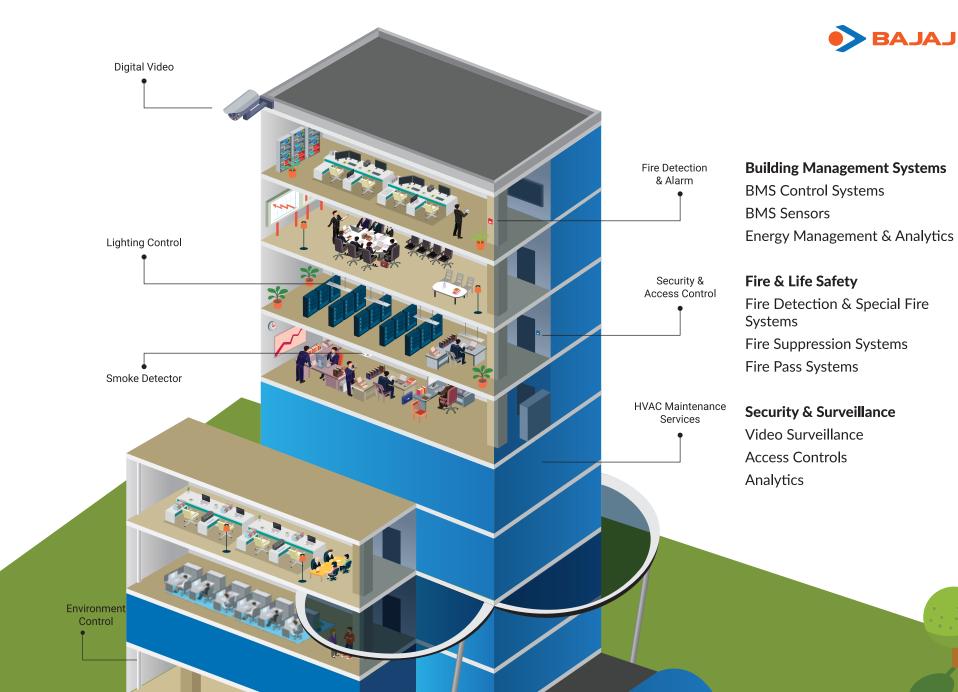


# SMART BUILDINGS

Advanced. Efficient. Sustainable

Smart Building Systems exists to improve every facet of how buildings operate. We apply our deep knowledge of mechanical, electrical and civil engineering with information technology to optimize HVAC, power, lighting, security and other building infrastructure. We develop systems that are innovative, efficient and sustainable.



## BUILDING MANAGEMENT SYSTEMS (BMS)

More than 400 projects in India and abroad have been equipped with technology\*solutions and products provided from house of BEL IBMS. The team has done upscaling of more than 95 partners across the length and breadth of the country alongwith global Master System Integrators. (Dell, Vertiv, HP, IBM. Schiender, Johnson Controls and Siemens) Through them we have performed landmark installations in major business verticals like commercial buildings, industrial premises, large format mall, giant media houses & production facilities, service sectors like hotels, hospitals, BFSI & IT.

We have been recognized as the leaders in Data Center solutions with more than 100 successful installations in four year & a dozen of tier-3 data centers across all class of cities in India.

With an unique open technology that is simple, redundant and scalable, BMS provides up-time performance guarantees and specializes in customer delight backed-up with service excellence.





With the world's first fully integrated native BACnet building solution encompassing HVAC, Lighting and Access Control products, Bajaj Electricals offer dependable and user friendly building management systems and energy management systems (EMS) to commercial, healthcare, education and leisure buildings along with specialised applications for data-centres with energy management and energy reporting tools for energy efficiency.





BAJAJ

enteliBUS™

Modular Control System



#### **Product Benefits**

BACnet implementation paired with an ARM9 processor and large memory capacity means enteliBUS has the power and features to tackle even the most demanding building automation application.

- Expandable to over 500 I/O points
- BACnet IP & BBMD routing ability enables easy inegration with IT infrastructure
- Multiple communication options (up to 3 Ethernet ports. 2 RS-485 ports and 2 USB ports) supporting BACnet Ethernet, BACnet IP, MS/TP, Modulus & LINKnet

#### Features

- Powerful automation engine equipped with ARM9 processor
- Customisable touchscreen interface enables system interaction at the controller
- Diagnostic lights on each module provide system status at a glance
- Hot swappable individual modules without shutting down the entire system
- DIN rail design is compact and easy to install & maintain
- Unique HAO override switch order provides seamless transfer from auto to hand or off position
- Universal outputs include 0-100% manual adjust lever option







#### Controllers

- Native BACnet (BACnet/IP, BACnet MS/TP)
- 32- bit controller
- Real Time Clock
- Inbuilt MODBUS port (optional)
- Hot swappable modules for easy maintenance and expansion
- POE controllers IT friendly and future ready with wireless and EnOcean products
- UL Listed, BTL Certified



- Temperature
- Humidity
- Indoor Air Quality
- Occupancy

Comes with customised colour display and is enabled with Near Field Communication (NFC).

