

# MV-IDH7000B

## Wireless Handheld Code Reader



### Introduction

MV-IDH7000B wireless handheld code reader decodes different types of 1D and 2D codes rapidly in different distances. With the built-in intelligent code reading algorithm, it can easily decoding codes with spots, defects and low contrast ratio, and entry level DPM codes. It adopts illumination system to provide direct lighting and diffused reflection lighting. With adaptive smart bases, the code reader can realize charging and data communication.

### Key Feature

- Built-in code reading algorithm for decoding different types of codes.
- Provides good robustness to read codes with spots, defects and low contrast ratio.
- Adopts Bluetooth 5.0 wireless technology to provide convenient and efficient operations.
- With a smart base, parameter configuration and device management via IDMVS client software are supported.
- Adopts 3150 mAh battery to provide long battery life.
- Adopts illumination system to provide direct lighting and diffused reflection lighting.
- Supports IP65 and drop height of 2.0 m.

### Available Model

- Near distance, with USB charging base set: MV-IDH7000B/10NR/07RN/US
- Standard distance, with USB charging base set: MV-IDH7000B/10SR/07RN/US
- Near distance, with network charging base set: MV-IDH7000B/10NR/07RN/LS
- Standard distance, with network charging base set: MV-IDH7000B/10SR/07RN/LS
- HHD, with USB charging base set: MV-IDH7000B/10HHD/07RN/US
- HHD, with network charging base set: MV-IDH7000B/10HHD/07RN/LS
- Far distance, with USB charging base set: MV-IDH7000B/10ER/12RN/US
- Far distance, with network charging base set: MV-IDH7000B/10ER/12RN/LS
- Near distance, handheld code reader only: MV-IDH7000B/10NR/07RN
- Standard distance, handheld code reader only: MV-IDH7000B/10SR/07RN

### Applicable Industry

PCB, new energy, consumer electronics, semiconductor, automobile parts, etc.

## Specification

| Model                         | MV-IDH7000B/10NR/07RN/US (LS)   | MV-IDH7000B/10SR/07RN/LS (US)  |
|-------------------------------|---|--|
| <b>Performance</b>            |   |  |
| <b>Symbologies</b>            | 1D codes: Code 39, Code 93, Code 128, GS1-Code128, CodaBar, EAN 8, EAN 13, ISBN, ISSN, ITF 25, ITF 14, UPCA, UPCE<br>2D matrix codes: QR Code, Data Matrix, MicroQR, Aztec, Han Xin<br>Stacked code: PDF417 |  |
| <b>Min. accuracy</b>          | 3 mil   |  |
| <b>Sensor type</b>            | CMOS  |  |
| <b>Resolution</b>             | 1280 × 800  |  |
| <b>Depth of field*</b>        | Code 39 (3 mil): 15 mm to 60 mm<br>Code 39 (5 mil): 5 mm to 80 mm<br>Data Matrix (5 mil): 10 mm to 70 mm<br>Data Matrix (10 mil): 0 mm to 110 mm <sup>1</sup><br>QR Code (5 mil): 10 mm to 70 mm            | Code 39 (5 mil): 30 mm to 200 mm<br>Code 128 (3 mil): 55 mm to 110 mm<br>Code 128 (20 mil): 56 mm to 660 mm<br>Data Matrix (10 mil): 20 mm to 220 mm<br>QR Code (10 mil): 20 mm to 220 mm<br>QR Code (20 mil): 10 mm to 450 mm |
| <b>Field of view</b>          | Horizontal 31°, vertical 20°  |  |
| <b>Detection angle</b>        | Tilt angle ± 60°, skew angle ± 60°, rotation angle 360°   |  |
| <b>Symbol contrast</b>        | 20%   |  |
| <b>Wireless communication</b> |   |  |
| <b>Communication mode</b>     | Bluetooth BT 5.0, BLE   |  |
| <b>Wireless range</b>         | 100 m (open area)   |  |
| <b>Electrical feature</b>     |   |  |
| <b>Battery</b>                | 3150 mAh  |  |
| <b>Charging time</b>          | Network interface: Shutdown mode: 12 VDC (12 V, 2 A): 3.5 h<br>USB interface: Shutdown mode: USB 3.0 (5 V, 1 A): 4 h, 12 VDC (12 V, 2 A): 3.5 h   |  |
| <b>Endurance</b>              | 13 h (interval scanning, once in 2 seconds)   |  |
| <b>Mechanical</b>             |   |  |
| <b>Focal length</b>           | 6.7 mm  |  |
| <b>Ambient illumination</b>   | 0 lux to 100000 lux   |  |
| <b>Light source</b>           | Direct lighting: white LED<br>Diffused reflection lighting: red LED   |  |
| <b>Aiming system</b>          | Cross laser aiming  |  |
| <b>Prompt</b>                 | LED indicator, buzzer, vibrator   |  |
| <b>Dimension</b>              | 73.4 mm × 104 mm × 215.2 mm (2.9" × 4.1" × 8.5")  |  |
| <b>Weight</b>                 | Approx. 410 g (0.9 lb.)   |  |
| <b>Ingress protection</b>     | IP65  |  |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F)                                   |  |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)  |  |
| <b>Drop height</b>            | 2.0 m   |  |
| <b>General</b>                |   |  |
| <b>Client software</b>        | IDMVS   |  |
| <b>Certification</b>          | CE, KC  |  |

