# Architect & Engineer Specifications

# Green Label Product

## ProMA Series

Available Models: ProMA, ProMA-QR, ProMA-RF

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# PART 1 – GENERAL

This document has been developed by ZKTeco, which aims to detail the minimum specifications for the design, distribution, deployment, monitoring, maintenance, and operation of our Green Label **ProMA Series** products (ProMA,ProMA-QR,ProMA-RF).

## 1.01 Summary

ProMA is a high-end outdoor multi-biometric access control standalone terminal built with ultra-robust aluminum alloy casted casing.
ProMA series enhance its protection level to reach water and dust proof standard (IP66) and vandal proof standard (IK07). There are three models under ProMA series, which have equipped with different authentication combinations, facial recognition, fingerprint recognition and multi-tech RFID recognition, named as ProMA-QR (Face+QR code+RFID), ProMA-RF (Face+RFID), ProMA (Face+Fingerprint+RFID). Additionally, the latest touchless palm recognition is also available in this terminal as an option feature.

### System Description

ProMA series uses ZKTeco's latest facial recognition algorithm, a fast and accurate facial recognition in all lighting conditions. This advanced biometrics algorithm works with everyone and supports multiple skin tones, face changes, face mask and make-up. ProMA series rapidly recognizes the faces; simultaneously eliminates various attacks with its efficient anti-spoofing algorithm. Moreover, the product equips with a 2MP starlight CMOS sensor camera with WDR function, enhancing the device to recognize faces under a challenging lighting environment.

## 1.02 Quality Assurance

ZKTeco is a globally renowned enterprise with biometric verification as its core technique. ZKTeco shall provide technical assistance and support in all aspects.

## 1.03 Delivery, Storage, and Handling

**Order:** ZKTeco' s ordering guidelines must be followed to avoid installation delays.

**Delivery:** ProMA Series products shall be delivered in the manufacturer's standard, unopened and undamaged package with identification labels intact.

**Storage and Protection:** ProMA Series products shall be stored, installed, operated, and protected from exposure to harmful weather conditions and at the environmental conditions recommended by the manufacturer.

## 1.04 Product Compliances

- FCC Part 15C Class B
- CE-RED Compliant
- RoHS

## 1.05 Warranty

The warranty on this product is 3 years from the date of purchase.

And the customer service duration for this product is granted according to the region where it is p urchased.

# PART 2 – PRODUCT

ZKTeco is responsible for developing the standards, guidelines, including the minimum requireme nts. The installation of ProMA Series in an access control system using readers and controllers can enable a variety of entry, exit, and lock systems: Electrical locks, Parking barriers and Turnstiles.

## 2.01 Models

**Manufacturer:** ZKTeco Co., Ltd.

**Category:** Access Control Device

**Available Models:**

- ProMA
- ProMA-QR
- ProMA-RF

## 2.02 Technical Features

**Common Features of ProMA Series Products**

1. Facial recognition speed of less than 0.3 seconds per face.
2. The device can be connected with the software through a stable connection for:
   a. Data Download
   b. Commands
   c. Real-Time Monitoring
3. Capacity: 30,000 facial templates standard for 1:N facial authentication.
4. 2MP starlight CMOS sensor camera with HDR function, which enables the device to recognize faces under a challenging lighting environment (0.5lux to 50,000lux).
5. Anti-spoofing algorithm against print attack (laser, color, and B/W photos), videos attack, and 3D m ask attack.
6. Smart energy-saving design; an RF detector will wake up the device when it precisely detects the distance between the user and the device is 300cm (9.84ft) or less.
7. Integrated 125kHz Proximity Card Reader (Optional : HID Prox ,HID iclass).
8. 2" non-touch screen, showing the validation results.
9. Supplement lighting with adjustable brightness.
10. Multiple communication methods: TCP/IP, RS485.