#### 7 inch high resolution LCD Touch Screen Display

- Small system interface stand alone
- Large system local control & display
- Web server functionality & e-mail alarm transmission
- MS/TP sub-LAN & enteliMESH network management
- Temperature/ relative humidity/ occupancy options





#### **Delta**■ Telta

#### Applications

The CopperCube is an on-site trend log archiver that manages up to 5,000 trend logs on a BACnet network.

The CopperCube includes several trend log archive maintenance tools. The autopruning feature deletes data after a set time period in order to free memory. You can also schedule backups to an external location. An optional SQL connector allows you to route the same trend log data to an external SQL database for use with third-party reporting tools while still maintaining the integrity of the original information.

#### Features

- Internal, local storage of trend log data
- Built-in web UI for feedback, operational status and configuration.
- Vendor independent
- Built-in connectivity to CopperTree's Kaizen and Delta Controls' enteliWEB software
- Native BACnet device
- Industrial embedded PC with an internal 60 GB solid-state hard drive
- Configurable auto backup to external storage device
- Firmware auto-update capability
- Optional SQL connector

#### **COPPERCUBE**

The CopperCube is an embedded industrial computer that connects to Building Automation Systems (BAS) through BACnet/IP or BACnet Ethernet protocols.

Each CopperCube locates all trend logs within the BAS and archives up to 5,000 individual trend logs on its local secure database. Trend log data is accessed through a built-in web interface, as well as through the CopperTree's Kaizen and Delta Controls' enteliWEB software.

# Action 1990 Action

#### Specifications

#### BACnet Protocols BACnet/IP

BACnet Ethernet

#### Mounting

35 mm horizontal DIN rail Includes rubber feet for flat surface mounting

#### Connectors

5 Screw-type terminal connectors 1 DC Power Jack, ID 2.5 mm, OD 5.5 mm

#### Wiring Class

NEC Class 2

#### Power

24 VAC, 50 VA 2-28 VDC, 30 W

#### Technology

Intel® Atom™ D2550 processor 2 GB SDRAM 64-bit operating system

#### **Communication Ports**

2 Gigabit Ethernet 4 USB 2.0, maximum 500 mA each

#### Ambient

0° to 55°C (32° to 131°F) 10-90% RH (non-condensing)

#### Compliance

CE-EMC Directive 89 / 336 / EEC FCC Class B

#### Listings

C-UL Listed UL 916 Listed Q





Sensor is a device, module, or subsystem whose purpose is to detect events or changes in its environment and send the information to other electronics, frequently a computer processor.

It is always used with other electronics, whether as simple as a light or as complex as a computer.





#### Sensors and Transmitters for the HVAC Professional

- Temperature Sensors and Transmitters
- Humidity Transmitters
- Gauge Pressure Transmitters
- Differential Pressure Transmitters
- Static Pressure Transmitters
- Air Flow Switches and Transmitters
- Current Switches & Sensors
- Analog to Pneumatic (I/P) Transducers
- Signal Conditioning Interfaces
- Power Supplies
- Air Quality Monitors
- Carbon Dioxide Detectors
- · Carbon Monoxide Detectors





#### Sensors, Switches and Controls in the Wireless Range

- Wireless Motion / Lux Sensor
- Ceiling Mount Occupancy Sensor
- Wall Mount Occupancy Sensor
- Integrated Light Switch
- · Wireless Switch
- Universal Voltage 1 channel Relay
- EnOcean BACnet / IP Gateway (eBOX)
- Window Door Sensor
- Wireless Key Card Switch
- Wall Mount Remote Temp. Sensor
- 3 Channel Temperature Sensor
- 10 Channel Sensor Control Board
- 24V LCD Wireless Thermostat
- Line Voltage Thermostat
- 24V Thermostat
- Wireless Control Module with LCD
- HVAC Module
- Valve Actuator
- Single-Controlled Outlet, 15A
- · Dual-Controlled Outlet, 15A
- Wall Mount Remote Temp. / Humidity Sensor
- Wall Mount Remote Temp. Sensor with Set Point Control

#### **Monitoring Products**



#### **Control Products**































#### enteliWEB

**Enterprise Facility and Energy Management Software** 

enteliWEB gives you a complete view of your building operations



### enteliWEB effortlessly connects to all your facilities under one login. Bringing all your buildings,

enteliWEB gives you a single managment solution

systems and energy analysis under one facility management umbrella saves engineering and maintenance time. Connected systems simply allow operators to work more efficiently.

