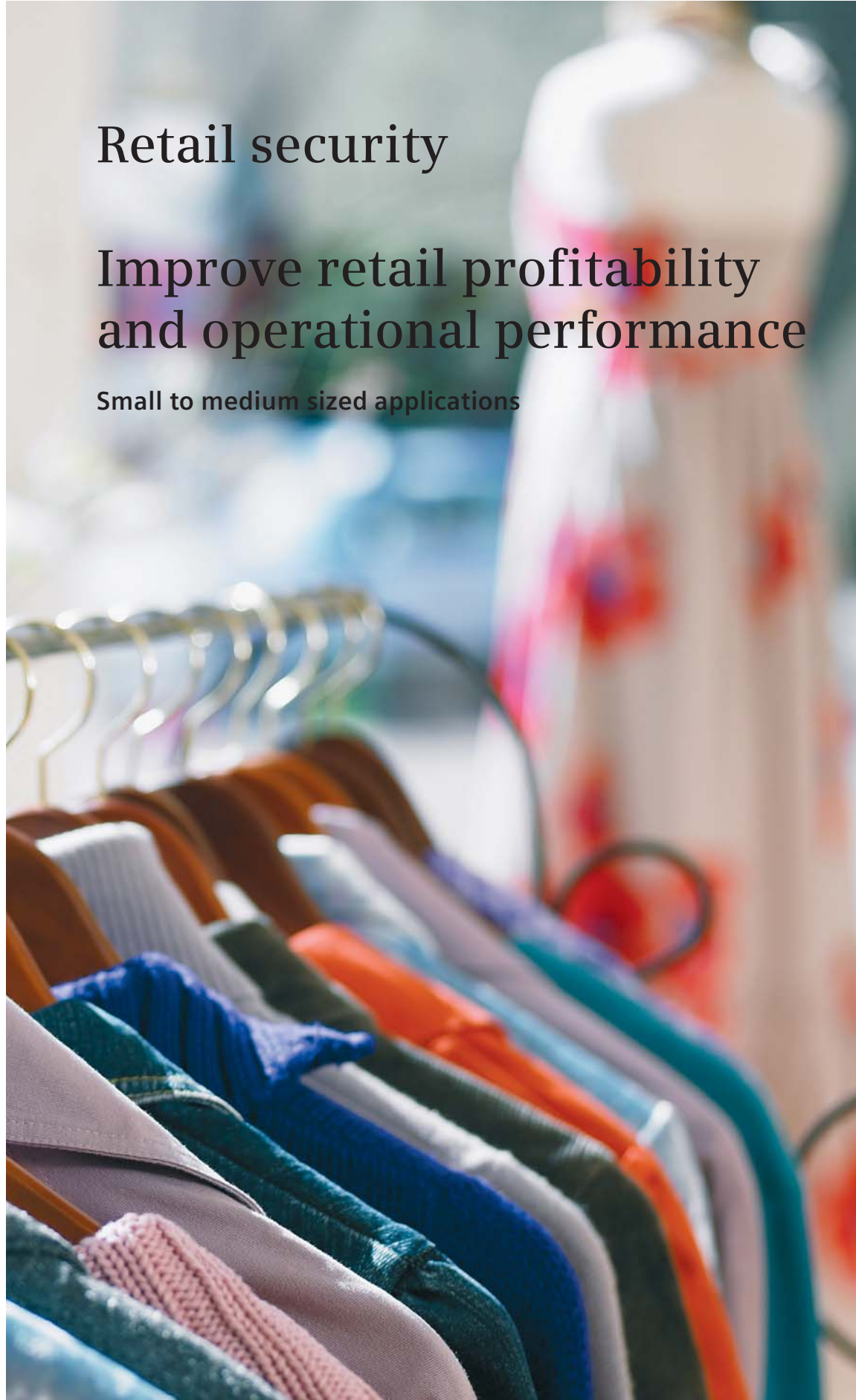




## Retail security

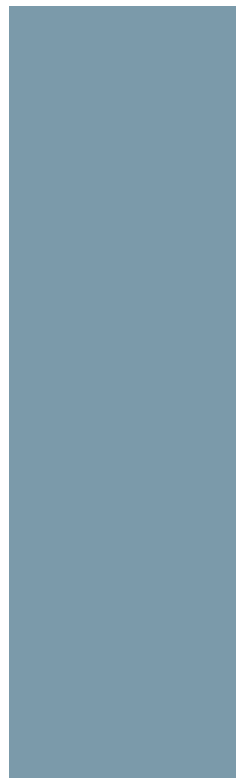
# Improve retail profitability and operational performance

Small to medium sized applications



Answers for infrastructure.

