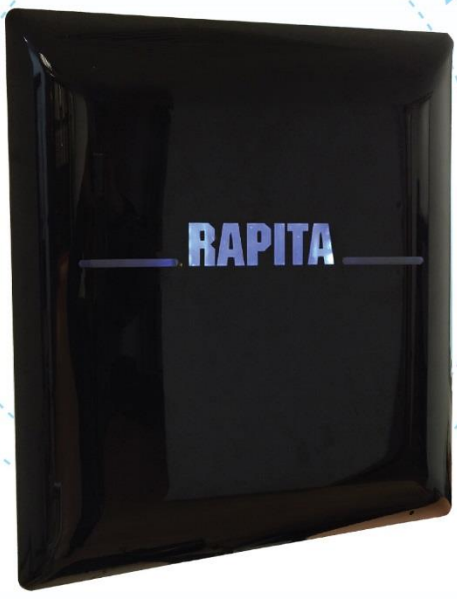
RAPITA®  Mi-RFID™

# INNOVATIVE TECHNOLOGY
## RFID LONG RANGE READER
### Vehicle Auto-gate Security System




## Mi-1808B

## Mi-1802B

Features :

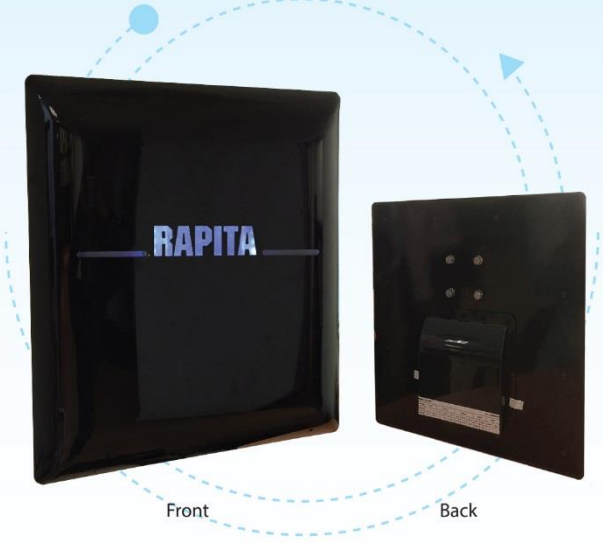
- Distance : 6 meters (MAX)
- Wiegand 26/34
- Water -proof
- Multi-protocol
- Integrated Design

- RFID Card
  [ UH / UE ] Long Range Card
- Hybrid Card 2 in 1
  [ EM ] Long Range + Mifare
  [ EL ] Long Range + Proximity

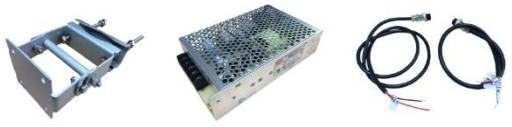
- Material
  [ PET / PVC ]

*Dealer address:*

## ALL New Mi-1808B RFID Reader




Accessories included :



Mounting Bracket | Industrial Power Supply | Power & Wiegand Cable

| Specification | |
|---|---|
| Product Code | Mi - 1808B |
| RF Characteristic | ISM 902~928MHz (FCC) or 919~923 MHz (MAS) |
| RF Power Output | 0~30dBm |
| Power Supply | Industrial Power Supply<br>Input : 100-240 VAC, 0.5A, Output : +12V, 6.2A |
| Operating Temperature | -20˚C to 80˚C |
| Indicator | LED ON : Card Reading<br>LED OFF : No Card Detected |
| Casing | IP65 Rating ( Black Color) |
| Dimension | 440mm x 440mm x 50mm |
| Tag Read Rate | Software Programmable,<br>Average Reading per 64Bits : <10ms |
| Weight | 2kg |
| Reading Range | >6m |
| Interface | Rs-232C Serial Interface / RS 485, Wiegand 26/34 |

## Mi-1802B RFID Reader


Accessories included :

Mounting Bracket | Industrial Power Supply | Power & Wiegand Cable

| Specification | |
|---|---|
| Product Code | Mi - 1802B |
| RF Characteristic | ISM 902~928MHz (FCC) or 919~923 MHz (MAS) |
| RF Power Output | 0~30dBm |
| Power Supply | Industrial Power Supply<br>Input : 100-240 VAC, 0.5A, Output : +12V, 6.2A |
| Operating Temperature | -20˚C to 80˚C |
| Casing | IP65 Rating ( White Color) |
| Dimension | 440mm x 440mm x 50mm |
| Tag Read Rate | Software Programmable,<br>Average Reading per 64Bits : <10ms |
| Weight | 2kg |
| Reading Range | >6m |
| Interface | Rs-232C Serial Interface / RS 485, Wiegand 26/34 |


**Thickness : 0.76mm**

## Rapita RFID Card E Series ( Synchronized ID available )

Mi-UE : Long range only
Mi-EM : Long range + mifare ( 2 in 1 )
Mi-EL : Long range + proximity ( 2 in 1 )