| Smart Base                    |   |   |
|-------------------------------|---|---|
| <b>Model</b>                  | MV-IDH7000B/SBASE/U   | MV-IDH7000B/SBASE/L   |
| <b>Communication protocol</b> | SmartSDK, USB (HID/CDC), Bluetooth  | SmartSDK, TCP Client, FTP, TCP Server, Profinet, Ethernet/IP, Modbus, UDP, Serial, Bluetooth, FINS, Melsec/SLMP |
| <b>Data interface</b>         | USB 2.0, RS-232, DC terminal <sup>2</sup>   | Fast Ethernet (100 Mbit/s), RS-232, DC terminal   |
| <b>Power supply</b>           | USB: 5 VDC<br>DC terminal: 12 VDC   | 12 VDC  |
| <b>Current consumption</b>    | USB 2.0: 1.5 A (max.), 0.14 A (during standby)<br>DC terminal: 0.7 A (max.), 0.06 A (during standby)  | 0.7 A (max.), 0.06 A (during standby)   |
| <b>Charging time</b>          | Adapter: 4 h, USB: 8 h  | 4 h   |
| <b>Dimension</b>              | 248.4 mm × 106.3mm × 69.4 mm (9.8" × 4.2" × 2.7")   |   |
| <b>Weight</b>                 | Approx. 380 g (0.8 lb.)   |   |
| <b>Ingress protection</b>     | IP40  |   |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F) |   |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)  |   |

\*Test condition: Environment temperature=25 °C (77 °F), ambient illumination=250 lux filament lamp, Hikrobot's test symbologies are used.

1: 0 mm means that the codes can be read within the imaging field of view.

2: The device can be powered via USB or DC terminal. Power supply via DC terminal is recommended.

## Specification

| Model                         | MV-IDH7000B/10HHD/07RN/US   | MV-IDH7000B/10HHD/07RN/LS |
|-------------------------------|---|---------------------------|
| <b>Performance</b>            |   |                           |
| <b>Symbologies</b>            | 1D codes: Code 39, Code 93, Code 128, GS1-Code128, CodaBar, EAN 8, EAN 13, ISBN, ISSN, ITF 25, ITF 14, UPCA, UPCE<br>2D matrix codes: QR Code, Data Matrix, MicroQR, Aztec, Han Xin<br>Stacked code: PDF417 |                           |
| <b>Min. accuracy</b>          | 3 mil   |                           |
| <b>Sensor type</b>            | CMOS  |                           |
| <b>Resolution</b>             | 1280 × 800  |                           |
| <b>Depth of field*</b>        | Data Matrix (2 mil): 0 mm to 11 mm <sup>1</sup><br>Data Matrix (5 mil): 0 mm to 20 mm <sup>1</sup><br>Code 39 (5 mil): 0 mm to 29 mm <sup>1</sup><br>QR Code (10 mil): 0 mm to 40 mm <sup>1</sup>           |                           |
| <b>Field of view</b>          | Horizontal 31°, vertical 20°  |                           |
| <b>Detection angle</b>        | Tilt angle ± 60°, skew angle ± 60°, rotation angle 360°   |                           |
| <b>Symbol contrast</b>        | 20%   |                           |
| <b>Wireless communication</b> |   |                           |
| <b>Communication mode</b>     | Bluetooth BT 5.0, BLE   |                           |
| <b>Wireless range</b>         | 100 m (open area)   |                           |

