



Retail security

Improve retail profitability and operational performance

Medium to large 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.



Security systems from Siemens offer **medium to large-sized retailers** the opportunity to increase operational efficiency, by reducing losses and thereby effecting greater competitiveness. With interoperable access control, intruder alarm and video surveillance systems, cost-effective security becomes a reality, building upon existing IT and security systems to provide central management of all the functionality, on-site or remotely via a CMS: from managing thousands of personnel, customers, suppliers and contractors requiring access to various parts of the retail site to monitoring entrances, exits, stockrooms, warehouses and payment areas – with extensions and upgrades to the system easily effected. Staff management, asset tracking and alarm response can also be greatly improved with centralised verification and response to cardholders, alarms, etc.

Medium to large-sized retail outlets

Supermarkets, department stores, DIY shops, car dealerships

■ **Deter theft with overt surveillance**
Overt video surveillance systems are a proven deterrent. Strategic positioning of Siemens' fixed cameras will actively discourage shoplifting, criminal damage and staff theft. That's because people know that, not only are the chances of being seen much greater, but that evidence is also constantly being recorded. Siemens' moving cameras have the additional advantage of being able to track suspected thieves throughout the store.

■ **Reduce fraudulent insurance claims**
"No Win – No Fee" legal services have brought about a dramatic increase in the number of "Slip & Fall" claims against retailers. If the entire retail premises are covered by Siemens cameras linked to SISTORE digital recording systems the chances of a false, costly liability claim proceeding will be greatly reduced because the retailer can produce evidence

of any incident. If the claim proves to be legitimate, a valuable insight can be obtained by reviewing the events leading up to the incident. This can help implement adequate corrective and preventative measures.

■ **Detect fraud at the cash register**
By linking them to POS data mining packages, Siemens' digital recording systems can deliver clear, detailed images of till transactions in an instant. Till receipts can be matched to images encrypted with 'date and time' data showing who sold what to whom. In this way, suspicious activities can be investigated and any fraudulent transactions readily detected.

■ **Manage access to vulnerable areas**
Siemens' access control systems can limit entry to stockrooms, offices and other sensitive areas of the retail premises.

Entry rights – based on seniority and working hours – are managed via a central database and tailored to suit the access requirements of each member of staff. Doors are locked and only open upon presentation of an authorised card to a reader controlling the door lock. The system can also be used to arm and disarm the Siemens' intrusion detection system therefore ensuring that high-risk areas are automatically protected at all times. This minimises the risk of personnel forgetting to reset the alarm or the passing of alarm codes to external parties. Integrated with detector-activated video surveillance systems, it also gives additional evidence-gathering functionality in the case of forced or unauthorised entry.

■ **Central and remote management**
Siemens' remote-viewing software enables live or recorded images to be viewed by specified PC users on the net-



Access control

Intrusion detection

Central controllers

SiPass Entro

SiPass Entro is a very flexible and user-friendly PC-based access control system that can monitor and control up to 512 doors and 40,000 cardholders. It enables customised access rights by categories and offers a complete range of reports. System configuration is simple and an extensive range of reader and card options are available. SiPass Entro also provides a unique video recording capability when used in combination with SISTORE digital video recorders.



Intrunet SI220

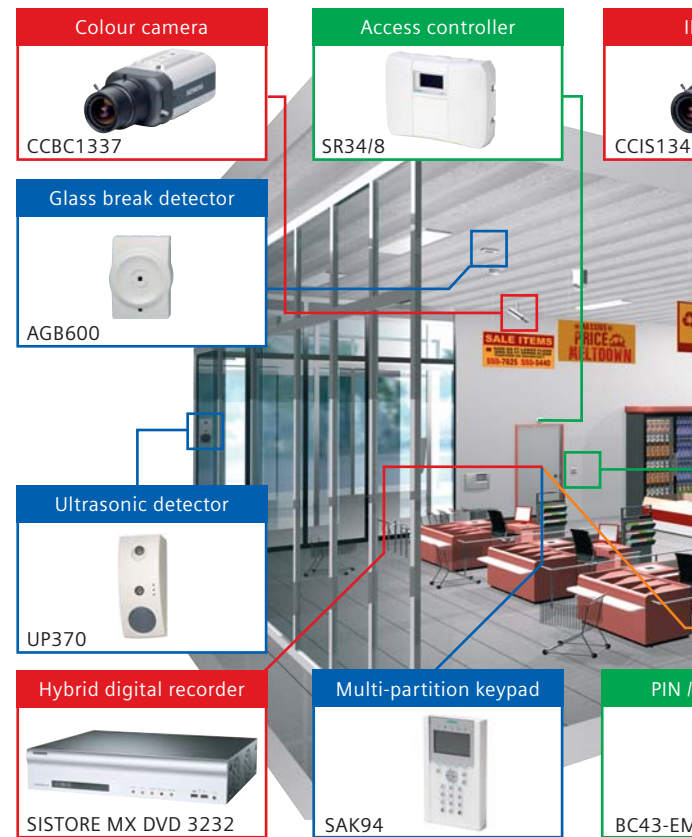
The Intrunet SI220 intruder alarm system offers to large-sized retailers the flexibility of a high-performance intrusion detection system. Expansion and integration is facilitated, additional security functionality to be integrated with door control or local video surveillance. Easy to use and manage, the system allows a range of communication modules that support alarm transmission and verification zones for centralised as well as remote monitoring.

