

suprema

SECURITY & BIOMETRICS



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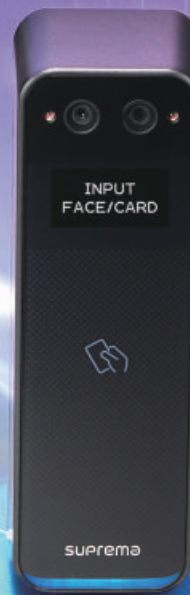
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Facial Authentication powered by AI



BioStation 3

BioEntry W3



BioStation 3 Max

To become a Global leading provider of
AI-powered Access Control and Security Solutions
with innovative products and services





Established in 2000, Suprema Inc. is a global leader in AI-powered Access Control and 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, 2011-2025,
15 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)



Monitoring

Search

MonitoringMapVideo

DoorMapDevice

All Door Groups

Management11

Main Entrance

Door Contact

Door Relay

Arm

CAM_Admin_Lobby

CAM_Elevator

IT Server Room

Door Contact

Door Relay

Arm

CAM_IT_Server_Inside

CAM_IT_Server_Door

Breakroom

Door Contact

Door Relay

Monitoring

Map

Video

CAM_Stairwell

25/07/21 18:08:20

Event (36)

Event Set

Unnamed 3

Alarm Event

Date	Door	Device	User Group	User	Card ID	Port ID	Event
2025/07/21 18:08:20	Breakroom	CAM_Stairwell					Fall Detection
2025/07/21 18:08:10	Main Loading Bay	XP2-GDPB 869365412 (192.1...	Shipping	Emma James	152639842		1:1 authentication su
2025/07/21 18:07:53	IT Server Room	BioEntry W3 547263985 (192...					1:1 authentication fa
2025/07/21 18:07:48	IT Server Room	BioEntry W3 547263985 (192...					1:1 authentication fa
2025/07/21 18:05:12	Meeting Room A	BioEntry W3 547863214 (192...	Janitorial	Lucas Baron	012015642		1:1 authentication su
2025/07/21 18:04:12	Meeting Room A	BioEntry W3 547863214 (192...	Janitorial	Lucas Baron	012015642		1:1 authentication su
2025/07/21 18:04:12	Staff Entry	XP2-GKDPB 153625365 (192...	Supervisor	Emma James	152639842		1:1 authentication su

User

Profile Image

ID1536963522

NameJamila Davis

EmailJamila@innovationtech.com

Phone-

DepartmentGlobal Sales

TitleDirector

GroupGlobal Sales

Period2023/07/21 00:00:00 ~ 2033/07/20 00:00:00

1:1 authentication failed (finger)

Event

Datetime

Door

Device

User

1:1 authentication failed (finger)

2025/07/21 18:07:53

IT Server Room

BioEntry P2 547263985

Maroon Kim

Credentials

Total Cards

854

Total Fingerprints

159

Total Visual Faces

568

Total Mobile Access

427

BioStar X

One Platform. Total Confidence.

BioStar X is Suprema's Unified Security Platform, featuring best-in-class biometric access, integrated monitoring, and an enterprise-ready backbone built for scale, uptime, and compliance.

Fall Detection

CAM_Stairwell

person on ground 0.55

25/07/21 18:08:20

18:08 18:09 18:10 18:11

25/07/21 18:08:20

1 2 3 4 1

Device | B

Exit Button

Door Sensor

Door Open

Held Open

Dual Auth

- Schedule

- Approve

- Approve

- Time

Anti-Tailg

Linked Ca

Linked Ca

Event

Fall detection

Datetime 2025/07/21 18:08:20

Door Breakroom

Device CAM_Stairwell

User

Status Active Ack & Report >

Door

Door name Breakroom

Entry XP2-GDPB 563214569

Exit BioEntry W3

Door Status Opened

Lock Status Unlocked

Alarm Disarmed

Recent Event

Datetime	Door
2025/07/21 18:12:33	IT Server Room
2025/07/21 09:30:12	IT Server Room
2025/07/21 09:30:11	IT Server Room
2025/07/21 09:30:00	IT Server Room
2025/07/21 09:29:55	IT Server Room

Access Trend

Mon

Tue

Wed

Thu

Fri

Sat

January February May June July August September October November



One screen for total awareness and action.



Infrastructure that grows stronger as you scale.



X is where integration meets no limits.

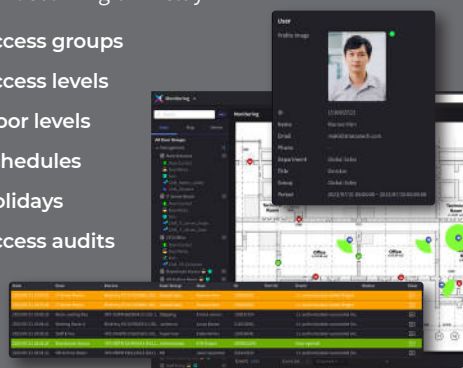
over who, where and when.

From lobby to rooftop, BioStar X lets you own every access point with a surgeon's precision. Schedules, zones, fire alarms, floors... You're not just managing doors. You're orchestrating movement.

Core access structure at scale

Managing hundreds of doors or thousands of users? BioStar X was designed to grow, without ever becoming unwieldy.

- Access groups
- Access levels
- Floor levels
- Schedules
- Holidays
- Access audits



Advanced AC

Enforces behavioral policies, safety standards, and emergency protocols with powerful zone logic.

- Anti-passback
- Fire alarm
- Interlock
- Schedule lock and unlock
- Occupancy
- Muster
- Intrusion alarm

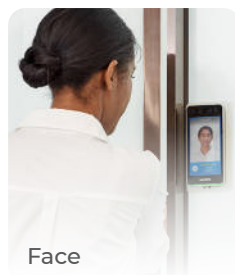
Emergency management

BioStar X makes it easy to respond fast with just one button push or tap on your phone.

- One-click lockdown
- Emergency unlock rules
- Access override tools
- Roll Call

One user, multiple ways in.

Whether it's staff, contractors, or visitors, BioStar X supports multi-credential and every access method you need to keep your operation moving.



intelligence that makes moves.

BioStar X blends AI detection, live video, and zone-level control into one unified monitoring console. Whether you're securing a single floor or a sprawling site, it gives you full visibility and rapid response. Less noise. More brains.

Unified monitoring console

BioStar X makes it easy to visualize activity by door, device, or full facility maps with live status indicators.



VMS integration

ADD-ON

Connect your VMS to monitor live camera feeds and link access and security events to recorded footages.

Event-driven alerts & responses

Monitor, investigate, and resolve events in a purpose-built interface with real-time controls and logs.

