**SUPREMA ACCESS CONTROL DEVICE - Secure I/O 2**

**TECHNICAL SPECIFICATIONS**

2024-02-15

# PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the Secure I/O 2.

* 1. SUMMARY

1. Section includes a RF reader and door controller with RS-485 connectivity.
2. Product - An I/O expanding device, capable of connecting with biometric/RF reader via RS-485 and controlling relays and external signal input.
   1. REFERENCE
3. Standards
4. FCC - Code of Federal Regulations, Title 47, Part 15, Class B
5. Conformity for Europe (CE)
6. UK Conformity Assessed (UKCA)
7. Korea Certification (KC)
8. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) - (EC No. 1907/2006)
9. The Waste Electrical and Electronic Equipment (WEEE) - Directive 2012/19/EU
   1. SUBMITTALS
   2. QUALIFICATIONS
10. Manufacturer shall be ISO 9001 certified with a minimum of five years’ experience in producing access control equipment.
11. Installers shall be trained by the Manufacturer to install, configure, and commission the access control system.
    1. WARRANTY
12. 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://support.supremainc.com>
3. Model(s) name: Secure I/O 2

Part Number: SIO2

1. Alternates: NONE
2. DESCRIPTION
3. The I/O device shall be an I/O expanding device capable of connecting with biometric/RF reader via RS-485 and controlling relays and external signal input.
4. FEATURES
5. Encrypted communication with connected device
6. Compact size
7. Easy to installation
8. Supports 1 relay, 2 external inputs
9. RS-485, TTL, Relay interface
10. SPECIFICATIONS

|  |  |  |
| --- | --- | --- |
| Category | Feature | Specification |
| General | CPU | Cortex M3 72 MHz |
| Memory | 128 KB Flash + 20 KB RAM |
| LED | Multi-color   * PWR * RS-485 TX/RX * IN1/IN2 * RELAY |
| 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) | 36 x 65 x 18 (mm) |
| Weight | * Device: 37 g * Bracket: 1 g |
| Certificates | CE, UKCA, KC, FCC, RoHS, REACH, WEEE, ETL Listed to UL 294 |
| Interface | RS-485 | 1 ch |
| RS-485 Communication Protocol | OSDP V2 compliant |
| TTL Input | 2 ch |
| Relay | 1 Relay |
| Electrical | Power | * Voltage: 12 Vdc * Current: Max. 0.5 A |
| Relay | 2 A @ 30 VDC Resistive load  1 A @ 30 VDC Inductive load |

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. STORAGE
6. The device shall be stored in an environment where temperature is in the range of -40 °C ~ 70 °C.
7. The device shall be stored in an environment where humidity is in the range of 0 % ~ 90 %, non-condensing.
8. INSTALLATION
9. The device shall be installed in an environment where temperature is in the range of -20 °C ~ 50 °C.
10. The device shall be installed in an environment where humidity is in the range of 0 % ~ 80 %, non-condensing.
11. All wires shall be run through conduit to prevent failure caused by rodent damage.
12. Connections between card readers and a door controller shall not exceed 100 meters.
13. All peripheral devices shall be grounded.
14. EXAMINATION
15. All network connections to the reader/controller shall be tested for proper levels of performance.

END OF SECTION