**SIEMENS**



## Effective loss prevention through multi-layered retail security

Crime affects the profitability of retail businesses of all sizes all over the world, from small individual shops to large multi-storey shopping centres. Small wonder, then that most retailers have made loss prevention a major priority.

While several practical measures can be put into place to limit the opportunity for theft during opening hours such as addressing blind spots on shopfloors – the real key to bringing about a substantial reduction is the building of a multi-layered approach to retail security – during and after working hours.

Electronic systems have an integral part to play in this multi-layered approach. The installation of video surveillance has often proven effective. As well as enabling the detection of intruders after hours, the presence of video systems can deter unauthorised access to vulnerable areas during opening hours. And, even greater benefits can be achieved through the integration and interoperability between video surveillance, access control and intruder alarm systems.

At Siemens, we understand that the level of sophistication and functionality required in such systems is driven by the size of the business they cover. The scalable products and systems we offer work seamlessly to provide cost-effective security which will not impact negatively on the retail environment.



# Retail security: good for staff, good for customers and great for profitability

## ■ “Multi-layered” approach to security

Adopting common sense procedures – such as locking stockrooms and limiting staff and customer access during stock takes – is fundamental to a more secure retail environment. Through training, staff should be encouraged to remain observant and to be on the lookout for suspicious or unusual behaviour. Once these kind of basic practices are put into place, electronic systems are the effective final layer of security – both during and outside opening hours.

## ■ Clamp down on shoplifting

In any attempt to reduce shoplifting, providing an active deterrent is a key objective. This can be achieved by a combination of article tagging and the overt positioning of video surveillance cameras. And, when thieves are not deterred, the latest video systems from Siemens will ensure that clear, visual evidence is recorded, easily retrieved and readily available to support any prosecution. The installation of access control for offices, stockrooms and other sensitive areas will also limit the opportunity for thieving.

## ■ Reduce employee theft opportunities

It is estimated that 35%<sup>(1)</sup> of retail theft is committed by employees. This involves activities that range from the removal of stock from displays to dishonest handling of cash and fraudulent till manipulation. Again, a combination of Siemens’ fixed video cameras linked to digital recording equipment, POS systems and access control of critical locations will provide an effective deterrent to staff who may be

tempted. It also provides irrefutable evidence if they succumb to temptation anyway.

## ■ Protect cash

The handling of cash is a major issue within the retail industry. It provides a constant temptation not only for employees regularly handling small amounts, but also for serious criminals wherever substantial takings start to accumulate. Again video surveillance and alarm systems, fitted with panic buttons to summon the police, have a proven deterrent effect.

## ■ Tighten out-of-hours security

Much vandalism and theft – and most break-ins – occur under the cover of darkness, outside normal working hours. Implementing overt electronic systems will help deter offenders and implementing covert ones will help identify, apprehend and successfully prosecute them. Siemens’ access control, intruder detection and video surveillance systems are flexible enough to cater for differing levels of security during and after opening times. Times of greater vulnerability such as evenings, weekends and public holidays can be designated as needing greater security and alarms set to trigger video recording equipment or locking doors.

## ■ Improve customer service

By relieving them of routine security procedures, the implementation of electronic security measures gives staff more time for customers. So with a safer, improved service, the likelihood of repeat business is greatly enhanced.

## ■ Reduce Health & Safety risks

Using access control systems to restrict entry to certain areas such as warehouses, stockrooms etc., also can ensure that only personnel trained in Health & Safety (H&S) policies are allowed to proceed. This should reduce the number of accidents in the workplace.

## ■ Security – all around improvement

Improved security is the key to a safer retail environment for customers and staff, but it also brings a measurable return on investment – with fewer losses, and improved customer and staff retention.

