



SIEMENS

# Cerberus PRO – an intelligent fire protection system

Comprehensive fire protection

Answers for infrastructure.



## Cerberus PRO – an intelligent fire protection system

Fire safety is all about protecting people and assets and securing business processes and continuity. Cerberus™ PRO is an intelligent fire protection system for fast, reliable fire detection, alarm signaling and control. Its wide portfolio comprises innovative products with intelligent technology. Multi-criteria detectors with our unique **ASAtechnology™** offer advanced signal analysis, selectable detection profiles and carbon monoxide life safety detection. This provides superb safety and enhanced protection of people and assets, without the threat of false alarms.

# Meeting your requirements

## Protecting people and assets reliably with products from Siemens

The Cerberus PRO family comprises several control panels, fire detectors, peripheral devices and accessories. They all have one thing in common: smart, unique safety features.

## Answering versatile challenges with powerful fire protection

Cerberus PRO is an excellent ideal choice for a variety of applications. It provides a stand-alone control panel for smaller applications, and networkable panels for larger, complex applications.

Additionally, Cerberus PRO provides a broad range of detectors with more than 20 selectable detection profiles, allowing them to be used in clean or dirty environments. Detectors with the unique **ASAtchnology** provide outstanding detection reliability and protection against false alarms – even in demanding environments. Additionally, their selectable detection profiles and dynamic algorithms interpret signals in real time. Innovative technologies such as forward and backward light scattering and redundant sensors further increase the detection capability and reliability of Cerberus PRO detectors, ensuring the safety of people and assets as well as the very survival of businesses.

## Planning and commissioning made easy and cost-efficient

Cerberus PRO is a flexible and scalable fire protection system that can be easily adapted to new conditions, and grows along with your requirements.

For example, the **ASAtchnology** detectors are adaptable to the expected environmental conditions, deceptive phenomena and fire risks. Should the building layout or space utilization change in the future, these fire detectors can be adapted by simply changing the detection profile. Furthermore, the networkable control panels allow system layout changes even at a later point in time, without significant additional planning effort required.

Servicing Cerberus PRO is both time- and cost-efficient. Remote analysis and evaluation of the system reduce on-site maintenance to a minimum. With remote diagnostics, service visits can be planned more effectively, as the service engineer will know which parts are needed before coming on site.

## Relying on Siemens experience

Siemens is known for innovation, technology leadership and superior quality. We were the first manufacturer to offer automatic fire detectors. Our products are backed by 160 years of experience in fire safety and the knowledge we've gained through worldwide installations. We will continue to further extend our Cerberus PRO product portfolio and compatibility with future add-ons, ensuring a safe investment.

## Highlights

- One detector portfolio to cover all application areas, from clean to dirty
- Reliable detection without false alarms due to selectable detection profiles, unique forward and backward light scattering technology and redundant sensors
- Stand-alone and networkable control panels for applications of various sizes
- Flexible and scalable fire protection system can be adapted to new conditions and expanded at a later point in time
- Efficient system maintenance thanks to remote analysis and evaluation
- Superior, high-quality products from Siemens



The Cerberus PRO detector family offers fire detectors for standard as well as demanding application areas. Thanks to their intelligent technology, they provide highly reliable detection without false alarms.



## Fast, reliable detection with patented technology

Data centers, telecommunications facilities, office buildings or industrial production facilities – Cerberus PRO offers a detector for any application.

### Choose from a broad portfolio

Cerberus PRO offers a detector for any application area. The standard detectors are an economical, reliable solution for standard applications. These applications have a low risk of fire as well as few deceptive phenomena – and thus present little risk to life and property. Applications include:

- Offices
- Conference rooms
- Corridors
- Stairwells

High-end detectors with the unique **ASAt**technology (Advanced Signal Analysis) are especially suited for demanding applications with a high risk of fire and many deceptive phenomena. Applications include:

- Hotel rooms where the detector must be mounted close to the bathroom door
- Multi-purpose halls
- Large conference rooms

### Relying on detection without false alarms

Demanding applications like data centers or industrial production facilities require exceptional detection technology. High-end detectors with **ASAt**technology offer an extremely fast and highly reliable detection response, whether in a sensitive or harsh environment. As they provide more than 20 detection profiles, they can be set to meet the exact, prevailing environmental conditions. These detectors are virtually immune to deceptive phenomena like steam, dust or gas, which prevents unnecessary downtimes and costs caused by false alarms.

