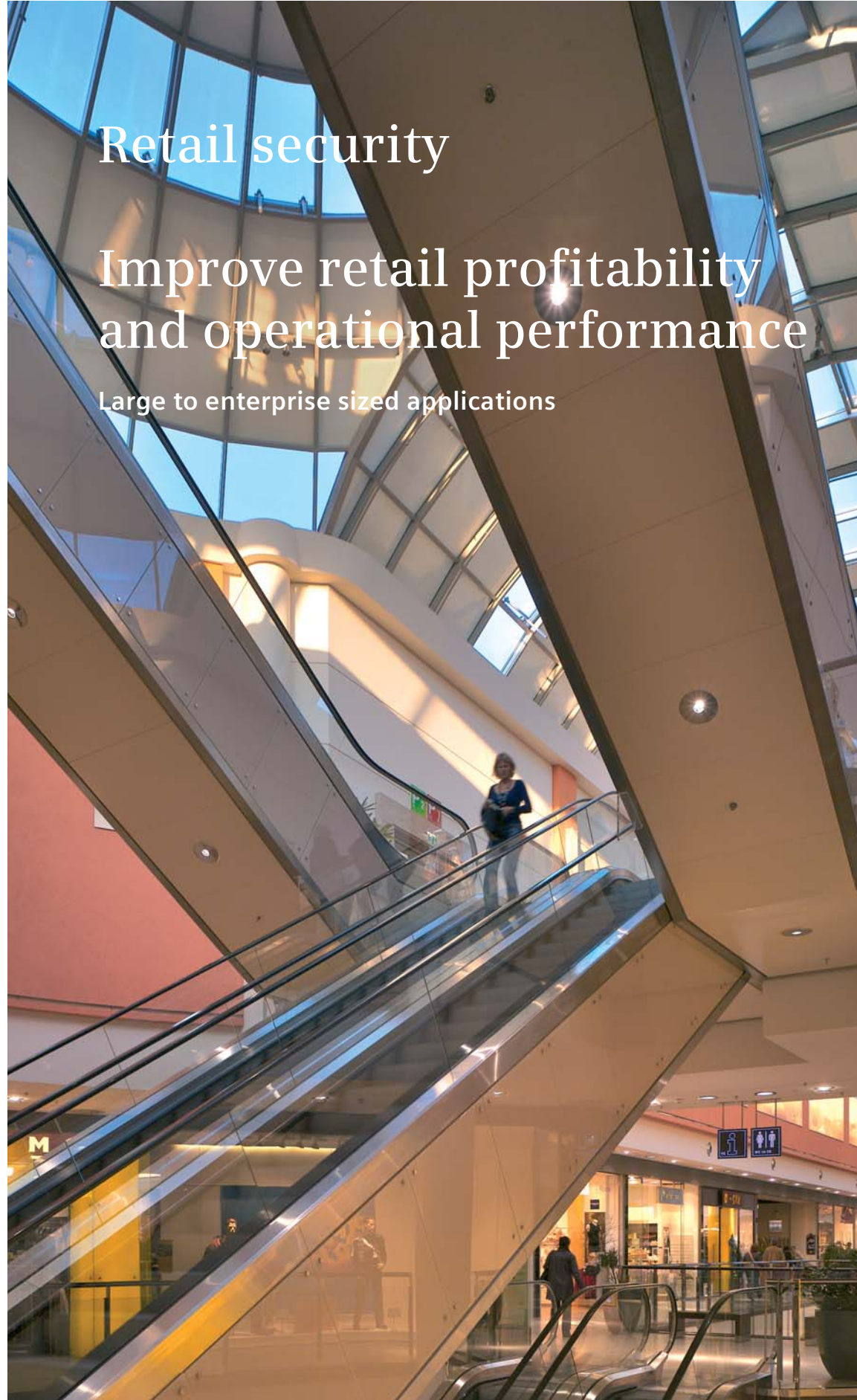




Retail security

Improve retail profitability
and operational performance

Large to enterprise 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 interoperate 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.

■ Interoperability for all

Electronic security systems from Siemens have inherent interoperability capability, meaning that regardless of the system size, the components can interact and be controlled from one central point at all times. So all retailers can benefit from centralised security management which focusses on their specific risks and priorities.

■ 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%⁽¹⁾ 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



⁽¹⁾ Global Retail Theft Barometer 2007.



Large retailers face the challenge of securing and monitoring larger areas and over multiple locations, often resulting in the requirement for central monitoring, either self-managed or outsourced. Interoperable access control, video surveillance and intruder alarm systems with centralised and remote monitoring therefore come into their own for large retail organisations, enabling them to implement anti-theft measures and procedures across all areas and locations: as security threat profiles and trends are more easily identified and gathered through centralised monitoring, staff can be better trained on anti-theft strategies. Interoperable security systems also have the added benefits of bringing with them the possibility of 'best-practice' sharing, economical use of resources and even monitoring of marketing campaigns. For a truly positive impact on the bottom line.