## Highlights

- Better overall security leads to an improved retail experience for customers
- Electronic security systems can also contribute to an improvement in Health & Safety performance
- Use electronic security measures – combined with common sense practices – to deliver increased protection for assets, staff and premises
- Reduce shrinkage by reducing the opportunity for theft
- Protect cash with physical restrictions and interoperable access control and video surveillance systems
- Improve out-of-hours security with interoperable video surveillance/recording and intruder detection systems



<sup>(1)</sup> Global Retail Theft Barometer 2007.



**Small to medium-sized retail companies** usually have limited security budgets and find it difficult to invest in electronic systems to cover all aspects of their business. As they do not have the security personnel that larger retailers or shopping centres have, improving security is therefore an issue for these kind of stores. However, through a combination of physical measures and carefully selected electronic equipment, it is possible to increase the protection of stock, staff, customers, takings and premises.

Further more, choosing the right security products can help small retailers benefit from a first level of interoperability even if only two of the three electronic security disciplines (access control, intruder alarm and video surveillance) are represented in the system.

## Small to medium-sized retail outlets

Petrol stations, high street retailers, specialist shops, pharmacies, convenience stores

### ■ Optimise investments in security

Security equipment need not be expensive. An effective system can be created with a number of strategically positioned surveillance cameras linked to a digital video recorder. For this kind of limited system of only a few cameras, SISTORE™ digital recorders from Siemens provide various, easy-to-use management tools and – integrated with an Intrunet intrusion system to ensure out-of-hours monitoring – will be easy and cost-effective to upgrade and expand.

Interoperability can already be achieved here with no additional cost. In fact, any combination of SISTORE video surveillance, Intrunet intruder alarm and SiPass access control can provide a useful level of interoperability for small retailers, with e.g. alarm events being paired with video footage and access control events.

### ■ Eliminate blind spots in the store

Shoplifters generally seek out the quieter corners of stores or areas where they are

hidden from sight, when attempting to conceal merchandise before leaving without paying.

By siting surveillance cameras in locations wherever customers are hidden from view, there is effectively no hiding place for shoplifters.

### ■ Keep a watch at all times

Smaller stores rarely have the luxury of being able to watch live video images or maintain normal observation of all customers on the premises, particularly at peak times. With entry-level recording equipment from Siemens, digital images are reliably recorded for later viewing or evidence-gathering should a theft or other event take place. Digital recording has many advantages from optimisation of data stored to reduced storage space (compared to tapes). Searching recorded images by date, time and transaction (interface to POS systems) also saves a great deal of valuable time.

### ■ No easy way out for thieves

To provide irrefutable evidence, a fixed camera should be positioned above the exit filming customers as they leave the store. SISTORE AX from Siemens records digital images with encryption of the complete video stream – including time, date and transaction data – making it simple to check in the event of an activated alarm or attempted theft.

### ■ Protect stockrooms and safes

There is a variety of options available from Siemens to control entry to retail stores, stockrooms and safes. The simplest option is a standalone, battery-operated code lock which, needing no extra wiring, is activated by a PIN code. Installation is quick and simple and causes very little disruption.



## Access control

## Intrusion detection

Central controllers

### SiPass Entro Lite

SiPass Entro Lite is perfectly suited to small and medium-sized applications. A SiPass Entro Lite system can control up to 8 doors and 1,000 cardholders.

#### Benefits

No need to manage multiple sets of keys to your facility anymore – employees, delivery people, etc. can have cards that allow them access to certain doors at certain times of the day or week. The system records who entered which door and when. Very cost-efficient and easy to use.



### Intrunet SI120

Designed for small to medium-sized businesses, the Intrunet SI120 system offers made-to-measure solutions with advanced detection technologies. The central control panel delivers comprehensive and user-friendly functionality.

#### Comprehensive functionality

The system includes audio and video alarm, can be controlled remotely or in-situ programming and activation, and offers well as alarm and event transmission over a variety of communication paths (e.g. PSTN, ISDN).