### Offering highest detection security

The basis for **ASAt**technology is the photo sensor arrangement that uses state-of-the-art forward and backward light scattering technology. It provides optical analysis of smoke particles and improves the detection capability of the detectors, making them virtually immune to false alarms.



The sophisticated detectors also have two optical and two thermal sensors. The redundant sensors improve the reliability of the detectors, meaning if one sensor should fail, the detector will still provide highly reliable operation. The detectors comply with NFPA 76 (Telecommunication Standard) and are classified as Very Early Warning Fire Detectors (VEWFD). This means that the detectors are extremely sensitive and thus provide very early detection.

#### Staying flexible to meet changing needs

Providing more than 20 selectable, application-specific detection profiles, the state-of-the-art ASA detectors can be optimally adjusted to always meet the current requirements of an application. If conditions should change, you simply adapt the detector by setting the appropriate detection profile. Should the room usage change frequently, you can also easily and quickly switch between selected detection profiles. This ensures that your application is permanently and reliably protected.

#### Detecting carbon monoxide

For maximum life safety, Cerberus PRO also provides a detector for all fire criteria: smoke, heat and carbon monoxide (CO). The additional CO sensor ensures earliest

detection of all CO-generating fires. It can also detect CO independently from fire. Therefore, when an application requires both fire and CO detection, only one detector is needed. This minimizes product, installation and maintenance costs. The CO detection profile can be set separately from the ASA detection profiles and complies with the requirements of the fire safety and carbon monoxide codes and standards UL 2075 and NFPA 720.

#### Protecting the environment

The detectors are made of environmentally friendly material. They are RoHS-compliant, meeting the standards regarding the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment. Additionally, they provide enhanced detection equivalent to ionization detectors due to their forward and backward light scattering technology. This makes ASA detectors a perfect “green” solution.

#### Benefiting from all-around safety

The installation of the detectors on the C-NET circuit increases safety. In case of a broken wire, the system can be designed so alarms are simply redirected the other way to the control panel.

#### Highlights

- Prevents downtimes and costs caused by false alarms
- More than 20 detection profiles to meet specific environmental conditions
- Unique forward and backward light scattering technology offers the most reliable detection with virtually no false alarms
- Redundant optical and thermal sensors for maximum reliability and fail-safe operation
- ASA detectors are selectable as multi-criteria fire, heat, smoke and CO life safety detectors
- Multi-purpose CO life safety and fire detector meet NFPA 720 and is UL 2075 listed
- RoHS-compliant replaces the need for ionization detectors due to forward and backward light scattering technology
- Compliance with NFPA 76 (Telecommunication Standard) as a VEWFD

The Cerberus PRO panel family comprises a stand-alone control panel for smaller applications and networkable control panels for more complex applications.



## Comprehensive safety with powerful panels

Cerberus PRO fire control panels combine high security standards with the latest technology. They are the ideal choice for a variety of applications.

### A cost-effective panel for small applications

Cerberus PRO offers a cost-effective stand-alone fire control panel for smaller, simpler applications. You can connect up to 50 detectors and peripheral devices. The detectors can be connected either via one class A or two class B C-NET circuits. Notification devices can be connected either via one class A or two class B Notification Appliance Circuits (NAC). An RS485 connection allows you to install remote terminals to review and operate the panel from another location in the building. Additionally, the built-in Digital Alarm Communication Transmitter (DACT) sends system information to off-site monitoring stations.

### Networkable panels for higher flexibility

With the networkable control panels from Cerberus PRO, you can easily accommodate larger, complex applications. Depending on the control panel, you can connect up to 504 detectors and peripheral devices.

Up to 16 panels can be networked via a SAFEDLINK. This makes Cerberus PRO a flexible and scalable solution that lets you easily and quickly react to future changes in building structure. Additionally, the networkable panels can also be integrated into a management station from Siemens.

