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BioStar | IP Access Control Management System

BioStar is a comprehensive access control management software featuring efficient TCP/IP based system architecture with intelligent IP readers. It supports wide choice of third-party devices and integration with other business systems which makes it the best solution in cost-reduction and flexibility in design.

BioStar Standard | Integrated IP access control management software

BioStar SE offers powerful and comprehensive access control functionalities for large-sized organizations. SE version controls up to 512 access control device with IP camera/NVR integration, anti-passback, muster zone, e-mail notification and visual map features.

BioStar Basic | Essential IP access control management software for SME

BioStar Basic is ideal for small to medium sized enterprises. The system covers up to 20 devices and supports integration with various database systems, event monitoring, T&A management and reporting features.

BioStar Lite | Embedded web server

BioStar Lite is an entry level, web-based access control management software supporting up to 10 devices with one door anti-pass back. Simple user interface and synchronization with sub-devices makes system operation easier than ever.

BioStar VideoPhone | Video Intercom software

BioStar VideoPhone is an IP based video intercom software replacing an analogue video phone. Incorporating with Suprema readers such as D-Station and BioStation T2, the application will allow the operator to see who is at the door and grant access, if approved.

Advantages of IP Access Control System

- Lower per-door-cost
- Elimination of control panels
- Lower installation cost
- Less wiring
- Scalability: No needed capacity of control panels
- Stability: No single point of failure affecting whole systems
- Leverage: Utilizing existing network infrastructure
- Power over Ethernet (PoE): Extra efficiency in powering locks and minor devices.

System Configuration

Specification

<table>
<thead>
<tr>
<th></th>
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</tr>
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<tr>
<td>License</td>
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<tr>
<td>System Architecture</td>
<td>Embedded Web</td>
<td>Server/Client</td>
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<td>MSDE, MSSQL, MySQL, Oracle</td>
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<td>Time Schedule</td>
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<tr>
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<td>128</td>
<td>128</td>
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<tr>
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<td>Yes</td>
<td>Yes</td>
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<tr>
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<td></td>
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<td>Work time Calculation</td>
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<tr>
<td>Report</td>
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<td>Yes</td>
</tr>
<tr>
<td>In/Out board</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
IP based Distributed Access Control

The BioStar system goes a step beyond conventional access control systems, by combining unique biometric identification with configurable access card capabilities. With its intuitive easy-to-use GUI and wizard type settings, BioStar provides comprehensive access control security for enterprise-level systems to small-to-medium sized systems.

User Management
- Supports 4-level departments
- User search interface
- Multi-level administrator settings
- Customized authentication mode by user
- Records user card issuance log

Access Control
- Controls up to 128 access groups
- Controls up to 128 time schedules
- 32 holidays configurable

Door Management
- 4-Level door groups
- Controls up to 512 doors
- Set alarm feature by selected doors

Visual Map Interface
- Graphical presentation of system
- Change device/door settings from the map
- Real-time monitoring on the map
- Event notifications in graphic icons
- Monitoring interface for doors and zones

Device Management
- Configure access control devices & Secure I/O
- RS485 supports up to 8 devices & 8 Secure I/O’s
- Server matching
- Real-time monitoring of device connection
- Wizard-type device search interface
- Easy firmware upgrade and reset

Lift Management
- Up to 120 floors control
- Configuration by each floor and user
- Dedicated Lift I/O module support

Zone Management
- Fire alarm, alarm, anti-passback, entrance limit and access zone
- Controls up to 32-device zones
- Alarm setting for selected zones
- View event log for selected zones
- Interlock zone

IP Camera & NVR Integration
- Real-time video monitoring
- Still image capturing upon preset events
- Supports event configuration with nominated access terminals
- Control of PTZ cameras
- Video log searching through NVR

Enterprise-level Time Attendance

BioStar includes time and attendance (T&A) features to allow administrators to define time categories, shifts, daily schedules, and holiday settings. The T&A capabilities of BioStar can be used to enforce compliance with check-in and check-out procedures, restrict access to off-duty personnel, and report attendance data. BioStar allows administrators to customize T&A functions and generate various kinds of attendance reports.