| <b>Electrical feature</b>     |   |   |
|-------------------------------|---|---|
| <b>Battery</b>                | 3150 mAh  |   |
| <b>Charging time</b>          | Shutdown mode: USB 3.0 (5 V, 1 A): 4 h, 12 VDC (12 V, 2 A): 3.5 h   | Shutdown mode: 12 VDC (12 V, 2 A): 3.5 h  |
| <b>Endurance</b>              | 13 h (interval scanning, once in 2 seconds)   |   |
| <b>Mechanical</b>             |   |   |
| <b>Focal length</b>           | 6.7 mm  |   |
| <b>Ambient illumination</b>   | 0 lux to 100000 lux   |   |
| <b>Light source</b>           | Direct lighting: white LED<br>Diffused reflection lighting: red LED   |   |
| <b>Aiming system</b>          | Cross laser aiming  |   |
| <b>Prompt</b>                 | LED indicator, buzzer, vibrator   |   |
| <b>Dimension</b>              | 73.4 mm × 104 mm × 215.2 mm (2.9" × 4.1" × 8.5")  |   |
| <b>Weight</b>                 | Approx. 410 g (0.9 lb.)   |   |
| <b>Ingress protection</b>     | IP65  |   |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F) |   |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)  |   |
| <b>Drop height</b>            | 2.0 m   |   |
| <b>General</b>                |   |   |
| <b>Client software</b>        | IDMVS   |   |
| <b>Certification</b>          | CE, KC  |   |
| <b>Smart Base</b>             |   |   |
| <b>Model</b>                  | MV-IDH7000B/SBASE/U   | MV-IDH7000B/SBASE/L   |
| <b>Communication protocol</b> | SmartSDK, USB (HID/CDC), Bluetooth  | SmartSDK, TCP Client, FTP, TCP Server, Profinet, Ethernet/IP, Modbus, UDP, Serial, Bluetooth, FINS, Melsec/SLMP |
| <b>Data interface</b>         | USB 2.0, RS-232, DC terminal <sup>2</sup>   | Fast Ethernet (100 Mbit/s), RS-232, DC terminal   |
| <b>Power supply</b>           | USB: 5 VDC<br>DC terminal: 12 VDC   | 12 VDC  |
| <b>Current consumption</b>    | USB 2.0: 1.5 A (max.), 0.14 A (during standby)<br>DC terminal: 0.7 A (max.), 0.06 A (during standby)  | 0.7 A (max.), 0.06 A (during standby)   |
| <b>Charging time</b>          | Adapter: 4 h, USB: 8 h  | 4 h   |
| <b>Dimension</b>              | 248.4 mm × 106.3mm × 69.4 mm (9.8" × 4.2" × 2.7")   |   |
| <b>Weight</b>                 | Approx. 380 g (0.8 lb.)   |   |
| <b>Ingress protection</b>     | IP40  |   |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F) |   |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)  |   |

\*Test condition: Environment temperature=25 °C (77 °F), ambient illumination=250 lux filament lamp, Hikrobot's test symbologies are used.

1: 0 mm means that the codes can be read within the imaging field of view.

2: The device can be powered via USB or DC terminal. Power supply via DC terminal is recommended.

## Specification

| Model                         | MV-IDH7000B/10ER/12RN/US   | MV-IDH7000B/10ER/12RN/LS                 |
|-------------------------------|--|--|
| <b>Performance</b>            |  |  |
| <b>Symbologies</b>            | 1D codes: Code 39, Code 93, Code 128, GS1-Code128, CodaBar, EAN 8, EAN 13, ISBN, ISSN, ITF 25, ITF 14, UPCA, UPCE<br>2D matrix codes: QR Code, Data Matrix, MicroQR, Aztec, Han Xin<br>Stacked code: PDF417  |  |
| <b>Min. accuracy</b>          | 10 mil   |  |
| <b>Sensor type</b>            | CMOS   |  |
| <b>Resolution</b>             | 1280 × 800   |  |
| <b>Depth of field*</b>        | Code 39 (10 mil): 540 mm to 1200 mm<br>Code 39 (20 mil): * mm to 2800 mm <sup>1</sup><br>Code 39 (50 mil): * mm to 5200 mm <sup>1</sup><br>Code 39 (100 mil): * to 6800 mm <sup>1</sup><br>Code 128 (10 mil): 650 mm to 1000 mm<br>Code 128 (20 mil): * mm to 2800 mm <sup>1</sup><br>Code 128 (100 mil): * mm to 6800 mm <sup>1</sup><br>Data Matrix (50 mil): * mm to 4000 mm <sup>1</sup><br>QR Code (20 mil): 600 mm to 1600 mm<br>QR Code (33 mil): 250 mm to 2600 mm<br>QR Code (100 mil): * to 6500 mm <sup>1</sup> |  |
| <b>Field of view</b>          | Horizontal 18°, vertical 10°   |  |
| <b>Detection angle</b>        | Tilt angle ± 60°, skew angle ± 60°, rotation angle 360°  |  |
| <b>Symbol contrast</b>        | 20%  |  |
| <b>Wireless communication</b> |  |  |
| <b>Communication mode</b>     | Bluetooth BT 5.0, BLE  |  |
| <b>Wireless range</b>         | 100 m (open area)  |  |
| <b>Electrical feature</b>     |  |  |
| <b>Battery</b>                | 3150 mAh   |  |
| <b>Charging time</b>          | Shutdown mode: USB 3.0 (5 V, 1 A): 4 h, 12 VDC (12 V, 2 A): 3.5 h  | Shutdown mode: 12 VDC (12 V, 2 A): 3.5 h |
| <b>Endurance</b>              | 13 h (interval scanning, once in 2 seconds)  |  |
| <b>Mechanical</b>             |  |  |
| <b>Focal length</b>           | 12 mm  |  |
| <b>Ambient illumination</b>   | 0 lux to 100000 lux  |  |
| <b>Light source</b>           | Direct lighting: white LED<br>Diffused reflection lighting: red LED  |  |
| <b>Aiming system</b>          | Point laser aiming   |  |
| <b>Prompt</b>                 | LED indicator, buzzer, vibrator  |  |
| <b>Dimension</b>              | 73.4 mm × 104 mm × 215.2 mm (2.9" × 4.1" × 8.5")   |  |
| <b>Weight</b>                 | Approx. 410 g (0.9 lb.)  |  |
| <b>Ingress protection</b>     | IP65   |  |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F)  |  |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)   |  |
| <b>Drop height</b>            | 2.0 m  |  |

