

# suprema

SECURITY & BIOMETRICS



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To become a leading provider of  
Access Control Solutions with  
innovative products and services





Established in 2000, Suprema Inc. is a global leader in AI-based security solutions. Over the past two decades, Suprema has demonstrated its expertise and technical superiority in AI security and biometric authentication. Suprema has led groundbreaking innovations in the industry, introducing an integrated security platform, deep-learning based AI solutions, biometric access control systems, cloud solutions, mobile access solutions, and embedded fingerprint modules.

Suprema serves diverse clients across government organizations, banks, hospitals, schools, manufacturing factories, and construction sectors. From startups, mid-sized to enterprise-level businesses, Suprema offers customized solutions and services to meet varying security needs.

With a presence in over 140 countries, Suprema has established itself as a premium global brand. Suprema is recognized among the world's top 50 security manufacturers and holds the top market share in biometric access control across Europe, Middle East, and Africa region.



Year Established

**2000**



Security Manufacturer

**Top 50**

(A&S Magazine, 2011-2024,  
14 years in a row)



EMEA Market Share

**No.1**

in Biometric Access Control  
(IHS Markit)



Number of people using  
Suprema technologies

**1 Billion +**



Systems  
in Operation

**1.5 Million +**

(worldwide installations)



Global Sales  
Network in

**140 Countries**



National Identification  
Projects in

**23 Countries**



Industry Patents and  
Intellectual Properties

**100+**



Excellent Financial  
Stability

**A+**

(Korea Investors Service)







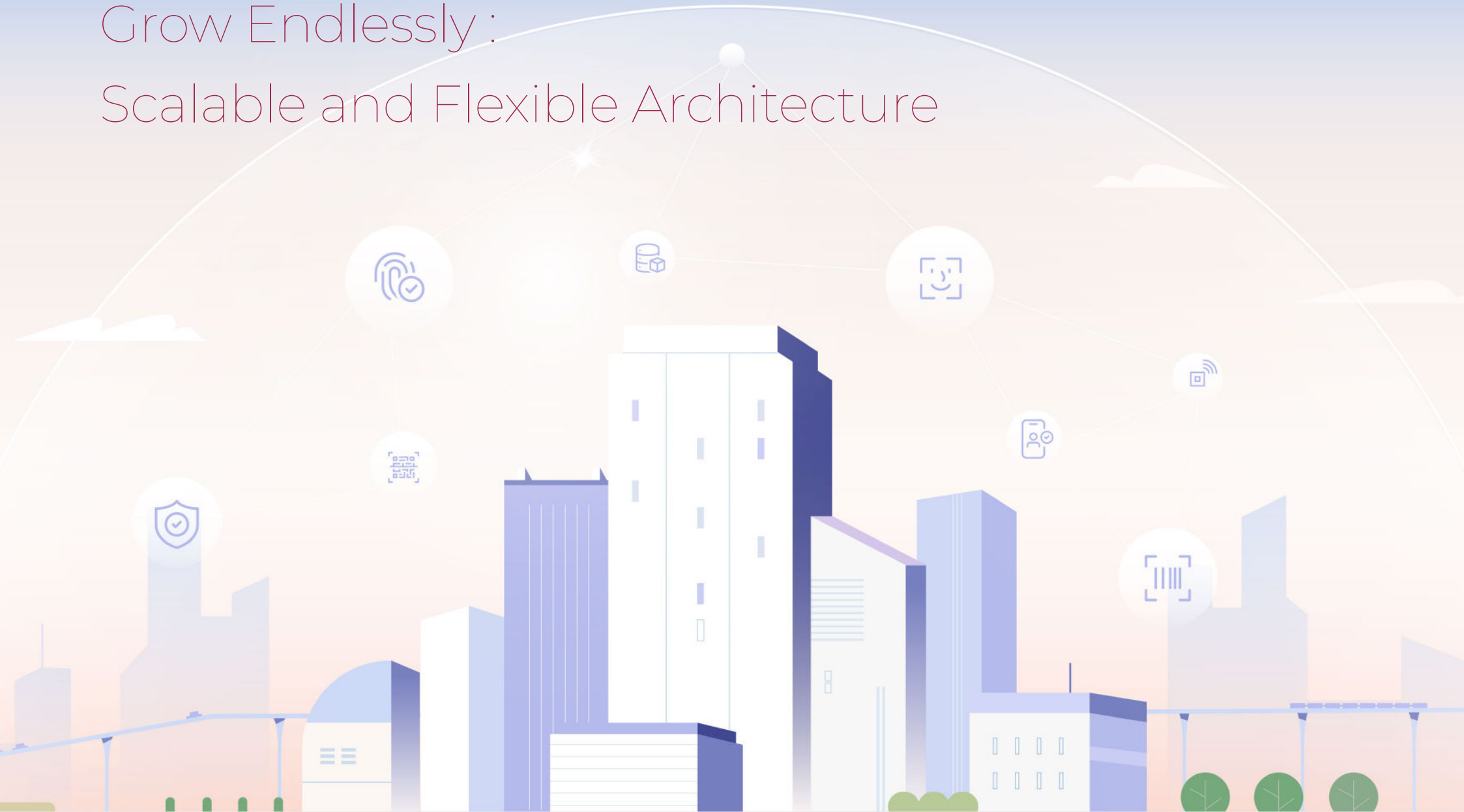


# | BioStar 2

Powerful, Friendly, Secure,  
Open Integrated Security Platform

Discover BioStar 2, your robust security platform with advanced features and an open architecture. Effortless but powerful, BioStar 2 makes multi-credential authentication easy and works the way you need to secure your business.

Start Simply,  
Grow Endlessly:  
Scalable and Flexible Architecture



## BioStar 2 Access Control

With the purchase of BioStar 2 AC license, you can use advanced access control features like elevator control, advanced anti-passback zone control, fire alarm zone, scheduled lock/unlock zone, intrusion alarm zone, server matching, and video log features.



Customized System Architecture



Elevator Control



Improved Zone Management



Server Matching



Video Logs



Visitor Management



## BioStar 2, Certified for Data Protection

Suprema BioStar 2 platform and access control devices are certified by ISO for data protection measures and are GDPR and CCPA compliant, meeting all of 26 data protection management standards, 114 data protection control and 18 personal information management requirements.

All personal information stored in Suprema products, including biometric data, are encrypted using AES algorithm and the encryption keys are safely managed in cryptochips(SecureElement), with access routes securely blocked.



# Access Controllers

Suprema's intelligent controller (CoreStation) manages all devices and readers, keeping your site as well as personal information secure and compliant.



### Easy to Manage

Access control, decision-making, and data management are centralized at a single point



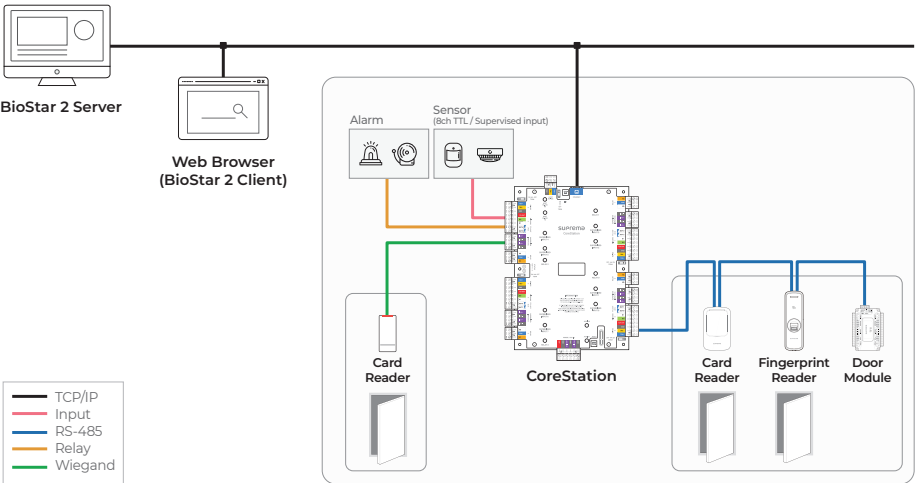
### Enhanced Security

Sensitive data are stored in main controllers with a Secure Element, ensuring protection from unauthorized access



### Easy to Scale

Simplify expansion by adding capacity easily while keeping costs under control



Centralized Access Control Systems

# Intelligent Reader Devices

Intelligent network device can serve as both a controller and a card reader simultaneously, suitable for companies that need flexibility for installation and maintenance or want to build their access control system in stages.



## Real-time Management

Intelligence at the network edge reduces response times and guards against connectivity loss



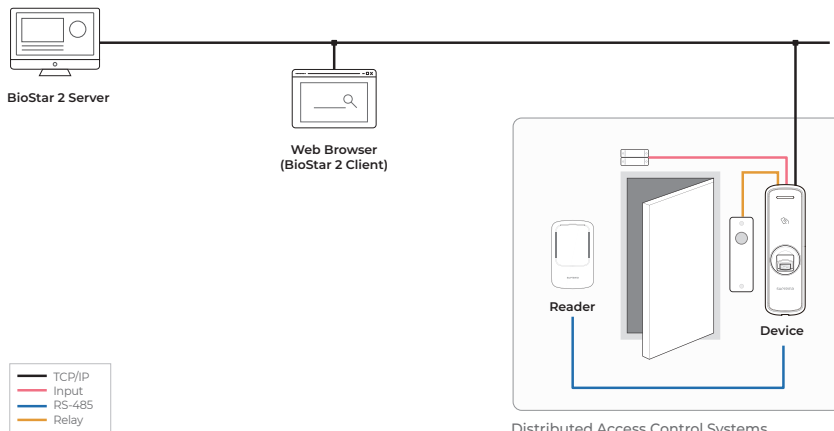
## Cost-Effectiveness

Simple wiring and low installation and maintenance costs for new installations or upgrades from legacy systems

