

SUPREMA QR/BARCODE AND RFID READER – XPass Q2

TECHNICAL SPECIFICATIONS

2026-07-21

PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the XPass Q2.

1.01 SUMMARY

- A. Section includes a QR/Barcode and RFID reader with Ethernet network connectivity.
- B. An IP enabled device capable of scanning and registering RFID cards, QR/Barcodes, and mobile access cards.

1.02 REFERENCE

- A. Standards
 - 1. IEEE 802.3 Ethernet Standards
 - 2. Conformity for Europe (CE)—Equipment Directive (RED) 2014/53/EU
 - 3. UK Conformity Assessed (UKCA)
 - 4. Korea Certification (KC)
 - 5. FCC - Code of Federal Regulations, Part 15, Class A
 - 6. Industry Canada (IC)
 - 7. Regulatory Compliance Mark (RCM)
 - 8. Bluetooth SIG
 - 9. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) - (EC No. 1907/2006)
 - 10. The Waste Electrical and Electronic Equipment (WEEE) - Directive 2012/19/EU
 - 11. Telecom Engineering Center (TELEC)
 - 12. ANSI / IEC60529 – Degrees of Protection Provided by Enclosures
 - a. International Electrotechnical Commission (IEC) – Ingress Protection Rating IP65

1.03 SUBMITTALS

1.04 QUALIFICATIONS

- A. Manufacturer shall be ISO 9001 certified with a minimum of five years' experience in producing access control equipment.

- B. Installers shall be trained by the Manufacturer to install, configure, and commission the access control system.

1.05 WARRANTY

- A. 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

2.01. EQUIPMENT

- A. 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>
- B. Model(s) name: XPass Q2
Part Number: XPQ2
- C. Alternates: NONE

2.02. DESCRIPTION

- A. The RF device is an IP-enabled device capable of scanning RFID cards, QR/Barcodes, and mobile access cards.

2.03. FEATURES

- A. Mobile access card support (NFC, BLE)
- B. Multi-class RFID card reading
- C. IP65, Dust & Waterproof
- D. TCP/IP, RS-485, Wiegand, Input, Relay, USB, Extended USB, Tamper
- E. OSDP V2 Compliant

2.04. SPECIFICATIONS

Category	Feature	Specification
Credential	RF Option	125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3 ¹⁾ , FeliCa
	RF Read Range ²⁾	EM/MIFARE/DESFire: 50 mm, FeliCa: 30 mm
	Mobile	NFC, BLE

	QR/Barcode ³⁾	Supported ⁴⁾
	QR/Barcode Read Range ⁵⁾	5 ~ 15 cm
General	CPU	1.2 GHz Single Core
	Memory	8 GB Flash + 256 MB RAM
	Crypto Chip	Supported
	LED	Multi-color
	Sound	Multi-tone Buzzer
	Operating Temperature	-20 °C ~ 60 °C
	Storage Temperature	-40 °C ~ 70 °C
	Operating Humidity	0 % ~ 95 %, non-condensing
	Storage Humidity	0 % ~ 95 %, non-condensing
	Camera	1 Camera (QR only)
	Dimension (W x H x D)	- Device: 50 x 150 x 40.2 (mm) - Bracket: 41.7 x 140.6 (mm)
	Weight	- Device: 213 g - Bracket: 40 g (Including washer and bolt)
	IP Rating	IP65
	Authentication	CE, UKCA, KC, FCC, IC, RCM, SIG, RoHS, REACH, WEEE, EAC, TELEC
Capacity	Max. User	200,000 ⁶⁾
	Max. Credentials (1:N)	Card: 200,000
	Max. Credentials (1:1)	Card: 200,000
	Max. Text Log	1,000,000
Interface	Ethernet	Supported (10/100 Mbps, auto MDI/MDI-X)
	Network Protocol	TCP, UDP
	RS-485	1 ch Master / Slave (Selectable)
	RS-485 Communication Protocol	OSDP V2 compliant
	Wiegand	1 ch Input / 1 ch Output (Selectable)
	Input	3 ch Inputs
	Relay	1 relay
	USB	USB 2.0 (Type C), only FW-Upgrade
	USB Expansion Port	Supported
	Tamper	Supported
Electrical	Power	12 Vdc - DC OUT not used Consumption Current: Max. 0.5 A - DC OUT used Consumption Current: Max. 2.6 A
		24 Vdc - DC OUT not used Consumption Current: Max. 0.3 A - DC OUT used Consumption Current: Max. 1.4 A
	Power Output	12 Vdc - Reader: Max. 0.5 A - Lock: Max. 1.2 A
		24 Vdc - Reader: Max. 0.25 A - Lock: Max. 0.6 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 ports 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 X	Supported
	BioStar 2	Supported
	BioStar 1	Not Supported

1) DESFire EV2/EV3 cards are backward compatible with DESFire EV1 cards, supporting CSN and smart card features, including those of the DESFire EV1 card.

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

3) Supports QR codes with up to 32 ASCII characters.

4) Camera QR license is required to use more diverse QR/barcode authentication.

- Barcode types supported by the Camera QR license: QR Code, DataMatrix, Aztec, Micro QR Code, PDF417, Code39, Code128, UPC-A, UPC-E, EAN-8, EAN-13

5) The indicated QR/Barcode recognition distance is a recommended distance, and the actual recognizable distance may vary depending on the QR/Barcode size and installation environment.

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

- Product specifications are subject to change without notice for performance improvement.

END OF SECTION

PART 3 - EXECUTION

3.01. INSTALLER

- A. Contractor personnel shall comply with all applicable state and local licensing requirements.

3.02. PREPARATION

- A. Contractor shall avoid locating the reader/controller in a location subject to direct sunlight, dust or soot.
- B. IP addressing shall be coordinated with the Owner's responsible IT personnel.

3.03. STORAGE

- A. The device shall be stored in an environment where temperature is in the range of -40 °C ~ 70 °C.
- B. The device shall be stored in an environment where humidity is in the range of 0 % ~ 95 %, non-condensing.

3.04. INSTALLATION

- A. The device shall be installed in an environment where temperature is in the range of -20 °C ~ 60 °C.
- B. The device shall be installed in an environment where humidity is in the range of 0 % ~ 95 %, non-condensing.
- C. All wires shall be run through conduit to prevent failure caused by rodent damage.
- D. Connections between card readers and a door controller shall not exceed 100 meters.
- E. All peripheral devices shall be grounded.
- F. To avoid RF interference, a minimum separation distance must be maintained.

Wall thickness	Distance
100 mm	270 mm
120 mm	250 mm
150 mm	170 mm

3.05. EXAMINATION

- A. All connections to the reader/controller shall be tested for proper levels of performance.

END OF SECTION