### Protecting the smart way

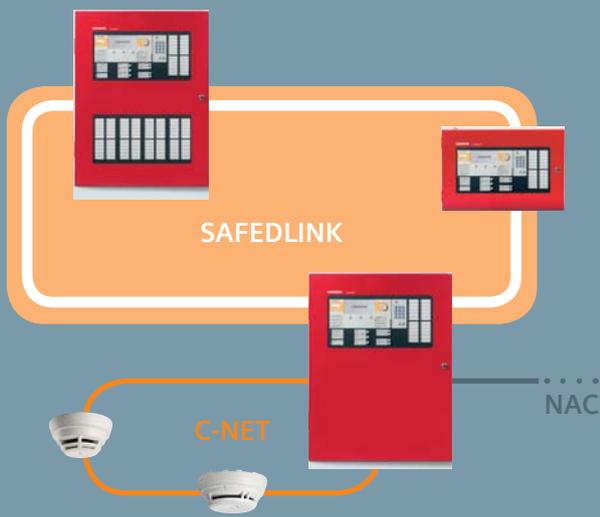
The fire control panels combine high security standards with the latest technology. The intelligent auto-configuration function supports finding the connected devices – automatically.

As a result, Cerberus PRO offers instant fire detection capability without delays created by manual configuration. In addition, the networkable control panels have an integrated degrade mode that is automatically activated. It ensures that notification appliances or other outputs are activated in the event of failure, and that alarm conditions of connected

# Detectors at a glance

High-end detectors	
ASAtchnology fire detector OOH941	ASAtchnology fire and CO detector OOHC941
 <ul style="list-style-type: none"> <li>– Dual optics (forward/backward light scattering) and dual thermal sensors</li> <li>– Utilizes <b>ASAtchnology</b> for excellent early detection and rejection of deceptive phenomena</li> <li>– more than 20 selectable detection profiles</li> <li>– UL listed as a high-sensitivity pre-alarm</li> <li>– Meets NFPA 76 requirement (Telecommunication Standard) as a VEWFD (Very Early Warning Fire Detector)</li> <li>– 8 selectable temperature settings, ranging from 135°F (57°C) to 175°F (79°C)</li> <li>– Offers programmable options for fixed temperature, rate-of-rise and a selectable “Low Temperature” warning should the temperature drop below 40°F (4°C)</li> </ul>	 <ul style="list-style-type: none"> <li>– Identical features to the OOH941, plus an additional CO sensor</li> <li>– Selectable as a multi-criteria addressable detector, smoke detector, heat detector or independent CO detector</li> <li>– Detects CO-generating fires as well as CO independent from fire</li> <li>– Only one detector is needed for fire and CO (instead of two) to comply with life safety regulations</li> <li>– UL 2075 listed as a CO life safety detector and meets NFPA 720 requirements</li> <li>– Provides field programmable, customizable supervisory signals for temperature or CO levels</li> </ul>
Standard detectors	
Multi-criteria fire detector OH921	Optical (photoelectric) smoke detector OP921
 <ul style="list-style-type: none"> <li>– Multi-criteria addressable detector</li> <li>– Single optical (photoelectric) and thermal (heat) sensor</li> <li>– Utilizes detection algorithms for early detection of a wide range of fire signatures</li> <li>– Rejects deceptive phenomena that may cause false alarms</li> <li>– 3 selectable application profiles</li> </ul>	 <ul style="list-style-type: none"> <li>– Photoelectric, light-scattering, addressable point detector</li> <li>– An economical solution and perfectly suitable for normal commercial applications</li> <li>– Operating temperature range of 32°F (0°C) to 120°F (49°C)</li> <li>– UL listed for direct in-duct plenum usage (without a duct housing)</li> </ul>
Thermal (heat) detector HI921	Input module FDCIO422
 <ul style="list-style-type: none"> <li>– Intelligent themistor-based heat detector</li> <li>– 8 selectable temperature settings, ranging from 135°F (57°C) to 175°F (79°C)</li> <li>– Offers programmable options for fixed temperature, rate-of-rise and a selectable “Low Temperature” warning should the temperature drop below 40°F (4°C)</li> </ul>	 <ul style="list-style-type: none"> <li>– Provides addressable control inputs and outputs simultaneously</li> <li>– 4 inputs and 4 outputs that can be used independently</li> <li>– Both class A and B monitoring are available</li> </ul>

