

COGNEX

DataMan[®] 8072 ER

Quick Reference Guide



2022 August 04
Revision: 6.3.2.3

Precautions



WARNING: LASER LIGHT, DO NOT STARE INTO BEAM: CLASS 2 LASER PRODUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY CAUSE SERIOUS INJURY.

To reduce the risk of injury or equipment damage, observe the following precautions when you install the Cognex product:

- This product is intended for industrial use in automated manufacturing or similar applications.
- The safety of any system incorporating this product is the responsibility of the assembler of the system.
- This product does not contain user-serviceable parts. Do not make electrical or mechanical modifications to product components. Unauthorized modifications can void your warranty.
- Route cables and wires away from high-current wiring or high-voltage power sources to reduce the risk of damage or malfunction from the following causes: over-voltage, line noise, electrostatic discharge (ESD), power surges, or other irregularities in the power supply.
- Changes or modifications not expressly approved by the party responsible for regulatory compliance could void the user's authority to operate the equipment.
- Ensure that the cable bend radius begins at least six inches from the connector. Cable shielding can be degraded or cables can be damaged or wear out faster if a service loop or bend radius is tighter than 10X the cable diameter.

- This device should be used in accordance with the instructions in this manual.
- All specifications are for reference purposes only and can change without notice.
- This product is intended for industrial use in automated manufacturing or similar applications.
- The safety of any system incorporating this product is the responsibility of the assembler of the system.
- This product does not contain user-serviceable parts. Do not make electrical or mechanical modifications to product components. Unauthorized modifications can void your warranty.

Symbols

The following symbols indicate safety precautions and supplemental information:



WARNING: This symbol indicates a hazard that could cause death, serious personal injury or electrical shock.



CAUTION: This symbol indicates a hazard that could result in property damage.



Note: This symbol indicates additional information about a subject.



Tip: This symbol indicates suggestions and shortcuts that might not otherwise be apparent.

Product Overview

DataMan 8072 ER Reader

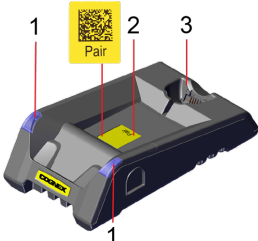
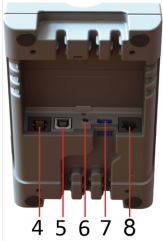


WARNING: LASER LIGHT, DO NOT STARE INTO BEAM












| | |
|---|--------------------------------------|
| 1 | Illumination module |
| 2 | Laser aimer |
| 3 | Illumination LEDs |
| 4 | Trigger (press and hold to read) |
| 5 | Lanyard hook |
| 6 | Indicator light |
| 7 | Communication module insertion point |

Base Station Overview

| | |
|---|---|
|  |  |
| 1 | Base station status indicators |
| 2 | PAIR sticker - Reading the code pairs the base station with the device |
| 3 | Connection point to the reader: <ul style="list-style-type: none">• pairing reader and base station• non-wireless communication• charging |
| 4 | RS-232 |
| 5 | USB |
| 6 | Power plug (24V, max. 15W) |


| | |
|---|--|
| 7 | Alternative power supply connector (24V, max. 15W, polarity marked on the plastic part near the connector). Recommended wire diameter is 14- 18 AWG |
| 8 | Ethernet |

DataMan 8072 ER Accessories







| Accessory Name | Product ID | Illustration |
|------------------------------------|------------------------------|---|
| Serial/USB slide-in | DMCM-SERIALM-00 |  |
| Ethernet slide-in | DMCM-ENETM-00 | |
| Bluetooth slide-in | DMCM-BTM-00 | |
| Charging base station | DMA-CBASE-01 |  |
| Intelligent Bluetooth base station | DMA-IBASE-BT-02 | |
| Power Supply for base station | DMA-24VPWR-xx ¹ |  |
| Power Supply for reader | DM100-PWR-000 | |
| Battery for the wireless reader | DMA-HHBATTERY-02 |  |
| Multi-battery charger | DMA-MBC-xx* |  |
| POE adapter | CPS-24V-POE1 |  |
| POE adapter | CPS-24V-POE4 |  |
| POE adapter | CPS-AC-POE1A-xx ² |  |
| Wall mount | DMA-WALL-8000-00 |  |

¹ xx can be US, EN, UK, or JP.