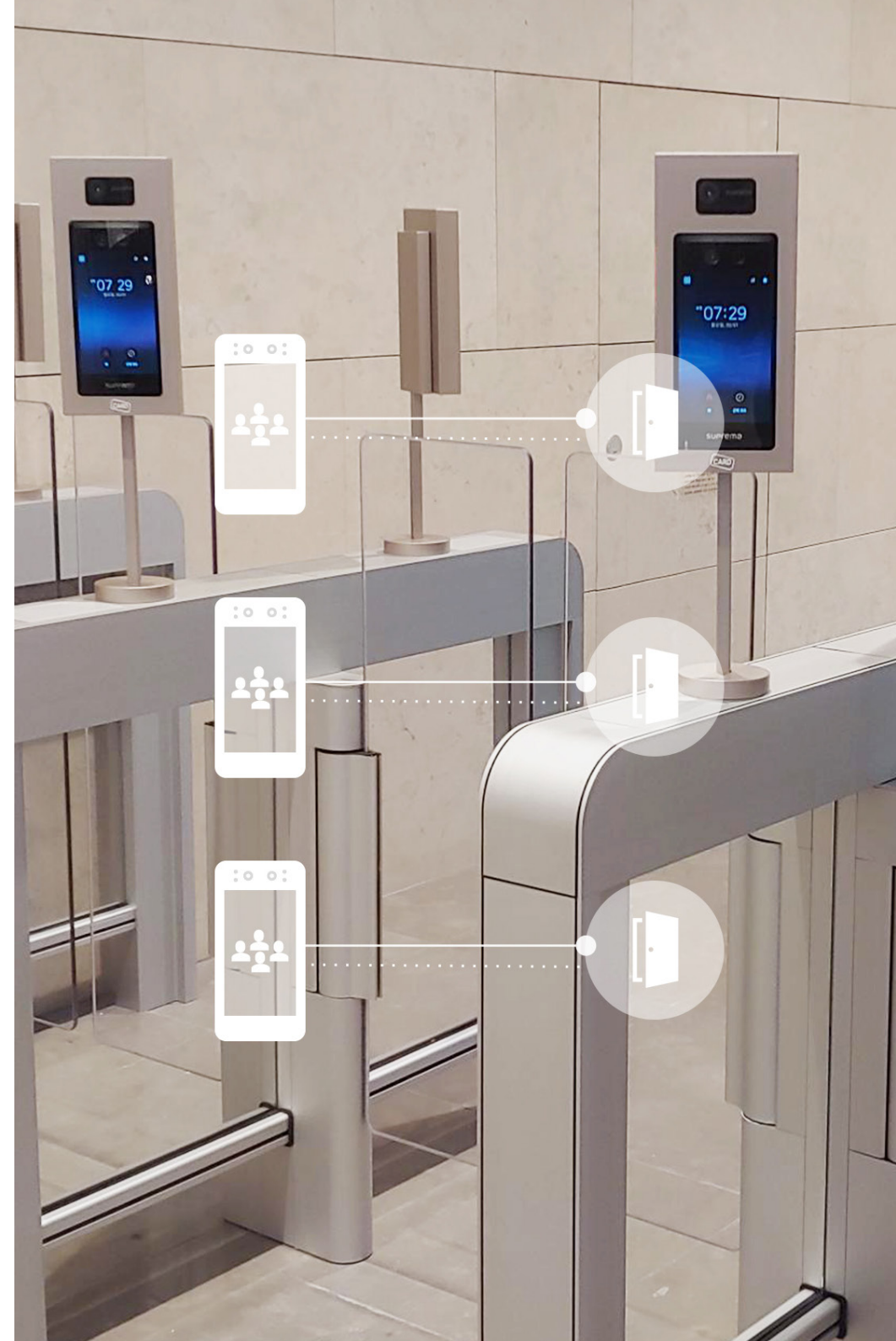


## Flexible Adaptation

Add, remove, upgrade readers and devices without system-wide impact



Distributed Access Control Systems



## Tailored User Experience with Multi-Credential Support

Not everybody has the same needs which is why BioStar 2 natively supports a wide variety of credentials. Effortlessly issue physical cards, mobile credentials or biometric authentication according to your needs.



Facial Authentication



Mobile Access



Fingerprint Recognition



QR Codes



RFID Cards



## Effortless Management

Reduce learning time and start securing your site with the intuitive interface of BioStar 2. Managing access rights and administering system functions is a breeze with our user-friendly web-based platform.

## Full Featured Access Control

Benefit from advanced features that help your organization meet security, safety and compliance goals with full featured historical and forensic reporting, alarm and fire zone management, photo badging and powerful real-time monitoring. Expand further with Visitor Management and Time & Attendance options to eliminate the need for multiple systems.



### Enterprise-grade Software

Harness the power of robust enterprise capable hardware and software that guarantees uptime, compatibility with IT standards as well as providing interfaces to integration with diverse systems.



### Reliable Security Partner

Leverage the dedicated teams of Suprema who have been providing innovative solutions in security and identity for over 20 years.



### Open API Integration

Our open and secure API allows connection with all kinds of systems to streamline processes and automate tasks by allowing secure information transfer and system control.

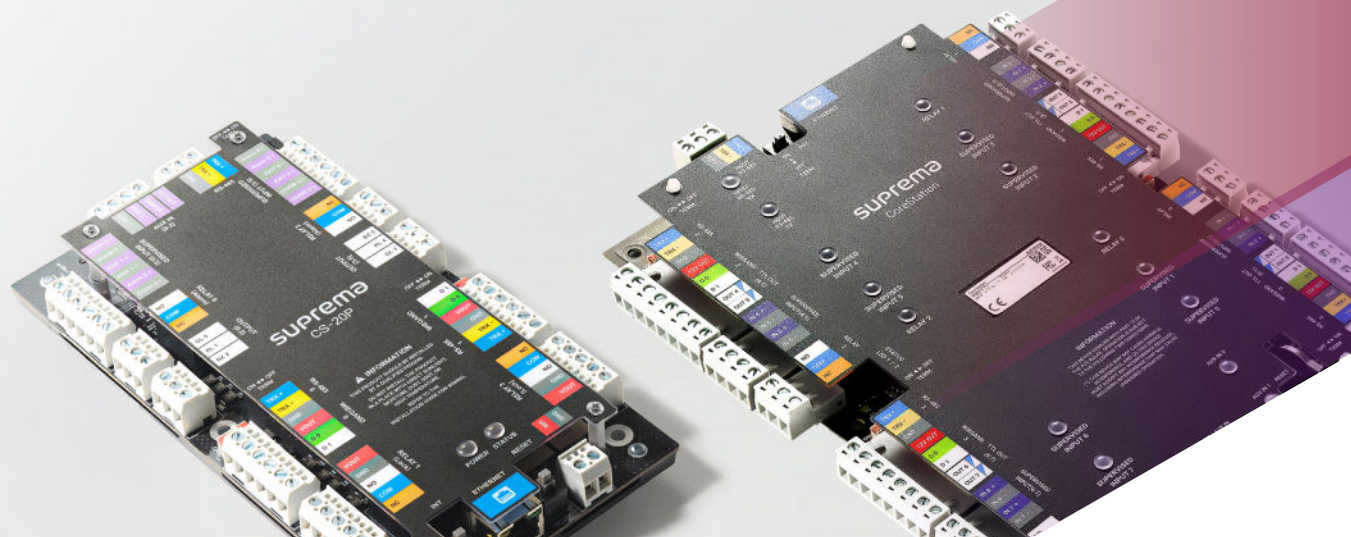


### Cybersecurity

Certified with AES-256 , ISO 27001, ISO 27701, and protected with Secure Element(SE), Secure Boot, and data encryption.

# Controller

Suprema controller provides the advantages of a biometric-enabled security over a centralized access control system.



## CoreStation (CS-40) | Intelligent Biometric Controller

Designed to accommodate enterprise-level systems, Suprema CoreStation stores up to 500,000 users with an incredible fingerprint matching speed of up to 400,000 match per second. Its multi-port interface also supports nonbiometric access control system such as RFID card readers, door locks, alarms sensors and RTE. With its high-performance, biometric readiness and Ethernet communication, CoreStation lets users access the full features of the BioStar 2 platform. Suprema CoreStation can be used in conjunction with door modules and output extension modules to control up to 132 access points. Suprema modules provides secure connection with encrypted communication.

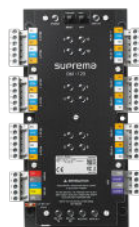
## CoreStation (CS-20, CS-20P) | 2 Door Controller

CoreStation 20 is a controller that supports PoE+ for easy installation and 2-door access control, providing an enterprise-grade security solution. As a centralized access control system, it stores up to 500,000 users and integrates seamlessly with BioStar 2 for access control and time attendance management while offering high compatibility with various interfaces. The CS-20P model also supports a SAM card slot for enhanced security.



### Input Module (IM-120)

- 12 supervised inputs
- Offline operation
- Auxiliary & tamper input



### Output Module (OM-120)

- Up to 12 output relays
- Elevator control with BioStar 2
- Anti-passback, fire alarm feature



### Door Interface (DI-24)

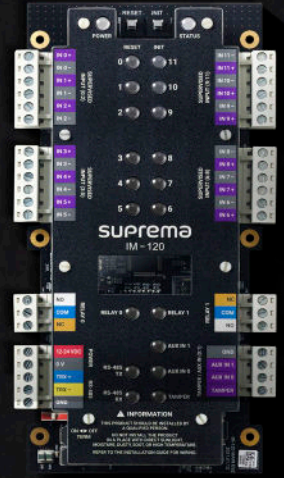
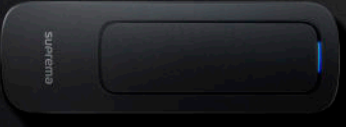
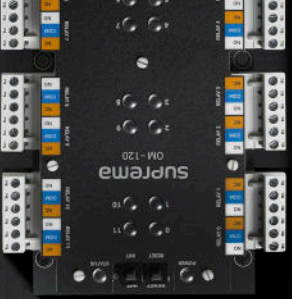
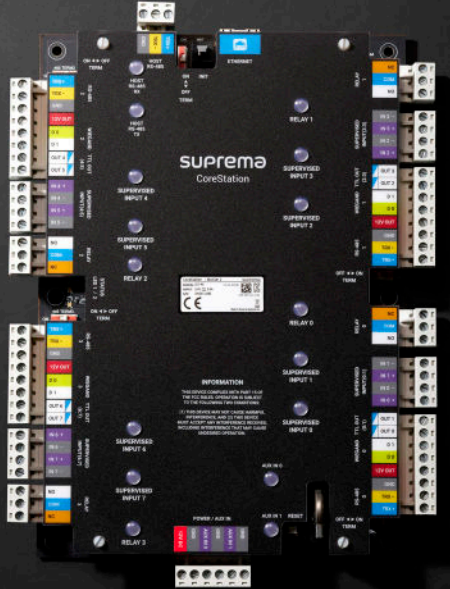
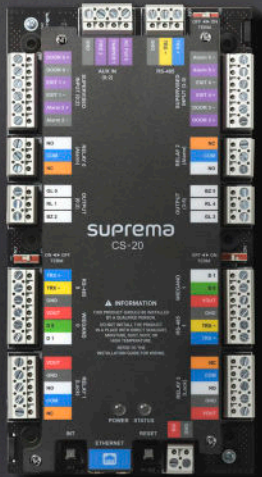
- Economical expansion option
- Green LED/Red LED/Buzzer control
- Dedicated Fire, Tamper, Power Fail inputs