- Real-time alerts
- Live door control
- One-touch emergency actions
- Linked events

monitoring enhancements.

Advanced video intelligence and automation, built right into BioStar X. *VMS Integration required.



Tailgating

Catch unauthorized follow-ins, in real time.



Intrusion

Instantly detect off-hours or unapproved access.



Fall

React fast to potential safety incidents.



Loitering

Identify unusual lingering behavior automatically.



Abandon

Automatically detect and alert on unattended items for faster, safer response.

Rock-solid security, built for

With AES-256 encryption, role-based permissions, and 50+ security event triggers, BioStar X runs tight security from core to edge. Built for the real world, where peace of mind and compliance are non-negotiable.

Multi-communication server

Handles more devices with less strain by distributing tasks across parallel comm servers. Resource sharing ensures smooth scaling and high performance, even in large deployments.

Granular role-based access permissions

End-to-end encryption

All system communications, from server to device to client, are encrypted using protocols like AES 256, TLS 1.2, HTTPS, and secure RS-485, ensuring data integrity across every channel.

Global compliance ready

BioStar X aligns with ISO 27001, ISO 27701, GDPR, and the EU NIS2 Directive to ensure international best practices in data protection, encryption, and privacy management.

Failover clustering (TBA)

Comprehensive audit trails and reporting

Secure tamper on Suprema devices

Detects pry, open, and removal events in real time, triggering alerts and automated responses. Upon detection, onboard wipe irreversibly clears data and configurations from the device.

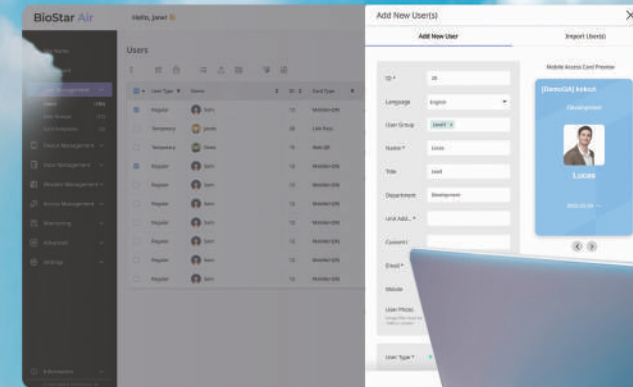
BioStar Air

Zero on-prem. All-in on cloud.

The only access control solution that natively connects the world's most advanced biometric readers to the cloud.

Built by the global leader in biometric security, BioStar Air eliminates the need for door controllers and on-prem servers while offering the most flexible credential options available. Smart readers with cutting-edge design connect seamlessly to its cloud-managed platform, giving you complete control of access to all your sites from your phone or browser.

Simple to manage, effortless to scale, ultimately secure—BioStar Air.



User Management

Today's Attendance



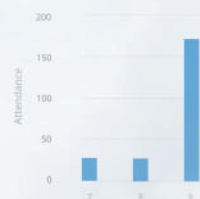
88%

45 USERS TODAY



Dashboard

Usage





4 DEVICE GROUPS



The screenshot displays the BioStar Air web application's "Users" management section. On the left is a sidebar menu with options like "Dashboard", "User Management", "Groups", "Devices", "Door Management", "Elevator Management", "Access Management", "Marketing", "Advanced", "Settings", and "Information". The main area shows a table of users with columns for User Type, Name, ID, Card Type, Valid Period, User Status, User Group, Access Level, and Floor Level. A search bar at the top right allows filtering by name. Below the table, there are filters for "1-15 of 15 items" and a checkbox for "Use as profile image".

User Type	Name	ID	Card Type	Valid Period	User Status	User Group	Access Level	Floor Level
Regular	Mina Thompson	124	Face, Mobile	2020/01/01 - 2020/01/09	Activated	Hill Team	Full Access	5F
Temporary	Javier Ramirez	145	LINK Pass	2020/03/09 - 2020/04/02	Activated	Visitor	Annual Conference	10F
Temporary	Michael Hardy	11	Web QR	2020/04/05 - 2020/04/07	Activated	Visitor	Annual Conference	10F
Regular	Brendy Chen	138	Face, Mobile	2020/04/15 - 2020/04/15	Activated	Dier Team	Weekend Workers	4F
Regular	Sara Lewis	125	Face, Mobile	2020/04/20 - 2020/04/20	Activated	Lingqi Team	Regular Access	5F
Regular	Vegon Chen	165	Mobile+QR	2020/04/25 - 2020/04/25	Activated	Marketing Team	Workday Hours	5F
Regular	Nolan Green	16	Mobile+QR	2020/05/01 - 2020/05/01	Activated	Dier Team	No	
Regular	Ethan Wright	63	Mobile	2021/03/01 - 2020/03/30	Suspended	Dier Team	No	
Regular	Ira Anderson	147	Mobile+QR	2020/03/01 - 2020/03/30	Expired	Dier Team	No	
Regular	[Redacted]	136	Mobile	2020/03/01 - 2020/03/30	Activated	Hill Team	No	



11 PENDING USERS



Biometrics
in the cloud



Zero on-prem
infrastructure



On-the-go
management



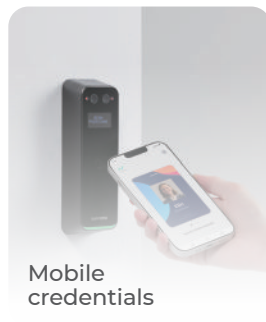
World's easiest
setup

Industry's of credentials.

Supports a full range of credentials while enabling hands-free, remote unlocking, and API-based integrations for maximum flexibility.



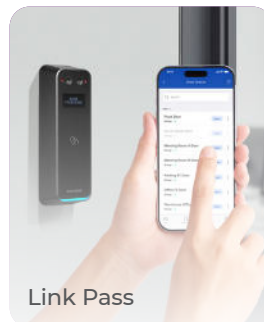
Face



Mobile
credentials



QR Pass



Link Pass



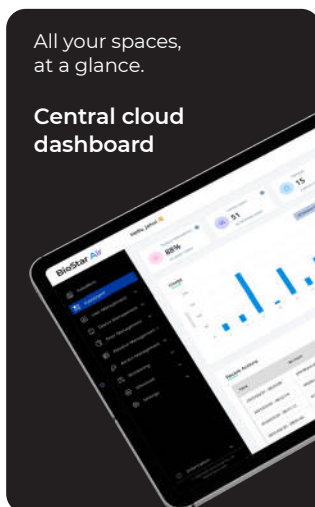
RFID



PIN

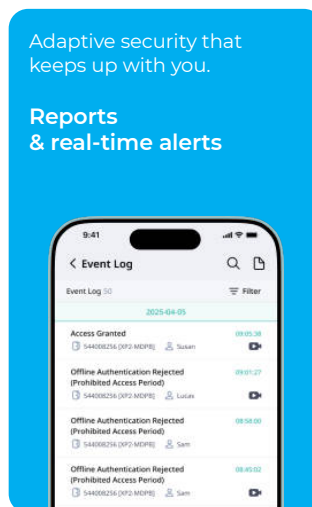
Effortless access control,

Empowers space owners to rethink access as a driver of new business models while enjoying the luxury of managing their spaces remotely, from anywhere in the world.