## Rapita RFID Card U Series ( Higher Security )

Mi-UH : Long range only
Mi-UM : Long range + mifare ( 2 in 1 )
Mi-UL : Long range + proximity ( 2 in 1 )



| | RFID Long Rang Card | RFID Hybrid Card (UHF + LF/ Mifare) |
|---|---|---|
| Operating Distance | Typically ~6-8m on air<br>(Antenna Dependent) | UHF : Typically ~6-8m on air (Antenna Dependent)<br>LF / Mifare : Proximity |
| Frequency | 902-928 MHz | i) 860-960 MHz<br>ii) 125 kHz / 13.56MHz |
| Memory | Long RangeSeries :<br>UH (UHF 2048 bits)<br>UE (UHF 240 bits EPC memory) | Hybrid Card Series :<br>UL - (UHF 2048 bits + Proximity 64 bits)<br>UM - (UHF 2048 bits + Mifare 1024 bits)<br>EL - (UHF 240 bits EPC memory + Proximity 64 bits)<br>EM - (UHF 240 - bits EPC memory + Mifare 1024 bits) |
| Write Endurance Cycle | 100, 000 | 100, 000 |
| Data Retention | Typical 10 years | Typical 10 years |
| Write Protection | Blockwise | Blockwise |
| Physical Characteristics | Card substrate : PET<br>Length : 86mm<br>Width : 54mm<br>Multi read capability : Yes<br>Water Resistance : Yes | Card substrate : PET<br>Length : 86mm<br>Width : 54mm<br>Water Resistance : Yes |
| Operating Temperature | -20˚C to 80˚C | -20˚C to 80˚C |
| Static Pressure | 10 N/mm$^2$ | 10 N/mm$^2$ |
| RF Air Protocol | ISO/ IEC 18000 | UHF : ISO/ IEC 18000<br>LF : 125kHz/<br>Mifare :13.56 MHz (ISO 14443A) |

*Specifications and product availability subject to change without prior notice.*

# Mi-1802B & Mi-1808B RFID Reader Quick Guide V2

Interface Wire Color Code ( You can find it at the back of the reader ) :

| Interface | Power | | RS232( DB 9 ) | | | RS485 | | Trigger | | Wiegand | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wire Color | 1 | 2 | Pin 3 | Pin 2 | Pin 5 | Brown | Yellow | Red | Black | Blue | White | Green |
| Definition | +12V | GND | TX | RX | GND | A+ | B+ | Trigger | GND | DATA 0 | DATA 1 | GND |

Note:

1. The Red and Black wires are for triggering, please be cautious and do not connect them to DC or AC Power as it will cause short circuit.
2. Do not connect interface signal wire to Power Supply wire!

**Technical Guidelines**

1. The reading distance between reader and tag in ideal condition is 4-5 meters.
2. Reading distance is fully depending on surrounding environment. E.g: frequency interference, humidity, etc.
3. Reading distance will be reduced or not detected for vehicle with tinted windscreen that contains heavy metal elements due to the nature of RF Signal that metal elements will detune the permeability of radio signal.

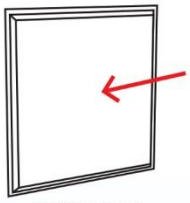
*Recommendation of tint film specification as below:*

- *Visible Light Transmission: > 70%* - *Ultra Violet Radiation Rejection : 99%* - *Shading Coefficient: > 0.60* - *Coolness factor: > 1.2*

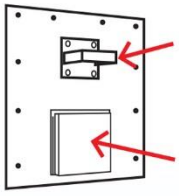
*REMARK: Information above for reference only, actual result subject to other technical factors and environment interference.*

*JPJ Compliant: Rule 5 (1) and Rule 5 (3) of the 2000 Amendment of the Motor Vehicle Rules (Prohibition on Specific Types of Glass) set the translucence level of the windshield at no less than 70% and the rear and side windows at no less than 50%.*

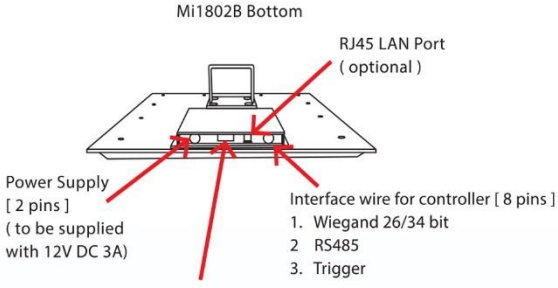
4. Distance between 2 readers should be at least 2 meters away to avoid interference.
5. Wiegand wiring are recommended to use Alarm cable or other higher grade cable.
6. Wiegand wiring are recommended to be less than 10 meters from reader to controller. Long wire will cause data signal loss.
7. Industrial power supply will be provided together with each reader. Sharing the power supply with other equipment are highly not recommended. At least 3 Ampere of power supply is needed for reader to operate normally.
8. Power supply wiring are recommended to be less than 10 meters from power supply to reader. DC Voltage will decrease if the power cable is too long. Reader will keep on beeping if the voltage supply is less than 9V.
9. RFID card should be away from metal or liquid object by at least 10cm.
10. Make sure no objects are blocking between Mi-1802B / Mi-1808B Long Range Reader and card when scanning is in progress.



Mi1802B Front



Mi1802B Back




Correct Way of Holding RFID Card

Card Position on Car Windscreen

Alternative Way of Placing RFID Card

Terms & Conditions / Disclaimer :

* All information provided in this quick guide is based upon our best knowledge at the time this quick guide was published.
* All information is believed to be accurate and given in all good intention.
* User shall be responsible for the installation of the Mi-1802B / Mi-1808B;
* User shall ensure that the installation must according to the instructions;
* Manufacturer (MDT) shall not be held responsible for any direct and/or indirect loss, damage or at any costs suffered by user as a result thereof, including the unavailability of the warranty or guarantee.
* Upon becoming the owner of Mi-1802B / Mi-1808B, user shall be fully responsible for the Mi-1802B / Mi-1808B and user shall not have any claim of whatever nature for the breakdown and/ or failure of the Mi-1802B / Mi-1808B in any manner whatsoever against manufacturer (MDT)

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