LONIX

BUILDING CONNECTIVITY

LONIX SECURITY CATALOGUE

LONIX SECURITY CATALOGUE

INTEGRATED SYSTEMS

the complete solution

Lonix provides the systems and products for intelligent building automation, smart security and integrated building management systems. Our product portfolio includes the key enablers for intelligent integration, sustainable development and Green Buildings.

CUTTING-EDGE LONIX SOFTWARE

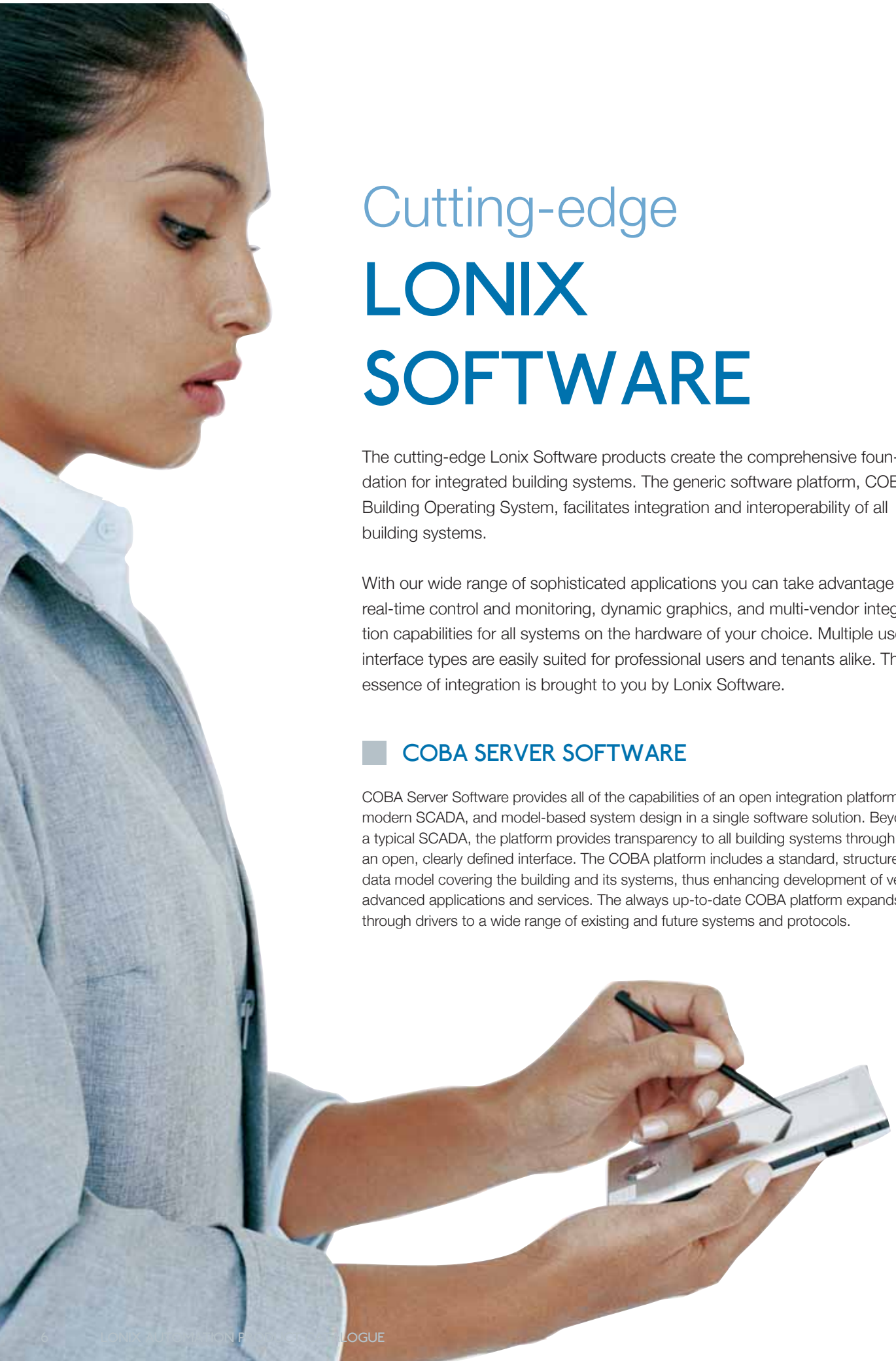
The cutting-edge Lonix Software products create the comprehensive foundation for integrated building systems. The generic software platform, COBA Building Operating System, facilitates integration and interoperability of all building systems – thus creating IBMS (Integrated Building Management System) and SMS (Security Management System). With our wide range of sophisticated applications you can take advantage of the real-time control and monitoring, dynamic graphics, and multi-vendor integration capabilities on the hardware of your choice. Multiple user interface types are easily suited for professional users and tenants alike. The essence of integration is brought to you by Lonix Software.

FOREFRONT LONIX AUTOMATION

The forefront Lonix Automation ensures robust functionality of building systems. Proven hardware/ firmware and world-class software allow for intelligent controls, flexible distribution and advanced integration of all building systems. The multi-functional control nodes, Lonix Modules, include the intelligence of the automation solution in compact size. Integrating smoothly with security systems, Lonix Automation is the premium choice for any building.

STATE-OF-THE-ART LONIX SECURITY

The state-of-the-art Lonix Security provides the integrated solution for outstanding security. The complete and fully featured infrastructure for access control and intruder alarm systems is efficiently combined with the advanced video surveillance system and a wide range of cameras. The solution allows for smooth integration with automation and building management systems – creating the fully unified solution for Intelligent Buildings.



Cutting-edge LONIX SOFTWARE

The cutting-edge Lonix Software products create the comprehensive foundation for integrated building systems. The generic software platform, COBA Building Operating System, facilitates integration and interoperability of all building systems.

With our wide range of sophisticated applications you can take advantage of real-time control and monitoring, dynamic graphics, and multi-vendor integration capabilities for all systems on the hardware of your choice. Multiple user interface types are easily suited for professional users and tenants alike. The essence of integration is brought to you by Lonix Software.

COBA SERVER SOFTWARE

COBA Server Software provides all of the capabilities of an open integration platform, modern SCADA, and model-based system design in a single software solution. Beyond a typical SCADA, the platform provides transparency to all building systems through an open, clearly defined interface. The COBA platform includes a standard, structured data model covering the building and its systems, thus enhancing development of very advanced applications and services. The always up-to-date COBA platform expands through drivers to a wide range of existing and future systems and protocols.

COBA CLIENT SOFTWARE

COBA Client Software is the professional monitoring application for all COBA connected systems, from building automation and room controls to demanding security systems of all types. Using the same application you can easily manage one or multiple sites in real time, locally and remotely. COBA Client Software is the perfect choice for demanding professional users of monitoring applications.