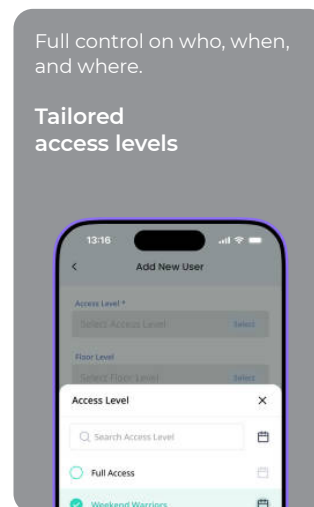
All your spaces,
at a glance.

**Central cloud
dashboard**



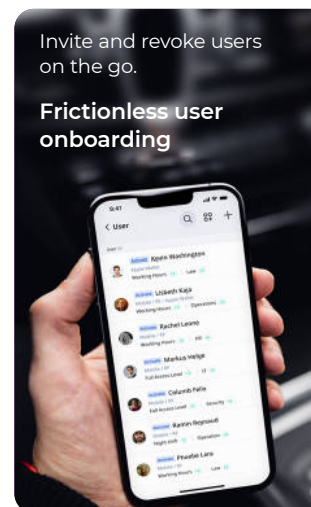
Adaptive security that
keeps up with you.

**Reports
& real-time alerts**



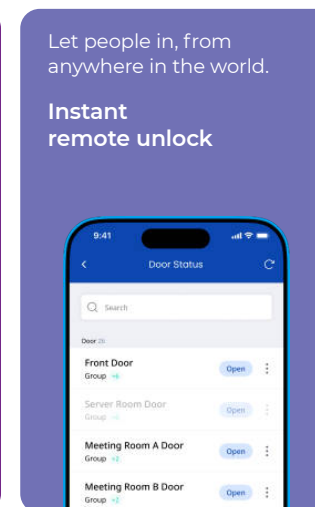
Full control on who, when,
and where.

**Tailored
access levels**



Invite and revoke users
on the go.

**Frictionless user
onboarding**

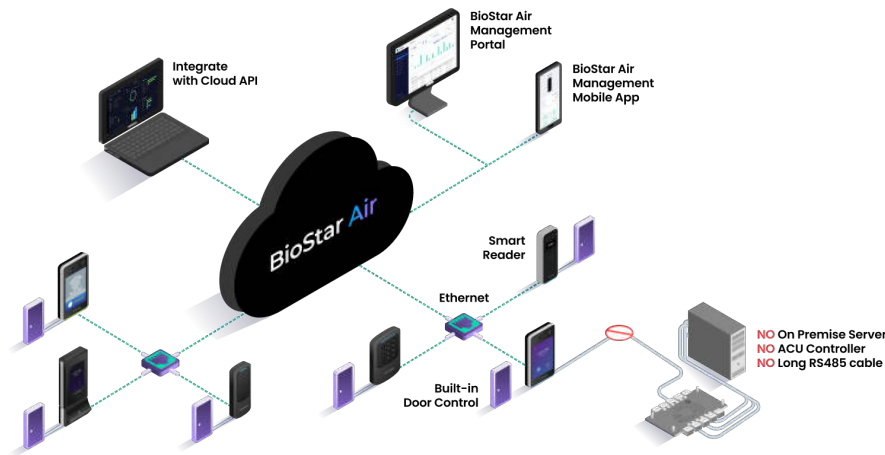


Let people in, from
anywhere in the world.

**Instant
remote unlock**

Secure today, for tomorrow.

With its smart access readers and edge architecture, BioStar Air eliminates the need for door controllers. Each reader operates independently with a built-in relay, ensuring seamless scalability.



Cloud agility, long-term reliability.

BioStar Air secures and maintains everything on your behalf, so you never have to install a security patch or reboot a server.

Certified secure

ISO 27001 certified, BioStar Air meets 26 data protection standards, 114 security controls, and 18 personal information management requirements, ensuring compliance with global security best practices.

Secure Offline Mode.

Temporary network disruptions should never translate into locked doors or compromised operations. BioStar Air maintains full access continuity during connectivity loss, without degrading security posture.

Mobile credentials: cloud-verified, edge-executed.

When a mobile credential is used, the smartphone validates it with the BioStar Air cloud and then presents a secure, cryptographically signed token to the reader. Even if the reader is offline, whether permanently in remote sites or temporarily due to network issues, access can be verified and granted locally using this token.

Face and RFID credentials: pre-distributed to the edge.

For biometric (facial authentication) and RFID credentials, BioStar Air continuously synchronizes credential data to each reader. Each reader maintains a local credential cache, allowing access decisions to continue locally using the most recent authorized data if the device goes offline.

Offline mobile credentials without mobile network.

BioStar Air also supports fully offline mobile access, even when the user's smartphone has no mobile or Wi-Fi connectivity, such as in underground or remote locations. Administrators can define a time-bounded offline acceptance window per reader, allowing mobile credentials to remain valid for a predefined duration while maintaining security through strict time limits and automatic expiration.

Secure API communication

All BioStar Air API communications run on TLS 1.2 encryption with secure HTTPS connections. Access tokens automatically expire to prevent unauthorized access, and AWS API Gateway safeguards against brute-force attacks.

No more patch Tuesdays

With automatic updates and cloud-based firmware management, customers always have the latest version without manual maintenance. No downtime, no security gaps, just seamless, worry-free protection.

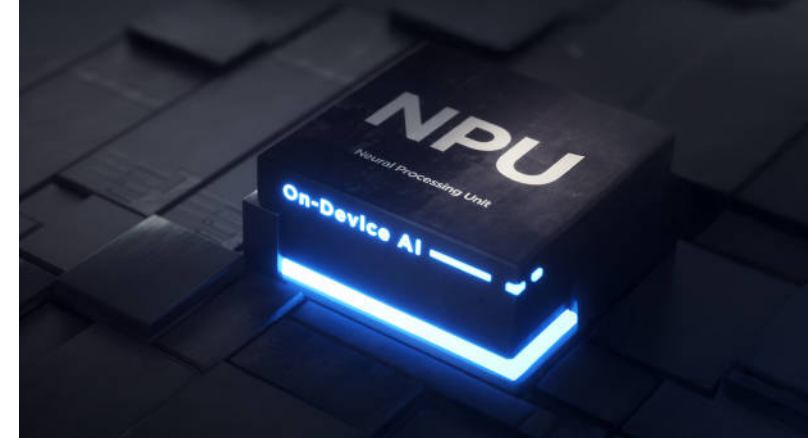
Biometrics

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.