Work Hour Calculation
- User defined time category configuration
- Daily working schedule configuration
- Overtime calculation
- Rounding
- Grace

Shift Management
- Daily and Weekly cycle scheduling
- Multiple shift rules by a user

Reporting
- Daily / Individual summary and report
- Report by TA result (such as absence or late)
- Work hour displayed by time category
- Export in CSV and PDF

Holiday and leave Management
- Holiday schedule configurable by group
- Leave schedule configurable by user

In/Out Board
- Real-time monitoring by T&A event
BioStar Lite | Embedded Web Server

BioStar Lite is an embedded web server software that is pre-loaded in select Suprema IP access control devices. BioStar Lite allows the administrator to manage users and devices using a web browser from any PC connected to a IP network. The software provides many convenient features including device configuration, user management, door/zone settings and live monitoring.

Features
Convenient management of the system within a web-based application.
Supports the network control of up to 10 devices. (1 Main, 9 Sub-devices)
No additional software installation required.
Remote door control of each device.
Easy anti-passback system configurations.
Synchronized configurations.

User Interface

User Tab
View and edit user information
Log Tab
View and monitor logs and events
Device Tab
Edit/Configure device Settings
Access Tab
Edit/Configure access groups & schedules
Data Tab
Backup user data and configurations
Device List
View connected devices and their status
Device Management
Add/Control Devices
Door List
View Users and linked devices
Door Management
Add/Modify/Configure door settings

LAN Configuration

LAN
TCP/IP
Web Client

TCP/IP or RS485
Supports up to 9 Sub-devices

BioStar VideoPhone | Interphone Application

BioStar VideoPhone is a PC application which allows the operator to use the PC and the linked device as an interphone system. The application not only allows the operator to see who is at the entry point, but also provides the ability to open the door. The BioStar VideoPhone can support up to 8 different extensions with in the “multi-operator” mode.

Features
Intuitive system management for a quick and easy configuration.
Simple user friendly user interface for any style of user.
Two-way communication with the linked device.
Access control of the linked device.

User Interface

Login
- User/administrator login
- Login with extension/IP

Operator Mode
- Remote door control (open)
- Mic/speaker volume control

Configuration
- Add/delete/edit devices
- Extensions and password settings

Intercom Process
Press [Call] on the device
Press [Call] on the device — Enter an extension — Press [OK]

Single Operator Mode

LAN
TCP/IP

BioStar VideoPhone Server

Multi Operator Mode (Extension Mode)

LAN
TCP/IP

BioStar VideoPhone Server

Operator

Intercom Process
Press [Call] on the device
**World’s Fastest Matching Speed**
FaceStation provides high performance face recognition by combining Suprema’s proprietary algorithm with its powerful dual-CPU matching engine. It delivers extremely fast matching speed up to 1:1,000 matches per second with exceptionally low error rate.

**Adaptive IR Illumination Technology**
Incorporating NIR near-infrared light control and advanced image analysis, FaceStation’s patented ‘Adaptive IR Illumination’ technology prevents unexpected image distortion such as saturation.

**Live Face Detection Technology**
FaceStation’s ‘Live Face Detection’ technology prevents possible fraud attempts by imitated face images. The technology is based on advanced analysis algorithm to distinguish unique characteristics in texture from human faces to various forms of counterfeit face images.

**4.3” Touchscreen LCD & Intuitive GUI**
The ultra wide 4.3” WVGA touchscreen LCD provides the FaceStation with a robust heavy-duty user interface designed not only for extreme usage, but also for the precision and accuracy required in biometric access control and high-traffic time and attendance systems. The user friendly and intuitive GUI provides users with a quick and easy access to all the features and functions available within the unit.

**Distributed IP Access Control System**
FaceStation provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As FaceStation also has networking capabilities, it can become part of a larger network via one of its various interfaces.

**Video Phone Interface**
FaceStation’s built-in camera, microphone, and speaker provides the device the ability to be integrated with conventional analogue based videophones or IP based videophones to create a simple interphone system. The BioStar VideoPhone software can be used with the device to create a very useful single/multi-operator interphone system.

**Versatile Interfaces - Extra Flexibility**
FaceStation comes with not only the IP interfaces (TCP/IP, WiFi), but also the more traditional interfaces (RS485, RS232, Wiegand, USB) to provide higher flexibility and multiple installation options for different environments. FaceStation also comes with 4 internal inputs and 2 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.

**PoE (Power over Ethernet)**
FaceStation is equipped with a PoE module allowing the device to be powered and controlled through just one Ethernet cable. PoE system allows for a very quick and easy installation.

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**FaceStation | Smart Face Recognition Terminal**

**Next Generation Face Recognition Technology**
The new FaceStation is a dedicated face recognition terminal. It is a perfect combination of beauty and performance. Using Suprema’s proprietary algorithms combined with state-of-the-art hardware, FaceStation provides near real-time template matching results. FaceStation comes with a wide array of features & functions, which can be accessed through an intuitive user friendly GUI. It can be used in both standalone or network environments and is the ultimate in facial recognition technology.