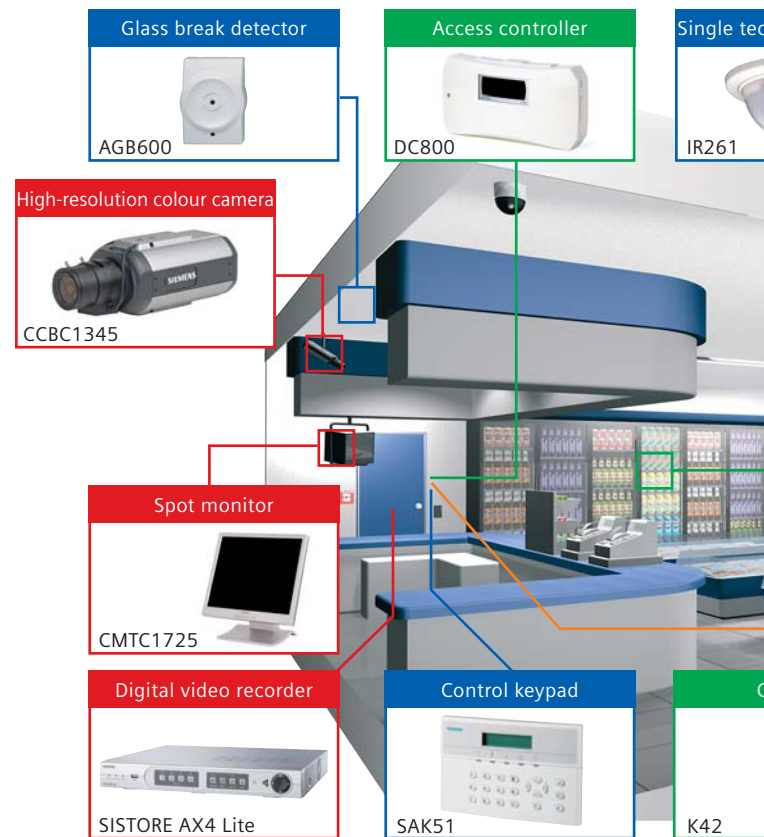
Interoperability in action – small convenience store

**06h00** – The shop owner arrives and enters the shop through the back door. He deactivates the Intrunet SI120 intruder alarm system and proceeds to the shop. Nothing looks unusual, but to make sure, he proceeds to the office. The access is controlled by a SiPass codelock: only he has the code. The office is also the stock room and safe, so no one else should have access. He changes the code every week anyway, just in case.

**06h30** – He reviews the night's video recording to ensure nothing has gone undetected. Using SISTORE AX Lite, he can search events by "activity" very quickly. Nothing unusual happened. He leaves the alarm on in the shop whilst he is at the back preparing for the day ahead.

**07h00** – The assistant opens the shop: the alarm system is deactivated throughout the premises, but the video surveillance system is on continuously monitoring all areas in the store through 4 cameras: one at the entrance, one at the till, and two covering blind spots in the shop.

**13h00** – After a busy morning, the assistant has gone for lunch. The shop owner needs to re-stack some of the shelves. He goes to the stockroom, where spot monitors allow him to keep an eye on his shop, so if a customer comes in, he can immediately go back behind the till.



Field devices

**Proximity and PIN reader** with a robust design and metal casing for vandal resistance. Access granted by card only or card + PIN for additional security.

#### Proximity readers

Ideal for controlling access to doors in offices by use of card only.

#### Hands-free readers

Ideal for food preparation areas to prevent contamination or warehouse areas as it is possible for the reader to read your card from a greater distance (up to 1 m).

#### Heavy duty weatherproof readers

Ideal for use in outdoor applications and in warehouse environments (vandal resistant).

#### Standalone access control

With no need for system connections, this is a cost-effective way to secure doors without heavy investments. The range includes:

- SiPass Codoor – battery-powered code locks that fit directly onto the door.
- The BC615 range of compact card readers – programmable from a built-in keypad.
- SiPass standalone kit – manage access rights for up to 500 users and one individual door or more.



#### Motion detectors

High-performance motion detectors are strategically positioned to monitor entrances to premises or rooms for early break-in detection. Single or dual technology detectors offer multi criteria signal analysis to ensure high immunity to false alarms, and clever mirror technologies make for superior detection. Easy snap-in installation concept for ease of installation and maintenance.

#### Control keypads

A complete range of 2-line display keypads with up to 16 characters. Displays for system states, such as on/off, partition "unset", "part set", etc.



## Video surveillance

businesses, the measure security. The SI120 control panel provides user-friendly security.

alarm verification, activation via PC, as well as using common alarm systems).



### SISTORE AX

SISTORE AX is specifically designed for this area of the market, with up to 16 cameras able to be connected. All models offer an integral front panel keyboard for local control, however remote network connection is also possible via the included RAS network-viewing software.