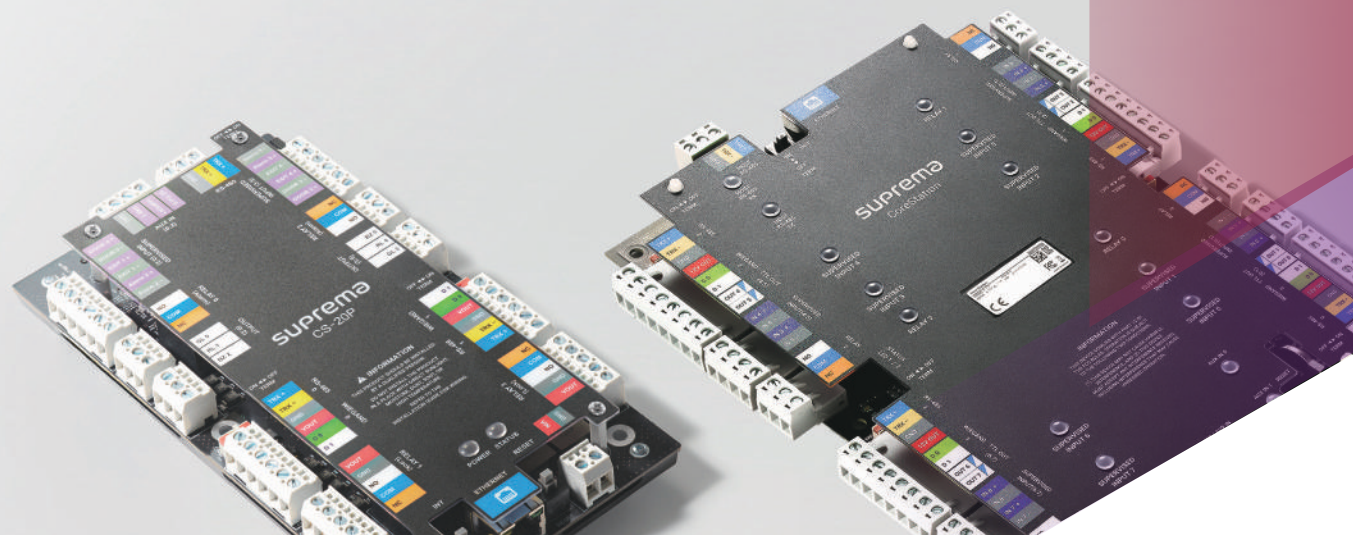
Fingerprint Recognition

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.



| 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 X 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 20 (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 X 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 X
- Anti-passback, fire alarm feature



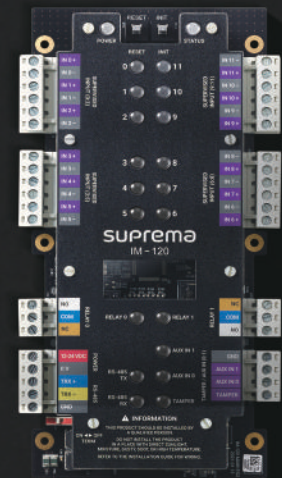
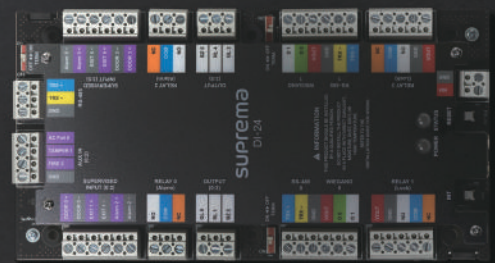
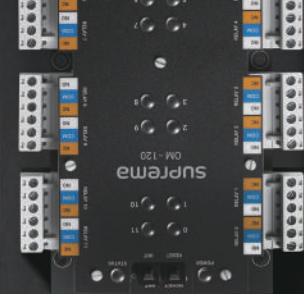
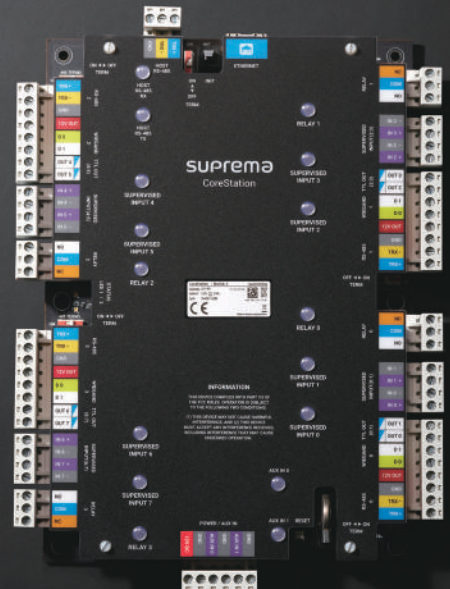
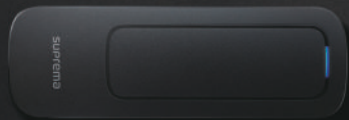
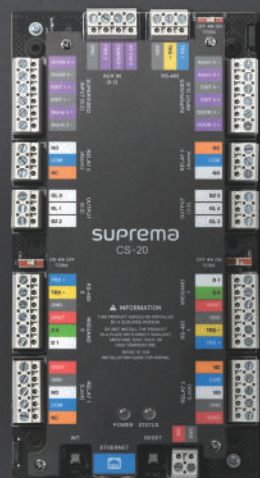
Door Interface Module (DI-24)

- Economical expansion option
- Green LED/Red LED/Buzzer control
- Dedicated Fire, Tamper, Power Fail inputs
- Provides DC power output for door locks and readers



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 Q2

Intelligent QR/RFID reader

- Reads most QR codes/barcodes, RFID cards, and mobile credentials
- IP65-rated for reliable indoor/outdoor use
- Provides DC power output for door locks and readers



