

# BioStation 2a

Feel the Power of AI



BioStation 2a represents a significant step in the evolution of security technology. It introduces deep learning into fingerprint recognition, enhancing access control with multiple credential options. The core innovation lies in its embedded AI processor, the NPU (Neural Processing Unit), finely tuned for deep learning, resulting in remarkable precision and speed in fingerprint recognition. Explore the future of security with BioStation 2a.

**Suprema**  
SECURITY & BIOMETRICS

## The World's First AI Security Solution Offering Unparalleled Security

### The World's First Deep-Learning Processor Adopted

BioStation 2a is powered by an AI processor, the NPU (Neural Processing Unit). This ensures lightning-fast and precise fingerprint recognition, setting new standards for security solutions for the first time in the world.

### Over 30% Improvement in Fingerprint Recognition

Through deep learning, the accuracy of fingerprint recognition is increased extensively. The ability to extract templates from low-quality fingerprints, such as those that are noisy or distorted, has significantly improved.

### x5 Higher Capacity : Up to 100,000 users

Increase the capacity by fivefold, from 20,000 to an impressive 100,000. Even with this substantial capacity expansion, BioStation 2a boasts enhanced speed, thanks to its upgraded Processor, now running at 1.5GHz, and the application of Neutral Processor Unit (NPU) technology.



## Specifications

| Model Name                    | BS2A-ODPB                                                                                                               | BS2A-OAPWB                                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| RF Option                     | 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>1)</sup> , FelICa                           | 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 <sup>1)</sup> , iCLASS SE/SR/Seos, FelICa |
| RF Read Range <sup>2)</sup>   | EM/MIFARE/DESFire/HID iCLASS: 50 mm, HID Prox/FelICa: 30 mm                                                             |                                                                                                                            |
| Mobile                        | NFC, BLE                                                                                                                |                                                                                                                            |
| Live Finger Detection         | Supported (SW-based)                                                                                                    |                                                                                                                            |
| CPU                           | 1.5 GHz Quad Core                                                                                                       |                                                                                                                            |
| Memory                        | 16 GB Flash + 2 GB RAM                                                                                                  |                                                                                                                            |
| Crypto Chip                   | Supported                                                                                                               |                                                                                                                            |
| Max. User                     | 500,000 <sup>3)</sup>                                                                                                   |                                                                                                                            |
| Max. Credential (1:N)         | Fingerprint: 100,000                                                                                                    |                                                                                                                            |
| Max. Credential (1:1)         | Fingerprint, Card, PIN: 500,000                                                                                         |                                                                                                                            |
| Max. Text Log                 | 5,000,000                                                                                                               |                                                                                                                            |
| LCD                           | 2.8" color TFT LCD / 320 x 240 pixels                                                                                   |                                                                                                                            |
| Wi-Fi                         | Not Supported                                                                                                           | Supported (802.11 b/g/n 2.4 GHz)                                                                                           |
| Ethernet                      | Supported (10/100 Mbps, auto MDI/MDI-X)                                                                                 |                                                                                                                            |
| RS-485                        | 1 ch Master / Slave (Selectable)                                                                                        |                                                                                                                            |
| RS-485 Communication Protocol | OSDP V2 compliant                                                                                                       |                                                                                                                            |
| Wiegand                       | 1 ch Input, 1 ch Output                                                                                                 |                                                                                                                            |
| Input                         | 3 ch Inputs                                                                                                             |                                                                                                                            |
| Relay                         | 1 Relay                                                                                                                 |                                                                                                                            |
| USB                           | USB 2.0 (Host)                                                                                                          |                                                                                                                            |
| Tamper                        | Supported                                                                                                               |                                                                                                                            |
| Power                         | Voltage: 12 Vdc, Current: Max. 0.8 A<br>Voltage: 24 Vdc, Current: Max. 0.4 A<br>PoE: Supported (IEEE 802.3af compliant) |                                                                                                                            |
| IP Rating                     | IP65                                                                                                                    |                                                                                                                            |
| Operating Temperature         | -20 °C ~ 60 °C (-4°F ~ 140°F)                                                                                           |                                                                                                                            |
| Dimensions (WxHxD)            | 142 x 144 x 45 (Bottom) / 37.8 (Top) (mm)                                                                               |                                                                                                                            |
| Certification                 | CE, UKCA, KC, FCC, RCM, SIG, RoHS, REACH, WEEE                                                                          |                                                                                                                            |

<sup>1)</sup> DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with BioStation 2a.

<sup>2)</sup> RF read range will vary depending on installation environment. <sup>3)</sup> The number of users registered without any credential data.

## Complete Access Control : Your Security, Your Way



### Multiple Credential

Offer fingerprint recognition, mobile access(NFC/BLE), and RFID card options making authentication easier.



### Customize Features

Enable integration and simple adding-on new features with an extended USB host.



### Large-scale Data Processing Capacity

Enable matching up to 100,000 fingerprint recognition template, and storing up to 5,000,000 logs.



### Versatile Environment Adaptation

Whether it's indoors or outdoors, BioStation 2a seamlessly adapts to any environment. It's IP65 rated and can operate in temperatures ranging from -20°C to 60°C, guaranteeing durability even in rugged conditions.



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