### Secure Module (SIO2)

- Secure door control
- Encrypted communication
- Compact form factor





BookCafe

# RFID Reader

Suprema offers card readers that support dual-frequency RFID technology, compatible with a wide range of card types including MIFARE, DESFire, FeliCa and EM. Suprema card readers can also read mobile credentials using both NFC and BLE communication. Suprema X-Station 2 is equipped with color LCD touchscreen and QR code recognition and can be used to manage time and attendance as well as visitor passage and access control at unmanned facilities.





### X-Station 2 | Versatile Intelligent Terminal

- Compatible with most RFID cards, Mobile Access cards, QR codes
- Enhanced security with Secure Boot and OSDP(Open Supervised Device Protocol)
- Built-in Camera for image logs



### XPass 2 | Outdoor Compact RFID Device

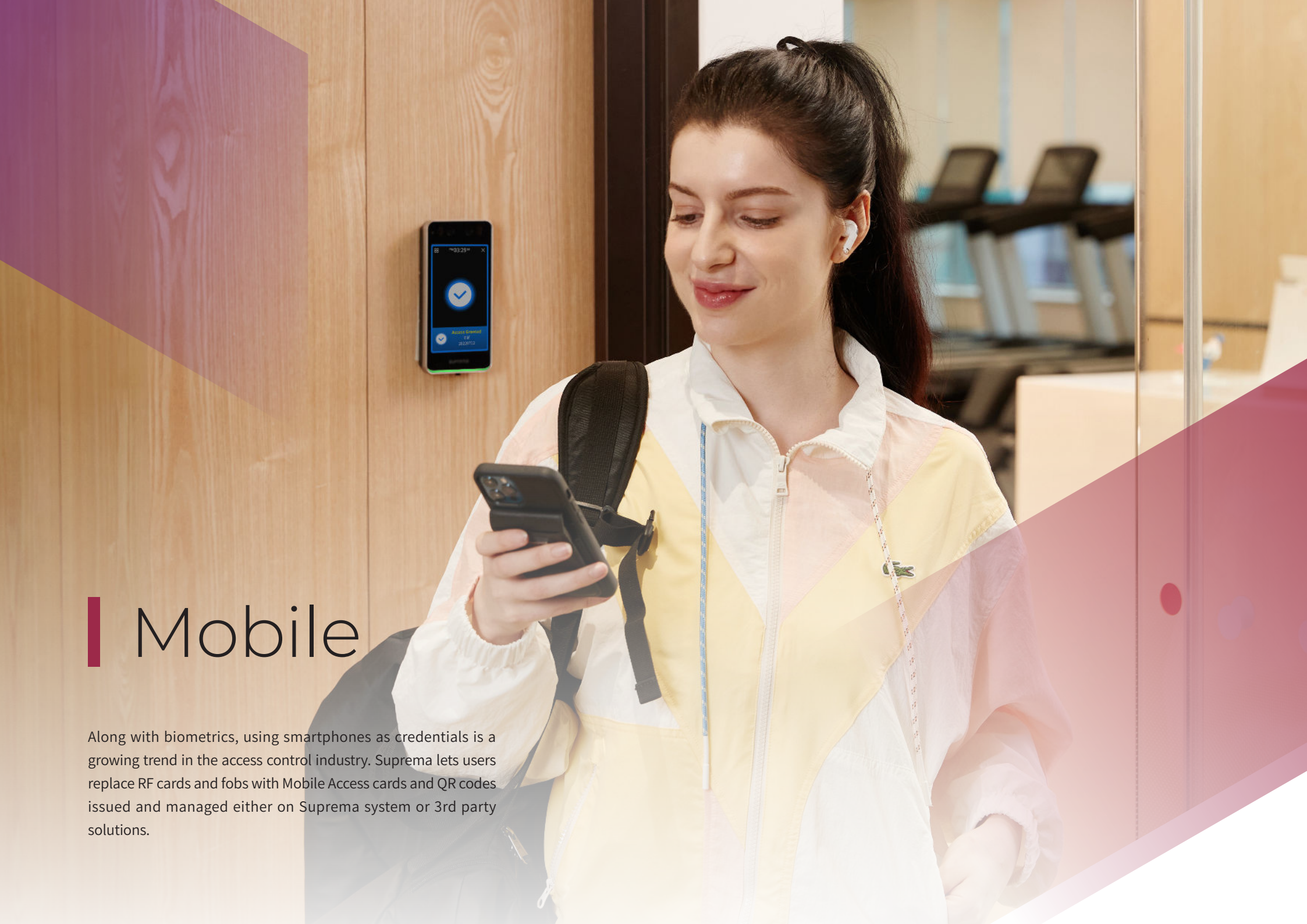
- Compatible with most RFID cards and dual-frequency
- Mobile Access cards
- IP67 and IK08 Vandal-proof structure



### XPass D2 | Outdoor Compact RFID Reader

- Compatible with most RFID cards and dual-frequency
- Mobile Access cards\*
- IP67 and IK08 Vandal-proof structure
- SIA OSDP verified

\* Suprema Mobile Access is supported on XPass D2 - V02A H/W versions only.




# Mobile


Along with biometrics, using smartphones as credentials is a growing trend in the access control industry. Suprema lets users replace RF cards and fobs with Mobile Access cards and QR codes issued and managed either on Suprema system or 3rd party solutions.


# Suprema Mobile Access


Suprema Mobile Access significantly improves user convenience by letting people use smartphones as access cards. Mobile access cards can be issued on either BioStar 2 or Suprema Airfob Portal and users can receive them via email. Suprema Mobile Access can easily be integrated with 3rd party systems.




- 

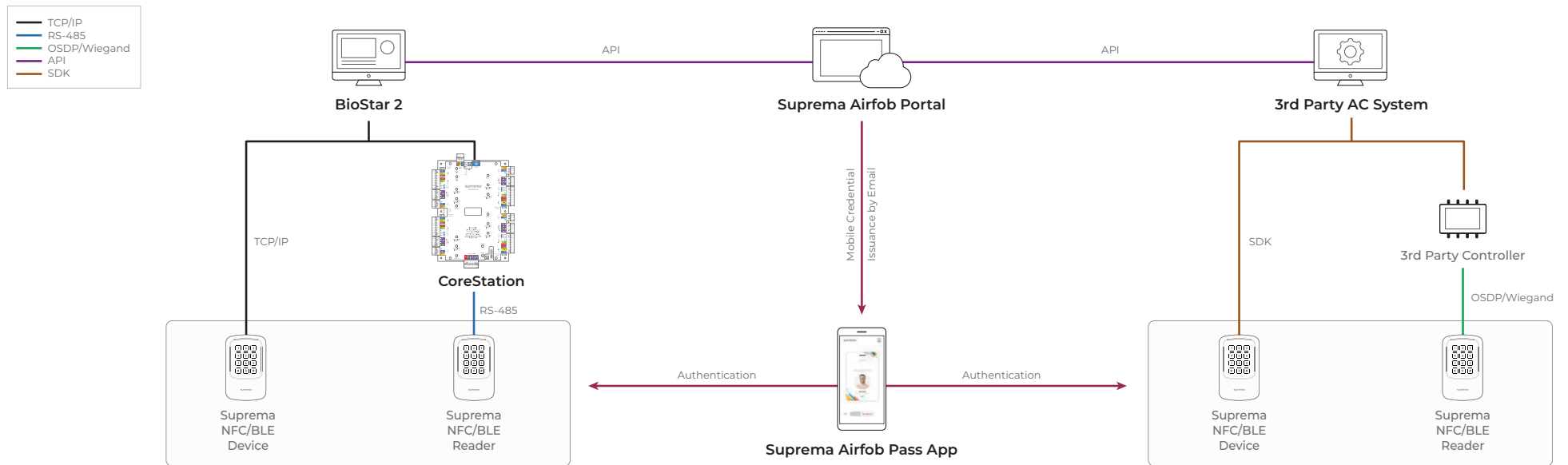
Fast and easy contactless solution
- 

Support both NFC & BLE (Bluetooth 4.2 or above)
- 

Remote management via web portal
- 

Background mode (BLE, Standby mode)
- 

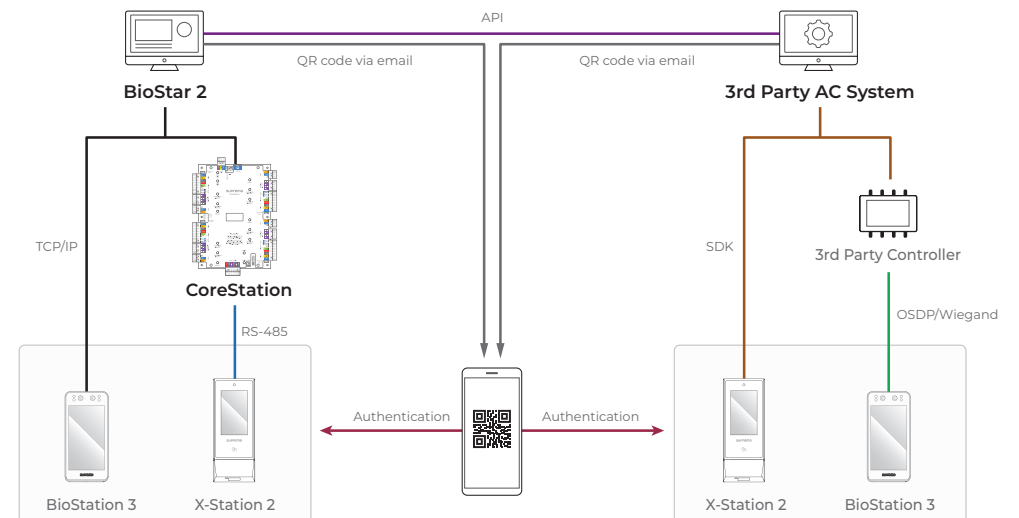
Compatible with Android (9.0 or above) & iOS (7.0 or above)