COBA WEBVIEW

COBA WebView is the user-friendly extension to professional monitoring applications. All COBA connected systems are easy to access using a standard web browser, without any additional software installations. COBA WebView provides significant advantages in terms of flexibility and ease of use.

COBA WEBPANEL

COBA WebPanel, optimized for touch enabled devices, offers convenient, browser-based user interfaces for occupants especially in homes, hotel rooms or office rooms. COBA WebPanel supports a variety of devices, such as Touch Screen Panel PC, Tablet PC, PDA, mobile phone, iPhone, IPTV and PC.

COBA SERVICE CENTER SOFTWARE

COBA platform supports efficient implementation of applications for centralized remote monitoring, alarm and fault detection of connected building management and security systems. Sites with COBA Server Software are connected to the central COBA SC server enabling forefront services for maintenance, facility management and security.

SYSTEM INTEGRATOR'S TOOLS

Easy and efficient commissioning of Lonix Systems is achieved with the user-friendly **Lonix Project Creation Tool** (PCT) software. The PCT supports System Integrators in configuration and commissioning of Lonix Systems.

The convenient **COBA Editor** supports easy implementation of COBA connected systems. COBA Editor includes a selection of libraries and templates for fast and easy graphics creation to different systems.

State-of-the art
LONIX SECURITY

The state-of-the-art Lonix Security provides the integrated solution for outstanding security. The complete and fully featured infrastructure for access control and intruder alarm systems is efficiently combined with advanced video surveillance systems and a wide range of cameras. Lonix Security integrates smoothly with automation and building management systems.

The flexible, easily expandable access control and intruder alarm system consists of independent network controllers and a comprehensive range of interface panels. The advanced video surveillance system consists of independent network video recorders and a full range of compatible IP cameras. The system supports a wide variety of peripherals from different manufacturers. The integrated user interface supports easy and effective monitoring of all connected systems.

Security system components – readers, sensors, cameras – are available according to specific needs of each solution type.

ACCESS CONTROL AND INTRUDER ALARMS

The core of the access control system consists of network controllers and interface panels. The system supports a wide variety of readers and other peripherals from different manufacturers.

- Network Controller
  LX-SEC-V1000
  TCP/IP interface for server connectivity and access control processing for up to 32 interface panels

- Door Interface Panel
  LX-SEC-V100
  Connects two access control cardreaders via Wiegand interface controlling one or two doors

- Input Monitor Interface Panel
  LX-SEC-V200
  Alarm input processing for up to 16 supervised input circuits, monitors and reports normal, off-normal and tamper states

- Output Control Interface Panel
  LX-SEC-V300
  Output control processing for up to 12 outputs

- Network Controller with Door Interface Panel
  LX-SEC-V2000
  TCP/IP interface for server connectivity and integrated access control processing for two readers/doors

- Door Controller
  LX-SEC-V-IP
  A single-door controller with TCP/IP connectivity

VIDEO SURVEILLANCE AND CAMERAS

Lonix Security integrates a selection of leading Video Surveillance systems with the full-scale solution. User-friendly interfaces and advanced capabilities are available for the solution of your choice.

VIDEO SURVEILLANCE

Video surveillance can be implemented with Digital Video Recording (DVR) or a fully IP based Network Video Recording (NVR) system or any combination of these. The video surveillance system is integrated with the BOS platform to enable advanced features provided by the combination of all the connected systems. For example, system can start recording video stream and/or turn PTZ camera to a preset position upon triggering from intruder alarm system, access control, fire alarm or any other system integrated with the BOS platform.

The video surveillance system supports both analog and IP cameras. Cameras and recorders can be operated both via video surveillance system's own user interface (live viewing of cameras) and the integrated user interface of the BOS (viewing cameras from floor plans). Cameras will be used not only by security operators, but also by safety and maintenance operators and all occupants.

Video Content Analysis (VCA) functionalities enable implementing many advanced features, such as left object detection, people counting and crowd monitoring, for example.

CAMERAS

A wide range of high quality cameras are available as part of the Lonix solution. Dome cameras, box cameras, bullet cameras, vandal dome cameras, PTZ cameras - our selection covers all of the most commonly required types and features.