² xx can be US, EN, UK, or JP.

| Accessory Name | Product ID | Illustration |
|-----------------------------|-------------------|---|
| Wall mount for base station | DMA-IBASE-WALL-00 |  |

Cables

| Accessory Name | Product ID | Illustration |
|--|---------------------|---|
| Coiled RS-232 cable for reader, 2.5 m | DM8000-RS232-02 |  |
| Industrial RS-232 cable for reader, 2.5 m | DM8000-RS232IND-02 | |
| Coiled RS-232 cable for reader, 4 m | DM8000-RS232-05 | |
| Coiled USB cable, 2.5 m | DM8500-USBC-02 |  |
| Ethernet cable, 2.5 m | DM8000-ECABLE-02 |  |
| Ethernet cable, 30 m | DM8000-ECABLE-30 | |
| Ethernet cable, 5 m | DM8000-ECABLE-05 | |
| USB cable, 2.5 m | DM8500-USB-00 |  |
| Coiled Ethernet cable, 5 m | DM8000-ECABLEC-05** |  |
| RJ25 (RJ12) to DSUB9 cable for base station, 5 m | DMA-RS232RJ-05 |  |

** Collimated cable length including DM8000-ECABLE-X should not exceed 50 m.

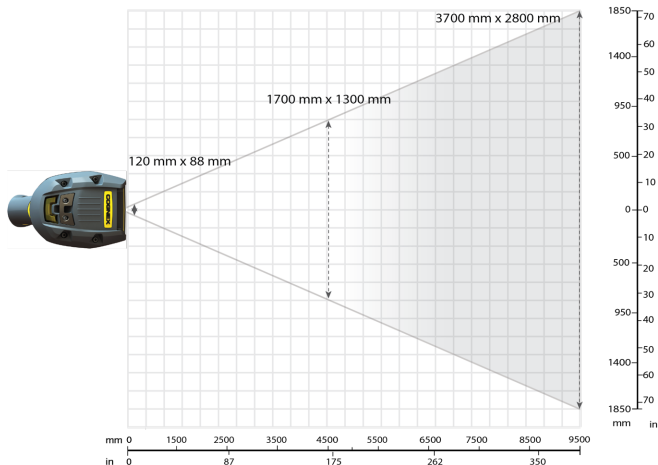
- USB cable for base station: Use any standard USB-A to USB-B 2.0 cable up to 3 meters.
- Ethernet cable for base station: Use any standard CAT5/5e, SF/FTP or S/FTP cable.
- DMA-USB-00: Straight 10ft USB cable.

Field of View and Reading Distances

Depth of Field values

Note: All values beginning with 0 denote the minimum distance where the Field of View is able to see the entire code.

DataMan 8072 ER with a 12 mm Liquid Lens (Long Range, Focused to 8 meters)



| Device | Distances in mm/1D min. code | Distances in mm/1D min. code |
|--------|------------------------------|------------------------------|
|--------|------------------------------|------------------------------|

| | | | | |
|----------|------|---------|------|---------|
| DM8072ER | 300 | 4 MIL | 300 | 8 MIL |
| | 4000 | 50 MIL | 2250 | 50 MIL |
| | 8000 | 100 MIL | 4750 | 100 MIL |

Connecting the Reader

Bluetooth Readers

1. Connect the slide-in to the reader and tighten the screws to lock the slide-in.
2. Insert the battery.
3. Insert the plug.

Corded Readers

1. Connect the slide-in to the reader and tighten the screws to lock the slide-in.
2. Insert the plug. Slide the cable lock up to the reader and twist the cable lock in place.



Note: Disconnect the DataMan 8072 ER from power before inserting the communication modules.

Installation

Installation procedures are detailed in the *DataMan 8072 ER Reference Manual*, which is installed with the DataMan Setup Tool. The DataMan Setup Tool is available from the DataMan support site: <http://www.cognex.com/support/dataman>.

To access documentation, open the Windows Start menu, select *All Programs > Cognex > DataMan Software vx.x.x > Documentation*.

Note:



- Cables are sold separately.
- If a standard component is missing or damaged, immediately contact your Cognex Authorized Service Provider (ASP) or Cognex Technical Support.



CAUTION: All cable connectors are "keyed" to fit the connectors on the DataMan system; do not force the connectors or damage may occur.