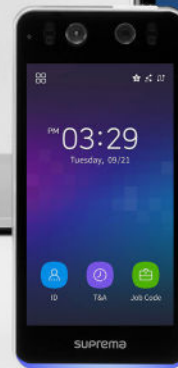
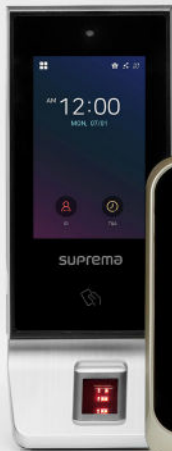
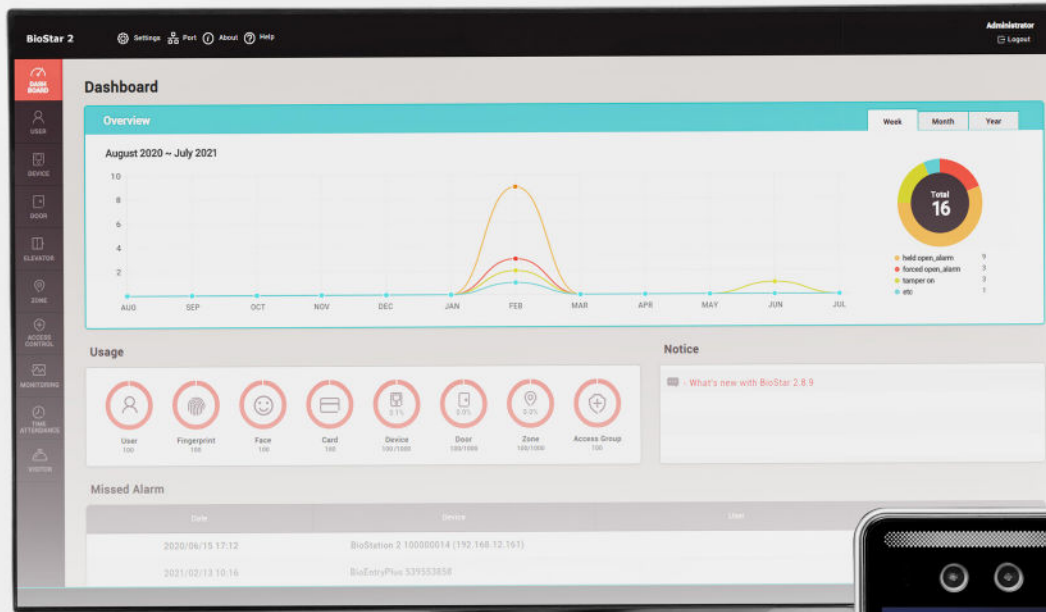




## QR Code

Suprema offers the option of using QR codes as credential. Suprema's BioStation 3 and X-Station 2 can read QR codes composed of up to 32 ASCII codes. QR codes can be issued on BioStar 2 or 3rd party systems.







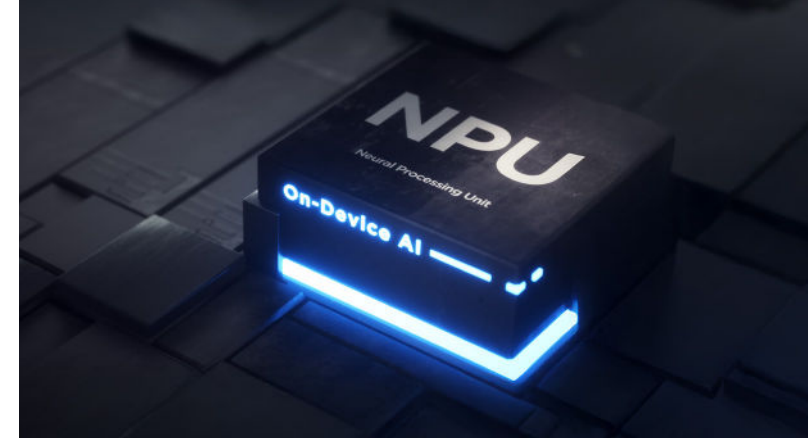
# Biometrics

Leading provider of biometric solutions since 2000, Suprema has continuously innovated fingerprint and facial authentication technology as well as deep learning artificial intelligence that is core to biometric solutions.



## Artificial Intelligence

Leveraging Suprema's extensive field data accumulated for over decades, Suprema boasts unparalleled authentication capabilities specializing in biometric access control. Suprema has developed a cutting-edge biometric authentication AI algorithm, adopting a highly advanced AI processor known as the NPU (Neural Processing Unit), optimized for deep learning. With its expertise in creating a lightweight AI engine and capability to effectively train vast biometric template data, Suprema's deep-learning based AI algorithm ensures the highest accuracy in authentication performance. This positioned Suprema as the world's first company to adopt NPU-based deep-learning technology into biometric authentication.



## Facial Authentication

Suprema's deep-learning based AI algorithm delivers highly accurate and fast facial authentication performance with BioStation 3. It uses dynamic face templates to increase matching accuracy for people of diverse ethnicities and those wearing masks, glasses, hats, beards, niqabs, and various hairstyles. Also, it is not only highly accurate but also fast, so it takes within 0.2 seconds to authenticate moving faces.

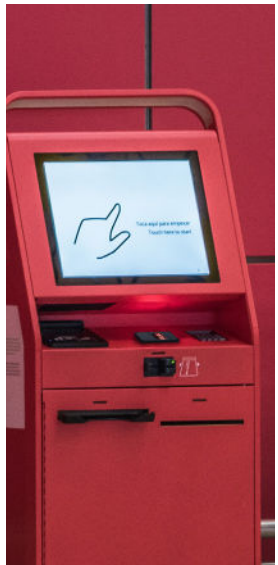
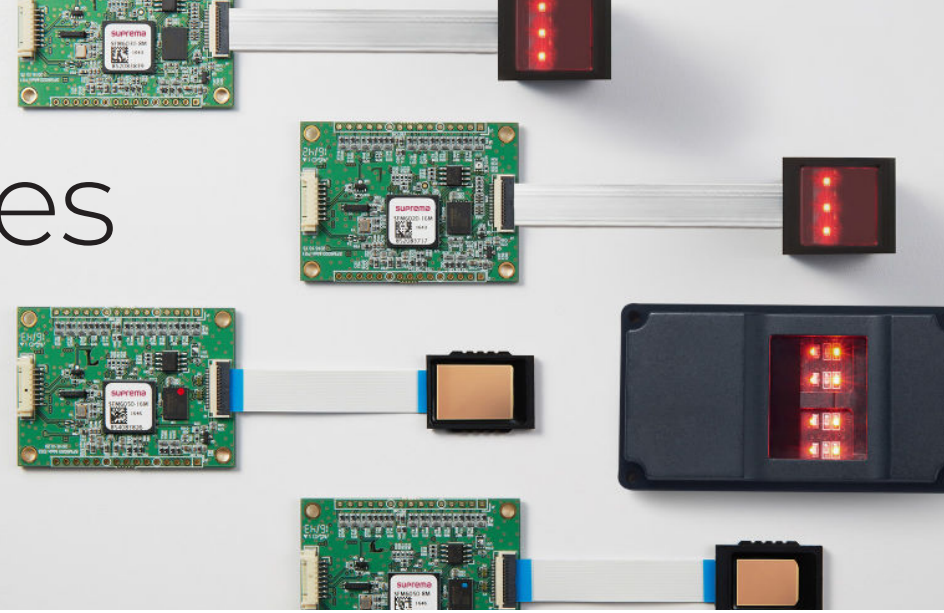
## Fingerprint Recognition

Suprema has pioneered fingerprint recognition technology based on deep learning. As a result, the accuracy, speed, and spoof-fingerprint detection performance of BioStation 2a's deep-learning-based AI algorithm are outstanding. Deep-learning has significantly enhanced the AI algorithm's capability to extract templates from low-quality fingerprints, such as those that are noisy or distorted. Also, it offers Live Finger Detection (LFD) which detects fake fingerprints copied using rubber, silicone, clay, glue, film, etc. ensuring highly accurate performance.



# Fingerprint Modules - SFM Series

The World's Best-Performing Embedded Fingerprint Modules  
For self-service kiosks and other management solutions.



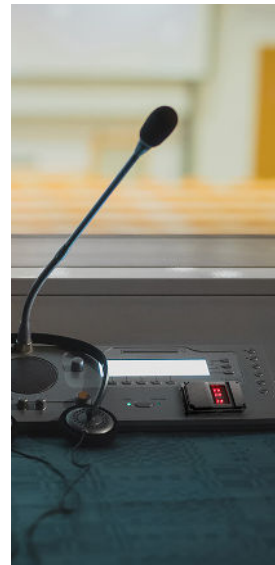
Membership Management Kiosks



Cabinet Management Solutions



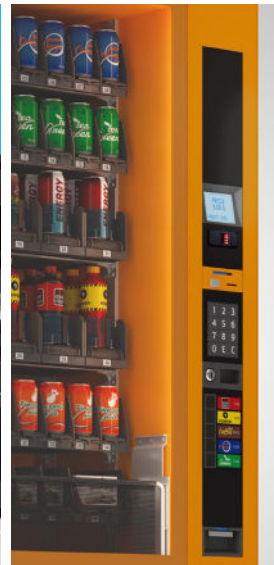
Interstate Trucking and Special Purpose Vehicle Attendance



Electronic Voting System



Cash Exchange Machine



Vending Machine



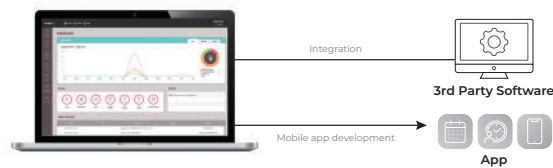
Medical Equipment

# Development Tools

Suprema is integrating with security system partners to be able to offer our products and solutions to a wider group of customers. Integration lets customers add Suprema products to their infrastructure in a streamlined and efficient way.