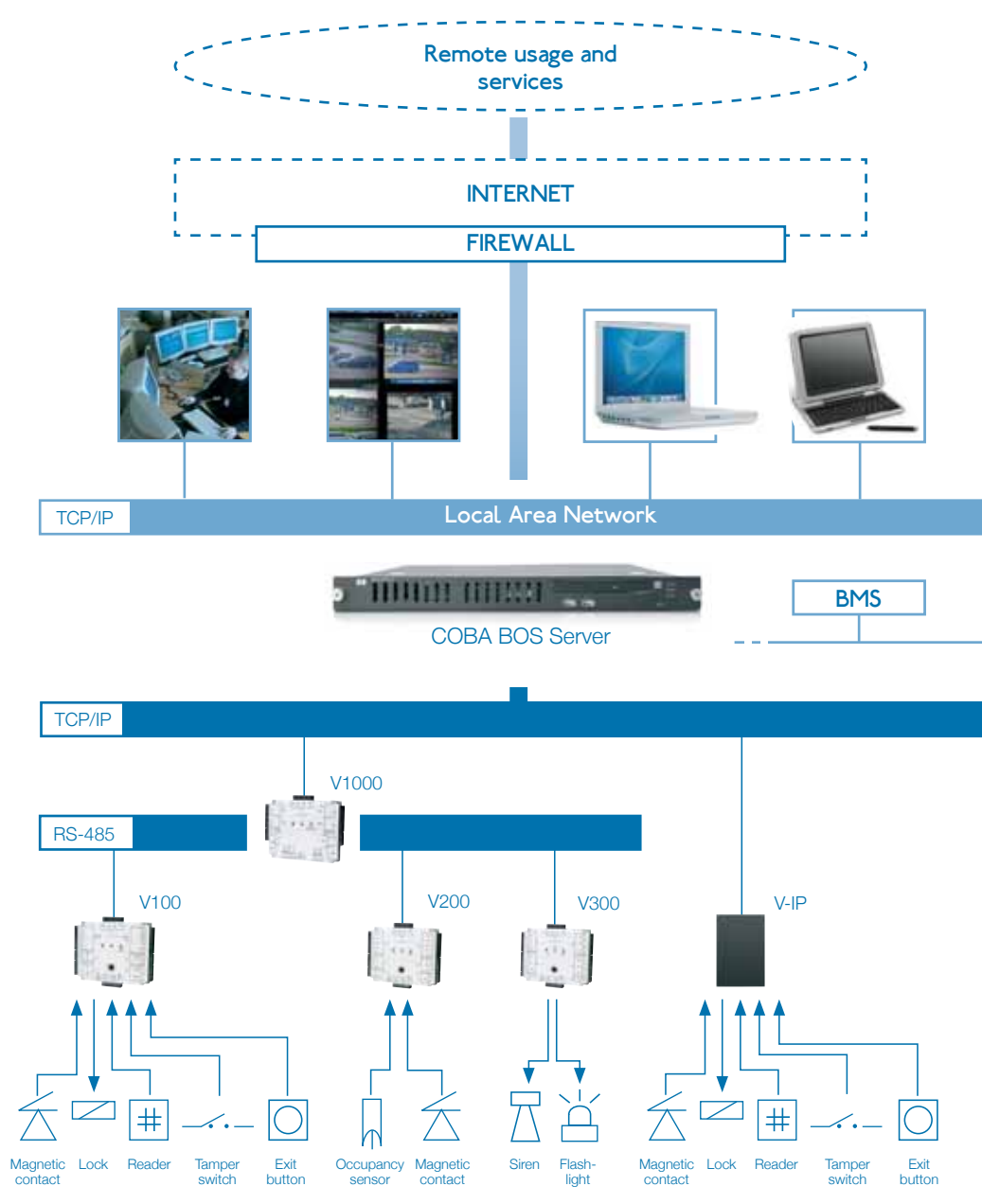
SYSTEM ARCHITECTURE

1. SERVICE LAYER

2. MANAGEMENT LAYER

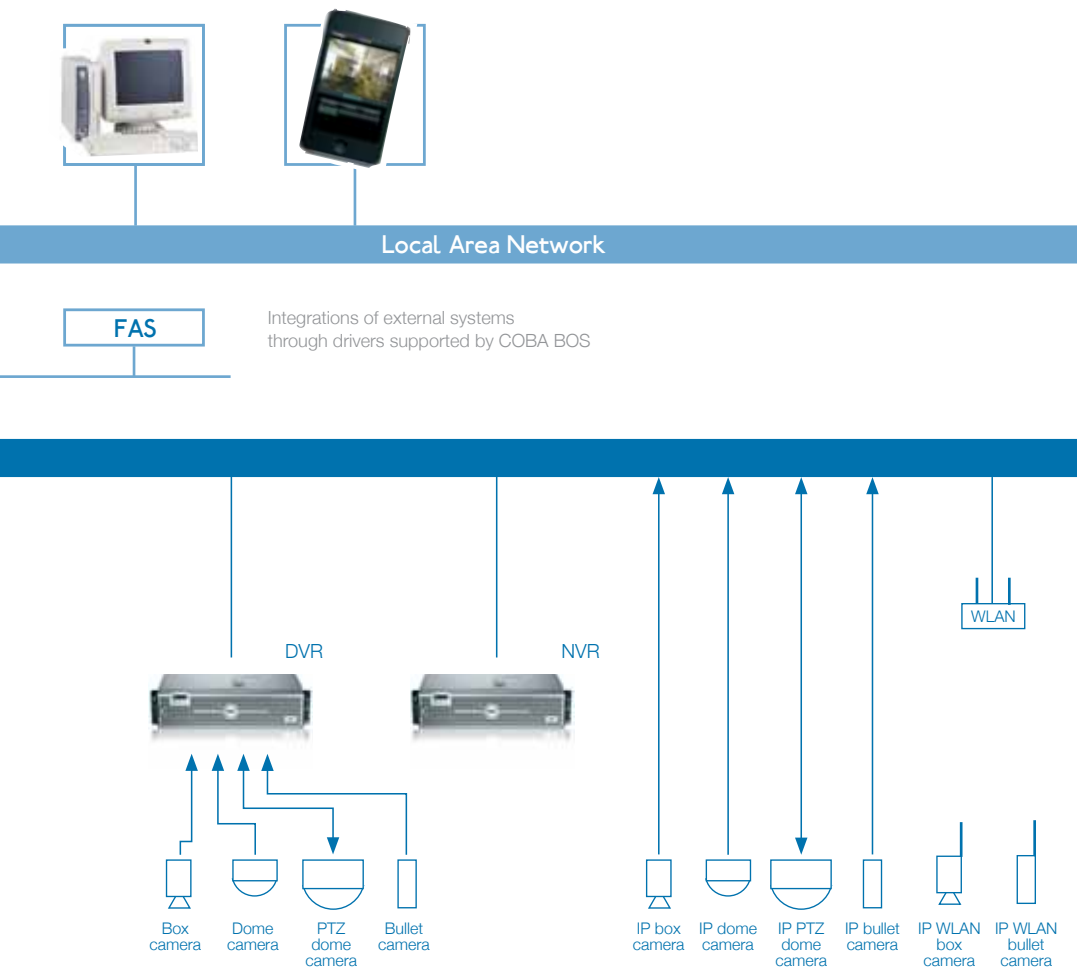
3. CONTROL LAYER

4. FIELD LAYER



The Integrated Security System Architecture provides a flexible foundation for a modern, long-lasting solution. All systems are extremely easy to operate through the unified platform.

Fire Alarm and BMS systems can also be integrated with Lonix Security Systems to form a fully unified solution.



Integrated
LONIX SECURITY

The state-of-the-art Lonix Security Management System provides the integrated solution for outstanding security. The complete and fully featured infrastructure for access control and intruder alarm systems is efficiently combined with the advanced video surveillance system and a wide range of modern cameras. Lonix Security also integrates smoothly with automation and building management systems. The generic software platform, COBA Building Operating System, provides one common view to all connected systems - thus creating a fully unified solution for Intelligent Buildings.

ACCESS CONTROL AND INTRUDER ALARMS

NETWORK CONTROLLER

LX-SEC-V1000

The Network Controller LX-SEC-V1000 handles intelligent access control processing for all connected interface panels and is the TCP/IP interface for Access Control Server connectivity. The Network Controller connects to up to 32 interface panels via two independent RS-485 networks and communicates with the Access Control Server through industry standard TCP/IP protocol. This architecture minimizes the impact on corporate LANs by using only one TCP/IP address for every 32 interface panels and by handling low-level transactions on the high speed RS-485 network.

The Network Controller stores a complete access control and configuration database for 44,000 cardholders, with expansion capability to 250,000 cardholders. The Network Controller connects with Access Control Server and processes real time commands from the Server. The device has event buffers for offline transactions. Fallback communications can be done via dialup or RF modem. The Network Controller operates on a 32-bit RISC processor running an embedded Linux Operating System. On-board flash memory allows program updates to be downloaded via the network.

