Frequently Asked Question

Fingerprint attendance device N-E90

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❖ Device Features

- **Verification Modes**: Fingerprint, RFID card, PIN
- **Capacity**:
  - Fingerprints: 2,000–10,000 users (varies by model)
  - Cards: 2,000–10,000
  - Passwords: 2,000–10,000
  - Logs: 150,000
- **Display**: 2.4" TFT LCD color screen (320x240 pixels)
- **Audio**: 16-bit Hi-Fi voice prompts
- **Operating System**: Linux-based

❖ Connectivity & Communication

- **Supported Protocols**: Wi-Fi, TCP/IP, USB Host
- **Push Data**: Yes (for real-time sync with server)
- **Remote Access**: Supported via software

❖ Power & Environment

- **Power Supply**: 12V DC / 2A
- **Battery Backup**: Inbuilt lithium-ion battery
- **Operating Temperature**: 0°C to 50°C
- **Installation**: Wall-mounted

❖ Access Control

- **Relay Support**: Yes (for door locks)
- **Control Methods**: Remote, push button, no-touch exit
- **Use Case**: Offices, hospitals, schools, industries

❖ Frequently Asked Questions

Q: Can it work without power?

- Yes, it has an **inbuilt battery backup** that activates during power outages.

Q: Does it support Wi-Fi?

- Absolutely! It supports both Wi-Fi and LAN (TCP/IP) for flexible connectivity.

Q: What if someone has ink or mehndi on their fingers?

- The sensor is designed to read rough, dry, or colored fingers, including ink or mehndi.

Q: Can I export attendance data?

- Yes, via USB or push data to your server/software.

Q: Is software included?

- Typically, yes. Most vendors provide **Smart Office or similar software** for attendance management.

Q: WHAT ARE THE BEST PRACTICES FOR IMPLEMENTING THESE VERIFICATION METHODS?

❖ Fingerprint Verification Best Practices

- **Ensure sensor quality**: Use high-resolution (500 DPI or higher) sensors for better accuracy and speed.
- **Regular cleaning**: Keep the sensor clean to avoid false rejections due to dirt or smudges.
- **Enroll multiple fingers**: Register at least two fingers per user to reduce access issues from injuries or wear.
- **Handle difficult fingerprints**: Use sensors that support dry, rough, or inked fingers (like those with mehndi).
- **Liveness detection**: If available, enable features that detect real fingers to prevent spoofing.

❖ RFID Card Verification Best Practices

- **Use encrypted cards**: Prefer MIFARE or similar secure RFID cards over basic 125kHz proximity cards.
- **Assign unique IDs**: Avoid duplicate card IDs to prevent unauthorized access.
- **Physical security**: Encourage users to treat cards like keys—report lost cards immediately.
- **Anti-passback**: Enable this feature to prevent users from sharing cards to bypass access rules.
- **Audit trails**: Log every card swipe for accountability and troubleshooting.

❖ PIN Code Verification Best Practices

- **Enforce strong PINs**: Avoid simple sequences like 1234 or repeated digits like 0000.
- **Limit attempts**: Lock accounts after a set number of failed attempts to prevent brute-force attacks.
- **Change periodically**: Encourage users to update PINs every 3–6 months.
- **Avoid shared PINs**: Assign unique PINs to each user for traceability.
- **Shield entry**: Install keypads in positions that prevent shoulder surfing.

❖ Combining Methods for Enhanced Security

- **Two-factor authentication**: Use combinations like Fingerprint + PIN or Card + PIN for sensitive areas.
- **Fallback options**: Allow PIN or card access if fingerprint fails, especially in dusty or industrial environments.
- **Role-based access**: Assign different verification combinations based on user roles (e.g., admin vs. visitor).
- **Real-time monitoring**: Use software to track access events and flag anomalies.

Q: <u>More about the verification modes</u>

1. Fingerprint Recognition

- **Sensor Type**: 500 DPI optical sensor
- **Accuracy**: FAR (False Acceptance Rate) of 0.00001%, FRR (False Rejection Rate) of 0.001%
- **Performance**: Reads **rough, dry, inked, or mehndi-covered fingers** with high precision
- **Speed**: Identification time is typically under 1 second
- **Use Case**: Ideal for secure, individual-specific access

2. RFID Card

- **Card Type**: 125kHz proximity cards (standard RFID)
- **Reading Range**: 5–10 cm
- **Capacity**: Up to 10,000 cards
- **Use Case**: Great for quick, contactless entry—especially in high-traffic areas

3. PIN Code

- **Keypad Input**: Users can enter a numeric password
- **Capacity**: Up to 10,000 PINs
- **Use Case**: Useful as a backup method or for users without biometric or card access

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