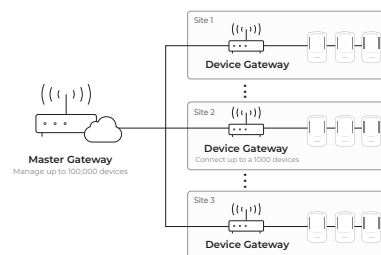
## BioStar 2 API

BioStar 2 API is a Web API that enables integration between BioStar 2 and 3rd party softwares. BioStar 2 API are standardized and allows communication using REST and JSON, making integration and app development easy.



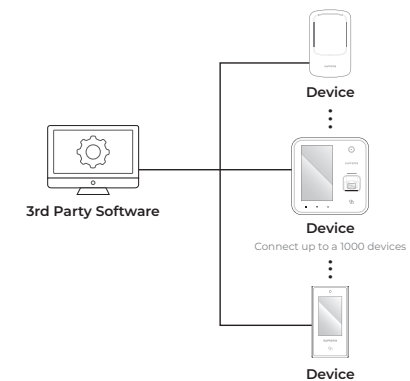
## Suprema G-SDK







Suprema G-SDK is a highly-scalable development kit that enables device management for multi-site, multi-tenant customers. It is mobile and cloud-friendly, allowing you to easily add and manage devices via Device Gateways when a new site is added. Based on gRPC, Suprema G-SDK supports many programming languages including Java, C#, Python, Node.js, Go, and C++.



## BioStar 2 Device SDK

BioStar 2 Device SDK is a development tool that enables you to control the core features of Suprema's terminal through 3rd party software.









| Product        |                                                                 |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                               |                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                 |                                               |
|----------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Product Name   |                                                                 | FaceStation F2                                                                                                                                                                                                                                                                                                                                                                   | BioStation 3                                                                                                                                                                                                                                                  | BioEntry W3                                                                                                                                                                                                                                                    | FaceStation 2                                                                                                                                                                                                                                               | BioStation 2a                                                                                                                                                                                                                                                      | BioStation L2                                                                                                                    |
| General        | Biometric                                                       | Face: FSF2-DB, AB / Face, Fingerprint: FSF2-ODB                                                                                                                                                                                                                                                                                                                                  | Face                                                                                                                                                                                                                                                          | Face                                                                                                                                                                                                                                                           | Face                                                                                                                                                                                                                                                        | Fingerprint                                                                                                                                                                                                                                                        | Fingerprint                                                                                                                      |
|                | LFD (Live Finger Detection)                                     | FSF2-DB, AB: - / FSF2-ODB: Supported (SW-based)                                                                                                                                                                                                                                                                                                                                  | -                                                                                                                                                                                                                                                             | -                                                                                                                                                                                                                                                              | -                                                                                                                                                                                                                                                           | Supported (SW-based)                                                                                                                                                                                                                                               | Supported                                                                                                                        |
|                | Protection Class                                                | IP65                                                                                                                                                                                                                                                                                                                                                                             | IP65, IK06                                                                                                                                                                                                                                                    | IP67, IK08                                                                                                                                                                                                                                                     | -                                                                                                                                                                                                                                                           | IP65                                                                                                                                                                                                                                                               | -                                                                                                                                |
|                | RF Options                                                      | <b>FSF2-DB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa<br><b>FSF2-AB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa, iCLASS SE/SR/Seos<br><b>FSF2-ODB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa | <b>BS3-DB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa<br><b>BS3-APWB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa, iCLASS SE/SR/Seos | <b>BEW3-DB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa<br><b>BEW3-APB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa, iCLASS SE/SR/Seos | <b>FS2-D:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa<br><b>FS2-AWB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa, iCLASS SE/SR/Seos | <b>BS2A-ODPB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa<br><b>BS2A-OAPWB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa, iCLASS SE/SR/Seos | <b>BSL2-OE:</b> 125kHz EM<br><b>BSL2-OM:</b> 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(3)</sup> , FeliCa |
|                | Mobile                                                          | NFC, BLE                                                                                                                                                                                                                                                                                                                                                                         | NFC, BLE                                                                                                                                                                                                                                                      | NFC, BLE                                                                                                                                                                                                                                                       | <b>FS2-D:</b> NFC<br><b>FS2-AWB:</b> NFC, BLE                                                                                                                                                                                                               | NFC, BLE                                                                                                                                                                                                                                                           | <b>BSL2-OE:</b> -<br><b>BSL2-OM:</b> NFC                                                                                         |
| Capacity       | Max. User <sup>(1)</sup>                                        | 100,000                                                                                                                                                                                                                                                                                                                                                                          | 100,000                                                                                                                                                                                                                                                       | 100,000                                                                                                                                                                                                                                                        | 30,000                                                                                                                                                                                                                                                      | 500,000                                                                                                                                                                                                                                                            | 500,000                                                                                                                          |
|                | Max. Credential (1:N) <sup>(4)</sup>                            | Face: 50,000<br>Fingerprint: 100,000                                                                                                                                                                                                                                                                                                                                             | Face: 50,000                                                                                                                                                                                                                                                  | Face: 30,000<br>Card: 100,000                                                                                                                                                                                                                                  | Face: 4,000                                                                                                                                                                                                                                                 | Fingerprint: 100,000                                                                                                                                                                                                                                               | Fingerprint: 100,000                                                                                                             |
|                | Max. Credential (1:1) <sup>(4)</sup>                            | Face: 100,000<br>Fingerprint: 100,000<br>Card: 100,000<br>PIN: 100,000                                                                                                                                                                                                                                                                                                           | Face: 100,000<br>Card: 100,000<br>PIN: 100,000                                                                                                                                                                                                                | Face: 30,000<br>Card: 100,000                                                                                                                                                                                                                                  | Face: 30,000<br>Card: 30,000<br>PIN: 30,000                                                                                                                                                                                                                 | Fingerprint: 500,000<br>Card: 500,000<br>PIN: 500,000                                                                                                                                                                                                              | Fingerprint: 500,000<br>Card: 500,000<br>PIN: 500,000                                                                            |
|                | Max. Text Logs                                                  | 5,000,000                                                                                                                                                                                                                                                                                                                                                                        | 5,000,000                                                                                                                                                                                                                                                     | 1,000,000                                                                                                                                                                                                                                                      | 5,000,000                                                                                                                                                                                                                                                   | 5,000,000                                                                                                                                                                                                                                                          | 1,000,000                                                                                                                        |
|                | Max. Image Logs                                                 | 50,000                                                                                                                                                                                                                                                                                                                                                                           | 50,000                                                                                                                                                                                                                                                        | 10,000                                                                                                                                                                                                                                                         | 50,000                                                                                                                                                                                                                                                      | -                                                                                                                                                                                                                                                                  | -                                                                                                                                |
| Interfaces     | Wi-Fi                                                           | -                                                                                                                                                                                                                                                                                                                                                                                | <b>BS3-DB:</b> - / <b>BS3-APWB:</b> 802.11 b/g/n 2.4 GHz                                                                                                                                                                                                      | -                                                                                                                                                                                                                                                              | <b>FS2-D:</b> - / <b>FS2-AWB:</b> Built-in, IEEE 802.11 b/g                                                                                                                                                                                                 | <b>BS2A-ODPB:</b> - / <b>BS2A-OAPWB:</b> 802.11 b/g/n 2.4 GHz                                                                                                                                                                                                      | -                                                                                                                                |
|                | Ethernet                                                        | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                                                                                                                                      | 10/100/1000 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                              | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                    | 10/100/1000 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                            | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                        | 10/100 Mbps, auto MDI/MDI-X                                                                                                      |
|                | RS-485                                                          | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                                                                                                                                | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                             | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                              | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                           | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                  | 1 ch Master or Slave (Selectable)                                                                                                |
