The **MBX**-*ID* is a multi-functional, biometric access card for access control, identity and authentication, personal safety and Real-Time location. The **MBX**-*ID* can store up to ten (10) fingerprints, each of which can initiate a different wireless function – RFID and Bluetooth for both physical access and computer/network access, 5G wireless for location and personal safety (duress). Unlike typical prox cards or USB authenticators that can still be used if lost or stolen, the **MBX**-*ID* requires biometric authentication before enabling its wireless capabilities.


Physical Access Control

The majority of physical access control systems incorporate an RFID access card issued to authorized personnel. The problem is that the access control system can only authenticate the card, and not the person – meaning lost or stolen access cards can be used by unauthorized persons to gain entry to workplaces, hospitals, schools or other sensitive areas. This endangers the safety of employees, students, patients and staff as well as the physical and intellectual assets of the organization.

The **MBX**-*ID* **Biometric Access Card** solves this problem by biometrically authenticating the person in possession of the card <u>before</u> granting access. A lost or stolen access card is useless in the hands of an unauthorized person because the user must first biometrically authenticate to the **MBX**-*ID* before the wireless (RFID, Bluetooth, 5G) functions are enabled. And because the fingerprint sensor is located on the card, the **MBX-***ID* can be used as an alternative to common touch surfaces, such as keypads and fingerprint sensors on door locks, gates and turnstiles.

Logical Access Control

Using the **MBX-***ID* is more secure than usernames and passwords because biometric authentication is required first, which then transmits the logon credentials over a secure Bluetooth link. This process is resistant to malware such as keystroke loggers. Software resident on the computer or network can automatically log on the user as soon as the card is within a predefined Bluetooth perimeter and, similarly, log off the user when the **MBX**-*ID* leaves the Bluetooth perimeter. The **MBX-***ID* supports embedded secure elements and similar cryptographic keys. FIDO2 compliance is pending.
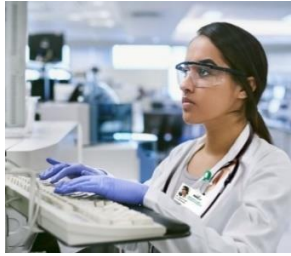
Time & Attendance

The **MBX-***ID* is well suited for both on-site and off-site Time and Attendance applications, using either the 5G wireless or the Bluetooth features. Personnel can be "clocked-in" as they approach the work area (geo-fence) and "clocked-out" when they exit the work area. The problem of "buddy-punching" is eliminated because the worker must be biometrically authenticated before the wireless functions are enabled.

Specifications:

MBX-ID Specifications	
Format / Size	ISO/IEC 7810 ID:1 85.60 mm × 53.98 mm x 2.1mm*
Operating Tempurature	10c - 50c
Fingerprint sensor (FPC)	10mm X 10mm (.4" X .4") area sensor capturing 508 DPI
Status Indicators	LED: Red, Green, Blue
Battery	Wireless rechargeable (Qi 2)
Authentication/Transaction Time	<2 seconds
Power On / Off	Power on is activated by a finger touch in the sensor. Power off is activated by a configurable timeout when not in use.
Physical security	A single secure MCU contains processor, memory, I/O, BLE.
Bluetooth	
Bluetooth version	v5.0 LE (Low Energy)
Bluetooth v5.0 Frequency	2.4 GHz frequency ISM band.
Data security (Bluetooth)	128 bit keyed HMAC protects all transmitted ID data end-to-end to server/receiver. Available hardware acceleration supports PKI (Public Key Infrastructure)
Cryptography	AES 256, SHA-256, RSA, DH, hardware RNG, and crypto hardware accelerators available
RFID / NFC	
Contactless protocols	ISO 14443A, NFC Type 2, Mifare DESfire EV3, HID iPass or SEOS, customer-specified
RFID Frequency	13.56 MHz
NFC Frequency	ISO 14443
	specifications subject to change

For more information, contact sales@mbxbiometrics.com.

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