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Max Users: 10,000  
Log Capacity: 1,000,000  
Image Log Capacity: 10,000  
CPU: 1.1GHz DSP, 667MHz RISC  
Memory: 4GB Flash + 512MB RAM  
RF Options: 13.56MHz Mifare  
Interfaces: TCP/IP, RS485, RS232, USB, Wiegand, WiFi  
Power: 12VDC, PoE (Power over Ethernet)
BioStation T2 | High Performance Fingerprint IP Terminal

Smarter Technology, Ultra Performance

The new BioStation T2 blends loads of innovative features with Suprema’s sophisticated fingerprint recognition technology. Its powerful dual-CPU engine ensures seamless operation and internal camera captures face image (logo snapshot) for extra level of security. Sealed in a flat-panel front glass and refined dimensions, it provides intuitive and aesthetic GUI on easy-to-use touchscreen LCD. In addition to its extensive communication interfaces, BioStation T2 also supports embedded web server which provides convenience system management over its IP-based access control system.

Powerful Dual-CPU Architecture

Its powerful dual-CPU architecture gives BioStation T2 the ability to deliver extremely fast matching speeds and near live responses while still providing an exceptionally low error rate. A powerful 533MHz DSP is dedicated to handling fingerprint operations and a 667MHz RISC processor ensures uninterrupted device operations.

5.0” Touchscreen LCD & Intuitive GUI

The ultra wide 5.0” WVGA touchscreen LCD provides BioStation T2 with a robust and user-friendly design. It uses its megapixel camera to first detect if a face is present and then stores the image as a facial log for verification. Proximity sensors and IR LED are used to ensure the image quality of the faces.

Face Detection Technology

BioStation T2 contains a special “Face Detection Technology” for an added sense of security. It uses its megapixel camera to first detect if a face is present and then stores the image as a facial log for verification. Proximity sensors and IR LED are used to ensure the image quality of the faces.

Distributed IP Access Control System

BioStation T2 provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As BioStation T2 also has networking capabilities, it can become part of a larger network via one of its various interfaces.

Embedded Web Server

BioStation T2 is preloaded with the BioStar Lite web server program. BioStar Lite is a simple & convenient tool used to configure, monitor and control up to 10 Suprema IP access control products, all without the need to install any software on a PC. It is the perfect tool for small to medium sized applications.

Video Phone Interface

D-Station’s built-in camera, microphone, and speaker provides the device the ability to be integrated with conventional analogue based videophones to create a simple interphone system. BioStar VideoPhone software is to be used for single/multi-operator interphone system.

Versatile Interfaces - Extra Flexibility (WiFi Option)

BioStation T2 comes with not only the IP interfaces (TCP/IP, WiFi), but also the more traditional interfaces (RS485, RS232, Wiegand, USB) to provide higher flexibility and multiple installation options for different environments. BioStation T2 also comes with 2 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.

Suprema Algorithm

Suprema’s world renowned fingerprint algorithm lies in the heart of every BioStation T2. The highly sophisticated algorithm has been recognized by both FVC and NIST MINEX and was proven to be one of the fastest and most accurate algorithms in the world.
D-Station
Fusion Biometric IP Access Terminal

Evolution of Biometrics

The Suprema D-Station represents a great leap forward in biometric technology. The perfect blend of face recognition with Dual-finger Technology based on sophisticated ‘Fusion Biometrics’ algorithm provides incredible accuracy and speed that no other biometric devices have ever achieved. Its powerful Tri-CPU engine ensures seamless operation of loads innovative features, and the ultra-wide touch screen LCD with intuitive GUI makes it extremely easy-to-use for both system administrators and everyday users. D-Station is not just the best of the breed, it’s a whole new generation of biometric security.

Multi-Biometric Fusion Technology
Suprema’s patented “Multi-Biometric Fusion Technology” takes the data gathered from multiple biometrics sensors and applies adaptive fusion algorithms to provide a level of performance and scalability that goes well beyond conventional fingerprint identification methods.

Powerful Tri-CPU Parallel Processing Architecture
Its unique Tri-CPU parallel processing architecture makes D-Station one of the most powerful biometric terminals in the market today. Two powerful 533MHz DSPs and a 667MHz RISC ensures uninterrupted device operations and unmatched biometric operational performance.