#### enteliWEB helps you make sense of data easily and quickly

- Enterprise dashboards allow Facility Managers to quickly evaluate their systems based on KPIs.
- Personal dashboards provide an easy way for operators to view the building the way they want.
- System dashboards provide a much richer experience than graphics alone, by combining operational views such as graphics, alarms, point lists, charts and other tools all on one page.



#### How enteliWEB will help you

- Manage multiple sites from a single login. No need to worry about duplicate addresses or networking everything together. All you need is an IP address for each site.
- Manage integrated HVAC, lighting, energy and other systems with one operator workstation.
- Alarm Management is designed to quickly and efficiently manage alarms from different sites.
- Dashboards provide simple visual summaries of facility information that allow you to drill
- enteliWEB comes with built-in developement support for custom applications, web services, mobile applications, dashboards and reports. Our partners can add functionality and customise the enteliWEB experience according to your organisation's needs.
- Mobile view is available for when you're on the move. Standard web technologies allow enteliWEB to be viewed on iPad and Android tablets.

enteliWEB has been designed to solve management challenges in almost every type of building. Whether it's installed in a school or a stadium, enteliWEB has specific features to make managing your building simpler.

#### HEALTHCARE

- Critical environment monitoring for your operating rooms
- Reduce energy costs throughout the hospital by turning off lighting in my unoccupied areas
- Mobile access makes it easy for your facility staff to service remote parts of the hospital

#### EDUCATION

- Public dashboards inform the community of what the facility is doing to save money
- Supervisory control of all your buildings
- Integrates occupancy schedules with your central room booking system
- Energy saving competitions between classrooms and buildings to encourage students to save energy

#### HOSPITALITY

- Raise your customer satisfaction scores by connecting your reservation system to enteliWEB
- Give your event staff, or even customers, mobile access to their room conditions for adjustments on the move
- Create public dashboards that show energy conservation that your hotel is making in real time



#### **MILITARY**

- LDAP user integration ensures secure passwords with user access being controlled by IT
- You can reduce your energy expenditures with Kaizen Energy for enteliWEB
- enteliWEB reduces the complexity of large facilities and organises information into task base dashboards and screens



#### COMMERCIAL

- Personal dashboards allow you to see your buidling
- Informs you when your facility is drifting away from specification
- Insight into your system streamlines your service making it easier to decide which faults need to be fixed
- Enterprise dshboards give you a top level view of each building remotely
- Allocate alarms to local building staff



#### DATA CENTRE

- Automatic alarms e-mails and applications notify you of critical failures
- Create a heat map of your data racks and view it in graphical form
- Compare energy consumption to environmental conditions
- All critical functions can be placed in one dashboards





An energy management system (EMS) is a system of computer-aided tools used by operators of electric utility grids to monitor, control, and optimize the performance of the generation and/or transmission system.

Energy management systems are also often commonly used by individual commercial entities to monitor, measure, and control their electrical building loads. Energy management systems can be used to centrally control devices like HVAC units and lighting systems across multiple locations, such as retail, grocery and restaurant sites.

Energy management systems can also provide metering, submetering, and monitoring functions that allow facility and building managers to gather data and insight make more informed decisions about energy activities across their sites.



#### CopperTree Analytics

CopperTree is part of the Delta Control Group, which gives it 30 years of practical energy and building management expertise. This allows them to bring you Software as a Service (SaaS) to help you start saving energy. CopperTree gathers data from the BAS, storing it in secure cloud servers. It then analyzes your building's data continuously, highlighting anomalies and identifying inefficiencies.

enteliWEB and CopperTree Analytics software seamlessly integrate into one complete application that allows you to see energy trends, diagnose system faults, and make improvements and changes directly to your Building Management System.

#### Get Deeper Insight

- CopperTree pulls data directly from any BACnet BMS system and presents it within enteliWEB.
- Real time building data is securely stored for protection and analysed to identify faults and track energy usage.
- Reports, KPIs and dashboards show you exactly what is going on within your building.
- You can measure and track energy to a far precise level than was ever affordable before using virtual meters.
- A full CopperTree installation provides a unique "golden standard" features which protects your building settings at commissioning levels but lets you constantly evolve your building performance.
- CopperTree provides you insight into which fixes will make the most impact which means now you can make the most of your staff and equipment.

