

## MRB-20B / MRB-20B-NFC

### Bluetooth Biometric Smart Card Reader

The MRB-20B model is built with modern technology for seamless integration with mobile devices. The MRB-20B comes with dual Smart Card slots and MorphoSmart CBM optical scanner. MRB-20B-NFC comes with additional NFC capability. They are capable to support majority of smartphones and tablets equip with Bluetooth v3 and above technology



#### Typical Applications:

- Home Banking / ATM / Kiosk
- Home Shopping Payment
- Secure Element
- Digital Signature
- Store Value
- Authentication
- Identification
- Customer Loyalty Program



## Features

#### ISO-7816 Contact

- Contact card slot for Card (ID-1) size
- Contact card slot for SAM (ID-0) size
- Supports I2C memory cards
  - SLE4418, SLE4428, SLE4432, SLE4442, SLE4436, SLE5536, SLE6636, AT88SC1608, AT45D041, AT45DB041
- Standards Compliant
  - EMV 4.0 L1 certified
  - PBOC 2.0 L1 certified
  - ISO 7816
  - Meets FIPS 201 Smart Card Reader interoperability

#### Near Field Communication (NFC)

- MRB20B-NFC model only
- Supports ISO/IEC 14443A and 14443B reader/writer
- Supports MIFARE Technology
- Supports FeliCa protocol at 212 kbos and 424 kbps
- Supports Innovation Jewel Card
- Supports NFC Forum tag type 1, 2, 3, and 4
- Compliancy with Paypass v1.1 and EMVCo v2.0 specifications in high-end model

#### MorphoSmart™ Biometric Scanner

- Optical Sensor resistance to electro-static discharges, scratch and shocks
- Morpho patented optical technology and biometric algorithm
- Internal Storage of 500 users or 1000 templates
- Match-on-Device and Match-on-card
- The best and most compact optical sensor in the market
- High quality fingerprint acquisition
- Support various output format:
  - Proprietary, RAW
  - ISO 19794-4 (CBM E2 Model)
  - WSQ compressed image (licensing involved)
- Embedded processing capabilities: MINEX compliant Codes & Matcher inside
- FBI PIV IQS certification and fake finger detection available in CBM E2 model only
- Extensive security features including encryption and digital signature
- Standards Compliant
  - FBI PIV IQS certification
  - FCC, CE, RoHS

## Technical Specification

- **Wireless Connectivity**
  - Bluetooth : supports v3.0 and v4.2 + EDR
- **Contact Smart Card Interface**
  - Standard : ISO7816 Classic A, B, and C (5V, 3V, and 1.8V)
  - Protocols : T0 and T1
  - Supply Current : 50 mA (max)
  - Read/Write Speed : 115200 bps (max)
  - Short Circuit Protection : Yes
  - Clock Frequency : 4.8 MHz
  - Card Connector : Contact
  - Card Insertion Cycles : 10000 (min)
  - Card Form Factor : ID-1(**Card**) and ID-0(**SAM**) size
- **NFC Interface (MRB20B-NFC only)**
  - Standard : ISO-14443 A & B, ISO-18092, MIFARE
  - Protocol : T1
  - Read/Write Speed : up to 848 kbps
  - Operating Frequency : 13.56 MHz
  - Operating Distance : up to 50mm
- **MorphoSmart™ Biometric Interface**
  - Model : CBM-V3
  - Compliance : MINEX/FIPS201, IP65
  - Sensor Area : 18 x 22mm Optical
  - Resolution : 500 dpi
  - Grey Scale : 256
- **Mobile Operating System**
  - Android : v3.1 above
  - iOS : iOS 6 above, iPhone 4s above, iPad 3 above
  - Windows : Win 7, Win 8, Win 10
- **Physical Specifications**
  - Dimension : 95 \* 58 \* 26 mm
  - Color : Black
  - Weight : 25 g
- **Built-in Peripheral**
  - Red Led
    - Blink : Battery is Low
    - ON : Battery is Charging
    - OFF : Battery is fully charged
  - Blue Led
    - 1 Blink : Bluetooth link is waiting for pairing
    - 2 Blinks : Bluetooth link is paired
  - Green Led
    - Blink : Reader power on and running
    - OFF : Reader is power off
- **Operating Conditions**
  - Temperature : 0°C – 50 °C
  - Humidity : 10% - 90%

### Other MyKAD readers



MS01350  
Smart Card Reader



MS01300  
Fingerprint scanner



MRB20B  
Bluetooth Biometric  
Smart Card Reader



ID Screen  
Biometric Smart Card  
Android Tablet



LBR20  
Apple Lightning Biometric  
Smart Card Reader for IPAD

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