1. After installing the software, connect the DataMan 8072 ER to your PC.
2. Launch the DataMan Setup Tool and click **Refresh**.
3. Select your DataMan 8072 ER Series reader from the list and click **Connect**.

DataMan 8072 ER Specifications

| Specification | DataMan 8072 ER Reader |
|---|---|
| Weight | 254g Wireless: 530 g (18.70 oz) (battery included) |
| Operating Temperature | 0 °C — 40 °C (32 °F — 104 °F) |
| Storage Temperature | -10 °C — 60 °C (14 °F — 140 °F) |
| Maximum Humidity | < 95% (non-condensing) |
| Environmental | IP65 |
| Symbologies | 1-D barcodes: Codabar, Code 39, Code 128, and Code 93, Interleaved 2 of 5, Pharma, GS1 DataBar, Postal, UPC/EAN/JAN, DataBar 2-D barcodes: Data Matrix™; QR Code and microQR Code, RSS/CS, PDF 417, MicroPDF 417, MaxiCode, Aztec Code |
| Power Supply Requirements | USB: external 5.0 W maximum LPS or NEC class 2 power supply: +5 V - +6 V DC RS232 external 5.0 W max LPS or NEC class 2 power supply +6.0 V 1 A DC (5.0 m RS-232 cable) +6.0 V 1 A DC (2.5 m RS-232 cable) ETH: Class 2 PoE supply IEEE 802.3af (connect only to PoE networks without routing to the outside plant) |
| Inrush current peak | 5A maximum Duration: approx. 30 μs Electrical charge: 60 μAs at 6 V Maximum capacity: 10 μF Maximum inrush: 50 μC |
| Battery life for wireless reader (typical use case) | ca. 4100 triggers can be operated within a 13 hour working shift The expected life time of the battery is 5 years. |
| Ethernet | 10/100 Base-T FULL/HALF DUPLEX, IEEE 802.3 |
| Bluetooth | Bluetooth™ 2.1, 2.4 GHz |
| Protection | |

DataMan 8072 ER Imager Specifications

| Specification | DataMan 8072 ER Imager |
|---------------------------|----------------------------------|
| Image Sensor | 1/3 inch CMOS |
| Image Sensor Properties | 3.75 μm square pixels |
| Image Resolution (Pixels) | 1280 x 960 |
| Lens Type | 12 mm F:7 lens with liquid lens |

DataMan 8072 ER Base Station Specifications

| Specification | DMA-IBASE-BT-02 |
|---------------------------|---|
| Weight | |
| Operating Temperature | 0 °C — 45 °C (32 °F — 113 °F) |
| Storage Temperature | -40 °C — 60 °C (-40 °F — 140 °F) |
| Maximum Humidity | 95% (non-condensing) |
| Power Supply Requirements | 5.5 V DC, 6 W maximum LPS or NEC Class 2 power supply or PoE Class 2 power supply |
| Protection | IP65 |

LED Wavelengths for DataMan 8072 ER

i Note: The data below refer to the LED Illumination accessory of the reader, not to the LED indicators.

The following table shows LED types and the related wavelengths:

| LED | λ [nm] |
|-----|----------------|
| RED | 623 |

Regulations and Conformity

The DataMan 8072 ER has Regulatory Model R00049, and meets or exceeds the requirements of all applicable standards organizations for safe operation. However, as with any electrical equipment, the best way to ensure safe operation is to operate them according to the agency guidelines that follow. Please read these guidelines carefully before using your device.



Note: For the most current CE declaration and regulatory conformity information, see the Cognex support site: cognex.com/support.

| Regulator | Specification |
|--------------------|-----------------------------------|
| USA | FCC Part 15B, Class A |
| Canada | ICES-003, Class A |
| European Community | CE, Class A EN55032 EN55024 |
| Japan | VCCI - CISPR 32 Class A |
| Korea | KN32/KN35 |

The following table shows Safety and Regulatory Information for corded readers:

| Safety and Regulatory | |
|-----------------------|--|
| Manufacturer | Cognex Corporation One Vision Drive Natick, MA 01760 USA |

| Safety and Regulatory | |
|------------------------------|---|
| CE | This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take immediate measures. This equipment complies with the essential requirements of the EU Directive 2014/30/EU. Declarations are available from your local representative. |
| EU RoHS | Compliant to the most recent applicable directive. |
| FCC | FCC Part 15, Class A This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. |
| Canadian Compliance | This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. |
| TÜV | DataMan 8072 ER: Regulatory Model R00049 NRTL: TÜV SÜD SCC/NRTL OSHA Scheme for UL/CAN 61010-1. CB report available upon request.TÜV SÜD, IEC/EN 61010-1. |