#### Take Instant Action

- Set KPIs for individual staff with a full CopperTree Installation and incentivise them based on performance measures.
- Allocate work orders and alerts to team members to prioritise their activities.
- Make live (or scheduled) adjustments according to weather feeds or schedule requirements.
- Set VIP watch lists.
- Covers you from a single site to awhole campus or district.
- Drill down from a school district to a school gymnasium VAV in a few clicks.

#### **Energy Management**

Energy management turns into a seamless process with CopperTree as a part of enteliWEB. Analyse your building metrics through your dashboards by monitoring your building through customised widgets. Go one step further by setting up notifications that monitor the HVAC and alarms throughout your building, letting you know if there are areas of concern.

Energy dashboards are automatically created when the meters are set up.

# Section 1999 Se

#### Reporting Tools

Create reports instantaneously using the enteliWEB reporting tool. Whether you need to present energy metrics in your weekly meeting or a company-wide presentation, enteliWEB is hassle-free way to report on the energy savings inside your building.



Demonstrate your sustainability commitment by displaying energy dashboards throughout your building so your staff and occupants know how much energy you are saving.



## FIRE & LIFE SAFETY

Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent ignition of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts.

Fire safety measures include those that are planned during the construction of a building or implemented in structures that are already standing, and those that are taught to occupants of the building.

Threats to fire safety are commonly referred to as fire hazards. A fire hazard may include a situation that increases the likelihood of a fire or may impede escape in the event a fire occurs.

Fire safety is often a component of building safety. Those who inspect buildings for violations of the Fire Code and go into schools to educate children on Fire Safety topics are fire department members known as Fire Prevention Officers. The Chief Fire Prevention Officer or Chief of Fire Prevention will normally train newcomers to the Fire Prevention Division and may also conduct inspections or make presentations.





Cutting-edge security technology and state-of-the-art know-how and experience provide the sound foundations from which to solve even the most complex tasks. In difficult cases special fire alarm systems underscore our strengths. These alarm systems are used in special ambient conditions or spatial conditions that preclude the use of conventional fire detectors. They provide a powerful and convincing solution no matter how complex the problem.





Our products are as well suited as the areas of application are varied: fire detectors, smoke detectors, sensitive detectors, alarm systems, etc., combine to create efficient monitoring systems.

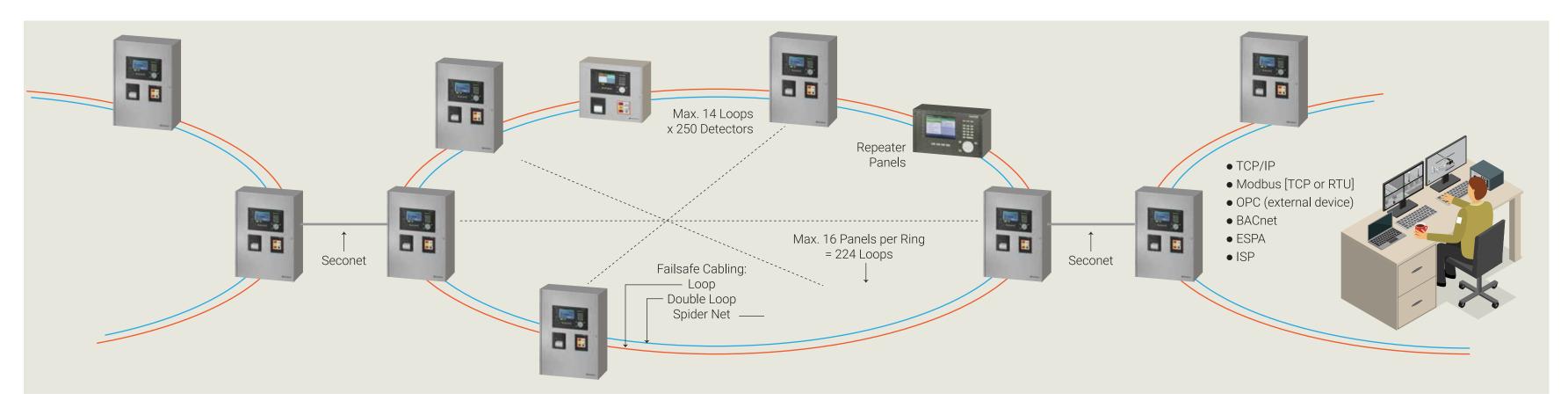
Securiton has decades of experience in the area of fire detection and fire alarm systems. Our close co-operation with fire specialists within the Securitas Group also drives our continual advances in the areas of R&D and production