#### Interoperable security system

SISTORE AX can be connected to all Siemens PIR detectors and also to SiPass Entro Lite access control system for alarm triggering enabling an interoperable security system.



Technology detector



Fixed dome



Dual technology detector



**Control software:**

- Records of those entering/exiting rooms (via alarms)
- Video playback linked to each alarm

**Code lock**

**SISTORE AX Lite Software**

**17h30** – The owner needs to prepare for the arrival of the cash transit company at 18h00. He leaves his shop assistant to deal with the customers. The codelock on the office door means no one will be able to enter whilst he is handling that much cash. The cash conveyor will also be able to collect the takings out of view from the public. There is a video camera at the back door however, so should anything go wrong during cash handling, evidence would be recorded.

**20h00** – It's closing time. The shop owner closes all doors and sets the alarm system. The video recording system is still running. The system is remotely managed by an alarm receiving centre, so if anything happens, they will be able to verify the alarm via the video cameras and respond accordingly.

**Integrated Security System**

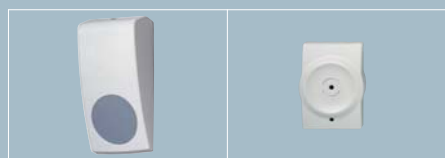
Intrusion Detection	Video Surveillance	Access Control

#### Glassbreak detectors

Windows or glass doors are a preferred point of entry for intruders. The off-glass acoustic glass break detector can be positioned up to 8.5 m away from the glass surface to be monitored, offering flexible positioning options.

#### Door and window contacts

Door and window contacts will trigger an alarm as soon as opening is detected, and before the intruder has had a chance to set foot on the premises.



#### Cameras

High-resolution models ensure detailed information is captured, with quick and easy setup. Setup made via DIP switches.

#### Fixed domes

These are usually placed in the corners for monitoring the complete area. Models can be fixed focal length for the most cost-effective solution, to models offering varifocal length lenses ensuring the most flexibility during installation.



#### Spot monitors

This is a cost-effective public display monitor, showing customers that cameras are monitoring the premises, aimed at proactively deterring theft.

#### Control keyboard

Able to remotely control the digital recording system, the CKA4820 keyboard offers ease of use and flexibility for quick and simple playback or searching of events.





The Intrunet entry-level intruder alarm systems from Siemens provides out-of-hours security for the whole retail premises yet allows the setting of the alarm on the stockroom whilst attending to customers during working hours.

■ **Reduce cash shrinkage at the till**  
 Many forms of register theft – “No-sale”, false refunds, etc. – are particularly difficult to detect without electronic help. Again, a fixed camera positioned over the till enables till activity to be continually and closely tracked, virtually eradicating the problem and – by signposting the company’s determination to stop staff theft from tills or stock – acting as a strong deterrent to employees.

■ **Improve out-of-hours security**  
 It is possible to record clear, crisp images even in the dimmest of lighting conditions with Siemens day-night cameras. It is therefore possible for smaller retail premises (which tend not to be manned 24 hours per day) to be fitted with practical, effective around-the-clock surveillance. When linked to Siemens’ digital video recorders and intrusion detection systems, the images they record can prove invaluable for investigation purposes. In the event of an alarm being triggered, the recording switches to high-speed in real time. An alert can be sent via a mobile telephone and video images viewed remotely from the storekeeper’s home, (using a standard IP connection) to verify the alarm and call the emergency services. Connection to an alarm receiving centre will provide additional peace of mind for smaller

shopkeepers. Verification of any alarm incident then becomes vital to ensure appropriate response is given in each case.

■ **Specialist shops and extended hours**  
 Specialist shops such as pharmacies and shops open late at night are increasingly becoming the targets of organised crime. Siemens’ silent alarms will raise the alarm without the intruder’s knowledge, thereby reducing the likelihood of violent or panic reaction. Again, linking to Siemens video surveillance cameras and digital recording systems will facilitate the full and reliable recording of any incident without putting the safety of any staff in jeopardy.

■ **Reduce risk and insurance premiums**  
 The introduction of even a relatively simple security system will inevitably bring about a reduction in theft during the working day and vandalism and break-ins during the night. Fewer claims will, in turn, lead to reduced insurance premiums – and the peace of mind that alarms are given adequate response by the intervention services.