# Panels at a glance

Control panels	
Control panel FC922	Control panel FC924
 <ul style="list-style-type: none"> <li>– Networkable panel</li> <li>– Connects up to 252 devices</li> <li>– Optional releasing module</li> <li>– 2 NACs expandable to 4</li> <li>– Application areas:               <ul style="list-style-type: none"> <li>• Industrial buildings/ manufacturing facilities</li> <li>• Smaller hotels</li> <li>• Data centers</li> <li>• Telecommunications</li> <li>• Power generation</li> </ul> </li> </ul>	 <ul style="list-style-type: none"> <li>– Networkable panel</li> <li>– Connects up to 504 devices</li> <li>– Optional releasing module</li> <li>– 2 NACs expandable to 4</li> <li>– Application areas:               <ul style="list-style-type: none"> <li>• Shopping malls</li> <li>• 1- and 2-floor office buildings</li> <li>• Small industrial facilities</li> <li>• Small hotels</li> <li>• Data centers</li> <li>• Schools</li> <li>• Libraries</li> </ul> </li> </ul>
Control panel FC901	Fire terminal FT924
 <ul style="list-style-type: none"> <li>– Stand-alone panel</li> <li>– Connects up to 50 devices</li> <li>– Application areas:               <ul style="list-style-type: none"> <li>• Retail shops</li> <li>• Doctor's offices</li> <li>• Dry cleaners</li> <li>• Small restaurants</li> <li>• Strip malls</li> <li>• Banks</li> <li>• Small office or commercial buildings</li> </ul> </li> </ul>	 <ul style="list-style-type: none"> <li>– Offers same view, control functionalities and maintenance and reporting capabilities as control panels</li> <li>– Allows full access to system controls and maintenance at additional points in a building               <ul style="list-style-type: none"> <li>• In a hotel lobby, e.g., a control panel would be installed where it is inconspicuous and the terminal in a more accessible area</li> </ul> </li> </ul>
System overview	
 <p>The diagram illustrates the system architecture. A central red control panel is connected to two other panels (one large, one small) via a loop labeled 'SAFEDLINK'. Below the main panel, two smoke detectors are connected to the panel via a loop labeled 'C-NET'. A 'NAC' (Notification Appliance Circuit) is also shown connected to the panel.</p>	<ul style="list-style-type: none"> <li>– Connect up to 16 networkable panels and fire terminals on the SAFEDLINK</li> <li>– Detectors are placed on the C-NET loop that is connected to a networkable panel</li> <li>– Notification appliances are connected via the Notification Appliance Circuit (NAC) that is connected to a networkable panel</li> <li>– SAFEDLINK and C-NET are implemented as a loop to increase fire safety: if a panel or detector should fail, the message is simply redirected the other way</li> </ul>



C-NET devices are forwarded via the SAFEDLINK – and thus reach security personnel, occupants or the fire department on time.

#### Realizing solutions simply and quickly

Cerberus PRO control panels offer unique features that let you quickly put a system into operation from one access point. For example, you can manually adjust the detection profile of each connected detector at the control panel.

#### Operating control panels intuitively for greater comfort

Emergency situations are stressful. This is why Cerberus PRO control panels and fire terminals are easy and intuitive to operate. They display the required information in a clear and comprehensible way. Customized messages are easy to understand and follow in the event of an alarm.

#### Improving service efficiency

Cerberus PRO can be remotely analyzed and evaluated from any standard PC. This reduces the maintenance effort and the number of on-site visits. Thanks to remote diagnostics, the service engineer knows which materials will be needed before coming on site. This translates into time- and cost-efficient servicing.

#### Expanded features available

The Cerberus PRO networkable control panels can be easily expanded to include the following features:

- Releasing module for a pre-action deluge or clean agent extinguishing system
- The system's NACs can be expanded from two to four with the expansion module
- The optional DACT sends system information to off-site monitoring stations
- The SAFEDLINK can also use fiber optic cable for communication between panels

#### Highlights

- Stand-alone and networkable solutions provide a panel for every need
- Auto-configuration for instant fire detection capability
- Networkable panels have integrated degrade mode to communicate alarms over the SAFEDLINK
- Remote evaluation and diagnostics for increased service efficiency
- Clear text display supports intuitive, stress-free operation in case of an event
- Can be integrated into the management system from Siemens

Siemens Switzerland Ltd  
Infrastructure & Cities 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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#### Answers for infrastructure.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

**“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”**