#### SecuriFire

- The SecuriFire 3000 fire alarm control panel is suitable for connecting up to 16 addressable loops with up to 250 devices per loop
- Modular 100% fully redundant
- 5.7" TFT color display for displaying all system states in plain text
- Depending on need and application, the detector can be implemented as smoke, temperature or combined detector
- Each detector has an inbuilt fault isolator
- Loop powered hooter cum flasher which can be connected directly to the fire detector line along with other participants



#### Fire Alarm System Networking



- Up to 16 SecuriFire control panels
- Up to 31 B5-MIC711 main indication and control maps (max. 32 participants) When several FCP fire alarm control panels are combined, it is called a "SecuriLan". Straightforward operation is provided from one location. Despite its decentral design, from outside the fire detection system appears to behave as if it were a conventional "central" fire alarm control panel. The topology of the SecuriLan is freely selectable; the control panels and indication and control maps can be networked with one another, both as a mesh network with a redundant or single loop and as a stub line.

Detection zones, fire incident controls etc. can be connected to any FCP in the SecuriLan, whereby links between elements of various FCPs are

also possible (2-detector dependency, controls etc.). The SecuriFire FCP 500 / 1000 fire alarm control panel cannot be networked with other control units.

Connection to superordinate systems (e.g. management systems) and connection of the virtual MIC is possible with the integrated Ethernet interface. Each of these fire alarm control panels (FCPs) is responsible only for its immediate surroundings and communicates with the other fire alarm control panels (FCPs) via a redundant ring circuit which ensures unrestricted functioning of the system (wire breakage, short-circuit etc.) with up to three faults. The continuous intelligent communication between the control panels is achieved with maximum data security via a redundant (doubled) ring circuit







#### SecuriStar Point Detectors



MCD 573X

- Heat

- Smoke

CCD 573X

- Smoke - Heat

- Co

- Smoke - Heat

- Sounder

- Sound

- Smoke

- Heat











- With Loop Switch

- with /o Loop Switch
- Pipe mount.

- For humid areas

- For flush mounting

- With light ring

MCP

Door Holders

Beam Detectors









#### Aspirating Smoke Detectors (ASD)





1 PVC (standard application) 2 ABS (halogen-free)

4 Copper (high temperatures and Explosion applications) 5 Various dust filters and dirt trap boxes

6 Water retaining box 7 Flame arresters

3 Stainless steel (for the food industry)

Aspirating smoke detectors from Securiton are among the most precise and most reliable early warning systems against fires. Securiton offers a complete range of models that makes the lightning-fast detection of fires both scalable and cost-effective for any monitoring area.

#### SecuriRas ASD 535

ASD 535 aspirating smoke detector consists of one or two independent sampling pipes

System limits according EN 54-20 for sampling pipe is 2 X 300 meters

With our unique software can use the product for asymmetric sampling topologies too

Dynamic temperature and dirt/soiling compensation Auto learning





#### SPECIAL FIRE SYSTEMS



#### ASD Product Range



#### Equipment

EUROPE (EN 54 / VdS) USA & Canada (NFPA / UL) China (CCC)

FM Global

#### Manufacturing

RoHS ISO 9001

| Strength              | Benefit   | Proof   |
|-----------------------|---|---|
| Large Area Coverage   | Less units, less installations and less battery backup, less maintenance for same achievement | Strong Aspirator + High Sensitivity                                   |
| Silent                | No noise wherever installed   | Less than 43dBA   |
| High Sensitivity      | Maximum number of sampling points Earliest possible warning                                   | 0.002%Obs./m is top in this industry!                                 |
| Operating Temperature | Less installation costs  No heating of sampled air and the related mains or battery power     | Operates at a temperature as low as -30°C                             |
| Robustness            | Zero downtime<br>Resists moisture / splashes  | IP 54<br>Shocks of 5G<br>MTBF > 10 Years                              |
| Networking            | Easy to do maintenance<br>Computer based tracking   | Up to 250 units<br>Up to 1km  |
| Engineering           | Less units for same achievement Free choice of tube topology                                  | 3D design software using scientific formulas for airflow calculations |

#### **Liner Heat Detection Systems**

#### Detecting fires under extreme conditions

Fires occur more often in dangerous locations - with conventional fire detectors quickly reaching their limitations. The intelligent line type heat detector from Securiton works perfectly, even under the most difficult conditions. Whether the fully automatic monitoring of large areas, resisting corrosive gases, extreme humidity and high temperatures or differentiating between false alarms and real danger – the list of requirements for a state-of-the-art line type heat detector is both long and detailed.