|                | RS-485 Communication Protocol                                   | OSDP V2 compliant                                                                                                                                                                                                                                                                                                                                                                | OSDP V2 compliant                                                                                                                                                                                                                                             | OSDP V2 compliant                                                                                                                                                                                                                                              | OSDP V2 compliant                                                                                                                                                                                                                                           | OSDP V2 compliant                                                                                                                                                                                                                                                  | OSDP V2 compliant                                                                                                                |
|                | Wiegand                                                         | 1 ch Input or 1 ch Output (Selectable)                                                                                                                                                                                                                                                                                                                                           | 1 ch Input and 1 ch Output                                                                                                                                                                                                                                    | 1 ch Input and 1 ch Output                                                                                                                                                                                                                                     | 1 ch Input and 1 ch Output                                                                                                                                                                                                                                  | 1 ch Input and 1 ch Output                                                                                                                                                                                                                                         | 1 ch Input or Output (Selectable)                                                                                                |
|                | TTL Input                                                       | 2 ch Input                                                                                                                                                                                                                                                                                                                                                                       | 3 ch Input                                                                                                                                                                                                                                                    | 3 ch Input                                                                                                                                                                                                                                                     | 2 ch Input                                                                                                                                                                                                                                                  | 3 ch Input                                                                                                                                                                                                                                                         | 2 ch Input                                                                                                                       |
|                | Relay                                                           | 1 Relay                                                                                                                                                                                                                                                                                                                                                                          | 1 Relay                                                                                                                                                                                                                                                       | 1 Relay                                                                                                                                                                                                                                                        | 1 Relay                                                                                                                                                                                                                                                     | 1 Relay                                                                                                                                                                                                                                                            | 1 Relay                                                                                                                          |
| Hardware       | USB                                                             | USB 2.0 (Host)                                                                                                                                                                                                                                                                                                                                                                   | USB 2.0 (Host)                                                                                                                                                                                                                                                | USB 2.0 (Type C), only FW-Upgrade                                                                                                                                                                                                                              | USB 2.0 (Host)                                                                                                                                                                                                                                              | USB 2.0 (Host)                                                                                                                                                                                                                                                     | -                                                                                                                                |
|                | CPU                                                             | 1.8 GHz Dual Core + 1.4 GHz Quad Core                                                                                                                                                                                                                                                                                                                                            | 1.5 GHz Quad Core                                                                                                                                                                                                                                             | 1.5 GHz Quad Core                                                                                                                                                                                                                                              | 1.4 GHz Quad Core                                                                                                                                                                                                                                           | 1.5 GHz Quad Core                                                                                                                                                                                                                                                  | 1.2 GHz Quad Core                                                                                                                |
|                | Memory                                                          | 16 GB Flash + 2 GB RAM                                                                                                                                                                                                                                                                                                                                                           | 32 GB Flash + 4 GB RAM                                                                                                                                                                                                                                        | 16 GB Flash + 2 GB RAM                                                                                                                                                                                                                                         | 8 GB Flash + 1 GB RAM                                                                                                                                                                                                                                       | 16 GB Flash + 2 GB RAM                                                                                                                                                                                                                                             | 2 GB Flash + 256 MB RAM                                                                                                          |
|                | Crypto Chip                                                     | Supported                                                                                                                                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                     | Supported                                                                                                                                                                                                                                                      | Supported                                                                                                                                                                                                                                                   | Supported                                                                                                                                                                                                                                                          | Supported                                                                                                                        |
|                | Sound                                                           | 16 bit                                                                                                                                                                                                                                                                                                                                                                           | 16 bit                                                                                                                                                                                                                                                        | 16 bit                                                                                                                                                                                                                                                         | 24 bit Voice DSP (echo cancellation)                                                                                                                                                                                                                        | 16 bit                                                                                                                                                                                                                                                             | 16 bit                                                                                                                           |
|                | Operating Temperature                                           | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                                                                                                                                      | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                   | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                    | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                 | -20°C ~ 60°C (-4°F ~ 140°F)                                                                                                                                                                                                                                        | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                      |
|                | Tamper                                                          | Supported                                                                                                                                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                     | Supported                                                                                                                                                                                                                                                      | Supported                                                                                                                                                                                                                                                   | Supported                                                                                                                                                                                                                                                          | Supported                                                                                                                        |
|                | Power                                                           | Voltage: 12 Vdc, Current: Max. 2.1 A<br>Voltage: 24 Vdc, Current: Max. 1 A                                                                                                                                                                                                                                                                                                       | Voltage: 12 Vdc, Current: Max. 1 A<br>Voltage: 24 Vdc, Current: Max. 0.65 A                                                                                                                                                                                   | Voltage: 12 Vdc, Current: Max. 1.0 A<br>Voltage: 24 Vdc, Current: Max. 0.6 A                                                                                                                                                                                   | Voltage: 24 Vdc, Current: Max. 1.2 A                                                                                                                                                                                                                        | Voltage: 12 Vdc, Current: Max. 0.8 A<br>Voltage: 24 Vdc, Current: Max. 0.4 A                                                                                                                                                                                       | Voltage: 12 Vdc, Current: Max. 0.5 A                                                                                             |
|                | PoE                                                             | -                                                                                                                                                                                                                                                                                                                                                                                | <b>BS3-DB:</b> -<br><b>BS3-APWB:</b> IEEE 802.3at compliant                                                                                                                                                                                                   | <b>BEW3-DB:</b> -<br><b>BEW3-APB:</b> IEEE 802.3at compliant                                                                                                                                                                                                   | -                                                                                                                                                                                                                                                           | IEEE 802.3af compliant                                                                                                                                                                                                                                             | -                                                                                                                                |
|                | Dimensions (W x H x D mm)                                       | <b>FSF2-DB, AB:</b> 119.8 x 233 x 23.5<br><b>FSF2-ODB:</b> 119.8 x 268.3 x 49.6                                                                                                                                                                                                                                                                                                  | 82.5 x 171 x 23.4                                                                                                                                                                                                                                             | 50 x 160 x 34.15                                                                                                                                                                                                                                               | 140.9 x 197.5 x 86.2                                                                                                                                                                                                                                        | 142 x 144 x 45 (Bottom) / 37.8 (Top)                                                                                                                                                                                                                               | 70.9 x 200.9 x 44.3 (Bottom) / 34.2 (Top)                                                                                        |
| Certifications | CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE | <b>BS3-DB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, MIC, TELEC<br><b>BS3-APWB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, MIC, TELEC, ETL Listed to UL 294                                                                                                                                                                                 | CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE, EAC, TELEC                                                                                                                                                                                   | CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE                                                                                                                                                                                                        | CE, UKCA, KC, FCC, RCM, SIG, RoHS, REACH, WEEE                                                                                                                                                                                                              | CE, UKCA, KC, FCC, BIS, RoHS, REACH, WEEE                                                                                                                                                                                                                          |                                                                                                                                  |