Large to enterprise-sized retail outlets

Shopping centres, airports' shop-in-shop, national supermarket chains, city centre shopping areas/redevelopments ...

■ Know your customers

Speed dome cameras from Siemens provide a 360° view. With high-speed panning and easy control, they can facilitate the monitoring of retail premises giving warning of suspicious customers. As suspected shoplifters or known criminals are spotted by personnel in the control room, information can be passed onto security staff. In this way, the suspect can be tracked discreetly throughout the entire site. Highest quality SISTORE recording systems will also gather video evidence.

■ Improve intelligence gathering

Central logging of security incidents, and their continual analysis is an effective way to identify suspicious customers. But it can also lead to the awareness of developments in criminal activity such as orchestrated shoplifting. Interactive Video Management (IVM) from Siemens provides additional tools to monitor the progress of incidents: site maps ensure that images from the exact location can be accessed instantly and the correct cameras controlled for optimum tracking of the incident. Therefore, full image and data documentation of any event is effectively gathered.

In shopping centres or malls, the information can be passed on to all outlets, security staff mobilised and wrongdoers

apprehended. Even organised criminals can be effectively combatted and sales staff given a greater sense of security and safety.

■ Eliminate cash-register theft

Linked to EPOS systems, Siemens' video cameras and recording systems can provide highly effective till monitoring and many benefits: till activity monitoring can be a big deterrent to those who might otherwise be tempted, whilst recorded video images can be matched to till receipts and POS data to provide ir-refutable evidence should the need arise.

In addition, because honest staff know that they are seen to be honest – and that dishonest staff will be apprehended – the installation of cameras can bring about better staff morale. A further benefit is the monitoring of staff performance in relation to the quality of customer service provided, enabling training gaps to be identified and filled.

■ After-hours monitoring

With stores open increasingly longer hours, it is vital to monitor areas only operated during standard working hours (such as offices or warehouses) separately from the shopping floors. By integrating SiPass access control, Intrunet intruder detection and SISTORE video

surveillance systems from Siemens, it is possible to monitor premises cost-effectively at night, manage and verify alarms and elicit an appropriate response. The Intrunet intruder alarm systems offer sophisticated partitioning functionality (500 "corridors", 20 "calendars"), allowing defined areas to be protected differently depending on the time of day – or night. The integration with access control systems enable the alarm system to be set/unset at certain times or deactivated only upon the badging a valid access card. Remote central viewing through an integrated SISTORE video surveillance system enables alarm-activated recording to be set up. This provides an effective yet economical use of resources by removing the need for security guards during the night. Alarms are quickly verified via live video images transmitted via Internet Protocol (IP).

■ Investment with a measurable return

Interoperable security brings many benefits in terms of return on investment: seamless integration of functionality and remote monitoring provide more efficient overall monitoring, and therefore measurable cost savings. The security system can utilise existing unused network cabling infrastructure to create a dedicated security network, – and hardware such as switching matrices can be

SiPass integrated

SiPass integrated is a powerful and flexible access control system that provides a very high level of security without compromising convenience and ease of use. It is built to meet access control needs that range in complexity from medium to very high, and fully supports the integration of video surveillance, intruder alarm and fire alarm systems. SiPass integrated is extremely scalable and can cater for large and very complex applications.