XPass 2

Outdoor Compact RFID Device

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

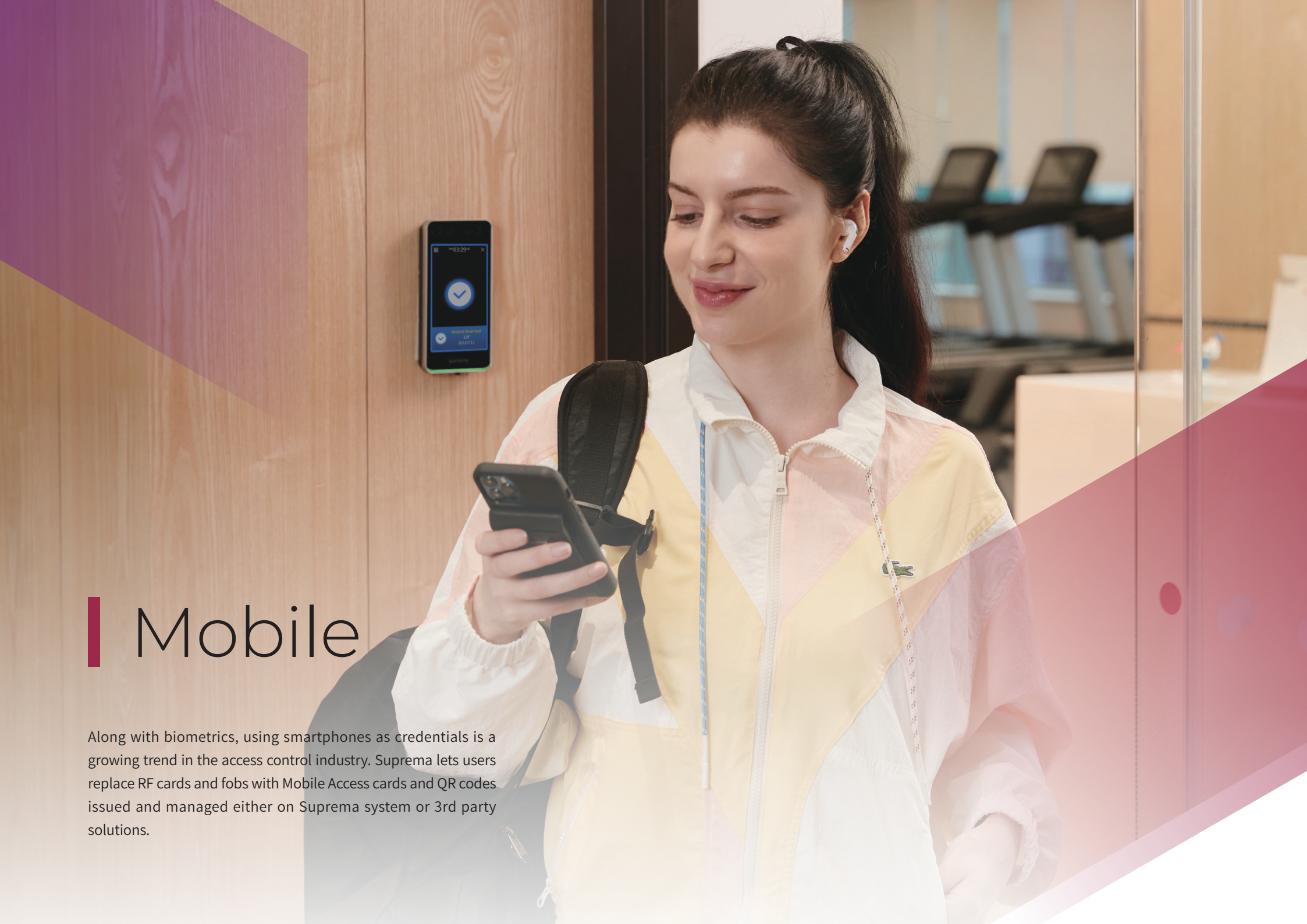


XPass D2

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.

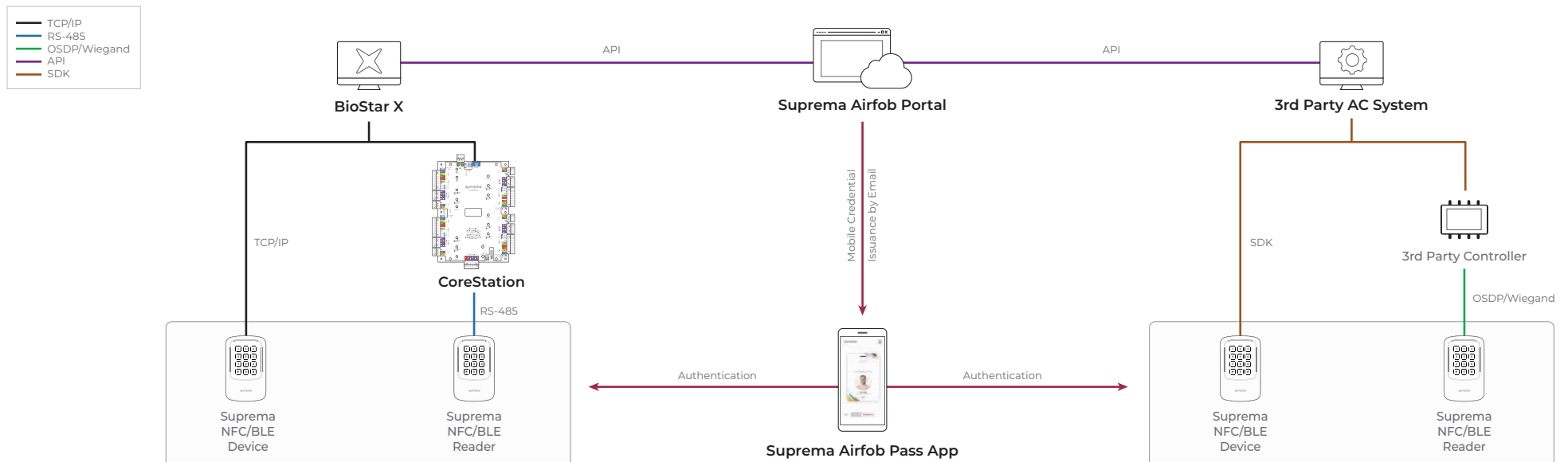
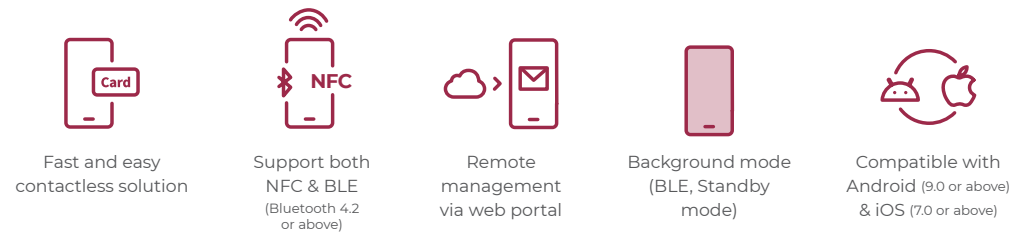
A woman with dark hair in a ponytail, wearing a yellow and white Lacoste jacket, is looking at her smartphone. She is standing next to a wooden door with a Suprema mobile access reader mounted on it. The reader's screen shows a blue checkmark and the text 'Access Granted' and '12:25:11'. The background shows a gym with treadmills.

