**SUPREMA ACCESS CONTROL DEVICE – X-Station 2**

**TECHNICAL SPECIFICATIONS**

2024-12-16

# PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the X-Station 2.

* 1. SUMMARY

1. Section includes an RF&QR/barcode reader and door controller with Ethernet network connectivity.
2. Product—An IP enabled RF&QR/barcode reader and door controller, capable of scanning and registering RFID cards, QR/Barcode, and mobile access cards, managing users, and controlling access.
   1. REFERENCE
3. Standards
4. IEEE 802.3 Ethernet Standards
5. FCC - Code of Federal Regulations, Part 15, Class A
6. Conformity for Europe (CE)—Equipment Directive (RED) 2014/53/EU
7. UK Conformity Assessed (UKCA)
8. Korea Certification (KC)
9. Industry Canada (IC)
10. Regulatory Compliance Mark (RCM)
11. Bluetooth SIG
12. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) - (EC No. 1907/2006)
13. The Waste Electrical and Electronic Equipment (WEEE) - Directive 2012/19/EU
14. ANSI / IEC60529 – Degrees of Protection Provided by Enclosures
15. International Electrotechnical Commission (IEC) – Ingress Protection Rating IP65
    1. SUBMITTALS
    2. QUALIFICATIONS
16. Manufacturer shall be ISO 9001 certified with a minimum of five years’ experience in producing access control equipment.
17. Installers shall be trained by the Manufacturer to install, configure, and commission the access control system.
    1. WARRANTY
18. Manufacturer shall provide a limited ( ) month warranty for the product to be free of defects 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: X-Station 2

Part Number: XS2

Sub Model

1. XS2-QDPB, XS2-DPB: QR/barcode, EM, MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3, FeliCa, Mobile Access Card (NFC, BLE) supported
2. XS2-QAPB, XS2-APB: QR/barcode, EM, HID Prox, MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3, FeliCa, iCLASS SE/SR/Seos, Mobile Access Card (NFC, BLE) supported
3. Alternates: NONE
4. DESCRIPTION
5. The RF & QR/barcode reader and door controller (“reader/controller”) shall be an IP-enabled device capable of scanning RFID cards, QR/Barcode, and mobile access cards, managing users, and controlling access.
6. FEATURES
7. Time Attendance and Access Control device based on Android 9 Pie
8. 1.5 GHz Quad Core with 1 GB RAM
9. Multiple credential options of RFID cards, Mobile Access card (NFC, BLE) and QR/barcodes
10. Multi-class RFID card reading
11. IP65, Dust & Waterproof
12. 4" IPS color LCD with capacitive touch screen
13. TCP/IP, RS-485, Wiegand, TTL, Relay, USB, PoE, Tamper
14. Intuitive Graphical User Interface (GUI) system
15. Enhanced Security and Data Protection
16. Expanded Capacity for more users and security logs
17. SPECIFICATIONS