CONNECTIONS

- 4 RS-485 ports to interfaces (separated into two independent networks)
- 2 supervised analog inputs for general purpose applications
- 2 non-latching output relays for example local alarm annunciation
- 1 tamper or general purpose input
- 1 power fail or general purpose input
- 1 battery fail or general purpose input

NETWORK CONTROLLER
LX-SEC-V1000

TECHNICAL DATA LX-SEC-V1000

Dimensions:	147.32 mm x 122.55 mm x 32.38 mm
Weight:	350 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Mount to any wall surface, using four screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet or on a wall above a suspended ceiling.
Communications Ports:	RS-485 - two wire, one TCP-IP port (10 or 100 Mbps)
Visual Indicators:	Power LED indicates that sufficient DC voltage is being provided to the unit. RS-485 Communications LED: Solid green indicates successful communications to downstream devices, red flash indicates a failed communications at tempt, solid red indicates no communications.
Processor:	32-bit RISC CPU, 100 MHz
Memory:	8 MB onboard Flash memory 16 MB / 32 MB memory expansions available 32 MB SDRAM 256k SRAM
Power Supply Requirements:	140 mA @ 12-18 VDC Recommended: Supervised linear power supply with battery backup, input surge protection, and supply fail and battery low contact outputs. Separate supervised DC supplies with battery back-up recommended for relay activated devices.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

DOOR INTERFACE PANEL

LX-SEC-V100

The Door Interface Panel LX-SEC-V100 connects with two access control card readers through Wiegand protocol based interface, controlling two doors or one door with entry/exit readers. All the inputs are supervised inputs, enabling high security features on I/O level. The Door Interface Panel connects to the Network Controller through a high speed RS-485 network. The Door Interface Panel supports easy linking of I/O functionality throughout the whole system. The device processes real time commands received from the Network Controller and reports all activity to the Network Controller. Off-line access control decisions are processed based on predefined rules. The device features on-board flash memory, allowing program updates to be downloaded via the network.

INPUTS

- 2 readers
- 2 door monitor switches
- 2 request-to-exit switches
- 1 power fail or general purpose input
- 1 battery fail or general purpose input
- 1 tamper or general purpose input

OUTPUTS

- All outputs are non-latching relay outputs
- 2 door strikes (configurable)
- 2 general purpose outputs for auxiliary devices

DOOR INTERFACE PANEL
LX-SEC-V100

TECHNICAL DATA LX-SEC-V100

Dimensions:	147.32 mm x 122.55 mm x 32.38 mm
Weight:	350 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Mount to any wall surface, using four screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet or on a wall above a suspended ceiling.
Communications Ports:	RS-485 - two wire, two SIA standard Wiegand ports
Visual Indicators:	Communications LED flashes green for “transmit to host” and red for “receive from host”. Power LED indicates that sufficient DC voltage is being provided to the unit.
Power Supply Requirements:	60 mA @ 9-18 VDC (with no readers connected) 600 mA @ 9-18 VDC (with to readers connected, max 500mA/reader) Recommended: Supervised linear power supply with battery backup, input surge protection, and supply fail and battery low contact outputs. Separate supervised DC supplies with battery back-up recommended for door locking or relay activated devices.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

INPUT MONITOR INTERFACE PANEL

LX-SEC-V200

The Input Monitor Interface Panel LX-SEC-V200 connects up to 16 supervised input circuits. Each input point monitors and reports normal, off-normal, and alarm states. Off-normal condition is programmable for each input point (NO or NC alarm devices may be used). Additional two relay outputs enable control of auxiliary devices, such as alarm sirens or flash lights.

The unit connects to the Network Controller through a high speed RS-485 network. The Input Monitor Interface Panel supports easy linking of I/O functionality throughout the whole system. The device processes real time commands received from the Network Controller and reports all activity to the Network Controller. The device features on-board flash memory, allowing program updates to be downloaded through the network.

INPUTS

- 16 supervised input circuits
- 1 power fail or general purpose input
- 1 battery fail or general purpose input
- 1 tamper or general purpose input

OUTPUTS

- 2 general purpose non-latching relay outputs for auxiliary devices

INPUT MONITOR INTERFACE PANEL
LX-SEC-V200

TECHNICAL DATA LX-SEC-V200

Dimensions:	147.32 mm x 122.55 mm x 32.38 mm
Weight:	350 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Mount to any wall surface, using four screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet or on a wall above a suspended ceiling.
Communications Ports:	RS-485 - two wire
Input Circuit Supervision:	Configurable for EO resistor values of 1K through 10K. Can also be configured as unsupervised circuits.
Visual Indicators:	Communications LED flashes green for “transmit to host” and red for “receive from host”. Power LED indicates that sufficient DC voltage is being provided to the unit.
Power Supply Requirements:	50 mA @ 9-18 VDC Recommended: Supervised linear power supply with battery backup, input surge protection, and supply fail and battery low contact outputs. Separate supervised DC supplies with battery back-up recommended for relay activated devices.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

OUTPUT CONTROL INTERFACE PANEL

LX-SEC-V300

The Output Control Interface Panel contains 12 latching relays, which can control up to 12 devices controllable by voltage free contact, such as logic inputs for process equipment, HVAC and elevator control panels, CCTV switchers, etc.

The unit connects to the Network Controller through a high speed RS-485 network. The Output Control Interface Panel supports easy linking of I/O functionality throughout the whole system. The device processes real time commands received from the Network Controller and reports all activity to the Network Controller. The device features on-board flash memory, allowing program updates to be downloaded through the network.

OUTPUTS

- 12 latching relay outputs for relay controllable devices

INPUTS

- 2 auxiliary input circuits
- 1 power fail or general purpose input
- 1 battery fail or general purpose input
- 1 tamper or general purpose input

OUTPUT CONTROL INTERFACE PANEL
LX-SEC-V300

TECHNICAL DATA LX-SEC-V300

Dimensions:	147.32 mm x 122.55 mm x 32.38 mm
Weight:	350 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Mount to any wall surface, using four screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet or on a wall above a suspended ceiling.
Communications Ports:	RS-485 - two wire
Visual Indicators:	Communications LED flashes green for “transmit to host” and red for “receive from host”. Power LED indicates that sufficient DC voltage is being provided to the unit.
Power Supply Requirements:	60 mA @ 9-18 VDC Recommended: Supervised linear power supply with battery backup, input surge protection, and supply fail and battery low contact outputs. Separate supervised DC supplies with battery back-up recommended for relay activated devices.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

NETWORK CONTROLLER WITH DOOR INTERFACE PANEL

LX-SEC-V2000

The Network Controller with Door Interface Panel handles access control processing of two readers/doors and is the TCP/IP interface for Access Control Server connectivity. The Network Controller with Door Interface Panel connects with two access control card readers through Wiegand protocol based interface, controlling two doors or one door with entry/exit readers.