Interoperability in action – town supermarket

05h00 – The first deliveries are due at 05h30. The staff enter the car park using their own access card to control the barrier. As they enter the warehouse using their hands-free access cards, the alarm system is deactivated, at the same time triggering real-time video recording.

07h00 – The stock management system is showing products available in area J but only half the quantity is there. The security manager reviews the video surveillance footage to investigate whether this is an inventory check error, a vendor error or pure theft. By reviewing the access log and video footage, he finds out that one of the employee's badges was used to enter the warehouse and steal some stock. He will now speak to the employee to clarify the situation.

08h30 – The supermarket will open shortly. Each office is access controlled with proximity readers. As the office staff present their cards to a reader to enter their offices, the motion detector is deactivated, the lights are turned on automatically.



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).



Glassbreak detectors

- Flexible positioning options
- Install up to 8.5 m away from the glass surface being monitored

Advanced motion detectors

- Advanced temperature compensation
- White light suppression (e.g. car headlights)
- False alarms can be vastly reduced

Seismic detectors

Very early detection of thermal and mechanical attacks on a wide range of safes and ATMs. For optimum damage limitation.

Video surveillance

em offers medium adaptable security tion. System ex- allowing for addi- rated, such as . Also benefits from a allow customised nes set ups – ideal oring.



SISTORE MX

SISTORE MX is a flexible, hybrid surveillance system that allows recording of both analogue and digital cameras. The free remote client software allows simultaneous display of up to 32 live images from different SISTORE MX devices. The SISTORE MX NVR (hardware-based) and SISTORE MX NVS (software-based) network video recording systems allow the operator to view live images, and support recording, playback and remote access for up to 32 IP cameras per installed system.



09h00 – The supermarket is now open. The access controlled barriers are in “open” mode to allow customers access to the car park.

12h30 – As the number of customers peaks, video surveillance cameras keep a watchful eye on the shop’s floor and tills. The queues are getting longer quickly. The control room operator advises the till staff manager, who opens additional tills. Waiting time at check outs are kept under control.

21h00 – The supermarket closes after another busy day. As shelves are being re-stacked ready for the following day, the till manager proceeds to begin counting the takings. The alarm is set in the shop, whilst the warehouse and offices are kept accessible for authorised access card holders. The carpark is now closed to the public. Day-night dome cameras keep a watchful eye on staff leaving the shop.

Interoperability – System Control Software



Intrusion Detection



Video Surveillance



Access Control

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.

Cameras

- Super high-resolution colour cameras for monitoring of tills and cash handling.
- High-resolution day-night models in conjunction with infrared illumination for clear images 24 hours a day.
- IP models for true digital transmission of streaming images to be recorded by SISTORE MX (software, hardware and hybrid recording).

Speed domes

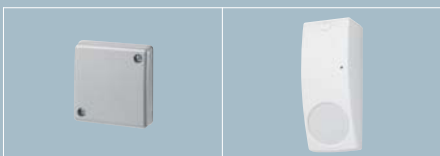
Utmost control and precision. Up to 26x optical zoom, with preset positions and automatic guard tour facility.

TFT displays

With various size of screen and performance of display – suitable for use in control rooms 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.





work. This means, for instance, that managers can review images to ensure their departments are running smoothly or check that areas are free from hazards. Users can also be authorised to access images remotely. Managers can therefore check stocktaking procedures, ensure there are no breaches of security or check that opening times are properly observed by staff – even when the managers themselves are not on the premises.

■ Improve out-of-hours safety for staff

With the growth of out-of-town retail centres, many medium to large companies are now in more isolated locations and have extended opening hours. This makes them more attractive to the serious criminal.

To improve security – and safety of staff – the first line of action is to ensure that the outer perimeter of the premises is secure. Siemens' access control systems allow entry to the car park to be controlled outside normal opening hours by granting access to only authorised card or tag holders.

Siemens' intruder detection systems enable the various areas of the premises (main store, warehouse, offices etc.) to be monitored independently. This means that offices can be under alarm while the main store is not. Detectors can be linked to specified verification zones, activating audio or video alarm verification immediately after an alarm. When the exterior of the building is monitored by Siemens' day-night cameras, staff will undoubtedly feel safer and more secure.

■ Future-proof security

In choosing the various Siemens' security technologies for retail premises, owners and managers are ensuring the future expansion capability of their security arrangements, which will be able to grow with the business.

Siemens' IP-based systems facilitate the central monitoring of the access control, intruder detector and video surveillance systems. In the event of any incident that triggers an alarm, signals can be transmitted to a pre-configured e-mail address and event-logs can be investigated remotely.

When linked to a central control room, or alarm monitoring centre, Siemens' systems provide invaluable tools for the verification of alarms and facilitate appropriate response.

■ Improve customer service

Video surveillance of a store and its tills will achieve far more than simply monitoring dishonest activity of staff and customers and recording evidence. By studying the serving of customers by staff, faults can be identified. Gaps in training can be corrected to improve performance and the service offered.

Staffing levels at tills and checkouts can be monitored too, in order to keep waiting times to a minimum and ensure efficient deployment of staff.

Highlights

- Make it simpler to investigate suspicious transactions and identify dishonest activities
- Use surveillance of tills to reduce employee cash theft and fraud
- Deter and reduce theft by customers and staff with overt video systems
- Control and manage entry to vulnerable areas with video and access control systems
- Improve out-of-hours safety and security with interoperable access control, video and intruder detection systems
- Substantial reduction in store theft means quick return on investment



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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