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| **Category** | **Feature** | **Specification** | |
| Credential | RF Option | * **XS2-QDPB**, **XS2-DPB**: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3**1)**, FeliCa | |
| * **XS2-QAPB, XS2-APB**: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV31), FeliCa, iCLASS SE/SR/Seos | |
| RF Read Range**2)** | EM/HID Prox/MIFARE/DESFire/HID iCLASS: 50 mm, Felica: 30 mm | |
| Mobile | Frequency: 13.56 MHz NFC & 2.4 GHz BLE | |
| Certificates: ISO 27001 | |
| Encryption: AES-256 | |
| Compatible devices: iOS 7.0 above, Android 9.0 above | |
| Scramble Keypad (PIN) | Supported | |
| QR/Barcode**3)** | * **XS2-QDPB**, **XS2-QAPB**: Supported * **XS2-DPB**, **XS2-APB**: Supported**4)** | |
| QR/Barcode Decode Ranges | 5 mil Code 39 | Near: 2.0 inch/5.1 cm  Far: 6.4 inch/16.2 cm |
| 5 mil Code 128 | Near: 2.5 inch/6.3 cm  Far: 5.0 inch/12.7 cm |
| 6.6 mil PDF417 | Near: 2.5 inch/6.3 cm  Far: 6.3 inch/16.0 cm |
| 10 mil PDF417 | Near: 1.8 inch/4.5 cm\*  Far: 9.0 inch/22.8 cm |
| 13 mil 100% UPC | Near: 2.0 inch/5.0 cm\*  Far: 12.5 inch/31.7 cm |
| 20 mil Code 39 | Near: 2.0 inch/5.0 cm\*  Far: 19.5 inch/49.5 cm |
| 20 mil Data Matrix | Near: 1.5 inch/3.8 cm  Far: 13.5 inch/34.3 cm |
| 20 mil QR Code | Near: 1.5 inch/3.8 cm  Far: 11.0 inch/27.9 cm |
| QR/Barcode Regulatory | LED Classifications | Exempt Risk Group LED product per IEC/EN 62471 |
| Electrical Safety | Complies with IEC/EN 60950-1 + A1 + A2 and UL 60950-1-07, 2nd Edition, 2014-10 |
| General | CPU | 1.5 GHz Quad Core | |
| Memory | 16 GB Flash + 1 GB RAM | |
| Crypto Chip | Supported | |
| Display | 4" IPS color LCD | |
| Display Resolution | 480 x 800 pixels | |
| Sound | 24 bit | |
| Operating Temperature | -20 °C ~ 50 °C | |
| Storage Temperature | -40 °C ~ 70 °C | |
| Operating Humidity | 0 % ~ 80 %, non-condensing | |
| Storage Humidity | 0 % ~ 90 %, non-condensing | |
| Camera Type | CMOS 2M pixels | |
| Camera Resolution | 1600 x 1200 pixels | |
| Dimension (W x H x D) | **XS2-QDPB**, **XS2-QAPB**: 82 x 203 x 33.9 (mm)  **XS2-DPB**, **XS2-APB**: 82 x 159 x 25.9 (mm) | |
| Weight | Device   * **XS2-QDPB**, **XS2-QAPB**: 343 g * **XS2-DPB**, **XS2-APB**: 280 g | |
| Bracket   * **XS2-QDPB**, **XS2-QAPB**: 88 g (Including washer and bolt) * **XS2-DPB**, **XS2-APB**: 67 g (Including washer and bolt) | |
| IP Rating | IP65 | |
| Certificates | CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, TELEC, RoHS, REACH, WEEE | |
| Capacity | Max. User | 500,000**5)** | |
| Max. Credentials (1:1) | * Card: 500,000 * PIN: 500,000 | |
| Max. Text Log | 5,000,000 | |
| Max. Image Log | 50,000 | |
| Interface | Ethernet | Supported (10/100 Mbps, auto MDI/MDI-X) | |
| RS-485 | 1 ch Master or Slave (Selectable) | |
| RS-485 Communication Protocol | OSDP V2 compliant | |
| Wiegand | 1 ch Input or Output (Selectable) | |
| TTL Input | 2 ch Inputs | |
| Relay | 1 Relay | |
| USB | USB 2.0 (Host) | |
| PoE | Supported (IEEE 802.3af compliant) | |
| Tamper | Supported | |
| Electrical | Power | * Voltage: 12 Vdc * Current: Max. 0.8 A | |
| * Voltage: 24 Vdc * Current: Max. 0.5 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 load  1 A @ 30 VDC Inductive load | |
| Platform | BioStar 2 | Supported | |

1) DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with X-Station 2.

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

3) Supports QR/Barcodes composed of up to 32 ASCII code strings.

4) Requires a separate license.

5) The number of users registered without having any credential data.

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 conduits 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. To avoid RF interference, a minimum separation distance must be maintained.

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| --- | --- |
| Wall thickness | Distance |
| 100 mm | 500 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