The Network Controller stores a complete access control and configuration database for 44,000 cardholders, with expansion capability to 250,000 cardholders. The Network Controller connects with Access Control Server and processes real time commands from the Server. The device has event buffers for offline transactions. The device operates on a 32-bit RISC processor running the Linux Operating System. On-board flash memory allows program updates to be downloaded via the network.

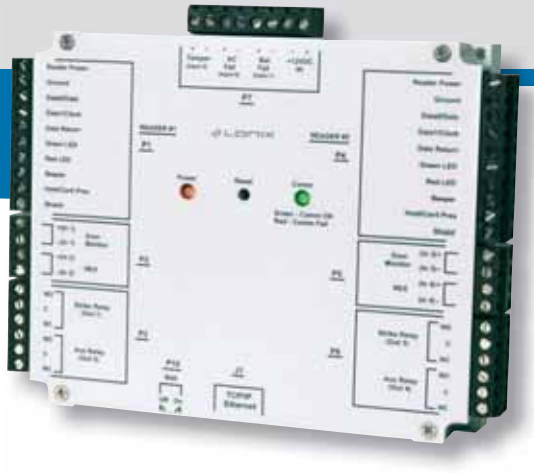
INPUTS

- 2 Wiegand readers
- 2 door monitor switches
- 2 request-to-exit switches
- 1 tamper or general purpose input
- 1 power fail or general purpose input
- 1 battery fail or general purpose input

OUTPUTS

- All outputs are non-latching relay outputs
- 2 door strikes (configurable)
- 2 general purpose relay outputs for auxiliary devices

NETWORK CONTROLLER
WITH DOOR INTERFACE PANEL
LX-SEC-V2000



TECHNICAL DATA LX-SEC-V2000

Dimensions:	147.32 mm x 122.55 mm x 32.38 mm
Weight:	350 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Mount to any wall surface, using four screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet or on a wall above a suspended ceiling.
Communications Ports:	One TCP-IP port (10 or 100 Mbps), two SIA standard Wiegand ports
Visual Indicators:	Power LED indicates that sufficient DC voltage is being provided to the unit.
Processor:	32-bit RISC CPU, 100 MHz
Memory:	8 MB onboard Flash memory 16 MB / 32 MB memory expansions available 32 MB SDRAM 256k SRAM
Power Supply Requirements:	160 mA @ 12-18 VDC (with no readers connected), can supply 350 mA @ 12 VDC to two connected readers. Recommended: Supervised linear power supply with battery backup, input surge protection, and supply fail and battery low contact outputs. Separate supervised DC supplies with battery back-up recommended for relay activated devices.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

DOOR CONTROLLER

LX-SEC-V-IP

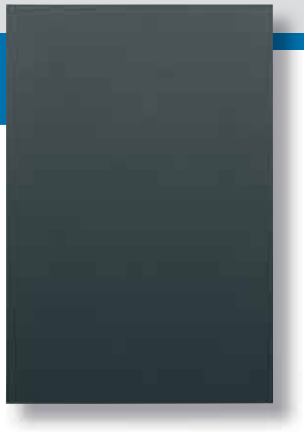
The Door Controller LX-SEC-V-IP creates a true IP access solution, which communicates with the Access Control Server using industry standard TCP/IP protocol straight from the door. The Door Controller stores a complete access control and configuration database for one controlled door and 44,000 cardholders and has event buffers for offline transactions. The device can be placed anywhere at the door to address all security requirements. The external reader is connected to the Door Controller through Wiegand protocol.

The single-door controller has built-in 802.3af Power over Ethernet (PoE), with 700 mA available for external field devices. The device uses standard CAT-5 or CAT-6 cabling for both data and power.

INPUTS

- 1 Wiegand reader
- 1 door monitor switch
- 1 request-to-exit switch
- 1 enclosure tamper
- 1 power fail or general purpose input
- 1 battery fail or general purpose input

DOOR CONTROLLER
LX-SEC-V-IP



TECHNICAL DATA LX-SEC-V-IP

Dimensions:	83.8 mm x 121.9 mm x 36.3 mm
Weight:	195 g
Enclosure Material:	UL94 polycarbonate
Operating Environment:	Temperature 0° to 50°C, humidity 5% to 95% relative (non-condensing)
Mounting:	Single-gang style electrical box
Communications Ports:	TCP-IP (10 or 100 Mbps), Wiegand reader
Visual Indicators:	Two LEDs indicate power/network activity and device I/O activity
Processor:	32-bit RISC CPU, 100 MHz
Memory:	8 MB onboard Flash memory 32 MB SDRAM 256k SRAM
Power Supply Requirements:	1 A @ 12-16 VDC maximum Recommended: Power is supplied using the Power over Ethernet technology available with PoE (802.3af) enabled network devices. Alternate: Supervised linear power supply with battery backup, input surge protection, and power fail and battery low contact outputs.
Certifications:	UL 294 and UL 1076, EN 50130-4, CE Mark

ACCESS READERS

Lonix Access Control System supports a wide variety of peripherals including different reader brands. Any reader supporting Wiegand protocol is compliant with the system. Readers, sensors and other peripherals are available as part of the Lonix Solution, according to the specific needs of your project.

Readers are available with optional features such as keypad, fingerprint recognition, long-range reading and different credential formats. Different types of credentials are supported, such as iCLASS (13.56 MHz), Mifare (13.56 MHz), or legacy proximity and magnetic stripe standards.

SELECTION

- Readers
- Keypad readers
- Biometric fingerprint readers
- Long-range readers

Biometric fingerprint reader

Readers

Keypad reader

VIDEO SURVEILLANCE AND CAMERAS

VIDEO SURVEILLANCE

Lonix Security Management System (SMS) integrates a selection of leading Video Surveillance systems with the full-scale solution. Video surveillance can be implemented as a Digital Video Recording (DVR) or a fully IP based Network Video Recording (NVR) system or as a hybrid combination.

The video surveillance system is integrated with the BOS platform to enable advanced features provided by the combination of all the connected systems. For example, the system can start recording video stream and/or turn PTZ camera to a preset position upon triggering from intruder alarm system, access control, fire alarm or any other system integrated with the BOS platform. Cameras and recorders can be operated both via video surveillance system's own user interface (live viewing of cameras) and the integrated user interface of the BOS (viewing cameras from floor plans).

The system supports also advanced features including Video Content Analysis (VCA), motion detection and Automatic Number Plate Recognition (ANPR).

FEATURES

- Fully IP based and hybrid systems
- Advanced motion detection
- Reliable video archiving
- Scalable system
- Advanced VCA and ANPR features

VIDEO MONITORING

CAMERAS

The Lonix Solution contains a wide range of high quality IP and CCTV cameras and video servers. Dome cameras, box cameras, bullet cameras, vandal dome cameras, PTZ cameras – our selection covers all of the most commonly required types and features. Latest technologies, such as H.264 video streaming, wireless connectivity, megapixel resolution, wide dynamic range and digital noise reduction features are available.