ADW 535-1

1 Detector

2 Relays



ADW 535-2 2 Detectors 4 Relays (2x Alarm & Fault)

| Strength            | Benefit  | Proof  |
|---------------------|--|--|
| Extremely Solid     | Indoor and outdoor application<br>Low demand for maintenance<br>Long life cycle                      | Metallic or PTFE sensor tube<br>IP65 enclosure<br>Operating range -30°C to +70°C                             |
| Long Lasting        | Low "Total Cost of Ownership" (TCO): Maintenance free and not needing any replacements – for decades | Metallic tubes<br>Automated integrity check<br>IP 65   |
| Extremely Resistant | Can be used in dangerous / aggressive environment.   | Works in any medium (solid, liquid, gas)<br>Measures from -40°C to +180°C                                    |
| Extremely Flexible  | Can be used in Explosion Zones without need for barriers or Atex approval                            | Programmable response behavior<br>Does Explosion without Atex certification<br>Measures from -40°C to +180°C |
| Serviceability      | Maintenance can take place without need to access the detection area                                 | Sensor tube is maintenance free  |
| Extremely Fast      | Buy extra time for securing the zone   | Fastest heat sensing technology available  |
| Engineering         | Reliability at performance extremes  | HeatCalc 3D design software  |

#### CLEAN AGENT FIRE SUPPRESSION SYSTEMS



Clean agent fire suppression systems have proven to be effective and reliable product that protect highly valuable assets without damaging the equipment

#### Benefits

- Reduces risk of downtime and helps maintain business continuity in the event of a fire.
- Clean, leaves behind no residue.
- Safe for discharge into occupied spaces.
- Cost effective engineered system, providing maximum protection.
- Sustainable technology providing an environmentally-conscious solution.





**Novec 1230** 

FM-200

Argonite





HFC 227 ea

FK-5-1-12

(HFC 227 ea & FK-5-1-12 both 25 Bar & 42 Bar UL listed Seamless Cylinder)

UL listed Refill Station PESO Approved

Made in India

#### **FirePASS**°

#### FirePASS Fire Prevention system for Data Centre & Closed environments

- The fire strategy for any data centre or any closed environment should be to prevent a fire from starting, mitigate damage to sensitive equipment and reduce downtime.
- Whilst traditional methods can usually be relied upon to extinguish the fire, failures can occur, especially when not regularly inspected, tested and maintained. In addition, these systems require the fire to have started and progressed prior to release to allow evacuation.
- Data Centres can now offer their customers Fire Prevention certainty, by protecting their facilities with FirePASS revolutionary Oxygen-Reduction Fire Prevention Technology. FirePASS produces an atmosphere with a reduced oxygen concentration of 15%.
   Combustion, with the type of fuels that you would expect to find in data centres, cannot occur below 16%.
- Due to the nature of hypoxic air providing even distribution throughout the protected space it helps solve some issues compared to other systems including:
- Aisle containment partitions, where other system need to have special consideration to baffling additional nozzles to achieve even distribution.
- Bundled cable fires are difficult to extinguished once started as recent research from Factory Mutual (FM) has indicated which can threaten the entire data centres.



- Cabinet fires which can present unique difficulties for suppression and sprinkler systems.

#### How Does Oxygen-Reduction Fire Prevention Technology Work?

The FirePASS system uses hollow membrane technology to produce an oxygen reduced environment in the following way:

- Reduce ambient fresh air,
- Purifying the air by filtering and drying,
- Injecting the hypoxic air into the risk area until the FirePASS oxygen monitors sense the designed, low level of oxygen,
- The hypoxic air flow is then switched off by the FirePASS control unit
- The control unit continues to monitor the oxygen levels until inward leakage of ambient fresh air (approximately 20% per day) increases the oxygen to the designed high level,
- The injection of the hypoxic air supply into the risk area is then switched back on and the cycle continues. The operation audio/visual alarms are activated if levels are sensed outside of the design parameters. Alarms can also be sent to Building Management Systems.
- In this way, the FirePASS system will continuously produce a hypoxic environment between 15 and 15.5% oxygen, 24 hours a day, seven days a week. This means any damage inside the data centre is limited to the initial faulty equipment or event. Any consequential combustion that may have spread to other equipment, has been eliminated.
- Safe for people and safe for the environment
- FirePASS uses only ambient fresh air as its source to produce a precisely controlled, hypoxic atmosphere, that can be relied upon to stay within the design parameters. In the extremely unlikely event of equipment malfunction, warnings will be given. The great majority of people will not experience any adverse reaction or discomfort in a hypoxic environment at these design levels. It is considered that, if it would be safe for a person to travel on a commercial aircraft flight, this hypoxic environment will not pose any risk.