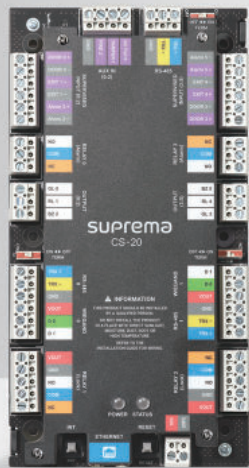
(1) The number of users registered without having any credential data. (2) DESFire EV2 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with Suprema devices.



(3) DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with Suprema devices.

(4) If FaceStation F2, BioStation 3 and FaceStation 2 are a master device and a device with a fingerprint sensor is connected as a slave, the slave device can be used for fingerprint authentication. You can find the capacity for fingerprint in the website's guide documentation.





|                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                           |                                                                                                                                                                                                     |                                                                                                                                                                                                  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| BioLite N2                                                                                                                                                                                                                                                       | BioEntry W2 <sup>(5)</sup>                                                                                                                                                                                                                                                                                                                                                                | BioEntry P2                                                                                                                                                                                                                                               | X-Station 2                                                                                                                                                                                                                                                                           | XPass 2                                                                                                                                                                                                                                                                             | XPass S2                                                                            |
| Fingerprint                                                                                                                                                                                                                                                      | Fingerprint                                                                                                                                                                                                                                                                                                                                                                               | Fingerprint                                                                                                                                                                                                                                               | Fingerprint: XS2-ODPB, OAPB                                                                                                                                                                                                                                                           | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| Supported (SW-based)                                                                                                                                                                                                                                             | Supported (HW + SW-based)                                                                                                                                                                                                                                                                                                                                                                 | Supported (SW-based)                                                                                                                                                                                                                                      | <b>XS2-ODPB, OAPB:</b> Supported (SW-based)                                                                                                                                                                                                                                           | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| IP67                                                                                                                                                                                                                                                             | IP67, IK09                                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                         | IP65                                                                                                                                                                                                                                                                                  | IP65, IP67, IK08                                                                                                                                                                                                                                                                    | IP65                                                                                |
| <b>BLN2-ODB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>BLN2-OAB, PAB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa, iCLASS SE/SR/Seos | <b>BEW2-OHPB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>BEW2-ODPB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>BEW2-OAPB:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa, iCLASS SE/SR/Seos | <b>BEP2-OD:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>BEP2-OA:</b> 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa, iCLASS SE/SR/Seos | <b>XS2-ODPB, QDPB, DPB:</b> 125 kHz EM & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>XS2-OAPB, QAPB, APB:</b> 125 kHz EM, HID Prox & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa, iCLASS SE/SR/Seos | <b>XP2-MDPB, GDPB, GKDPB:</b> 125 kHz EM & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa<br><b>XP2-MAPB:</b> 125 kHz EM, HID Prox & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>®</sup> , FeliCa, iCLASS SE/SR/Seos        | 13.56MHz MIFARE, MIFARE Plus, DESFire/EV1 (CSN), FeliCa, ISO14443A, ISO15693        |
| NFC, BLE                                                                                                                                                                                                                                                         | NFC, BLE                                                                                                                                                                                                                                                                                                                                                                                  | NFC                                                                                                                                                                                                                                                       | NFC, BLE                                                                                                                                                                                                                                                                              | NFC, BLE                                                                                                                                                                                                                                                                            | -                                                                                   |
| 10,000                                                                                                                                                                                                                                                           | 500,000                                                                                                                                                                                                                                                                                                                                                                                   | 10,000                                                                                                                                                                                                                                                    | 500,000                                                                                                                                                                                                                                                                               | 200,000                                                                                                                                                                                                                                                                             | 50,000                                                                              |
| Fingerprint: 10,000                                                                                                                                                                                                                                              | Fingerprint: 100,000                                                                                                                                                                                                                                                                                                                                                                      | Fingerprint: 10,000                                                                                                                                                                                                                                       | Fingerprint: 100,000 ( <b>XS2-ODPB, OAPB</b> only)                                                                                                                                                                                                                                    | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| Fingerprint: 10,000<br>Card: 10,000<br>PIN: 10,000                                                                                                                                                                                                               | Fingerprint: 500,000<br>Card: 500,000                                                                                                                                                                                                                                                                                                                                                     | Fingerprint: 10,000<br>Card: 10,000                                                                                                                                                                                                                       | Fingerprint: 500,000 ( <b>XS2-ODPB, OAPB</b> only)<br>Card: 500,000<br>PIN: 500,000                                                                                                                                                                                                   | Card: 200,000<br>PIN: 200,000                                                                                                                                                                                                                                                       | Card: 50,000                                                                        |
| 1,000,000                                                                                                                                                                                                                                                        | 1,000,000                                                                                                                                                                                                                                                                                                                                                                                 | 1,000,000                                                                                                                                                                                                                                                 | 5,000,000                                                                                                                                                                                                                                                                             | 1,000,000                                                                                                                                                                                                                                                                           | 100,000                                                                             |
| -                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                         | 50,000                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| -                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                                                     | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                      | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                                                                                                                                               | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                               | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                                           | 10/100 Mbps, auto MDI/MDI-X                                                                                                                                                                                                                                                         | 10/100 Mbps, auto MDI/MDI-X                                                         |
| 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                                                                                                                                         | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                         | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                                     | 1 ch Master or Slave (Selectable)                                                                                                                                                                                                                                                   | 1 ch Master or Slave (Selectable)                                                   |
| OSDP V2 compliant                                                                                                                                                                                                                                                | OSDP V2 compliant                                                                                                                                                                                                                                                                                                                                                                         | OSDP V2 compliant                                                                                                                                                                                                                                         | OSDP V2 compliant                                                                                                                                                                                                                                                                     | OSDP V2 compliant                                                                                                                                                                                                                                                                   | OSDP V2 compliant                                                                   |
| 1 ch Input or Output (Selectable)                                                                                                                                                                                                                                | 1 ch Input or Output (Selectable)                                                                                                                                                                                                                                                                                                                                                         | 1 ch Input or Output (Selectable)                                                                                                                                                                                                                         | 1 ch Input or Output (Selectable)                                                                                                                                                                                                                                                     | 1 ch Input or Output (Selectable)                                                                                                                                                                                                                                                   | 1 ch Input or Output (Selectable)                                                   |
| 2 ch Input                                                                                                                                                                                                                                                       | 2 ch Input                                                                                                                                                                                                                                                                                                                                                                                | 2 ch Input                                                                                                                                                                                                                                                | 2 ch Input                                                                                                                                                                                                                                                                            | 2 ch Input                                                                                                                                                                                                                                                                          | 2 ch Input                                                                          |
| 1 Relay                                                                                                                                                                                                                                                          | 1 Relay                                                                                                                                                                                                                                                                                                                                                                                   | 1 Relay                                                                                                                                                                                                                                                   | 1 Relay                                                                                                                                                                                                                                                                               | 1 Relay                                                                                                                                                                                                                                                                             | 1 Relay                                                                             |
| -                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                         | USB 2.0 (Host)                                                                                                                                                                                                                                                                        | -                                                                                                                                                                                                                                                                                   | -                                                                                   |
| 1.2 GHz                                                                                                                                                                                                                                                          | 1.2 GHz Quad Core                                                                                                                                                                                                                                                                                                                                                                         | 1.0 GHz                                                                                                                                                                                                                                                   | 1.5 GHz Quad Core                                                                                                                                                                                                                                                                     | 1.0 GHz                                                                                                                                                                                                                                                                             | 533 MHz DSP                                                                         |
| 4 GB Flash + 64 MB RAM                                                                                                                                                                                                                                           | 2 GB Flash + 256 MB RAM                                                                                                                                                                                                                                                                                                                                                                   | 8 GB Flash + 64 MB RAM                                                                                                                                                                                                                                    | 16 GB Flash + 1 GB RAM                                                                                                                                                                                                                                                                | 4 GB Flash + 64 MB RAM                                                                                                                                                                                                                                                              | 16 MB Flash + 16 MB RAM                                                             |
| Supported                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                                                                                                                                                 | Supported                                                                                                                                                                                                                                                 | Supported                                                                                                                                                                                                                                                                             | Supported                                                                                                                                                                                                                                                                           | Supported                                                                           |
| 16 bit                                                                                                                                                                                                                                                           | Multi-tone Buzzer                                                                                                                                                                                                                                                                                                                                                                         | Multi-tone Buzzer                                                                                                                                                                                                                                         | 24 bit                                                                                                                                                                                                                                                                                | Multi-tone Buzzer                                                                                                                                                                                                                                                                   | Multi-tone Buzzer                                                                   |
| <b>BLN2-ODB, OAB:</b> -20°C ~ 50°C (-4°F ~ 122°F)<br><b>BLN2-PAB:</b> -10°C ~ 50°C (14°F ~ 122°F)                                                                                                                                                                | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                                                                                                                                               | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                               | -20°C ~ 50°C (-4°F ~ 122°F)                                                                                                                                                                                                                                                           | -35°C ~ 65°C (-31°F ~ 149°F)                                                                                                                                                                                                                                                        | -35°C ~ 65°C (-31°F ~ 149°F)                                                        |
| Supported                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                                                                                                                                                 | Supported                                                                                                                                                                                                                                                 | Supported                                                                                                                                                                                                                                                                             | Supported                                                                                                                                                                                                                                                                           | Supported                                                                           |
| Voltage: 12Vdc, Current: Max. 0.4 A                                                                                                                                                                                                                              | Voltage: 12 Vdc, Current: Max. 0.5 A                                                                                                                                                                                                                                                                                                                                                      | Voltage: 12 Vdc, Current: Max. 0.2 A                                                                                                                                                                                                                      | Voltage: 12 Vdc, Current: Max. 0.8 A<br>Voltage: 24 Vdc, Current: Max. 0.5 A                                                                                                                                                                                                          | Voltage: 12 Vdc, Current: Max. 0.5 A<br>Voltage: 24 Vdc, Current: Max. 0.3 A                                                                                                                                                                                                        | Voltage: 12 Vdc, Current: Max. 0.4 A                                                |
| -                                                                                                                                                                                                                                                                | IEEE 802.3af compliant                                                                                                                                                                                                                                                                                                                                                                    | -                                                                                                                                                                                                                                                         | IEEE 802.3af compliant                                                                                                                                                                                                                                                                | IEEE 802.3af compliant                                                                                                                                                                                                                                                              | -                                                                                   |
| 58 x 190 x 44 (Bottom) / 34.6 (Top)                                                                                                                                                                                                                              | 50 x 172 x 43.4 (Bottom) / 38.1 (Top)                                                                                                                                                                                                                                                                                                                                                     | 50.1 x 164 x 38                                                                                                                                                                                                                                           | <b>XS2-ODPB, OAPB:</b> 82 x 208.5 x 53 (Bottom) / 25.9 (Top)<br><b>XS2-QDPB, QAPB:</b> 82 x 203 x 33.9<br><b>XS2-DPB, APB:</b> 82 x 159 x 25.9                                                                                                                                        | <b>XP2-MDPB, MAPB:</b> 48 x 144.7 x 27<br><b>XP2-GDPB, GKDPB:</b> 80 x 130 x 25                                                                                                                                                                                                     | 80 x 120 x 11.4                                                                     |
| CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE                                                                                                                                                                                                          | <b>BEW2-OHPB, ODPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE<br><b>BEW2-OAPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE, ETL Listed to UL 294                                                                                                                                                                                        | CE, UKCA, KC, FCC, RCM, BIS, ANATEL, RoHS, REACH, WEEE                                                                                                                                                                                                    | <b>XS2-ODPB, OAPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE<br><b>XS2-DPB, QDPB, APB, QAPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, TELECOM, RoHS, REACH, WEEE                                                                                   | <b>XP2-MDPB, GDPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, ETL Listed to UL 294<br><b>XP2-GKDPB:</b> CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, TELECOM, RoHS, REACH, WEEE, ETL Listed to UL 294<br><b>XP2-MAPB:</b> CE, UKCA, KC, FCC, RCM, SIG, RoHS, REACH, WEEE | CE, UKCA, KC, FCC, BIS, RoHS, REACH, WEEE                                           |

<sup>(5)</sup> Some models (BEW2-ODP, BEW2-OAP, BEW2-OHP) do not support BLE.