SELECTION

- Dome cameras
- Vandal dome cameras
- Box cameras
- Mini box cameras
- Bullet cameras
- PTZ cameras
- Video servers

Features and technical data of the latest camera models are presented on the following pages.

Box Cameras | Bullet Cameras | Dome Cameras | Vandal Dome Cameras

IP DOME CAMERAS

The IP Dome Cameras are available in models indoor and outdoor vandal proof models. Standard resolution on both models is D1 (720 x 576 pixels). The high resolution models support up to 2 Megapixels (1600 x 1200). Cameras support H.264, MPEG-4 and MJPEG compressions simultaneously via triple streaming feature. Up to 10 simultaneous connections per camera are supported. All models come with varifocal auto iris lenses, Power over Ethernet and optional built-in 15 meter IR LEDs, which produce clear view at zero lux illumination. Standard resolution models have 3D Digital Noise Reduction and Digital Wide Dynamic Range (D-WDR) features. All models have also 3-Axis Gimbal adjustment, which enables easy adjusting of camera views. Firmware of the cameras can be updated via network.

FEATURES

- H.264/MPEG-4/MJPEG compression
- Power over Ethernet
- 3-axis gimbal adjustment
- Triple Streaming (H.264/MPEG-4/MJPEG)
- Up to 10 simultaneous connections
- 2-way audio
- Day/Night function
- SD card backup
- ONVIF compatible
- Built-in 15M IR LEDs (optional)
- IR cut filter mechanism (optional)

Vandal Dome Cameras

Dome Cameras

TECHNICAL DATA	IP DOME CAMERA D1 LX-SEC-CFD2-IP-D1	IP DOME CAMERA 2M LX-SEC-CFD2-IP-2M	IP VANDAL DOME CAMERA D1 LX-SEC-CFD2-IP-D1-O	IP VANDAL DOME CAMERA 2M LX-SEC-CFD2-IP-2M-O
Image Sensor:	1/3" CCD	1/3.2" CMOS (2M-Pixel)	1/3" CCD	1/3.2" CMOS (2M-Pixel)
Lens:	Vari-focal auto iris 3.7~12 mm	Vari-focal auto iris 2.7~9 mm	Vari-focal auto iris 3.7~12 mm	Vari-focal auto iris 2.7~9 mm
Maximum Resolution:	720x576	1600x1200	720x576	1600x1200
Horizontal Angle of View:	75.4° - 24°	101° - 30.4°	75.4° - 24°	101° - 30.4°
Day/Night Function:	Yes	Yes	Yes	Yes
Minimum Illumination:	0.05 lux @ F1.6 0 lux (IR On)	0.5 lux @ F1.2 0 lux (IR On)	0.05 lux @ F1.6 0 lux (IR On)	0.5 lux @ F1.2 0 lux (IR On)
Compression Format:	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG
Audio In/Out:	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support
Input/Output (Alarm):	1/1	1/1	1/1	1/1
Power over Ethernet:	Yes (IEEE802.3af)	Yes (IEEE802.3af)	Yes (IEEE802.3af)	Yes (IEEE802.3af)
Digital Noise Reduction	Yes	–	Yes	–
D-WDR	Yes	–	Yes	–
Power Consumption:	DC 12V, 470 mA	DC 12V, 470 mA	DC 12V, 470 mA	DC 12V, 470 mA
Operating Environment:	-10° to 50°C	-10° to 50°C	-10° to 50°C	-10° to 50°C
Protection Class:	–	–	IP66	IP66
Dimensions (WxH mm):	132x108	132x108	140x130	140x130
Weight:	520 g	520 g	1250 g	1250 g
Outdoor Use:	No	No	Yes	Yes
Optional Features				
IR LEDs	Built-in 15 m	Built-in 15 m	Built-in 15 m	Built-in 15 m

IP BOX CAMERAS

The IP Box Cameras are available in standard metal box casing and in plastic mini box casing.

Standard box models resolution options are D1 (720 x 576 pixels) and 2 Megapixels (1600 x 1200). Cameras have CS mounting for lens. Standard box cameras support H.264, MPEG-4 and MJPEG compressions simultaneously via triple streaming feature. D1 resolution model has advanced 3D Digital Noise Reduction and Digital Wide Dynamic Range (D-WDR) features.

Mini box models resolution options are VGA (640 x 480 pixels) and 1.3 Megapixels (1280 x 1028). Cameras have fixed lenses. Mini box cameras support H.264, MPEG-4 and MJPEG compressions simultaneously via triple streaming feature.

Up to 10 simultaneous connections per camera are supported by all box camera types and they support Power over Ethernet. Firmware of all cameras can be updated via network.

FEATURES OF BOX CAMERAS

- H.264/MPEG-4/MJPEG compression
- Power over Ethernet
- Triple Streaming (H.264/MPEG-4/MJPEG)
- Up to 10 simultaneous connections
- 2-way audio
- Day/Night function
- SD card backup
- ONVIF compatible
- Wireless available (optional)
- IR cut filter mechanism (optional)

FEATURES OF MINI BOX CAMERAS

- Small compact size
- H.264/MPEG-4/MJPEG compression
- Power over Ethernet
- Triple Streaming
- 2-way audio
- Wireless (optional)

Box Cameras

Mini Box Camera

TECHNICAL DATA	IP BOX CAMERA D1 LX-SEC-CFB2-IP-D1	IP BOX CAMERA 2M LX-SEC-CFB2-IP-2M	IP MINI BOX CAMERA VGA LX-SEC-CFMB-IP-VGA	IP MINI BOX CAMERA 1.3M LX-SEC-CFMB-IP-1.3M
Image Sensor:	1/3" CCD	1/3.2" CMOS (2M-Pixel)	1/4" CMOS	1/4" CMOS
Lens:	CS mount	CS mount	4.0 mm, F 2.0, Fixed Iris	4.0 mm, F 2.0, Fixed Iris
Maximum Resolution:	720x576	1600x1200	640x480	1280x1024
Horizontal Angle of View:	Depends on lens type	Depends on lens type	64°	64°
Day/Night Function:	Yes	Yes	Yes	Yes
Minimum Illumination:	0.00001 lux @ F1.5	0.5 lux @ F1.5	1.0 lux @ F2.0	1.5 lux @ F2.0
Compression Format:	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG
Audio In/Out:	Built-in Microphone, 1 out (RCA type), 2-way, Duplex support	Built-in Microphone, 1 out (RCA type), 2-way, Duplex support	Built-in Microphone, 1 out (3.5mm Phone Jack), 2-way, Duplex support	Built-in Microphone, 1 out (3.5mm Phone Jack), 2-way, Duplex support
Input/Output (Alarm):	1/1	1/1	-	-
Power over Ethernet:	Yes (IEEE802.3af)	Yes (IEEE802.3af)	Yes (IEEE802.3af)	Yes (IEEE802.3af)
Digital Noise Reduction	Yes	-	-	-
D-WDR	Yes	-	-	-
Power Consumption:	DC 12V, 450 mA	DC 12V, 450 mA	LAN: DC 12V, 200 mA WLAN: DC 12V, 250 mA	LAN: DC 12V, 200 mA WLAN: DC 12V, 250 mA
Operating Environment:	-10° to 50°C	-10° to 50°C	-10° to 45°C	-10° to 45°C
Dimensions (WxHxD mm):	65x58x131,5	65x58x131,5	59x93,7x45,5	59x93,7x45,5
Weight:	450 g	450 g	180g	180g
Outdoor Use:	Requires housing	Requires housing	No	No
Optional Features				
Wireless LAN	802.11 b/g	802.11 b/g	802.11 b/g	802.11 b/g
IR Cut Filter Mechanism	Yes	Yes	–	–