5.0” Touchscreen LCD & Intuitive GUI
The ultra wide 5.0” WVGA touchscreen LCD provides BioStation T2 with a robust heavy-duty user interface designed for extreme usage and the precision and accuracy required in biometric access control and high-traffic time and attendance systems. Its intuitive and user friendly GUI provides a quick and easy access to all features and functions.

Distributed IP Access Control System
D-Station provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will allow for a simple localized setup and improve system stability by eliminating a single point of failure that can affect the entire system.

Video Phone Interface
D-Station’s built-in camera, microphone, and speaker provides the device the ability to be integrated with conventional analogue based videophones or IP based videophones to create a simple interphone system. BioStar VideoPhone software is to support single/multi-operator interphone system.

Versatile Interfaces - Extra Flexibility (WiFi Option)
D-Station comes with IP interfaces (TCP/IP, WiFi, PoE) and conventional interfaces (RS485, RS232, Wiegand, USB) to provide higher flexibility and multiple installation options for different environments. D-Station also comes with 4 internal inputs and 2 internal relay output to control peripheral devices.

Unique Features and Extra Functions
- Accelerometer: Used to detect shock caused by tampering or vandalism.
- ISO14443 Type A & Type B Support: Provides greater versatility.
- SAM(SIM) Card Support: Used for enhanced security applications.
- SD Memory Card Slot: Used to extend the memory capacity of the device.
- RS232 interface: Used for GPRS/GSM based mobile connections and serial printers.

10,000 matches in 1 second [1:N]
User Capacity : 200,000
Log Capacity : 1,000,000(event), 5,000(image)
Dual-finger technology
Fusion face recognition
5.0” touch screen LCD
1.3M pixel camera
Power over Ethernet
Video phone
WiFi LAN, TCP/IP, RS485/232/H, RS232, Wiegand
BioStation | Full-featured Fingerprint IP Terminal

The World's Best Selling Fingerprint Terminal

BioStation is a full-featured high-end fingerprint terminal that combines the advantages of a TCP/IP network with Suprema's renowned biometric technology to provide the optimal solution for both access control and time attendance. BioStation comes with a massive 1GB memory that provides the storage of up to 200,000 users and a staggering 1 million event logs. Its powerful processing engine and algorithms provide uncompromising high-level biometric security with flexibility and ease of use.

Enhanced Dual-CPU Architecture
BioStation is the first of the Suprema's product lines to use a dual-CPU architecture. Its dual-CPU gives BioStation the ability to deliver fast matching speeds and rapid responses while providing an exceptionally low error rate. A powerful 533MHz DSP is dedicated to handling fingerprint operations and a 200MHz RISC processor ensures uninterrupted device operations.

2.5" Color LCD & Intuitive GUI
The 2.5" QVGA color LCD gives BioStation an user friendly and intuitive GUI that provides users with a quick and easy access to all the features and functions available within the unit.

Versatile Interfaces - Extra Flexibility (WiFi Option)
BioStation comes with not only the IP interfaces (TCP/IP, WiFi), but also the more traditional interfaces (RS485, RS232, Wiegand, USB) to provide higher flexibility and multiple installation options for different environments. BioStation also comes with 4 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.

Suprema Algorithm
Suprema's world renowned fingerprint algorithm lies in the heart of every BioStation. The highly sophisticated algorithm has been recognized by both NIST MINEX and was proven to be one of the fastest and most accurate algorithms in the world.

Distributed IP Access Control System
BioStation provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As BioStation also has networking capabilities, it can become part of a larger network via one of its various interfaces.

3,000 matches in 1 second (1:N)
User capacity : 200,000
Log capacity : 1,000,000
Dual CPU : 533DSP + 200MHz RISC
Fast ID Matching™ technology
2.5" QVGA LCD
WiFi LAN, TCP/IP, RS485, RS232, Wiegand
USB device & host interfaces
EM, HID Prox., Mifare options
BioLite | Outdoor Fingerprint IP Terminal

Durable Structure, All-round Excellence

Suprema BioLite series are the World’s smallest IP fingerprint terminal with access control & time attendance features. With its rugged IP65-rated waterproof structure, BioLite offers exceptional durability in extreme conditions and is ideal for both indoor and outdoor environment. BioLite also packs renowned Suprema’s biometric technology with simplicity and exceptional value for your budget. All the advanced features resides in a compact and slim design and its user-friendly interfaces allow ease of use and maintenance.

Powerful 533MHz DSP

Its powerful 533MHz DSP gives BioLite Net/Solo the ability to deliver fast matching speeds and rapid responses while providing an exceptionally low error rate. This powerful processor is capable of handling the large amounts of data required for fast and accurate fingerprint matching as well as ensuring uninterrupted device operations.