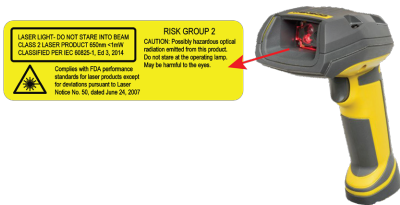
The following table shows Safety and Regulatory Information for wireless readers:

LED Safety Statement

CAUTION: Illumination and Lens assembly: This device has been tested in accordance with IEC 62471-1:2008 and has been certified to the limits of Risk Group 2. Possibly hazardous optical radiation emitted from this product. Do not stare at the operating lamp. May be harmful to the eyes.

Laser Safety Statement

WARNING: Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. This device has been tested in accordance with IEC60825-1 3rd ed., and has been certified to be under the limits of a Class 2 Laser device.



For European Community Users

Cognex complies with Directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE).

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performance of this product.

Compliance Statements: DataMan Base Station

The DataMan Base Stations have the following Regulatory models respectively: DMA-IBASE-BT-02 has 1AAG, DMA-CBASE-01 has R00046, and they meet or exceed the requirements of all applicable standards organizations for safe operation. However, as with any electrical equipment, the best way to ensure safe operation is to operate them according to the agency guidelines that follow.



Note: For the most current CE declaration and regulatory conformity information, see the Cognex support site: cognex.com/support.

Please read these guidelines carefully before using your device.

| Safety and Regulatory | |
|-----------------------|---|
| Manufacturer | Cognex Corporation One Vision Drive Natick, MA 01760 USA |
| | DMA-IBASE-BT-XX DMA-IBASE-01 DMA-CBASE-01 This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take immediate measures. This equipment complies with the essential requirements of EU Directives 2014/30/EU and 2014/53/EU. Declarations are available from your local representative. |
| EU RoHS | Compliant to the most recent applicable directive. |
| FCC | FCC Part 15, Class A This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. |

Safety and Regulatory

| | |
|---------------------|--|
| Canadian Compliance | This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. |
| Mexican Compliance | DMA-IBASE-BT-XX: RCPCO1A15-0073 DMA-IBASE-01: RCPCODM12-0655 |
| Chinese Compliance | DMA-IBASE-BT-XX: CMIIT ID: 2015DJ0237 DMA-IBASE-01: CMIIT ID: 2012DJ2857 |
| TÜV | RTL: TÜV SÜD SCC/NRTL OSHA Scheme for UL/CAN 61010-1. CB report available upon request. TÜV SÜD, IEC/EN 61010-1. |

中国大陆RoHS (Information for China RoHS Compliance)

根据中国大陆《电子信息产品污染控制管理办法》(也称为中国大陆RoHS), 以下部份列出了本产品中可能包含的有毒有害物质或元素的名称和含量。



Table of toxic and hazardous substances/elements and their content, as required by China's management methods for controlling pollution by electronic information products.

| | Hazardous Substances 有害物质 | | | | | |
|--|---------------------------|-------------------|-------------------|--------------------------------------|--|--|
| Part Name 部件名称 | Lead (Pb) 铅 | Mercury (Hg) 汞 | Cadmium (Cd) 镉 | Hexavalent Chromium (Cr (VI)) 六价铬 | Polybrominated biphenyls (PBB) 多溴联苯 | Polybrominated diphenyl ethers (PBDE) 多溴二苯醚 |
| Regulatory Model R00049 Base Station | X | O | O | O | O | O |
| <p>This table is prepared in accordance with the provisions of SJ/T 11364. 这个标签是根据SJ/T 11364的规定准备的。</p> <p>O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T26572 - 2011. 表示本部件所有均质材料中含有的有害物质低于GB/T26572 - 2011的限量要求。</p> <p>X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T26572 - 2011. 表示用于本部件的至少一种均质材料中所含的危害物质超过GB/T26572 - 2011的限制要求。</p> | | | | | | |

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