| 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

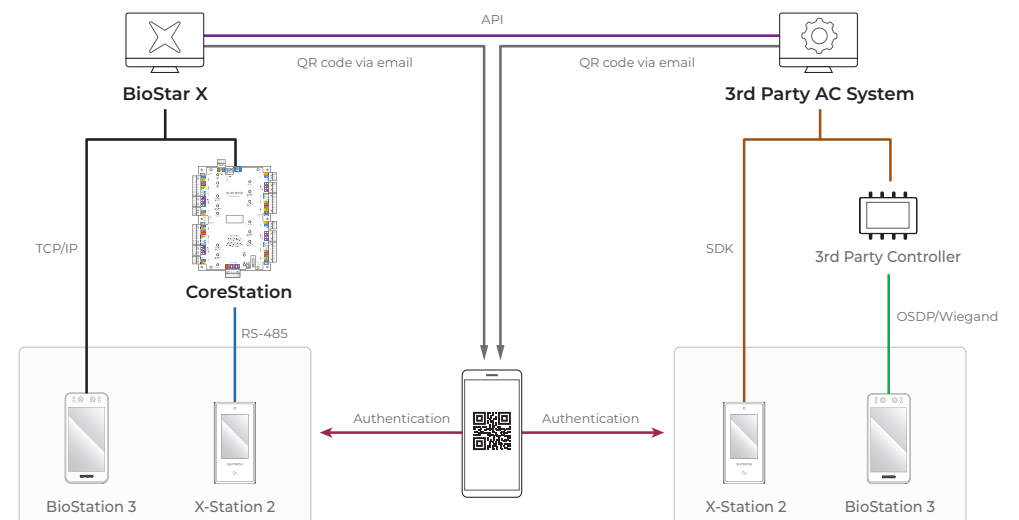
Suprema Mobile Access significantly improves user convenience by letting people use smartphones as access cards. Mobile access cards can be issued on either BioStar X or Suprema Airfob Portal and users can receive them via email. Suprema Mobile Access can easily be integrated with 3rd party systems.





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 X or 3rd party systems.







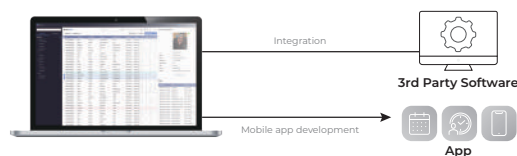
Development Tools

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.



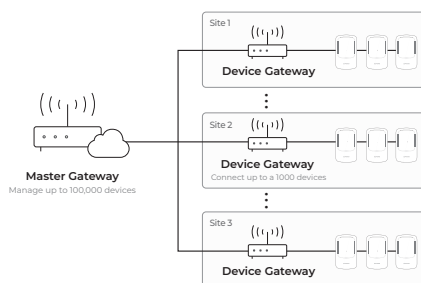
BioStar X API

BioStar X API is a comprehensive web application programming interface that provides necessary tools for developers to create applications or integrate BioStar X into 3rd party software.



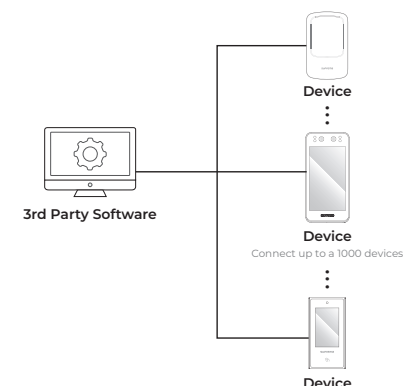
Suprema G-SDK

Suprema G-SDK is a new software development kit for allowing Suprema devices to be integrated with third-party software. It is a lightweight, scalable, and cross-platform solution which expedites your development.



BioStar Device SDK

BioStar Device SDK development framework allows developers to seamlessly integrate core functionality of Suprema biometric devices and terminals with 3rd party software.