IP BULLET CAMERAS

The IP Bullet Cameras are weather-proof and available with 20, 30, 40 and 50 meter IR LEDs, which produce clear view at zero lux illumination. Standard resolution is D1 (720 x 576 pixels). The high resolution models support up to 2 Megapixels (1600 x 1200). Cameras support H.264, MPEG-4 and MJPEG compressions simultaneously via triple streaming feature. Up to 10 simultaneous connections per camera are supported. All cameras come with varifocal auto iris lenses. Power over Ethernet is supported by models having 20 meter IR LEDs. Standard resolution models have 3D Digital Noise Reduction and Digital Wide Dynamic Range (D-WDR) features. Firmware of the cameras can be updated via network.

FEATURES

- Weatherproof (IP66)
- H.264/MPEG-4/MJPEG compression
- Power over Ethernet
- Triple Streaming (H.264/MPEG-4/MJPEG)
- Up to 10 simultaneous connections
- 2-way audio
- External varifocal lens adjustment
- Day/Night function
- SD card backup
- ONVIF compatible
- Built-in 20, 30, 40 or 50 meter IR LEDs
- IR cut filter mechanism

IP Bullet Camera 30/40/50 meters

IP Bullet Camera 20 meters

TECHNICAL DATA	IP BULLET CAMERA D1, IR20M LX-SEC-CFBU2-D1-O-IR20	IP BULLET CAMERA 2M, IR20M LX-SEC-CFBU2-2M-O-IR20	IP BULLET CAMERA D1, IR30/50M LX-SEC-CFBU2-D1-O-IR30/50	IP BULLET CAMERA 2M, IR30/40M LX-SEC-CFD2-2M-O- IR30/40
Image Sensor:	1/3" CCD	1/3.2" CMOS (2M-Pixel)	1/3" CCD	1/3.2" CMOS (2M-Pixel)
Lens:	Vari-focal auto iris 3.7~12 mm	Vari-focal auto iris 3.6~16 mm	Vari-focal auto iris 30m: 3.7~12 mm 50m: 9~22 mm	Vari-focal auto iris 3.6~16 mm
Maximum Resolution:	720x576	1600x1200	720x576	1600x1200
Horizontal Angle of View:	75.4° - 24°	101° - 30.4°	30m: 75.4° - 24° 50m: 31.2° - 16.8°	101° - 30.4°
Day/Night Function:	Yes	Yes	Yes	Yes
Minimum Illumination:	0 lux (IR On)	0 lux (IR On)	0 lux (IR On)	0 lux (IR On)
Compression Format:	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG
Audio In/Out:	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support
Input/Output (Alarm):	1/1	1/1	1/1	1/1
Power over Ethernet:	Yes (IEEE802.3af)	Yes (IEEE802.3af)	No	No
Digital Noise Reduction	Yes	–	Yes	–
D-WDR	Yes	–	Yes	–
Power Consumption:	DC 12V, 500 mA	DC 12V, 500 mA	DC 12V, 730 mA	DC 12V, 730 mA
Operating Environment:	-10° to 50°C	-10° to 50°C	-10° to 50°C	-10° to 50°C
Protection Class:	IP66	IP66	IP66	IP66
Dimensions (WxL mm):	83 x 180	83 x 180	With sun shield: 114x260 Without sun shield: 99.4x225	With sun shield: 114x260 Without sun shield: 99.4x225
Weight:	700 g	700 g	1600 g	1600 g
IR LEDs	Built-in 20 m	Built-in 20 m	Built-in 30 or 50 meters	Built-in 30 or 40 meters
Outdoor Use:	Yes	Yes	Yes	Yes
Other				
Wireless LAN	–	–	802.11 b/g	802.11 b/g

IP VIDEO SERVERS

Video servers are available in 1-, 2-, and 4-channel models to connect the analog cameras to IP network. All models support 25 frames per second per channel and up to D1 resolution (720x576 pixels). 1- and 2-channel models support H.264, MPEG-4 and MJPEG compressions simultaneously via triple streaming feature. Up to 10 simultaneous connections per server are supported. These models also support Power over Ethernet as default. 4-channel model supports H.264 and MJPEG compressions and up to 8 simultaneous connections are supported. Firmware of the video servers can be updated via network.

FEATURES

- H.264/MPEG-4/MJPEG compression
- Power over Ethernet
- Triple Streaming (H.264/MPEG-4/MJPEG)
- PTZ control
- Up to 8 or 10 simultaneous connections
- 2-way audio
- SD card backup
- ONVIF compatible
- Wireless (optional)

IP VIDEO SERVERS

IP Video Servers

TECHNICAL DATA	1-CHANNEL IP VIDEO SERVER LX-SEC-VS-1CH	2-CHANNEL IP VIDEO SERVER LX-SEC-VS-2CH	4-CHANNEL IP VIDEO SERVER LX-SEC-VS-4CH
Video Input:	1 BNC	2 BNC	4 BNC
Video Output:	1 BNC	No	4 BNC
Maximum Resolution:	720x576	720x576	720x576
Compression Format:	H.264 / MPEG-4 / MJPEG	H.264 / MPEG-4 / MJPEG	H.264 / MJPEG
Audio In/Out:	1 in, 1 out, 2-way, Duplex support	1 in, 1 out, 2-way, Duplex support	4 in, 1 out (RCA), 2-way, Duplex support
Input/Output (Alarm):	1/1	2/2	4/1
RS-232	1	1	1
RS-485	1, for PTZ control	1, for PTZ control	1, for PTZ control
Power over Ethernet:	Yes (IEEE802.3af)	No	No
Power Consumption:	LAN: DC 12V, 350mA WLAN: DC 12V, 450mA	LAN: DC 12V, 350mA WLAN: DC 12V, 450mA,	LAN: DC 12V 530mA WLAN: DC 12V 630mA
Operating Environment:	-10° to 50°C	-10° to 50°C	-10° to 50°C
Simultaneous Connections:	10	10	8
Dimensions (WxLxD mm):	134x42x107	134x42x107	218x44x202
Weight:	400 g	400 g	1400 g

CCTV CAMERAS

The selection of CCTV cameras covers all required forms and resolution requirements – box, dome, vandal dome, bullet, PTZ cameras from 540 TV lines to 650 TV line Wide Dynamic Range models. All cameras support day and night modes. All cameras come as default with varifocal auto iris lenses. Cameras can be connected directly to video inputs of Hybrid DVRs or via video servers to NVRs.