Distributed IP Access Control System

BioLite Net/Solo provide both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As BioLite Net/Solo also have networking capabilities, they can become part of a larger network via one of its various interfaces.

IP65-rated Waterproof Structure

BioLite Net/Solo have been completely sealed against invasive moisture, dust and even liquids. Featuring their superb IP65-rated protection, meticulous sealing, combined with extra protective engineering, they ensure faultless operation under any outdoor installation.

2,000 matches in 1 second (1:N)
User capacity: 5,000(Net), 200(Solo)
Log capacity: 50,000(Net), 5,000(Solo)
533MHz DSP
IP65 waterproof
Graphic LCD with backlight
Operating Temp.: -20°C ~ 50°C
TCP/IP, RS485, Wiegand
EM, Mifare options

Suprema’s world renowned fingerprint algorithm lies in the heart of every BioLite Net/Solo. The highly sophisticated algorithm has been recognized by both FVC and NIST MINEX and was proven to be one of the fastest and most accurate algorithms in the world.

Versatile Interfaces - Extra Flexibility

BioLite Net come with not only a TCP/IP interface, but also the more traditional interfaces (RS485, Wiegand) to provide higher flexibility and multiple installation options for different environments. BioLite Net/Solo also come with 2 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Securle I/O accessory device.
BioEntry | Fingerprint IP Reader/Controller

Designed for Simplicity, Superb Engineering

The BioEntry Plus/W exquisitely blends the benefits of a next generation distributed IP system with the high level security provided by biometrics. Engineered by the World’s leading biometric experts, BioEntry Series offers unrivaled quality with exceptional engineering. BioEntry W takes the series one step further by encasing a world renowned product into an IP65 vandal resistance housing and adding PoE (Power over Ethernet) capabilities. It is truly the ultimate for outdoor biometric access control systems.

Powerful 533MHz DSP
Its powerful 533MHz DSP gives BioEntry Plus/W the ability to deliver fast matching speeds and rapid responses while providing an exceptionally low error rate. This powerful processor is capable of handling the large amounts of data required for fast and accurate fingerprint matching as well as ensuring uninterrupted device operations.

Distributed IP Access Control System
BioEntry Plus/W provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As BioEntry Plus/W also have networking capabilities, they can become part of a larger network via one of its various interfaces.

Versatile Interfaces - Extra Flexibility
BioEntry Plus/W come with not only a TCP/IP interface, but also the more traditional interfaces (RS485, Wiegand) to provide higher flexibility and multiple installation options for different environments. BioEntry Plus/W also come with 2 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.

IP65-rated Waterproof Structure [BioEntry W]
BioEntry W has been completely sealed against invasive moisture, dust and even liquids. Featuring its superb IP65-rated protection, meticulous sealing, combined with extra protective engineering, it ensures faultless operation under any outdoor installation.

Vandal Resistant Housing [BioEntry W]
The BioEntry W is the first of Suprema’s product line to come with a robust vandal resistant housing. Using a special AVS plastics the BioEntry Ws is able to withstand a high level of impact making it the ideal for outdoor applications.

PoE (Power over Ethernet) [BioEntry W]
BioEntry W is equipped with a PoE module allowing the device to be powered and controlled through just one Ethernet cable. A PoE system allows for a very quick and easy installation.

Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>BioEntry W</th>
<th>BioEntry Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>Optical</td>
<td>Optical/ Capacitive</td>
</tr>
<tr>
<td>PoE</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>IP Rate</td>
<td>IP65 (Outdoor)</td>
<td>No</td>
</tr>
<tr>
<td>Vandal Resistant</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Dimension</td>
<td>50 x 172 x 42 mm (W/H/D)</td>
<td>50 x 160 x 37 mm (W/H/D)</td>
</tr>
<tr>
<td>RF Card Option</td>
<td>13.56MHz Mifare/DesFire</td>
<td>13MHz EM, HID Prox. 13.56MHz Mifare/DesFire 13MHz iClass/Felica</td>
</tr>
</tbody>
</table>
The new X-Station from Suprema is the world’s first IP access control terminal with touchscreen LCD and face detection technology. Its 3.5 inch touchscreen LCD and intuitive GUI provide comprehensive access control and time attendance functions. Featuring face detection technology with a megapixel camera, X-Station can record up to 5,000 face image logs for extra level of security and attendance records. The built-in camera detects and captures face images of each entry to prevent unauthorized access and payroll fraud. Suprema X-Station is set to change the way we use access reader.