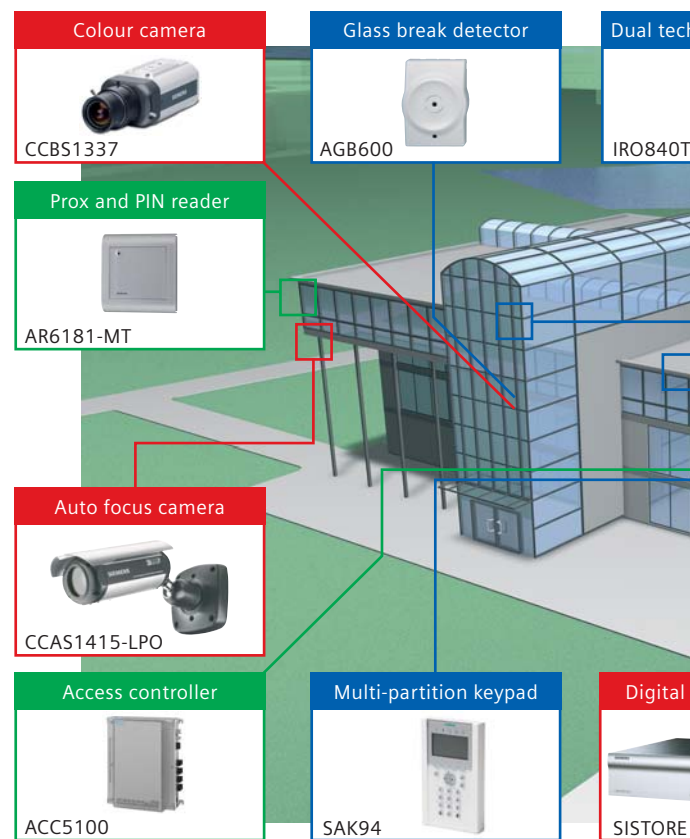
Intrunet SI410

SI410 forms the heart of easy-to-operate intrusion detection systems. Combining a range of high performance Siemens detectors, audio or video components, the SI410 system provides rich and reliable security. Sophisticated processing ensures a high detection accuracy and false alarm immunity. Easy system expansion through functional integration with DM, video surveillance and access control systems.

08h00 – Some of the shops are opened in the 3 large buildings which constitute the shopping centre. Each shop can activate or deactivate the alarm independently but all are linked to the Intrunet SI410 intrusion system, which secures the whole shopping centre. The system is also connected to outdoor and indoor domes and cameras, and to a SISTORE CX codec video recording system. The 3 buildings are monitored by a central control room located 10 km away. The control room staff can access live and recorded images over IP, and manage the complete security and safety system using the Siemens MM8000 Danger Management System.

08h30 – The security team is checking all areas before the opening at 09h00. They can access their offices and the local control room on the third floor with SiPass access cards. The system is also implemented in 2 other shopping centres in the area, and as the team moves from one site to the other, their cards give them access to all 3 sites as required. As the same system is used, the transfer of people is optimised, and start-up and down time is reduced significantly.

10h30 – A well known shoplifter has been sighted. The ground team has advised the control room by radio, who are also tracking him using Siemens speed domes positioned strategically throughout the shopping centre and inside the shops. Real-time recording ensures high-resolution images can be gathered for evidential purposes.



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).



External motion detectors – the first line of defense

Perimeter surveillance is paramount for large or enterprise systems, providing the first line of defense against intruders. Siemens external motion detectors enable an alarm to be triggered as soon as intruders set foot on restricted outdoor areas, allowing for intervention to take place before access to critical areas or buildings has been gained.

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.

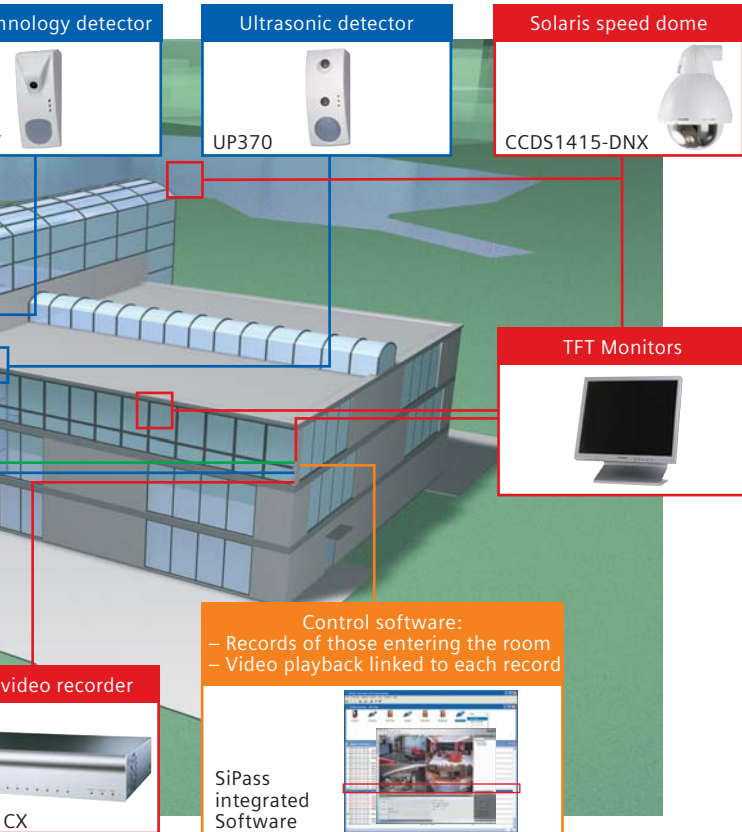
Video surveillance

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SISTORE CX

SISTORE CX is an intelligent digital video codec (encoder and decoder) for video transmission and recording. Using the latest Siemens IT technology, it is particularly suited for applications requiring video transmission or as video sensor in IP network installations. SISTORE CX provides excellent scalability and transparent communication using client stations located throughout the network. It can be used to build a "virtual video matrix", providing video over IP streams for display on analogue output devices or PC-based software decoders.



