know requirements vary from simple to network-wide solutions, our Cerberus PRO family offers four models: FC721, FC722, FC724, and FC726.

## Fire detectors



Whether smoke, heat or flame. Cerberus PRO fire detectors use sophisticated algorithms and adaptable parameter sets to meet your requirements. They communicate via and are powered by the C-NET. Special detectors such as linear smoke detectors, infrared flame detectors, radio fire detectors or devices for explosion-protected zones complete the detector portfolio.

## Floor repeater terminals and displays



The floor repeater terminals and displays FT2010 and FT2011 offer a better overview because they display system status and events at floor level – for example on a nursing station. They enhance user convenience, as visibility can be configured individually. Floor repeater terminals and displays are connected directly on the C-NET loop, saving cabling and installation costs. And FT2010 and FT2011 enhance safety because they remain functional even in case of an open or short circuit.

## Alarming devices



Increase safety with the sounder FDS221 for acoustic signaling, the alarm sounder beacon FDS229 for acoustic and optic signaling, and with the sounder base DBS720 that is integrated in the fire detector.

## Mimic display driver



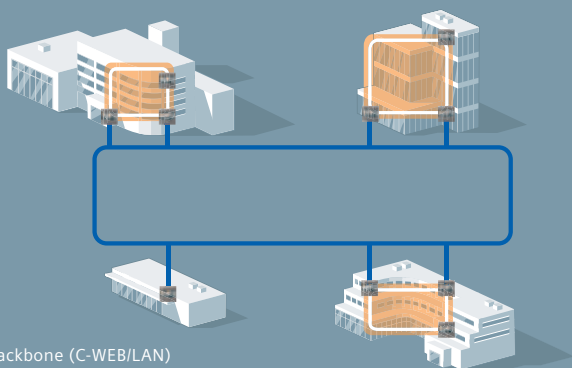
Customer-specific floor plan displays are possible thanks to the C-NET-powered mimic display driver FT2001-A1.

## Input/output modules



Cerberus PRO input/output modules further increase safety and security of people and assets. With the input modules FDCI221/FDCI222, you can monitor the status of doors, ventilation or sprinklers. The input/output modules FDCIO221/FDCIO222 enable decentralized control of fire doors and plant. The "transponder" FDCIO223 enables a monitored connection of conventional detector lines, alarm signaling devices, and devices in explosion-protected zones.

## Backbone



The backbone is an innovative, EN 54-approved industrial LAN network that offers increased planning flexibility. It enables you to network up to 64 panels, optimally adapt Cerberus PRO to any building or process structure, and realize campus-wide solutions. Two independent, EN 54-approved Ethernet switches are all you need to connect one cluster with up to 16 panels to a fiber-optic backbone. Up to 14 clusters can be connected to a backbone. Since they are then seen as one network, one central access point is sufficient to connect the remote transmission to the fire brigade, pager, and a danger management system.

The large Cerberus PRO network can also be integrated into a danger management system from Siemens, needing only one Ethernet switch – increasing overall safety and security even further. Additional security equipment, such as a firewall, is needed to integrate a danger management system via a customer network.

# Answers for infrastructure.

## ■ Megatrends driving the future

The megatrends – demographic change, urbanization, climate change, and globalization – are shaping the world today. These have an unprecedented impact on our lives and on vital sectors of our economy.

## ■ Innovative technologies to answer the associated toughest questions

Throughout a 160-year history of proven research and engineering talent, with more than 50,000 active patents, Siemens has continuously provided its customers with innovations in the areas of healthcare, energy, industry, and infrastructure – globally and locally.

## ■ Increase productivity and efficiency through complete building life cycle management

Building Technologies offers intelligent integrated solutions for industry, commercial and residential buildings, and public infrastructure. Over the entire facility's life cycle, our comprehensive and environmentally conscious portfolio of products, systems, solutions, and services for low-voltage power distribution and electrical installation technology, building automation, fire safety and security ensures the:

- optimum comfort and highest energy efficiency in buildings,
- safety and security for people, processes, and assets,
- increased business productivity.



Siemens Switzerland Ltd  
Industry Sector  
Building Technologies Division  
International Headquarters  
Gubelstrasse 22  
6301 Zug  
Switzerland  
Tel +41 41 724 24 24

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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T: 0845 644 2888  
[www.sensecosystems.com](http://www.sensecosystems.com)  
[sales@sensecosystems.com](mailto:sales@sensecosystems.com)

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