CCTV

Planning Guide

Answers for infrastructure.

SIEMENS

Planning Guide – CCTV portfolio overview

Analogue cameras

Monochrome camera

Colour camera

Day-night camera

Auto focus camera

Vandal resistant auto focus fixed dome

Varifocal and monofocal fixed dome

Vandal resistant varifocal fixed dome

Speed dome

Weatherproof housing

Pan-tilt heads

Infrared lighting

Telemetry receiver driver for pan-tilt heads

Transmission methods

Transmitter

Transmitter*

Coax

Twisted pair

Fibre optic

LAN/WAN/xDSL

Receiver

Receiver*

SISTORE CX Transceiver encoding

SISTORE CX Transceiver decoding

* Not available from Siemens portfolio.

Advantages

Coaxial cable
- Low costs
- Simple to cable, simple handling
- Point-to-point connection
- No maintenance required
- No active amplifier required

Twisted pair (two-wire) transmission
- Range up to 1500 m
- Uses existing cable infrastructure
- Small space required due to narrow diameter of cable
- Cost-effective for short distances

Fibre optic transmission
- Range up to 69 km
- Secure against interference and tapping
- Low pallet and fire load (weight)
- No maintenance required
- Multiple transmission of signals possible

PSTN/ISDN dial-up line
- Unlimited range in existing ISDN telecommunication networks
- Cross-border connection possible
- For in-house systems, no costs if the systems present are used

LAN/WAN/Web
- Uses existing network structures and hardware
- No range limit within the network
- Internet integration possible

Disadvantages

Coaxial cable
- Large space required due to wide diameter of cable
- Signal interference from electro-magnetic sources
- Limited range: up to 200 m depending on cable specification
- Lightning protection expensive
- Separate cable required for control

Twisted pair (two-wire) transmission
- Active elements (transmitter and receiver required)
- Maintenance required (temperature-dependent)

Fibre optic transmission
- Higher costs (material and handling)
- Active elements (transmitter and receiver required)
- Significant effort and expense involved with changes in camera location
- Special installation training required

PSTN/ISDN dial-up line
- Costs depend on the availability of telecommunication networks
- Active elements (transmitter and receiver) required
- Slower image transmission speed

LAN/WAN/Web
- Hardware costs
- Bandwidth restriction for image transmission speed
- Bandwidth restriction for image transmission quality

Video (direct connection)

Embedded real-time video analysis

Video input

Video output

LAN

SISTORE CX EDS
Outdoor motion detection and tracking

or

SISTORE CX ODR
Detection of abondened or removed objects

Up to 8 surveillance channels

Video switching

Video input

SIMATRIX 164
16 video inputs
4 video outputs
IVM interface
16 alarm inputs
RS232

Video input

SIMATRIX 648
Expandable up to 64 video inputs
8 video outputs
IVM interface
Max. 64 alarm inputs
RS232

Video input

SIMATRIX SYS
Expandable up to 255 video inputs
64 video outputs
IVM interface
Max. 256 alarm inputs
RS232

Video input

SIMATRIX NEO
Expandable up to 224 video inputs
32 video outputs
Modular and scalable system
Simultaneous multi-protocol-telemetry
Ethernet connection
IVM interface
Max. 256 alarm inputs
RS232

Digital recording

Video input

SISTORE AX
4/9/16 video inputs, up to 200 ips
Up to 4 audio channels
PTZ control
Export via DVD writer
IVM connection

Video input
IP input

SISTORE MX
Hybrid video recorder
4~32 video inputs
Up to 32 IP camera inputs
Up to 200 ips
2/4 monitor outputs
1 audio channel
PTZ control
Export via DVD writer
IVM connection

LAN

Video input
IP input

SISTORE CX
Real-time video codec
4/8 video inputs, 200 ips (8 x 25 ips)
1/2 IP camera inputs
2/4 monitor outputs
PTZ control
IVM connection

Monitoring and control

TFT LCD display monitor

DVR remote access software

Interactive Video Management software

Remote keyboard CKA4820

Video (transmitted)