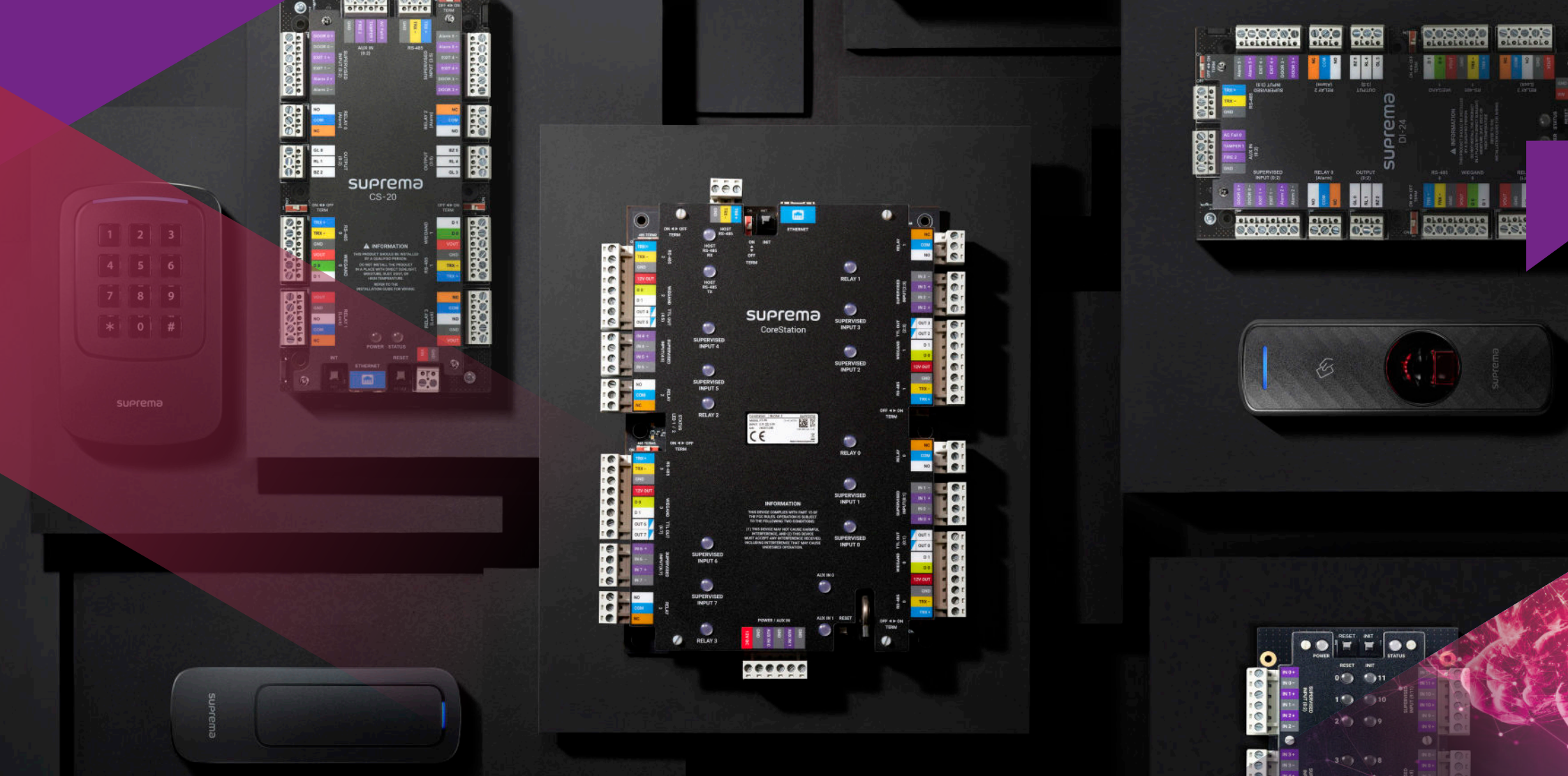


| Product              |                               |     |  |
|----------------------|-------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Product Name         |                               | CoreStation (CS-40)                                                                  | CoreStation (CS-20   CS-20P)                                                      |
| Capacity             | Max. User                     | 500,000                                                                              | 500,000                                                                           |
|                      | Max. Credential (1:N)         | Face: 4,000<br>Fingerprint: 100,000 <sup>(6)</sup>                                   | -                                                                                 |
|                      | Max. Credential (1:1)         | Face: 30,000<br>Fingerprint: 500,000 <sup>(6)</sup><br>Card: 500,000<br>PIN: 500,000 | Card: 500,000<br>PIN: 500,000                                                     |
|                      | Max. Text Logs                | 5,000,000                                                                            | 500,000                                                                           |
| Interfaces           | Ethernet                      | 10/100 Mbps, Auto MDI/MDI-X                                                          | 10/100 Mbps, Auto MDI/MDI-X                                                       |
|                      | RS-485                        | 5 ch                                                                                 | 3 ch                                                                              |
|                      | RS-485 Communication Protocol | OSDP V2 compliant                                                                    | OSDP V2 compliant                                                                 |
|                      | Wiegand                       | 4 ch                                                                                 | 2 ch                                                                              |
|                      | Relay                         | 4 Relays                                                                             | 4 Relays                                                                          |
|                      | Supervised Input              | 8 ch (TTL Input Selectable)                                                          | 6 ch                                                                              |
|                      | TTL Output                    | 8 ch                                                                                 | 6 ch                                                                              |
|                      | AUX Input                     | 2 ch (AC Power Fail, Tamper)                                                         | 3 ch (AC Power Fail, Tamper, Fire)                                                |
|                      | SAM Slot                      | -                                                                                    | - Supported                                                                       |
|                      | Connectivity                  | Max. Slave Devices (RS-485)                                                          | Max. 64 devices<br>(Max. 31 devices per port)                                     |
| Max. Wiegand Devices |                               | Max. 132 devices (with DM-20)                                                        | Max. 2 devices                                                                    |
| Hardware             | CPU                           | 1.4 GHz Octa Core                                                                    | 1.2 GHz Single Core                                                               |
|                      | Memory                        | 8 GB Flash + 1 GB RAM                                                                | 4 GB Flash + 256 MB RAM                                                           |
|                      | Crypto Chip                   | Supported                                                                            | Supported                                                                         |
|                      | LED                           | Multi-color                                                                          | POWER: RED single-color<br>STATUS: Multi-color                                    |
|                      | Operating Temperature         | 0°C ~ 50°C (32°F ~ 122°F)                                                            | 0°C ~ 50°C (32°F ~ 122°F)                                                         |
|                      | Tamper                        | Optional (ENCR-10)                                                                   | -                                                                                 |
|                      | Power                         | Voltage: 12 Vdc, Current: Max. 0.2 A<br>Voltage: 24 Vdc, Current: Max. 0.1 A         | Voltage: 12 Vdc, Current: Max. 2.8 A<br>Voltage: 24 Vdc, Current: Max. 1.4 A      |
|                      | Dimensions (W x H x D mm)     | 150 x 214 x 21                                                                       | 100 x 190 x 33.9                                                                  |
|                      | PoE+                          | -                                                                                    | - Supported                                                                       |
|                      | Certifications                | CE, UKCA, KC, FCC, RCM, RoHS, REACH, WEEE, ETL Listed to UL 294                      | CE, UKCA, KC, FCC, RCM, IC, RoHS, REACH, WEEE, EAC, VCCI                          |

| Product      |                               |                    |                                        |
|--------------|-------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Product Name |                               | BioEntry R2                                                                                           | XPass D2                                                                                                                  |
| General      | Biometrics                    | Fingerprint                                                                                           | -                                                                                                                         |
|              | Protection Class              | -                                                                                                     | IP65, IP67, IK08                                                                                                          |
|              | RF Options                    | <b>BER2-OD:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire EV1/EV2/EV3 <sup>(7)</sup> , FeliCa | <b>XP2-MDB, GDB, GKDB:</b> 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>(7)</sup> , FeliCa |
|              | Mobile                        | <b>BER2-OD:</b> NFC                                                                                   | <b>XP2-MDB, GDB, GKDB:</b> NFC, BLE                                                                                       |
| Interfaces   | RS-485                        | 1 ch Slave                                                                                            | 1 ch                                                                                                                      |
|              | RS-485 Communication Protocol | OSDP V2 compliant                                                                                     | OSDP V2 compliant                                                                                                         |
|              | Wiegand                       | -                                                                                                     | 1 ch                                                                                                                      |
| Hardware     | CPU                           | 1.0 GHz                                                                                               | 80 MHz                                                                                                                    |
|              | Memory                        | 32 MB Flash + 32 MB RAM                                                                               | 512 KB Flash + 160 KB RAM                                                                                                 |
|              | Sound                         | Multi-tone Buzzer                                                                                     | Multi-tone Buzzer                                                                                                         |
|              | Operating Temperature         | -20°C ~ 50°C (-4°F ~ 122°F)                                                                           | -35°C ~ 65°C (-31°F ~ 149°F)                                                                                              |
|              | Tamper                        | Supported                                                                                             | Supported                                                                                                                 |
|              | Power                         | Voltage: 12 Vdc, Current: Max. 0.2 A                                                                  | Voltage: 12 Vdc, Current: Max. 0.3 A                                                                                      |
|              | Dimensions (W x H x D mm)     | 50.1 x 164 x 38                                                                                       | <b>XP2-MDB:</b> 48 x 144.7 x 27<br><b>XP2-GDB, GKDB:</b> 80 x 130 x 25                                                    |
|              | Certifications                | CE, UKCA, KC, FCC, RoHS, REACH, WEEE                                                                  | CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, ETL Listed to UL 294                                             |

| Product      |                               |  |  |  |  |
|--------------|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Product Name |                               | Input Module (IM-120)                                                               | Output Module (OM-120)                                                              | Door Interface (DI-24)                                                              | Secure Module (Secure I/O 2)                                                        |
| Interfaces   | RS-485                        | 1 ch                                                                                | 1 ch                                                                                | 3 ch                                                                                | 1 ch                                                                                |
|              | RS-485 Communication Protocol | OSDP V2 compliant                                                                   | OSDP V2 compliant                                                                   | OSDP V2 compliant                                                                   | OSDP V2 compliant                                                                   |
|              | Wiegand                       | -                                                                                   | -                                                                                   | 2 ch                                                                                | -                                                                                   |
|              | Relay                         | 2 Relays                                                                            | 12 Relays                                                                           | 4 Relays                                                                            | 1 Relay                                                                             |
|              | Input                         | Supervised Input: 12 ch (TTL Input Selectable)                                      | -                                                                                   | 6 ch                                                                                | TTL Input: 2 ch                                                                     |
|              | Output                        | -                                                                                   | -                                                                                   | 6 ch                                                                                | -                                                                                   |
|              | AUX Input                     | 2 ch (AC POWER FAIL)                                                                | 2 ch Dry Contact Input                                                              | 3 ch (AC POWER FAIL, Tamper, Fire)                                                  | -                                                                                   |
| Hardware     | CPU                           | Cortex M3 72MHz                                                                     | Cortex M3 72MHz                                                                     | 1.2 GHz Single Core                                                                 | Cortex M3 72MHz                                                                     |
|              | Memory                        | 512 KB Flash + 64 KB SRAM                                                           | 128 KB Flash + 20 KB SRAM                                                           | 4 GB Flash + 256 MB RAM                                                             | 128 KB Flash + 20 KB RAM                                                            |
|              | LED                           | Multi-color                                                                         | Multi-color                                                                         | POWER: RED single-color<br>STATUS: Multi-color                                      | Multi-color                                                                         |
|              | Operating Temperature         | -20°C ~ 60°C (-4°F ~ 140°F)                                                         | -20°C ~ 60°C (-4°F ~ 140°F)                                                         | 0°C ~ 50°C (32°F ~ 122°F)                                                           | -20°C ~ 50°C (-4°F ~ 122°F)                                                         |
|              | Power                         | Voltage: 12 Vdc, Current: Max. 0.2 A                                                | Voltage: 12 Vdc, Current: Max. 0.6 A                                                | Voltage: 12 Vdc, Current: Max. 2.8 A<br>Voltage: 24 Vdc, Current: Max. 1.4 A        | Voltage: 12 Vdc, Current: Max. 0.5 A                                                |
|              | Dimensions (W x H x D mm)     | 90 x 190 x 21                                                                       | 90 x 190 x 21                                                                       | 100 x 190 x 33.9                                                                    | 36 x 65 x 18                                                                        |
|              | Certifications                | CE, UKCA, KC, FCC, RCM, RoHS, REACH, WEEE                                           | CE, UKCA, KC, FCC, RoHS, REACH, WEEE                                                | CE, UKCA, KC, FCC, RCM, IC, RoHS, REACH, WEEE, EAC, VCCI                            | CE, UKCA, KC, FCC, RoHS, REACH, WEEE, ETL Listed to UL 294                          |

(6) If a device with a fingerprint sensor is connected as a slave, the slave device can be used for fingerprint authentication. (7) DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with Suprema devices.



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