Max user: 200,000
Image Log capacity: 1,000,000
Face log capacity: 5,000
CPU: 667 MHz RISC
LCD: 3.5” touch screen
Memory: 1GB flash + 128MB
RF Options: 13.56 MHz Mifare, 125KHz EM
Interfaces: TCP/IP, 2ch RS485, Wiegand I/O

Powerful 677MHz RISC Processor
Its powerful 677MHz RISC processor gives X-Station the ability to deliver fast matching speeds and rapid responses while ensuring uninterrupted device operations.

3.5” Touchscreen LCD & Intuitive GUI
The ultra wide 3.5” QVGA touchscreen LCD provides the X-Station with a robust heavy-duty user interface designed not only for extreme usage, but also for the precision and accuracy required in access control and high-traffic time and attendance systems. The user friendly and intuitive GUI provides users with a quick and easy access to all the features and functions available within the unit.

Face Detection Technology
X-Station provides both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As X-Station also has networking capabilities, it can become part of a larger network via one of its various interfaces.

Video Phone Interface
X-Station has built-in camera and speaker and it can be used with BioStar Videophone software to create a very useful single/multi-operator interphone system.

Versatile Interfaces
X-Station comes with not only the TCP/IP interface, but also the more traditional interfaces (RS485, Wiegand) to provide higher flexibility and multiple installation options for different environments. X-Station also comes with 2 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.
The Xpass/Xpass Slim provides all the leading-edge features of high-end IP access control products packed into an ultra compact design. These sleek devices are encased in an IP65 waterproof structure and offer PoE (Power over Ethernet) capabilities making it the ideal for outdoor IP RF ID access control solutions.

The Xpass Slim, designed to fit gang boxes, takes the series to the next level by incorporating a multi-smart card reading technology with gang box mounting options.

Powerful 533MHz DSP
Its powerful 533MHz DSP gives Xpass/Xpass Slim the ability to deliver fast matching speeds and rapid responses while providing an exceptionally low error rate. This powerful processor is capable of handling the large amounts of data required for fast and accurate fingerprint matching as well as ensuring uninterrupted device operations.

Distributed IP Access Control System
Xpass/Xpass Slim provide both reader and controller functionalities in one device. One device can scan ID data, manage users and control access from the edge of a system. This will not only allow for a simple localized setup, but it will also improve system stability by eliminating a single point of failure that can affect the entire system. As Xpass/Xpass Slim also have networking capabilities, they can become part of a larger network via one of its various interfaces.

IP65-rated Waterproof Structure
Xpass/Xpass Slim have been completely sealed against invasive moisture, dust and even liquids. Featuring their superb IP65-rated protection, meticulous sealing, combined with extra protective engineering, they ensure faultless operation under any outdoor installation.

Power of Ethernet (PoE)
Xpass/Xpass Slim are equipped with a PoE module allowing each device to be powered and controlled through just one Ethernet cable. A PoE system allows for a very quick and easy installation.

Multi-Smartcard Reader [Xpass Slim]
The Xpass Slim is the first of Suprema's product lines to boast a multi-card type reader. With this new technology a single reader is able to read Mifare CSN, inside CSN, Felica IDM, ISO14443A/B CSN, or ISO15693 CSN information.

Versatile Interfaces - Extra Flexibility
Xpass/Xpass Slim come with not only the TCP/IP interface, but also the more traditional interfaces [RS485, Wiegand] to provide higher flexibility and multiple installation options for different environments. Xpass/Xpass Slim also come with 2 internal inputs and 1 internal relay output to control peripheral devices. The I/O ports can also be extended using the Secure I/O accessory device.

Comparison

<table>
<thead>
<tr>
<th>Xpass Slim</th>
<th>Xpass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Type</td>
<td>135MHz Mifare, CSN, Inside CSN, Felica, EM, HID Prox.</td>
</tr>
<tr>
<td>Environment</td>
<td>Outdoor (IP65)</td>
</tr>
<tr>
<td>PoE</td>
<td>Yes</td>
</tr>
<tr>
<td>Dimensions</td>
<td>85 x 120 x 27 mm (W/H/D)</td>
</tr>
</tbody>
</table>

Max Users: 40,000
Log Capacity: 10,000
RF Options: EM, HID Prox., Mifare [Xpass] | Multi smart cards [Xpass Slim]
Interfaces: TCP/IP, RS485, Wiegand
Power: 12VDC | PoE (Power over Ethernet) [Xpass]
Secure I/O

Secure I/O is a separate controller for door control and I/O expansion. With encrypted communication, it provides secure and cost effective access control system.