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## SECURITY & SURVEILLANCE

Modern high definition IP video surveillance systems generate massive amounts of critical, access-sensitive data. Capturing, protecting, accessing and mobilizing this data is paramount, and a very challenging task for traditional IT infrastructure.

Arxys has purpose-built networked storage solutions that deliver the performance, protection and resiliency that these hyper modern surveillance systems require. Our Surveillance DataServers empower you to ensure your client can capture and access hundreds of IP camera simultaneously with maximum throughput and z downtime.

The IP video server is the heart of any video surveillance project. It communicates directly with networks, monitors cameras, and every part in between. Choosing the best video server for your security system project is essential and can affect the number of cameras, resolution, FPS (frames per second), and motion-based recording.

Arxys | Shield solutions combine best in class leading edge advancements, on a foundation of tried and true solutions, to deliver the highest performing, most highly available video surveillance storage available. White box video servers and storage solutions - including DAS (NVR), SAN, IAS – are not designed for write-intensive 24/7 IP video lance workload





#### A camera for every scenario

A broad range of megapixel cameras gives you the most options to reduce inventory shrinkage, monitor employee procedures and keep customers safe. Whether it's a parking lot or the inside of a busy retail environment, our cameras can provide better coverage in greater detail, with fewer cameras than ever before.



#### H4 Mini Dome Camera Line



Ideal for high-detail coverage of hallways and entrances, with both indoor and outdoor options. Small Camera Footprint and Profile

- HDSM SmartCodec Technology
- LightCatcher™ Technology
- Wide Dynamic Range (WDR)
- Optional Adaptive IR





The H4 SL camera line combines exceptional image quality with an innovative and modular design that is easiest-to-install. Reduce your bandwidth and storage

requirements using our Idle Scene Mode and patented High Definition Stream Management (HDSM)™ technologies. The H4 SL camera is also video analytics-ready to support our patented analytics technology with a future firmware upgrade.



- Decreasing installation time by up to 50 percent.
- Available in bullet and dome formats, the H4 SL camera's modular design allows it to snap into the base of your choice.





#### H4 PTZ Camera Line



Track moving objects and zoom in on facial detail from over 900 ft away.

- Self-learning video analytics
- Up to 45x zoom capabilities
- High frame rate
- Lightcatcher™ technology
- Ultra-Wide Dynamic Range (WDR) technology
- Bandwidth management

High Definition Stream Management (HDSM)™ technology and Idle Scene Mode technology to deliver exceptional image detail with reduced bandwidth.

#### H4 PTZ Camera Line



HD NVR Premium provides high-performance and high-capacity recording. It's engineered for consistent reliability, availability and scalability to enterprise video management environments.

- Self-learning video analytics
- High video capacity and built-in management
- Scalable and reliable recording solution
- Easy setup and maintenance

#### HD Multisensor Camera



HD Multisensor Camera delivering superior image detail while offering a flexible, new approach to monitoring environments that require coverage of multiple areas.

- Superior image detail
- Flexible installation
- Remote zoom and focus
- Wide Dynamic Range (WDR)
- ONVIF compliant
- Increased frame rate

#### **HD Multisensor Camera**



Up to 29 MP resolution provides maximum coverage of parking lot areas to keep customer belongings safe and secure.

- 4K (8 MP), 4.5K (12 MP), 5K (16 MP), 6K (24 MP) and 7K (30 MP) resolutions
- Self-learning Analytics
- H.264 Compression
- Focus and Iris control of SLR lenses
- Increased framerate
- Flexible lens options
- Onboard storage

#### Fixed Dome Network Camera



- 2-Megapixel CMOS Sensor
- 30 fps @ 1920x1080
- Real-time H.264, MJPEG compression (Dual Codec)
- Removable IR-cut Filter for day & night function
- Built-in IR Illuminators, effective up to 15 meters
- Built-in 802.3af compliant PoE
- Build-in MicroSD/SDHC/SDXC card slot for on-board storage
- Supports ONVIF standard to simplify integration and enhance interoperability
- 3D Noise reduction

