Technical Specification

Sl. No.	Name	Description	Quantity
01.	**Access Control Device**	**Brand:** Internationally Reputed Brand (To be mentioned by the bidder) **Model:** To be mentioned by the bidder **Country of Origin:** To be mentioned by bidder **Country of Manufacturer:** To be mentioned by bidder **Quality:** The manufacturer of the proposed goods shall comply with applicable CE/FCC/ROHS or equivalent internationally recognized certifications, where applicable. **Basic Features:** 1. Biometric Attendance Terminal with Face, Fingerprint, Smart Card, Palm or equivalent contactless biometric technology and QR Authentication 2. The device shall support configurable multi-factor authentication policies, including combinations such as (Face only, Card only, Fingerprint only, Face + Card, Face + Fingerprint, Card + Fingerprint, Face + Card + Fingerprint, other configurable authentication combinations). These authentication policies shall be configurable individually or in bulk through the web/cloud management platform. 3. The device shall communicate directly with the cloud server over the Internet/intranet using secure communication protocols (e.g., HTTPS/TLS) without requiring additional middleware. IoT enabled architecture with direct cloud communication. 4. The solution shall support secure device registration/provisioning, remote configuration, firmware upgrade, centralized monitoring, user management, event/attendance data synchronization, and device health/status monitoring. 5. The device shall support continuous connectivity with the cloud-based software platform and automatically synchronize transactions, user data, configuration changes, and firmware updates whenever network connectivity is available. 6. User enrollment, including biometric templates (face and fingerprint), shall be centrally managed and synchronized across authorized devices through the web/cloud management platform. 7. The device shall support AI-based facial recognition and fingerprint authentication. **Intended Use:** Time attendance and optional access control for government offices. **Authentication:** 1. Support face, fingerprint, palm, QR code and ISO/IEC 14443 Type A/B 13.56 MHz smart cards or equivalent. Configurable single or multi-factor authentication. 2. The device shall store unrecognized/stranger event logs in its internal memory and automatically synchronize them with the centralized management platform when network connectivity is available.	04 (Four)

০১/১০/২৫
প্রকৌঃ আল-আমিন
সহকারী প্রোগ্রামার

০১/১০/২০২৫
প্রকৌঃ ছোটন শীল
মেইনটেনেন্স ইঞ্জিনিয়ার

১/১০/২৫
প্রকৌঃ আনোয়ার পারভেজ
সিস্টেম এনালিস্ট

		Face Capacity: Minimum 20,000 face templates. **Finger Print Capacity:** Minimum 3,000 fingerprint templates **Card Capacity:** Minimum 20,000 users. **Log Capacity:** Minimum 200,000 transaction logs. **Recognition Speed:** Face verification ≤1 second. **Recognition Distance:** Configurable Minimum 0.3m to 1.5m or above **Recognition Accuracy:** Minimum 99% under normal operating conditions. **Camera:** Dual camera (visible + IR) or equivalent with liveness detection. **Display:** Minimum 5-inch capacitive touch IPS/LCD, 720p equivalent or higher. **Processor:** Embedded multi-core processor with dedicated AI acceleration (NPU, GPU, DSP, or equivalent architecture) suitable for real-time biometric recognition. **Memory:** Minimum 1GB RAM and 4 GB Flash or higher. **OS:** Embedded Linux or Android or Equivalent **Interfaces:** 10/100/1000 Ethernet, USB Host, Wigand, Relay, RS232/RS485 or equivalent. **Wireless:** Support built-in IEEE 802.11 b/g/n Wi-Fi or an optional Wi-Fi module for connectivity within office wireless networks. **Protocols:** MQTT, TCP/IP, DHCP, HTTPS, NTP, REST/JSON API for IoT communication. **Firmware:** USB and OTA firmware upgrade. **Security:** TLS encryption, password protected admin, role based access, audit logs. **Cloud:** Support cloud and/or on premise centralized and local server management. **AI Features:** 1. The centralized software shall optionally support AI-powered chatbot or voice assistant for employee self-service functions (attendance history, leave balance, leave application status, etc.). 2. Liveness detection, mask recognition, stranger detection or equivalent. **API:** REST/JSON APIs and SDK for enrollment, attendance, synchronization, user management. Supplier will have to deliver SDK of the devices separately **Environment:** IP54 or manufacturer standard suitable for indoor installation; operating temperature up to 50°C or manufacturer rating. **Power:** 12V DC or equivalent. **Accessories:** Power adapter, mounting kit, back plate, cables. **Installation:** Supplier shall be responsible to integrate the devices with cloud base central management dashboard using the api or equivalent secure device-to-cloud/device-to-server communication technology over standard broadband Internet without requiring a dedicated leased line or public static IP at each remote location. **Training:** Administrator and operator training. **After-Sales:** Helpdesk, firmware updates, spare parts. **Documentation:** Datasheet, manuals, API docs, warranty certificate. **Inspection:** Physical verification, functional testing, acceptance test. **Delivery:** Factory new equipment with all accessories. **OEM Standards:** The OEM must have either a direct local office in Bangladesh OR an Authorized Local Partner / Distributor in Bangladesh	

০৯/১০/২৫
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০৯/১০/২৫
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9/10/25
প্রকৌঃ আনোয়ার পারভেজ
সিস্টেম এনালিস্ট

		backed by a valid Manufacturer's Authorization Form/Letter (MAF). The OEM must hold a valid ISO 9001:2015 certification for Quality Management. Certification in ISO/IEC 27001:2013 or 2022 (Information Security Management) is preferred/optional. The proposed hardware model must comply with CE, FCC, or RoHS standards. **Warranty:** The bidder must quote minimum 3 (Three) years manufacturer's warranty including Hardware replacement service and 24x7 Technical support. The warranty services will start from the date of successful commissioning.	
02.	Smart Employee Management Software [for 1(one) year]	1. Live Graphical Attendance Summary Dashboard. 2. Live Attendance Feed 3. Android & iOS App. 4. Live Attendance Reports with Summary with export option. 5. Bulk Employee Data upload. 6. Employee Profile: Basic HRIS Database. 7. Employee Self Login. 8. Holiday Management. 9. Enroll once use everywhere. 10. Multiple Admin Access. 11. Implementation, Software data entry and backup. 12. Support and Training.	01 (One)

প্রকৌঃ আল-আমিন
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প্রকৌঃ আনোয়ার পারভেজ
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