## Highlights

- Eliminate ‘blind’ spots in stores with careful positioning of video cameras
- Restrict entry to cash areas and stockrooms with standalone access control systems
- Clamp down on register-theft by active video monitoring of all till activities
- Reduce insurance costs by reducing insurance claims
- Improve overall security of premises and safety of staff with alarm and alert systems
- Well-designed security products enables shopkeepers to operate to a fixed budget whilst benefitting from a first level of security interoperability





The new corporate headquarters were opened in 2006 and cover about 19,500 m<sup>2</sup>. An architectural jewel, the building is the set of a remarkable display of famous cars and offers visitors a diversified portfolio of branded products and services. The site includes a repair and accessories shop, and is a recognised centre of competence for the repair of classic cars. The company has been a family run business for over five decades and employs 2,000 qualified employees in Hungary and Austria. More details: <http://www.pappas.at/>

# Case study: Georg Pappas Automobil AG – integrated safety and security

## Highlights

- Access control – 86 readers
- Audio/evacuation – 72 loudspeakers
- Fire detection
- Fire protection/extinguishing
- Intrusion detection – 30 detectors
- Video surveillance (CCTV) – 69 cameras

### ■ Project requirements

Optimum fire detection system, flexible gas extinguishing system, acoustic and alarm system for the whole area, reliable video surveillance, modern access control.

### ■ System description

The access control system includes amongst others 57 proximity readers, 29 proximity readers with PIN and 17 escape route terminals. The system also provides elevator control functionality.

The intrusion detection system consists of two Intrunet SI420 subsystems, comprising 12 control panels, around 30 alarm sensors and several infrared barriers and magnetic contacts.

The IP-based video surveillance system sits on the Gbit Ethernet LAN, and comprises of 15 analogue cameras, 54 IP cameras and 2 central video servers.

A modern fire detection system and a flexible gas extinguishing system were installed too.

The acoustic and alarm system includes 72 loudspeakers with approximately 6,000 W. The transfer of the signals is effected over a 100 Mbit Ethernet LAN.

The security control centre WinGuard with data interface to the maintenance groups fire, video, alarm and access control provides fast response times.










### ■ Customer benefits

Highest possible safety and security for staff, customers, and material assets via a fully interoperable system.





# Systems overview

	Access control	Intruder detection	Video surveillance	Remote monitoring
Small to medium	 <p>SiPass standalone and codelocks, or SiPass Entro Lite with prox &amp; PIN readers</p>	 <p>Intrunet SI120 with single or dual technology motion detectors and door/window contacts</p>	 <p>SISTORE AX DVR and fixed cameras and domes</p>	Via alarm receiving centre
Medium to large	 <p>SiPass Entro Lite or Entro with a wide range of readers (prox &amp; PIN, proximity, hands-free and heavy-duty)</p>	 <p>Intrunet SI220 with dual technology motion detectors, glass break detectors and multi-partition keypad</p>	 <p>SISTORE MX DVR + NVS + NVR with fixed and PTZ IP cameras and domes</p>	Own or outsourced control room
Large to enterprise	 <p>SiPass Entro or SiPass integrated combined with a wide range of readers (prox &amp; PIN, proximity, hands-free and heavy duty)</p>	 <p>Intrunet SI410 with external detectors, internal motion detectors with Grade 4 antiblocking, and multi partition keypads with key switch and annunciation modules</p>	 <p>SISTORE CX DVR with fixed and PTZ cameras and domes + IVM software</p>	MM8000 DMS – own or outsourced

## Welcome to the world of innovative thinking

### ■ Innovation

For the last 160 years, Siemens has been investing a great deal in both manpower and research and development. This has ensured a constant stream of new insights, technologies and inventions that enable us to continuously improve the reliability of our products and systems to make them easier to install and operate.

Advances in digital technologies are creating a whole new world of possibilities. Siemens has been at the leading edge of progress in this field and continues to redefine both current and future technologies.

### ■ Interoperability

Interoperable systems are now supplied alongside such basic requirements as lighting, heating and water in a building. As a company, we know that integration supports the business environment through the interaction of products and systems. We break down the barriers between our access control, intrusion detection and video surveillance product lines in our security portfolio and listen to what the market actually wants. We then develop to deliver both fully integrated and interoperable security systems, based on our 30 years of know-how in security.



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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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