**SUPREMA ACCESS CONTROL DEVICE - BioStation L2**

**TECHNICAL SPECIFICATIONS**

2021-11-08

# PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the BioStation L2.

* 1. SUMMARY
1. Section includes a biometric reader and door controller with Ethernet network connectivity.
2. Product - An IP enabled biometric reader and door controller, capable of scanning and registering fingerprints and RFID cards, managing users and controlling access.
	1. REFERENCE
3. Standards
4. IEEE 802.3 Ethernet Standards
5. FCC - Code of Federal Regulations, Title 47, Part 15, Class B
	1. SUBMITTALS
	2. QUALIFICATIONS
6. Manufacturer shall be ISO 9001 certified with a minimum of five years’ experience in producing access control equipment.
7. Installers shall be trained by the Manufacturer to install, configure and commission the access control system.
	1. WARRANTY
8. Manufacturer shall provide a limited ( ) month warranty for the product to be free of defect in material and workmanship.

END OF SECTION

# PART 2 - PRODUCTS

1. EQUIPMENT
2. Manufacturer
Suprema Inc.
17F Parkview Office Tower, Jeongja, Bundang, Seongnam, Gyeonggi, 463-863, Republic of Korea
Tel: 82-31-783-4502, Fax: 82-31-783-4503, [www.supremainc.com](http://www.supremainc.com)
support@supremainc.com
3. Model(s): BioStation L2
4. Alternates: NONE
5. DESCRIPTION
6. The biometric reader and door controller (“reader/controller”) shall be an IP-enabled device capable of scanning fingerprints and RFID cards, managing users and controlling access.
7. FEATURES
8. Time Attendance and Access Control device
9. Quad Core 1.2GHz
10. Live Finger Detection (LFD)
11. NIST MINEX certified and compliant
12. RS-485, Wiegand, TTL, Relay, Tamper
13. Built-in card reader with card options (125 KHz EM, HID Prox, 13.56 MHz MIFARE, MIFARE Plus, DESFire/DESFire EV1, FeliCa, NFC)
14. Intuitive Graphical User Interface (GUI) system
15. Function Keys (F1, F2, F3, F4)
16. SPECIFICATIONS

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| **Category** | **Feature** | **Specification** |
| Credential | Biometric | Fingerprint |
| RF Option | **BSL2-OE**: 125kHz EM |
| **BSL2-OM**: 13.56MHz MIFARE, MIFARE Plus, DESFire/EV1, FeliCa, NFC |
| RF read range\* | MIFARE: 50 mm, DESFire: 50 mm, Felica: 30 mm*\* RF read range will vary depending on the installation environment.* |
| General | CPU | 1.2 GHz Quad Core |
| Memory | 2GB Flash + 256 MB RAM |
| Crypto chip | Supported |
| LCD type | 2” color TFT LCD  |
| LCD resolution | 220 x 176 pixels |
| Sound | 16-bit Hi-Fi |
| Operating temperature | -20°C ~ 50°C |
| Storage temperature | -40°C ~ 70°C |
| Operating humidity | 0% ~ 80%, non-condensing |
| Storage humidity | 0% ~ 90%, non-condensing |
| Dimension (W x H x D) | 71 mm x 201 mm x 44 mm (Bottom) / 34 mm (Top) |
| Weight | Device: 280g |
| Bracket: 61g (Including washer and bolt) |
| Certificates | CE, FCC, KC, RoHS, REACH, WEEE |
| Fingerprint  | Image dimension | 272 x 320 pixels |
| Image bit depth  | 8bit, 256 grayscale |
| Resolution | 500 dpi |
| Template | SUPREMA / ISO 19794-2 / ANSI 378 |
| Extractor / Matcher | MINEX certified and compliant  |
| LFD | Supported |
| Capacity | Max. User | 500,000 |
| Max. Credential (1:N) | Fingerprint: 100,000 |
| Max. Credential (1:1) | Fingerprint: 500,000Card:500,000PIN:500,000 |
| Max. Text Log | 1,000,000 |
| Interface | Ethernet | Supported (10/100 Mbps, auto MDI/MDI-X) |
| RS-485 | 1ch Host or Slave (Selectable) |
| Wiegand | 1ch Input or Output (Selectable) |
| TTL input | 2ch Inputs |
| Relay | 1 Relay |
| Tamper | Supported |
| Electrical | Power | Voltage: DC 12V Current: Max. 600 mA |
| Switch input VIH | Min. 3VMax. 5V |
| Switch input VIL | Max. 1V |
| Switch Pull-up resistance | 4.7kΩ (The input ports are pulled up with 4.7kΩ.) |
| Wiegand output VOH | More than 4.8V |
| Wiegand output VOL | Less than 0.2V |
| Wiegand output Pull-up resistance | Internally pulled up with 1 kΩ |
| Relay | Voltage: Max. 30VDCCurrent: 1A, Max. 2A |
| Platform | BioStar 2 | Supported |
| BioStar 1 | Supported |

END OF SECTION

# PART 3 - EXECUTION

1. INSTALLER
2. Contractor personnel shall comply with all applicable state and local licensing requirements.
3. PREPARATION
4. Contractor shall avoid locating the reader/controller in a location subject to direct sunlight, dust or soot.
5. IP addressing shall be coordinated with the Owner’s responsible IT personnel.
6. STORAGE
7. The device shall be stored in an environment where temperature is in the range of -40°C - +70°C.
8. The device shall be stored in an environment where humidity is in the range of 0% - 90%, non-condensing.
9. INSTALLATION
10. The device shall be installed in an environment where temperature is in the range of -20°C - 50°C.
11. The device shall be installed in an environment where humidity is in the range of 0% - 80%, non-condensing.
12. All wires shall be run through conduit to prevent failure caused by rodent damage.
13. Connections between card readers and a door controller shall not exceed 100 meters.
14. All peripheral devices shall be grounded.
15. To avoid RF interference, a minimum separation distance must be maintained.

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| Wall thickness | Distance |
| 100 mm | 470 mm |
| 120 mm | 400 mm |
| 150 mm | 300 mm |

1. EXAMINATION
2. All network connections to the reader/controller shall be tested for proper levels of performance.

END OF SECTION