- CPU : 16 MHz, 8bit Microprocessor
- Input : 4-Ch
- Output : Form C Relay 2-Ch
- Host Communication : RS-485
- Display : 10 Status LED
- Power : 12 Vdc @<300mA

Configuration

Lift I/O

The Lift I/O is a input/output module tailored to control the floor access within an elevator. It uses the RS-485 port to provide secure communication with Suprema’s readers and can control access of up to 12 floors. Each reader can connect with up to 10 Lift I/Os, which allows for the potential control of a staggering 120 floors.

- CPU : 16MHz, 8bit Microprocessor
- Input : 12-Ch
- Output : Form C Relay 12-Ch
- Host Communication : RS-485
- Display : 31 Status LEDs
- Power : 12VDC @500mA
- Scalability : Up to 10 per Host device

Configuration

Demonstration Kits

Demonstration Kits are for use in showrooms, training and supporting field sales. The kit demonstrates simple secure connection of IP access control system and it is consists of an IP reader/controller unit, an external relay unit (Secure I/O) a lock and an exit switch. It also provides TCP/IP port connecting to the host PC or network with other demo-kits. Demonstration Kits come with a solid aluminum carrying case.

- Demonstration Kits are available for all models of Suprema IP access control range.

Components
- 12vac power adapter
- Aluminum carrying case
- Secure I/O (external relay unit)
- Deadbolt lock
- RTE switch
- Power/network ports

Starter Kits

Starter Kits packs essential components for dealers/distributors to effectively demonstrate and evaluate Suprema IP access control system.

Components
- IP access reader/controller unit
- Power adapter
- BioStar Basic
- Technical Documents
- BioStar SDK
- Secure I/O (selected models only)
- Plastic Stand
- Command cards (selected models only)

* Starter Kits are available for all models of Suprema IP access control range.
<table>
<thead>
<tr>
<th>Feature</th>
<th>BioEntry W</th>
<th>BioEntry Plus</th>
<th>BioLite Net</th>
<th>BioLite Solo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Application</td>
<td>Access Control</td>
<td>Access Control</td>
<td>Time Attendance</td>
<td>Access Control</td>
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<td>Authentication Modes</td>
<td>Finger/Card</td>
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<td>Finger/Card/PIN</td>
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<td>Optical</td>
<td>Optical</td>
<td>Optical</td>
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<tr>
<td>Face Detection Camera</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
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</table>

<table>
<thead>
<tr>
<th>Capacity</th>
<th>BioEntry W</th>
<th>BioEntry Plus</th>
<th>BioLite Net</th>
<th>BioLite Solo</th>
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<td>Yes</td>
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<td>RS232</td>
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<td>-</td>
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<tr>
<td>Wiigand</td>
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<td>1</td>
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<tr>
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<td>2.5&quot; WVGA touch screen</td>
<td>2.5&quot; WVGA touch screen</td>
<td>2.5&quot; WVGA touch screen</td>
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<td>Multi-color LED</td>
<td>Multi-color LED</td>
<td>Multi-color LED</td>
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<td>Sound Indicator</td>
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<td>16-bit Hi-Fi sound</td>
<td>16-bit Hi-Fi sound</td>
<td>16-bit Hi-Fi sound</td>
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<tr>
<td>Voice Instruction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Operating Temperature</td>
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<td>-20°C ~ 50°C</td>
<td>-20°C ~ 50°C</td>
<td>-20°C ~ 50°C</td>
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<tr>
<td>Tamper</td>
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<td>Switch</td>
<td>Switch</td>
<td>-</td>
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<tr>
<td>Poe</td>
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<td>Feature</td>
<td>X-Station</td>
<td>Xpass</td>
<td>Xpass Slim</td>
<td></td>
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<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------</td>
<td></td>
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<tr>
<td><strong>Product</strong></td>
<td></td>
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<td></td>
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<tr>
<td><strong>Application</strong></td>
<td>Time Attendance, Access Control</td>
<td>Access Control</td>
<td>Access Control</td>
<td></td>
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<td><strong>Face Detection Camera</strong></td>
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<td>Yes</td>
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<td><strong>RS232</strong></td>
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<td>In or Out (Switchable)</td>
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<td><strong>USB</strong></td>
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<td><strong>SD Card Slot</strong></td>
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<td><strong>Sound Indication</strong></td>
<td>16-bit Hi-Fi sound</td>
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<td>Multi-tone buzzer</td>
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<tr>
<td><strong>Voice Instruction</strong></td>
<td>16-bit Hi-Fi sound</td>
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<td>-20°C ~ 50°C</td>
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<td><strong>Tamper</strong></td>
<td>Switch</td>
<td>Switch</td>
<td>Switch</td>
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<td><strong>PoE</strong></td>
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<td>12vDC</td>
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<td><strong>Mount type</strong></td>
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<td>Mullion or any plat surface</td>
<td>US/EU/Asia gang box, flush box or any plat surface</td>
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<tr>
<td><strong>Certifications</strong></td>
<td>CE, FCC, KCC, BSMI</td>
<td>CE, FCC, KCC, BSMI, IP65</td>
<td>CE, FCC, KCC, BSMI, IP65</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>79 x 125 x 27</td>
<td>120 x 65 x 27</td>
<td>86 x 120 x 11.4</td>
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</tbody>
</table>