| <b>General</b>                |   |   |
|-------------------------------|---|---|
| <b>Client software</b>        | IDMVS   |   |
| <b>Certification</b>          | CE, KC  |   |
| <b>Smart Base</b>             |   |   |
| <b>Model</b>                  | MV-IDH7000B/SBASE/U   | MV-IDH7000B/SBASE/L   |
| <b>Communication protocol</b> | SmartSDK, USB (HID/CDC), Bluetooth  | SmartSDK, TCP Client, FTP, TCP Server, Profinet, Ethernet/IP, Modbus, UDP, Serial, Bluetooth, FINS, Melsec/SLMP |
| <b>Data interface</b>         | USB 2.0, RS-232, DC terminal <sup>2</sup>   | Fast Ethernet (100 Mbit/s), RS-232, DC terminal   |
| <b>Power supply</b>           | USB: 5 VDC<br>DC terminal: 12 VDC   | 12 VDC  |
| <b>Current consumption</b>    | USB 2.0: 1.5 A (max.), 0.14 A (during standby)<br>DC terminal: 0.7 A (max.), 0.06 A (during standby)  | 0.7 A (max.), 0.06 A (during standby)   |
| <b>Charging time</b>          | Adapter: 4 h, USB: 8 h  | 4 h   |
| <b>Dimension</b>              | 248.4 mm × 106.3mm × 69.4 mm (9.8" × 4.2" × 2.7")   |   |
| <b>Weight</b>                 | Approx. 380 g (0.8 lb.)   |   |
| <b>Ingress protection</b>     | IP40  |   |
| <b>Temperature</b>            | Working temperature: -10 °C to 50 °C (14 °F to 122 °F)<br>Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)<br>Charging temperature: 0 °C to 40 °C (32 °F to 104 °F) |   |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)  |   |

\*Test condition: Environment temperature=25 °C (77 °F), ambient illumination=250 lux filament lamp, Hikrobot's test symbologies are used.

1: It is determined by the code length and detection angle.

2: The device can be powered via USB or DC terminal. Power supply via DC terminal is recommended.

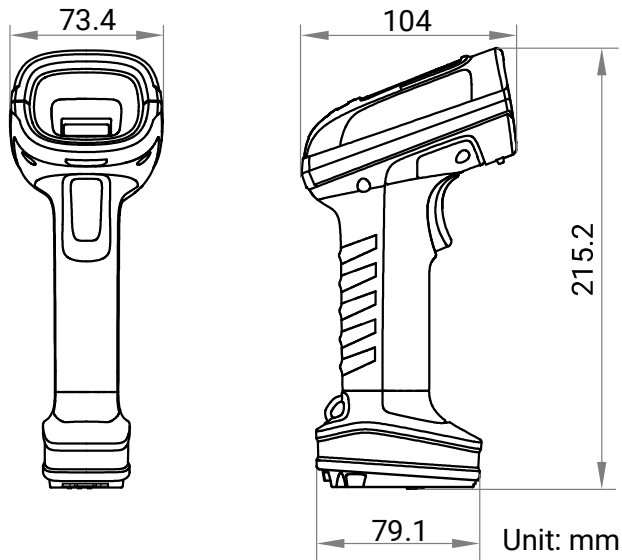
| Laser Information of IDH7000B Series Product |         |
|--|---------|
| Laser safety class                           | Laser 2 |
| Wavelength                                   | 650 nm  |
| Pulse width                                  | 8 ms    |
| Maximum power                                | 1 mW    |

## Accessories

- Smart base with USB interface: MV-IDH7000B/SBASE/U
- Smart base with network interface: MV-IDH7000B/SBASE/L

## Dimension

Wireless Handheld Code Reader:



Smart Base:

