**SUPREMA ACCESS CONTROL DEVICE - BioLite N2**

**TECHNICAL SPECIFICATIONS**

2023-06-29

# PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the BioLite N2.

* 1. SUMMARY
1. An IP enabled biometric reader and door controller, capable of scanning and registering fingerprints and RFID cards, managing users and controlling access.
	1. REFERENCE
2. Standards
3. IEEE 802.3/802.3u Ethernet Standards
4. FCC - Code of Federal Regulations, Part 15, Class A
5. Conformity for Europe (CE) - R&TTE Directive 1999/5/EC
6. UK Conformity Assessed (UKCA)
7. Korea Certification (KC)
8. Industry Canada (IC)
9. Regulatory Compliance Mark (RCM)
10. Bluetooth SIG
11. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) - (EC No. 1907/2006)
12. The Waste Electrical and Electronic Equipment (WEEE) - Directive 2012/19/EU
13. ANSI / IEC60529 – Degrees of Protection Provided by Enclosures
14. International Electrotechnical Commission (IEC) – Ingress Protection Rating IP67
	1. SUBMITTALS
	2. QUALIFICATIONS
15. Manufacturer shall be ISO 9001 certified with a minimum of five years’ experience in producing access control equipment.
16. Installers shall be trained by the Manufacturer to install, configure and commission the access control system.
	1. WARRANTY
17. 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, 248, Jeongjail-ro, Seongnam-si, Gyeonggi-do, 13554, Republic of Korea
Tel: 82-31-783-4502, Fax: 82-31-783-4503, [https://www.supremainc.com](https://www.supremainc.com/)
[https://support.supremainc.com](https://support.supremainc.com/)
3. Model(s) name: BioLite N2

Part Number: BLN2

1. Alternates: NONE
2. DESCRIPTION
3. The biometric reader and door controller (“reader/controller”) shall be an IP-enabled device capable of scanning fingerprints, RFID cards and mobile cards, managing users and controlling access.
4. FEATURES
5. Time Attendance and Access Control device
6. 1.2GHz CPU and 4GB Flash
7. Mobile card support (NFC, BLE)
8. Multi-class RFID card reading
9. IP65, IP67, Dust & Water Proof
10. Mullion type form-factor
11. NIST MINEX certified and compliant
12. TCP/IP, RS-485, Wiegand, TTL, Relay, Tamper
13. Intuitive Graphical User Interface (GUI) system
14. Function Keys (F1, F2)
15. FBI PIV(FAP 10) certified (BLN2-PAB Sensor only): OEM SFU-550 (SFU-P2) & fingerprint sensing module OPV single finger livescan capture device without membrane at 500ppi (PIV-071006 and Mobile ID FAP 10)
16. SPECIFICATIONS

|  |  |  |
| --- | --- | --- |
| **Category** | **Feature** | **Specification** |
| Credential | Biometric | Fingerprint |
| RF Option | **BLN2-ODB**: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3**1)**, FeliCa, NFC & 2.4GHz BLE |
| **BLN2-OAB**, **BLN2-PAB**: 125kHz EM, HID Prox & 13.56Mhz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3**1)**, FeliCa, iCLASS SE/SR/Seos, NFC & 2.4GHz BLE |
| RF read range**2)** | MIFARE/DESFire: 50 mm, EM/FeliCa: 30 mm |
| General | CPU | 1.2 GHz |
| Memory | 4 GB Flash + 64 Mb RAM |
| Crypto chip | Supported |
| LCD type | 1.77” color TFT LCD  |
| LCD resolution | 160 x 128 pixels |
| Sound | 16-bit |
| Operating temperature | * **BLN2-ODB**, **BLN2-OAB**: -20 °C to 50 °C
* **BLN2-PAB**: -10 °C to 50 °C
 |
| Storage temperature | * **BLN2-ODB**, **BLN2-OAB**: -40 °C to 70 °C
* **BLN2-PAB**: -20 °C to 60 °C
 |
| Operating humidity | 0 % ~ 80 %, non-condensing |
| Storage humidity | 0 % ~ 90 %, non-condensing |
| Dimension (W x H x D) | 58 x 190 x 44 (Bottom) / 34.6 (Top) (mm) |
| Weight | * Device: 255 g
* Bracket: 57 g (Including washer and bolt)
 |
| IP rating | IP67 |
| Certificates | CE, UKCA, KC, FCC, IC, RCM, BIS, SIG, RoHS, REACH, WEEE |
| Fingerprint  | Image dimension | 272 x 320 pixels |
| Image bit depth  | 8 bit, 256 grayscale |
| Resolution | 500 dpi |
| Template | SUPREMA / ISO 19794-2 / ANSI 378 |
| Extractor / Matcher | MINEX certified and compliant  |
| Live Fingerprint Detection | Supported (SW-based) |
| Capacity | Max. User | 10,000 |
| Max. Credential (1:N) | Fingerprint: 10,000 |
| Max. Credential (1:1) | * Fingerprint: 10,000
* Card: 10,000
* PIN: 10,000
 |
| Max. Text Log | 1,000,000 |
| Interface | Ethernet | Supported (10/100 Mbps, auto MDI/MDI-X) |
| RS-485 | 1 ch Master / Slave (Selectable) |
| Wiegand | 1 ch Input / Output (Selectable) |
| TTL input | 2 ch Input |
| Relay | 1 Relay |
| Tamper | Supported |
| Electrical | Power | * Voltage: 12 Vdc
* Current: Max. 0.4 A
 |
| Switch input VIH | * Min.: 3 V
* Max.: 5 V
 |
| Switch input VIL | Max.: 1 V |
| Switch Pull-up resistance | 4.7 kΩ (The input pots are pulled up with 4.7 kΩ.) |
| Wiegand output VOH | More than 4.8 V |
| Wiegand output VOL | Less than 0.2 V |
| Wiegand output Pull-up resistance | Internally pulled up with 1 kΩ |
| Relay | 2 A @ 30 VDC Resistive load1 A @ 30 VDC Inductive load |
| Platform | BioStar 2 | Supported |
| BioStar 1 | Not Supported |

1) DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with BioLite N2.

2) RF read range will vary depending on installation environment.

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. This device has a different storage temperature for each model. BLN2-ODB and BLN2-OAB shall be stored in an environment where temperature is in the range of -40°C - +70°C. For BLN2-PAB, it shall be stored in an environment where temperature is in the range of -20°C - +60°C.
8. The device shall be stored in an environment where humidity is in the range of 0% - 90%, non-condensing.
9. INSTALLATION
10. This device has a different operating temperature for each model. BLN2-ODB and BLN2-OAB shall be installed in an environment where temperature is in the range of -20°C - +50°C. For BLN2-PAB, it shall be installed in an environment where temperature is in the range of -10°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. Keep at least 10 cm distance between the devices when install multiple devices.
16. EXAMINATION
17. All network connections to the reader/controller shall be tested for proper levels of performance.

END OF SECTION