Video software

IVM security control

Interactive Video Management system

IVM is a scalable, open, interactive system for the control and operation of security applications:
– Controls analogue (SIMATRIX) matrix switchers
– Display of configured site plans with cameras, monitors, alarm lists, log books etc.
– Controls DVR systems (SISTORE)
– Compatible with SiPass access control
– Complete PTZ control
– Multi-client access

IP-based products

Hybrid IP cameras

Hybrid IP fixed dome camera

SISTORE CX1
Real-time video codec
1 video input, 25 ips
1 monitor output
PTZ control
IVM connection
EDS compatible

Video input

SISTORE CX
Real-time video codec
4/8 video inputs, 200 ips (8 x 25 ips)
1/2 IP camera inputs
2/4 monitor outputs
PTZ control
IVM connection
EDS compatible

Video input
IP input

SISTORE MX NVS
IP camera recording software
4/9/16/32 IP camera inputs
Mega pixel recording
PTZ control
IVM connection

IP input

LAN

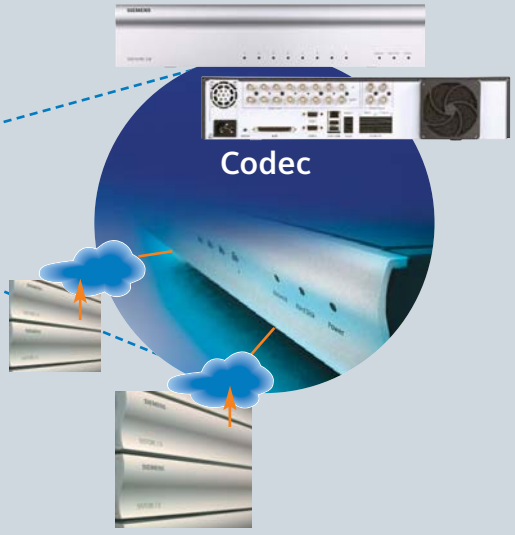
SISTORE MX NVR
Recording up to 16 IP camera inputs
Up to 100 ips
Mega pixel recording
Up to 16 alarm inputs and outputs (optional)

IP input

SISTORE MX
Hybrid video recorder
4~32 video inputs
Up to 32 IP camera inputs
Up to 200 ips
2/4 monitor outputs
1 audio channel
PTZ control
Export via DVD writer
IVM connection

Video input
IP input

SISTORE CX
Transceiver (encoder & decoder)
Streaming:
– 200 ips encoding (CIF, 2CIF)
– 100 ips encoding (4CIF)
– 100 ips encoding & 50 ips decoding (2CIF)
– 50 ips encoding & 50 ips decoding (4CIF)
– 100 ips decoding (2CIF, 4CIF)
Compression:
4CIF = ~ DVD quality
2CIF = ~ SVHS quality
CIF = ~ VHS quality



SISTORE CX
Virtual matrix
Scalable digital solution
Video encoder & decoder in one system
Web-based control
Multi-client/multi-server access
Internal hard disk storage

Siemens: one brand, one partner – one system – for all your security & fire safety requirements

Access Control CCTV Fire Safety Intruder Detection

Every day small sized applications in "standalone" operation – small convenience store or petrol station shop

CCTV products for this example:

Monofocal fixed domes, to surveil the shop

High-resolution DIP switch colour camera monitoring customers paying and forecourt

15" high-resolution public display monitor

SISTORE AX4 Lite, 4 camera digital recorder, operating in a standalone mode

Medium sized applications with local area networking (LAN) – large supermarket with warehouse

CCTV products for this example:

Speed domes, to surveil all the aisles

High-resolution IP cameras monitoring "sale items" on end of aisles for Marketing purposes

CKA keyboard to control speed domes, SIMATRIX & SISTORE AX

15" TFT display monitor

SISTORE AX16, 16 camera digital recorder, with LAN connection to head office

SISTORE CX, digital video codec for IP transmission & recording of warehouse cameras

High-risk applications with wide area networking (WAN) – commercial bank

CCTV products for this example:

Vandal resistant domes monitoring public floor areas for the highest protection

High-resolution colour cameras monitoring customers being served

High-resolution wide dynamic cameras monitoring customers entering through glass doors to the bank

19" TFT display monitor

SISTORE MX hybrid recorder, with WAN connection to security office

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.

Subject to change • Order no. A24205-A336-B352 •

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