**11.** IP66 dust & waterproof standard and IK07 vandal-proof standard.

**12.** Security and Network

a. IPv4/v6
b. Host/Controller connection protected by TLS 1.2/1.1
c. Generate and load custom peer certificates for TLS
d. Port-based network access control using 802.1X
e. HTTPS protection
f. Secure cookies
g. Authorized IP address filtering
h. IP Client Proxy
i. Strong password enforcement

**13.** Door Control

a. Two-reader ports: Clock and Data, Wiegand, or RS485
b. Two programmable inputs, One relay

**14.** Access Control

a. Gate Control Mode
b. Door Lock/Sensor Delay duration
c. Configurable Door Sensor type
d. Door availability time-period
e. Verification Mode combination
f. Master/Salve Device configuration
g. AUX-In configuration
h. Combined verification supports up to 99 Access Groups
i. Supports up to 50 Time Rules, including three Time zones in one rule

**15.** Card Formats

a. Entire card number reported on invalid read
b. Up to 14-digit (64-bit) User ID and up to 8-digit PIN numbers maximum
c. Activation/Deactivation Date or Date & Time

**16.** Card Reader Functions

a. Multiple card format support by the reader
b. Paired reader support
c. Alternate reader support
d. Turnstile support
e. Biometric device support
f. Supports host-based approval rules
g. Software support with programmable user commands, card input
h. Anti-Passback support
i. Reader-based (IN, OUT, and IN/OUT)
j. Duress Mode to identify any threat

**17.** Device Data Functions

a. Encrypted data
b. Configurable card database
c. Supports up to 9 digital card numbers
d. Supports User ID up to 14 digits
e. Supports Password up to 8 digits
f. Card issue code of up to 32 bits

**18.** Intrusion Alarm Functions

a. Supports entry delays and exit delays
b. Area monitoring
c. Provides control and alarm processing from the software

**19.** Supported Integrations

a. Regional IO shows IO status
b. Reader firmware and configuration download
c. Supports up to 2 RS-485 IO protocols
d. Supports up to 16 strong authentication readers when connected with an Access Controller

**20.** System Functions

a. Relay count activations
b. Interoperability with older host software using Legacy Mode feature
c. Synchronize time using NTP

**21.** Web Server

a. System Configuration (network/ cloud server/ face parameter)

b. User Registrations (face/ Fingerprint/ card)

c. Update Firmware

## 2.03 Technical Specifications

### Common Specifications of ProMA Series Products

| Category | Feature | Specifications |
|---|---|---|
| Capacity | **Max. Face Template (1:N)** | 30,000 ( ProMA-QR & ProMA-RF can expand to 50,000) |
| | **Max. Transaction Log** | 500,000 |
| | **Max. Fingerprint Template(ProMA)** | 10,000 |
| | **Max. Cards** | 50,000 ( ProMA-QR & ProMA-RF can expand to 100,000) |
| Verification | **Biometrics** | Face ( ProMA support face & fingerprint) |
| | **Access Cards** | IC Card & DESFire card (13.56 MHz)<br>125KHz EM |
| General | **Processor** | 1.0GHz Quad Core CPU |
| | **Memory** | 1G RAM / 8G Flash |
| | **LCD Type (Screen)** | 2" TFT non-touch LCD |
| | **LCD Resolution** | 240*320 pixels |
| | **LED Fill Light** | White Color |
| | **Proximity Sensor** | RF Sensor |
| | **Sound** | Hi-Fi Audio |
| Hardware | **Operating Temperature** | -20 °C ~ 55 °C (-4°F ~ 131°F) |
| | **Storage Temperature** | -25 °C ~ 65 °C (-13°F ~ 149°F) |
| | **Operating Humidity** | ≤93%RH |
| | **Storage Humidity** | ≤93%RH |
| Camera | **Camera Type** | 2MP starlight CMOS sensor camera with HDR |
| | **Camera Resolution** | 1920*1080 pixels |
| Facial Recognition | **Algorithm Version** | ZKLiveFace V3.9 (ProMA ZKFinger v10.0 ) |
| | **Resolution** | 640*480 pixels |
| | **Image Bit Depth** | 10 bits grayscale, 1024 tones |
| Interface | **Power** | DC 12V |
| | **POE** | External |
| | **Ethernet** | TCP/IP Supported *(10/100 Mbps, Auto MDI/MDIX)* |
| | **RS-485** | 1 Host or 1 Slave |
| | **Wiegand** | 1 Input, 1 Output |
| | **Relay** | 1 Lock Relay Output |
| | **Button** | 1 Exit |
| | **Door Alarm Sensor** | 1 Sensor |
| | **AUX IN** | 1 Auxiliary Input |
| | **AUX OUT** | 1 Alarm Out |
| | **Tamper Alarm** | Supported |