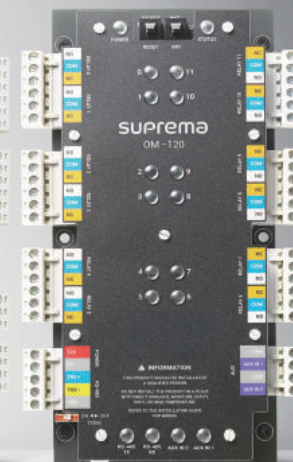
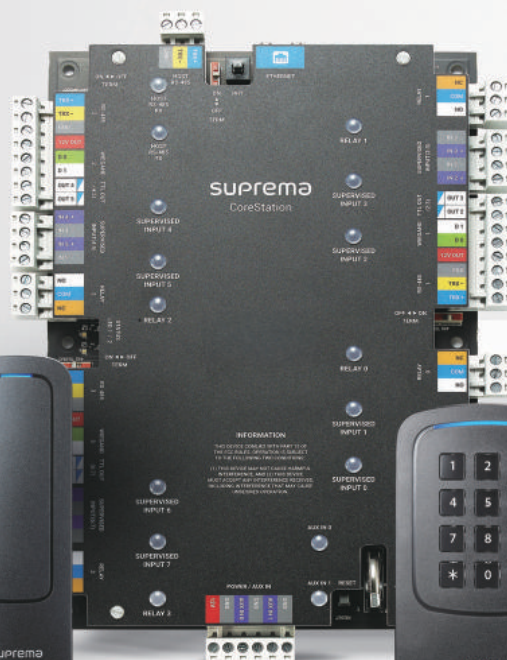
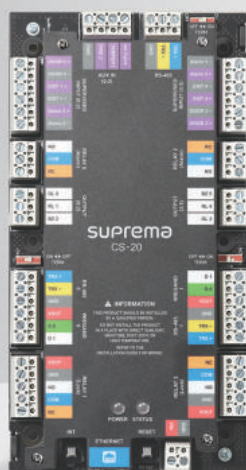
Product					
Product Name		BioStation 3 Max	BioStation 3	BioEntry W3	BioStation 2a
General	Biometric	Face:BS3M-DB, APB / Face, Fingerprint: BS3M-ODB, OAPB	Face	Face	Fingerprint
	LFD (Live Finger Detection)	BS3M-DB, APB: - / BS3M-ODB, OAPB: Supported (SW-based)	-	-	Supported (SW-based)
	Protection Class	IP65, IK06	IP65, IK06	IP67, IK08	IP65
	RF Options	BS3M-DB, ODB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa BS3M-APB, OAPB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa, iCLASS SE/SR/Seos	BS3-DB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa BS3-APWB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa, iCLASS SE/SR/Seos	BEW3-DB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa BEW3-APB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa, iCLASS SE/SR/Seos	BS2A-ODPB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa BS2A-OAPWB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽³⁾ , FeliCa, iCLASS SE/SR/Seos, FeliCa
	Mobile	NFC, BLE	NFC, BLE	NFC, BLE	NFC, BLE
Capacity	Max. User ⁽¹⁾	100,000	100,000	100,000	500,000
	Max. Credential (1:N) ⁽⁴⁾	Face: 50,000 Fingerprint: 100,000 (BS3M-ODB, OAPB only) Card: 100,000	Face: 50,000	Face: 30,000 Card: 100,000	Fingerprint: 100,000
	Max. Credential (1:1) ⁽⁴⁾	Face: 100,000 Fingerprint: 100,000 (BS3M-ODB, OAPB only) Card: 100,000 PIN: 100,000	Face: 100,000 Card: 100,000 PIN: 100,000	Face: 30,000 Card: 100,000	Fingerprint: 500,000 Card: 500,000 PIN: 500,000
	Max. Text Logs	5,000,000	5,000,000	1,000,000	5,000,000
	Max. Image Logs	50,000	50,000	10,000	-
Interfaces	Wi-Fi	-	BS3-DB: - / BS3-APWB: 802.11 b/g/n 2.4 GHz	-	BS2A-ODPB: - / BS2A-OAPWB: 802.11 b/g/n 2.4 GHz
	Ethernet	10/100/1000 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)
	RS-485 Communication Protocol	OSDP V2 compliant	OSDP V2 compliant	OSDP V2 compliant	OSDP V2 compliant
	Wiegand	1 ch Input, 1 ch Output	1 ch Input, 1 ch Output	1 ch Input, 1 ch Output	1 ch Input, 1 ch Output
	Input	3 ch Input	3 ch Input	3 ch Input	3 ch Input
	Relay	1 Relay	1 Relay	1 Relay	1 Relay
	USB	USB 2.0 (Type C)	USB 2.0 (Host)	USB 2.0 (Type C), only FW-Upgrade	USB 2.0 (Host)
Hardware	CPU	1.4 GHz Quad Core	1.5 GHz Quad Core	1.5 GHz Quad Core	1.5 GHz Quad Core
	Memory	32 GB Flash + 4 GB RAM	32 GB Flash + 4 GB RAM	16 GB Flash + 2 GB RAM	16 GB Flash + 2 GB RAM
	Crypto Chip	Supported	Supported	Supported	Supported
	Sound	16 bit	16 bit	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 ~ 60°C (-4°F ~ 140°F)
	Tamper	Supported	Supported	Supported	Supported
	Power	Voltage: 12 Vdc, Current: Max. 2.1 A Voltage: 24 Vdc, Current: Max. 1 A	Voltage: 12 Vdc, Current: Max. 1 A Voltage: 24 Vdc, Current: Max. 0.65 A	Voltage: 12 Vdc, Current: Max. 1.0 A Voltage: 24 Vdc, Current: Max. 0.6 A	Voltage: 12 Vdc, Current: Max. 0.8 A Voltage: 24 Vdc, Current: Max. 0.4 A
	PoE	BS3M-DB, ODB: - BS3M-APB, OAPB: PoE+, IEEE 802.3at compliant	BS3-DB: - BS3-APWB: PoE+, IEEE 802.3at compliant	BEW3-DB: - BEW3-APB: IEEE 802.3af compliant	IEEE 802.3af compliant
	Dimensions (W x H x D mm)	BS3M-DB, APB: 119.8 x 233 x 23.5 BS3M-ODB, OAPB: 119.8 x 268.3 x 49.6	82.5 x 171 x 23.4	50 x 160 x 34.15	142 x 144 x 45 (Bottom) / 37.8 (Top)
	Certifications	CE, UKCA, KC, FCC, IC, RCM, RoHS, REACH, WEEE, SIG, MIC, TELEC, ETL Listed to UL 294	BS3-DB: CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, MIC, TELEC BS3-APWB: 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, RCM, SIG, 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 ⁽⁵⁾	BioEntry P2	X-Station 2	XPass Q2	XPass 2	XPass S2
Fingerprint	Fingerprint	Fingerprint	Fingerprint: XS2-ODPB, OAPB	-	-	-
Supported (SW-based)	Supported (HW + SW-based)	Supported (SW-based)	XS2-ODPB, OAPB: Supported (SW-based)	-	-	-
IP67	IP67, IK09	-	IP65	IP65	IP65, IP67, IK08	IP65
BLN2-ODB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa BLN2-OAB, PAB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/ EV3 ⁽⁸⁾ , FeliCa, iCLASS SE/SR/Seos	BEW2-OHPB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa BEW2-ODPB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa BEW2-OAPB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa, iCLASS SE/SR/Seos	BEP2-OD: 125KHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/ EV3 ⁽⁸⁾ , FeliCa BEP2-OA: 125KHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa, iCLASS SE/SR/Seos	XS2-ODPB, DPB: 125 kHz EM & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa XS2-OAPB, APB: 125 kHz EM, HID Prox & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa, iCLASS SE/SR/Seos	XPQ2-DB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa	XP2-MDPB, GDPB, GKDPB: 125 kHz EM & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa XP2-MAPB: 125 kHz EM, HID Prox & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , 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	NFC, BLE	-
10,000	500,000	10,000	500,000	200,000 ⁽⁶⁾	200,000	50,000
Fingerprint: 10,000	Fingerprint: 100,000	Fingerprint: 10,000	Fingerprint: 100,000 (XS2-ODPB, OAPB only)	Card: 200,000	-	-
Fingerprint: 10,000 Card: 10,000 PIN: 10,000	Fingerprint: 500,000 Card: 500,000	Fingerprint: 10,000 Card: 10,000	Fingerprint: 500,000 (XS2-ODPB, OAPB only) Card: 500,000 PIN: 500,000	Card: 200,000	Card: 200,000 PIN: 200,000 (XP2-GKDPB only)	Card: 50,000
1,000,000	1,000,000	1,000,000	5,000,000	1,000,000	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	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)	1 ch Master or Slave (Selectable)
OSDP V2 compliant	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)	1 ch Input or Output (Selectable)
2 ch Input	2 ch Input	2 ch Input	2 ch Input	3 ch Input	2 ch Input	2 ch Input
1 Relay	1 Relay	1 Relay	1 Relay	1 Relay	1 Relay	1 Relay
-	-	-	USB 2.0 (Host)	USB 2.0 (Type C), only FW-Upgrade	-	-
1.2 GHz	1.2 GHz Quad Core	1.0 GHz	1.5 GHz Quad Core	1.0 GHz	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	8 GB Flash + 256 MB RAM	4 GB Flash + 64 MB RAM	16 MB Flash + 16 MB RAM
Supported	Supported	Supported	Supported	Supported	Supported	Supported
16 bit	Multi-tone Buzzer	Multi-tone Buzzer	24 bit	Multi-tone Buzzer	Multi-tone Buzzer	Multi-tone Buzzer
BLN2-ODB, OAB: -20°C ~ 50°C (-4°F ~ 122°F) BLN2-PAB: -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)	-20 °C ~ 60 °C (-4°F ~ 140°F)	-35°C ~ 65°C (-31°F ~ 149°F)	-35°C ~ 65°C (-31°F ~ 149°F)
Supported	Supported	Supported	Supported	Supported	Supported	Supported
Voltage: 12 Vdc, 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 Voltage: 24 Vdc, Current: Max. 0.5 A	Voltage: 12 Vdc, Current: Max. 0.5 A Voltage: 24 Vdc, Current: Max. 0.3 A	Voltage: 12 Vdc, Current: Max. 0.5 A 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	XS2-ODPB, OAPB: 82 x 208.5 x 53 (Bottom) / 25.9 (Top) XS2-DPB, APB: 82 x 159 x 25.9	50 x 150 x 40.2	XP2-MDPB, MAPB: 48 x 144.7 x 27 XP2-GDPB, GKDPB: 80 x 130 x 25	80 x 120 x 11.4
CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE	BEW2-OHPB,ODPB: CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE BEW2-OAPB: 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	XS2-ODPB, OAPB: CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE XS2-DPB, APB: CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, TELEC, RoHS, REACH, WEEE	CE, UKCA, KC, FCC, IC, RCM, SIG, RoHS, REACH, WEEE, EAC, TELEC	XP2-MDPB, GDPB: CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE, ETL Listed to UL 294 XP2-GKDPB: CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, TELEC, RoHS, REACH, WEEE, ETL Listed to UL 294 XP2-MAPB: CE, UKCA, KC, FCC, RCM, SIG, RoHS, REACH, WEEE	CE, UKCA, KC, FCC, BIS, RoHS, REACH, WEEE