**About SUPREMA**

Leader in Biometrics & IP Access Control
Smarter technology that exceeds customers’ expectation
Quality and design that leads the industry trend
It’s what’s behind every Suprema products

At Suprema
Our devoted employees bring together diverse ideas with simple goal
Delivering greater value to customers business
With Suprema, the technology becomes your success
Company at a Glance

Headquarters: Gyeonggi-do, South Korea
Foundation: May 4, 2000
Business Area:
- Biometric/RFID access control system
- Fingerprint security solution
- Live scanning system
- Electronic passport solution

Global Business
- 110 countries worldwide
- Over 910 customers

Revenue:
- 2011: KRW 41.6 billion (USD 37 million)
- 2012: KRW 212 billion (USD 188 million)

Average Growth Rate: 52% (2006 ~ 2011)

Listed company in South Korea’s stock exchange (KOSDAQ)

Headquarter
Foundation
Business Area
Global Business
Revenue
Market Cap.
Growth
Financial Status

Our Advantages
- World’s best performing fingerprint algorithm
- Industry-leading international awards and certifications
- Manufactured by high quality IT production facilities in South Korea
- Made from best quality components and materials
- Global partner programs for training, technical supports & upgrades

Business Growth
- Revenue growth rate (CAGR) of 52% during 2006 ~ 2011
- Launched the first biometric IPO in Korea (Jul 2008)
- 57% market share in the domestic market
- Named to Deloitte’s Technology Fast 500 Asia Pacific in 2008 & 2009
- Shipped over 1,000,000 fingerprint products worldwide

Awards & Certifications
- A&S ‘World’s Top 50 Security Company’ in 2012
- Frost & Sullivan’s Biometrics Company of the Year 2009
- Top Prize at Detektor International Award 2009 and 2010
- Top result in NIST MINEX tests (2008)
- FBI certification for live-scanners
- UL294 certification for access control product
- ISO 9001/14001 Qualification

Project References

Government
- Ministry of Justice, Kuwait
- Ministry of Education, Mexico
- Ministry of Finance, Georgia
- Ministry of Education, Saudi Arabia

Police & Law Enforcement
- Policía Nacional de Colombia, Colombia
- National Police, Iran
- Supreme Prosecutors’ Office, South Korea
- The Juvenile Protection Education Institution, South Korea

Commercial
- Caixa BI-Banco de Investimento, Portugal (Banking)
- Grupo Kolporter, Poland (Media)
- Toshiba Information Equipment, Philippines (IT)
- British American Tobacco, Turkey (Manufacturing)
- Cuatrecasas Goncalves Pereira, Spain (Law Firm)

Hospitality & Tourism
- Burger King, Turkey
- Pamplona Hotel, Spain
- Kangwon Land Casino, South Korea

Others
- UNICEF, Denmark (NGO)
- Karachi International Airport, Pakistan (Transport)
- De Hoop ggz, Netherlands (Healthcare)

BUSINESS HIGHLIGHTS

Revenue growth rate (CAGR) of 52% during 2006 ~ 2011
Launched the first biometric IPO in Korea (Jul 2008)
57% market share in the domestic market
Named to Deloitte’s Technology Fast 500 Asia Pacific in 2008 & 2009
Shipped over 1,000,000 fingerprint products worldwide
Global Sales
Suprema has over 910 respected customers from 110 countries around the world.

Market Penetration
(NumberOfCountries)

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<thead>
<tr>
<th></th>
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<td>110</td>
<td>105</td>
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Number of Customers

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<td>850</td>
<td>620</td>
<td>543</td>
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