| | | |
|---|---|---|
| | **Reset** | Supported |
| **Electrical** | **Power** | Voltage: DC 12V (10.5V to 14V)<br>Max. Current during initialization: 550mA<br>Current in stand-by: 300mA to 350mA<br>Max. Current during Facial Recognition: 450mA |
| | **Switch Input VIH** | Min. 3V<br>Max. 5V |
| | **Switch Input VIL** | Max. 1V |
| | **Switch Pull-up Resistance** | 4.7 |
| | **Wiegand Output VoH** | More than 4.8V |
| | **Wiegand Output VoL** | Less than 0.2V |
| | **Wiegand Output Pull-up Resistance** | Internally pulled up to 1kΩ |
| | **Relay** | Voltage: Max. 30VDC<br>Current: 1A, Max. 2A<br>Durability: 100,000 times operation at max. resistive load of 3V. |
| **Supported Software** | ZKBio CVSecurity | |
| **Functionalities** | **Standard** | Access Levels<br>Groups<br>Holidays<br>Daylight Saving Time (DST)<br>Duress Mode<br>Anti-Passback<br>Query Records<br>Custom Wallpaper & Screensaver<br>Tamper Switch Alarm |
| | **Significant** | High-Speed Facial Recognition (0.3s)<br>Liveness Detection<br>HTTPS Encryption |
| **Protection Level** | IP66 and IK07 | |
| **Certificates** | CE, FCC, RoHS | |

## Dimensions and Packing

| Specifications | Packing Dimensions (W×D×H) | Net Weight | Gross Weight |
|---|---|---|---|
| **ProMA** | 270mm×187mm×117mm | 0.45kg | Inner Layer of Packing: 1.45kg<br>Outer Layer of Packing: 8.9kg |
| **ProMA-QR** | 270mm×187mm×117mm | 0.45kg | Inner Layer of Packing: 1.45kg<br>Outer Layer of Packing: 8.9kg |
| **ProMA-RF** | 270mm×187mm×117mm | 0.44kg | Inner Layer of Packing: 1.44kg<br>Outer Layer of Packing: 8.8kg |

# PART 3 – EXECUTION

## 3.01 Installation

1. All installations performed by the successful specifier must comply with the national and code of practice standards.
2. Operating Environment:

- **ProMA/ ProMA-QR/ ProMA-RF:** face recognition: Indoor/outdoor, Light Availability:0~50,000 lux, 20 ° C ~ 55 ° C (-4° F ~ 131°F);

**ProMA/ProMA-QR:** Fingerprint or QR code recognition: Indoor, No direct light,-20 ° C ~ 55 ° C (-4° F ~ 131°F)

3. Recommended Installation Guidelines:
   - Installation Height: **1.38m**
   - Height of the face adapted for detection: **1.55m to 1.85m**
   - The distance between the device and a user **0.3 to 2.5m**
4. All the devices, tools, hardware, software, and software licenses necessary for the complete implementation of the access control system, as defined in this document shall be supplied and installed under this subcontract.
5. Cable laying precautions and safety measures must be specified.
6. Exit card readers must be provided for highly protected areas identified or described in the drawings, to allow exact monitoring of people entering and leaving the preset area.
7. The device should be configured with the software.

## 3.02 Testing

All installation needs to be checked for stability and performance post-installation.

## 3.03 Maintenance

Procedures and methods for maintaining the access control system, including the access control devices, controllers, and readers. For all other components also, maintenance procedure needs to be regulated.