SELECTION

- Indoor dome camera
- Vandal dome camera
- Wide Dynamic Range vandal dome camera
- Box camera
- Wide Dynamic Range box camera
- IR bullet camera
- Indoor PTZ camera
- Outdoor PTZ camera

Bullet Cameras | Dome Cameras | PTZ Cameras

TECHNICAL DATA	DOME CAMERA LX-SEC-CFD2-540	VANDAL DOME CAMERA LX-SEC-CFD2-540-O	VANDAL DOME CAMERA LX-SEC-CFD2-650WD-O	BOX CAMERA LX-SEC-CFB-540
Image Sensor:	1/3" Sony Super HAD II CCD	1/3" Sony Super HAD II CCD	1/3" Sony 960H WD Super HAD CCD II	1/3" CCD
Lens:	Vari-focal auto iris 3.7~12 mm	Vari-focal auto iris 3.7~12 mm	Vari-focal auto iris 3.7~12 mm	CS mount, DC drive
Video Resolution:	752x582	752x582	976x582	752x582
Horizontal Resolutions:	540 TVL	540 TVL	650 TVL	540 TVL
Horizontal Angle of View:	75.4° - 24°	75.4° - 24°	75.4° - 24°	Depends on lens
Day/Night Function:	Yes	Yes	Yes	Yes
Minimum Illumination:	0.1 lux @ F1.2 0 lux (IR On)	0.1 lux @ F1.2 0 lux (IR On)	Color: 0.1 lux @ F1.0, B&W: 0.01 lux @ F1.0, Sense-up: 0.001 lux @ F1.0 0 lux (IR On)	0.1 lux @ F1.2
Digital Noise Reduction	–	–	Yes	–
WDR	–	–	Yes	–
Power Consumption:	DC 12V, 270 mA	DC 12V, 270 mA	DC 12V, 350 mA	DC 12V, 130 mA
Operating Environment:	-10° to 50°C	-10° to 50°C	-10° to 50°C	-10° to 50°C
Protection Class:	-	IP66	IP66	-
Dimensions (WxH(xD) mm):	132x108	140x130	140x130	58.8x58.8x103
Weight:	450 g	950 g	1100 g	270 g
IR LEDs	Built-in 15 m (optional)	Built-in 15 m (optional)	Built-in 15 m (optional)	Optional IRC filter
Outdoor Use:	No	Yes	Yes	Requires housing
Other				
	–	–	RS485 control	–

TECHNICAL DATA	BOX CAMERA LX-SEC-CFB2-650WD	BULLET CAMERA LX-SEC-CFBU-540V-O-IR25	OUTDOOR PTZ CAMERA LX-SEC-CPTZD-550-27Z12-O	PTZ CAMERA LX-SEC-CPTZD-550-27Z12
Image Sensor:	1/3" Sony 960H WD Super HAD CCD	1/3" CCD	¼" Sony color Super HAD CCD	¼" Sony color Super HAD CCD
Lens:	CS mount, DC drive 2.8~10 mm	Vari-focal auto iris 3.7~12 mm	27 x Optical zoom, 3.5-94.5mm (12 x digital zoom) CS mount, DC drive	27 x Optical zoom, 3.5-94.5mm (12 x digital zoom) CS mount, DC drive
Video Resolution:	976x582	752x582	752x582	752x582
Horizontal Resolutions:	650 TVL	540 TVL	550 TVL color, 680 TVL B/W	550 TVL color, 680 TVL B/W
Horizontal Angle of View:	Depends on lens	75.4° - 24°	H: 55.5° (W) to 2.24° (T)	H: 55.5° (W) to 2.24° (T)
Day/Night Function:	Yes (+Sense-up)	Yes	Yes (+Sense-up)	Yes (+Sense-up)
Minimum Illumination:	Color: 0.1 lux @ F1.0, B&W: 0.01 lux @ F1.0 Sense-up: 0.001 lux @ F1.0	0 lux (IR On)	Color: 0.5 lux @ F1.6, B&W: 0.1 lux @ F1.6 Sense-up: 0.00005 lux @ F1.6	Color: 0.5 lux @ F1.6, B&W: 0.1 lux @ F1.6 Sense-up: 0.00005 lux @ F1.6
Digital Noise Reduction	Yes (3D)	–	Yes	Yes
WDR	Yes (Sony EFFIO)	–	–	–
Power Consumption:	DC 12V, 350 mA	DC 12V, 450 mA	AC 24V, 21W	AC 24V, 18W
Operating Environment:	-10° to 50°C	-10° to 50°C	-40° to 50°C	-10° to 50°C
Protection Class:	–	IP66	IP66	–
Dimensions:	65 mm(W)x58 mm(H) x131,5 mm(D)	Θ 83 mmx127 mm	216.8 mm(D)x289.2 mm(H)	188.7 mm(D)x216.9 mm(H)
Weight:	440 g	550 g	5200 g	3100 g
IR LEDs	Optional IRC filter	Built-in 25 m	IRC filter	IRC filter
Outdoor Use:	Requires housing	Yes	Yes	No
Other				
	RS485 control	–	RS485 and RS-422 control, Pan Travel 360°, Tilt travel 92°, Pan Speed 0.1° ~ 180°/sec, Auto Flip, 250 presets, Digital Image Stabilizer	RS485 and RS-422 control, Pan Travel 360°, Tilt travel 92, Pan Speed 0.1° ~ 180°/sec, Auto Flip, 250 presets, Digital Image Stabilizer

BRACKETS AND HOUSINGS

The selection of brackets and housings enable mounting of cameras in different locations, both indoor and outdoor. Brackets and housings are available for box cameras, bullet cameras, dome and PTZ cameras.

SELECTION

- Brackets for box and bullet cameras
- Brackets for dome cameras
- Brackets for PTZ cameras
- Selection of housings for box cameras

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