14h00 – A fire alarm is manually triggered in one of the underground car parks. The Danger Management System, which allows control of the complete security system through one interface, automatically brings up live images of the alarm point on screen and a graphical overview of the site, also used to track the evacuation progress in case of a valid fire alarm. The live images show no sign of fire. After a rapid search for the event, the pre-event recording reveals that the manual call point was maliciously activated. A security officer is dispatched to the area for further checks. The control room operator resets the system to normal operation, ensuring all access controlled areas are still active.

20h00 – The shops are closed, but customers are still lingering. The central security team checks all areas via the video surveillance system to allow ground teams to rush the last shoppers out before closing the centre. All shops are now under alarm, whilst the cleaning staff are busy in the main atriums.



Motion detectors for complex environments

The range of Siemens internal motion detectors caters for all environments. The range includes the award winning Eyetec dual motion detector, the only motion detector on the market with an antiblocking functionality which complies with EN50131-2 Grade 4. All Siemens motion detectors offer the highest detection rate and false alarm immunity.



Super high-resolution cameras

Offering the highest detailed images for evidential use, the range of super high-resolution models are sure to impress.

Vandal resistant domes

For areas with the highest risk, either in- or outdoors, these IP66 vandal resistant domes can withstand a blow up to 1000 kg on the impact resistant polycarbonate-protective bubble.

Solaris speed domes

Solaris domes offer accuracy, speed, reliability and high-quality images by day or night, with 18x or 26x zoom.

TFT/LCD displays

With various sizes of screen and performance of display – the range of TFT displays is suitable to create "video-walls" for use in a control room or as public display monitors.

Control keyboard

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





replaced by virtual software equivalents. With centralised access control, entry rights can follow the cardholder from one location to another – this keeps the number of cards required – and the time it would otherwise take to manage or change user rights in multiple locations – to a minimum. It also allows for the central control of car parks, lifts and entrances (to floors, offices and other secure areas) on multi-purpose retail complexes.

Last, but not least, as sales personnel are relieved of routine tasks – such as enabling/disabling alarm systems – they can focus their attention on serving the customer better.

■ **Real-time resource management**

The monitoring of entrances to any retail premises is essential. Siemens' access control systems will help secure sensitive areas such as cash-boxes and cashier-passages. It will also provide useful separation of customer and staff access and can be linked to "Time & Attendance" and payroll applications. With surveillance of tills and entrances, peaks in customer activity are readily apparent and staffing levels increased accordingly.

■ **Improving operational performance**

Retail chains have the difficulty of implementing security strategies across a number of stores, as well as offices, warehouses and distribution centres. Through increased control and improved compliance with requirements, the chains can dramatically improve their operational performance. This improves transparency and can also help with the consistent communication of the desired brand

image. This is possible because remote monitoring makes it possible to follow up merchandising campaigns in real time. It is also possible to study staff performance, enhance training and thereby bring about effective sharing and implementation of Health & Safety best practices and significant improvements in customer service.

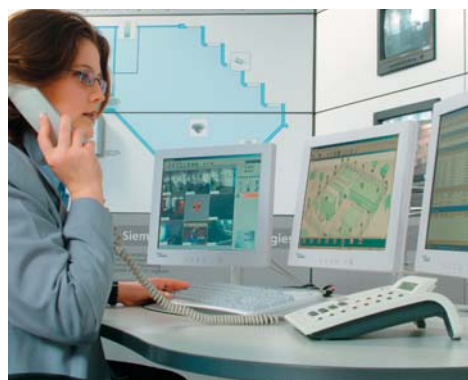
■ **Integrated danger management**

The Danger Management System from Siemens allows larger retailers and shopping centres to take advantage of around-the-clock availability of security control centres. In this way, Siemens' security systems can be monitored cost-effectively, without the expense of on-site guards. Siemens' Danger Management System (DMS) also facilitates the management of data from the various systems including fire detection systems. Escape routes are pre-determined and the management station guides the operator through response-steps. Clear procedures are displayed on screen, subsystem functionality is activated and monitored accordingly (eg: switch on/off alarm, start real-time video recording, request assis-

tance etc.). Management tools such as graphical visualisations, time-scheduled activities (activate shift changes – day/night) are included within the software program.

Highlights

- Better investigation and evidence gathering
- Improved operator performance at tills and checkouts
- Remote monitoring supports follow-up of merchandising campaigns and implementation of Health & Safety and best practices procedures
- Lifting of staff morale
- Effective response to incidents





The new corporate headquarters were opened in 2006 and cover about 19,500 m². 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 & 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 & 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 & 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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