#### Speed Dome Network Camera



- 1080p Full HD SONY CMOS Sensor
- 30 fps @ 1080p Full HD/ 60 fps @ 720p HD and 20x Zoom Lens
- Removable IR-cut Filter for Day & Night Function
- 360 Continuous Pan and 220 Tilt
- Real-time H.264, MPEG-4 and MJPEG Compression (Triple Codec)
- WDR Pro for Unparalleled Visibility in High Contrast Environments
- Weather-proof IP66-rated and NEMA 4X Housing
- 0 0 -40 C~55 C Wide Temperature Range for Extreme Weather Conditions
- Audio Detection for Instant Alerts and Auto Tracking for Moving Objects
- Built-in 802.3 at Compliant PoE Plus and built-in On-board Storage
- 3D Privacy Masks for Additional Protection

#### **Bullet Network Camera**





- 2-Megapixel CMOS sensor
- 30 fps @ 1920x1080
- Removable IR-cut filter for day and night function
- Built-in IR Illuminators, effective up to 20 meters
- Real-time H.264 & MJPEG compression (Dual Codec)
- Weather-proof IP66-rated housing
- Mounting bracket with vable management for protected Installation
- Built-in 802.3af compliant PoE
- Built-in MicroSD/SDHC/SDXC Card Slot for On-board storage
- 3D noise reduction

#### 5 Megapixel Fisheye zNetwork Camera



- 5 Megapixel
- 1080p full HD
- 1.5 mm fisheye lens
- Day & night
- H.264, MPEG-4, MJPEG
- IK10 Vandal-proof and IP66 eeather-proof
- 802.3af PoE
- On-board storage
- Local or client dewarp





Organizations today face a myriad of security challenges at their facilities.

Managing the access of authorized personnel into a facility is a major concern. The primary challenge for many organizations is to secure their facility from unwanted personnel while also allowing a free flow of people who have a legitimate purpose in engaging with the organization.





#### Multi-factor PKI Authentication Solutions

- Enter buildings and restricted areas equipped with a broad selection of contactless, contact plus contactless and biometric readers
- Log in to computers and secure networks on site and remotely
- Securely access applications and data even in the cloud
- Digitally sign and encrypt documents and emails
- Perform multi-factor authentication to meet all necessary authentication modes and assurance levels specified in NIST SP 800-116 and the TWIC Reader Specification



#### Multi-factor Authentication

HID Global's multi-factor authentication solutions are providing easy-to-use, hard-to-lose security for businesses, governments, and organizations around the world. See why they trust us with their trusted identities.

- Mobile authentication
- Authenctication server
- OTP tokens
- Smart cards



#### Visitor Management System

Automated visitor management systems lend a more professional appearance to check in systems, enhance security and meet compliance mandates for the collection and auditing of visitor data.

- Enhance the professionalism of the enrollment process and visitor check-in with a digital check in system
- Provide additional safeguards by screening against felony and sex offender watch lists if applicable
- Improve security by identifying who is in a facility quickly and accurately, especially in emergency situations
- Conduct analysis/reporting on visitor data, quickly and easily via visitor management software



#### Bio-metric Authentication

Biometric authentication solutions from HID Global bring multispectral imaging technology to any identity application where knowing "who" matters. Biometric authentication offers this assurance with secure, convenient and reliable solutions for reading fingerprints.

- Enhanced with security features including data encryption and tamper detection/response
- Multispectral fingerprint plus contactless card authentication on a Single device
- Superior performance and liveness detection with enhanced accuracy and image capture speed
- Compact, durable module for integration, with multispectral usability and liveness detection





Video analytics technology is a sophisticated search engine for video data. It sorts through hours of footage with ease, to quickly locate a specific person of interest across an entire site.

This technology can dramatically improve incident response time and enhance forensic investigations by allowing operators to build robust video evidence and create a powerful narrative of events.



#### Key Features

- Quickly search for a person of interest
- Refine searches based on time and camera location
- Playback, bookmark and export tools
- Self-learning video analytics-enabled
- Integrated with Avigilon Control Center (ACC) software

#### Benefits

- Enables operators to quickly comb through hours of recorded footage, efficiently grouping video data to help track an individual's route, identify a previous and last-known location and assist investigations.
- Accurately provides results relevant to the time and place of an event.
- Allows the flexibility to simultaneously compile a comprehensive set of video evidence from multiple video sources.
- Works with Avigilon video analytics cameras to generate, record and classify video data for effective searches.
- Provides advanced video search capabilities to enhance the user experience of the complete Avigilon solution.