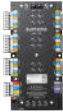
(5) Some models (BEW2-ODP, BEW2-OAP, BEW2-OHP) do not support BLE.

(6) Based on users registered without credentials.

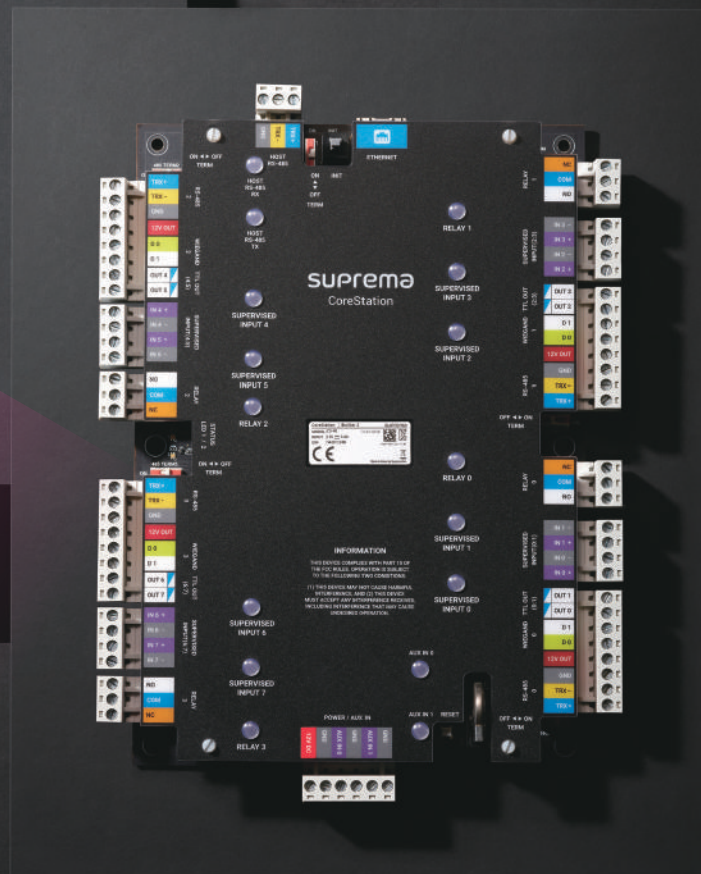
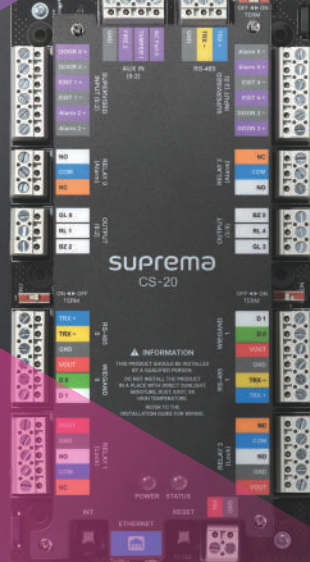


Product			
Product Name		CoreStation (CS-40)	CoreStation 20 (CS-20 CS-20P)
Capacity	Max. User	500,000	500,000
	Max. Credential (1:N)	Face: 4,000 Fingerprint: 100,000 ⁽⁷⁾	-
	Max. Credential (1:1)	Face: 30,000 Fingerprint: 500,000 ⁽⁷⁾ Card: 500,000 PIN: 500,000	Card: 500,000 PIN: 500,000
	Max. Text Logs	5,000,000	5,000,000
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
	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 (Max. 31 devices per port)	Max. 4 devices
	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 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 Voltage: 24 Vdc, Current: Max. 0.1 A	Voltage: 12 Vdc, Current: Max. 2.8 A 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

Product			
Product Name		BioEntry R2	XPass D2
General	Biometrics	Fingerprint	-
	Protection Class	-	IP65, IP67, IK08
	RF Options	BER2-OD: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa	XP2D-MDB, GDB, GKDB: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ⁽⁸⁾ , FeliCa
	Mobile	BER2-OD: NFC	XP2D-MDB, GDB, GKDB: NFC, BLE
Interfaces	RS-485	1 ch Slave	1 ch Slave
	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	XP2D-MDB: 48 x 144.7 x 27 XP2D-GDB, GKDB: 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 Module (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 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 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	CE, UKCA, KC, FCC, RoHS, REACH, WEEE, ETL Listed to UL 294

(7) If a device with a fingerprint sensor is connected as a slave, the slave device can be used for fingerprint authentication. (8) 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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