COGNEX

DataMan® 8050

Quick Reference Guide

2020 April 14

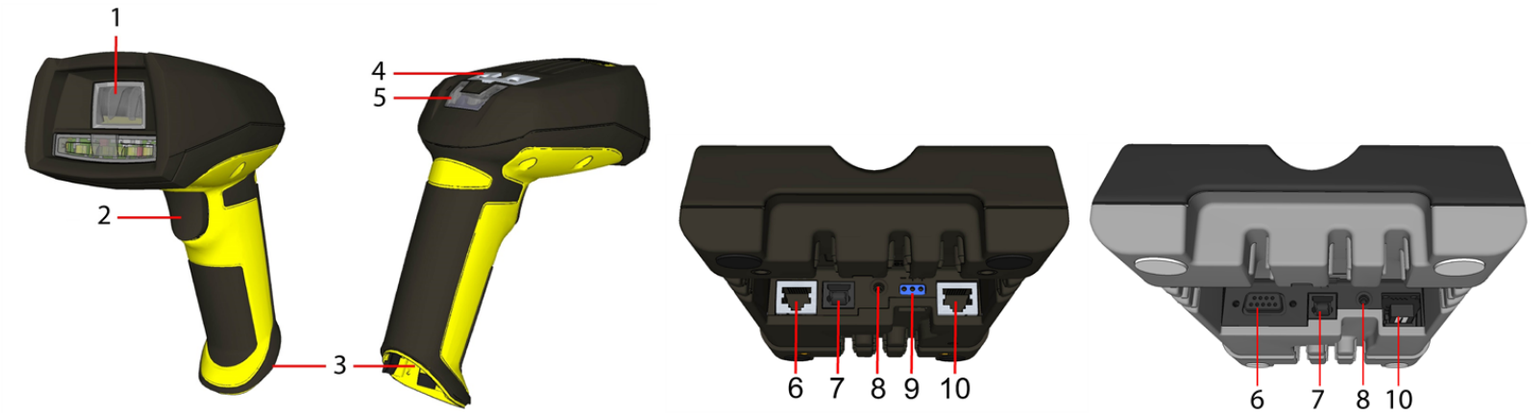
Revision: 6.1.6SR1.7

Precautions

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

- 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.

Product Overview



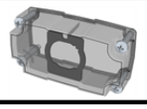
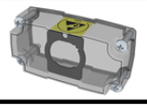
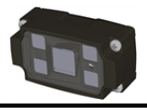
1	LED aimer guide
2	Trigger (press and hold to read)
3	Communication module insertion point
4	Lanyard hook
5	Indicator light
6	RS-232 connection
7	USB connection
8	Power plug (24V, max. 15W)
9	Alternative power supply connector (24V, max. 15W, polarity marked on the plastic part near the connector)
10	Ethernet connection

DataMan 8050 Accessories

Serial/USB slide-in	DMCM-SERIALM-00	
Ethernet slide-in	DMCM-ENETM-00	
Bluetooth slide-in	DMCM-BTM-00	
Wireless slide-in	DMCM-WLESSM-00	
Charging base station	DMA-CBASE-01	
Intelligent base station	DMA-IBASE-01	
Intelligent Bluetooth base station	DMA-IBASE-BT-01	
Intelligent Bluetooth base station	DMA-IBASE-BT-02	
Power Supply for base station	DMA-24VPWR-xx*	
Power Supply for reader	DM100-PWR-000	
Battery for the wireless reader	DMA-HHBATTERY-01	
Multi-battery charger	DMA-MBC-xx*	
POE adapter	CPS-24V-POE1	
POE adapter	CPS-24V-POE4	
POE adapter	CPS-AC-POE1A-xx*	
Wall mount	DMA-WALL-8000-00	
Wall mount for base station	DMA-IBASE-WALL-00	
Stand	DM-STAND-00	
Rubber sleeve	DM8050-SLEEVE-00	

*xx can be US, EN, UK, or JP.

Lens Options and Covers

6.2 mm lens kit	DM150-LENS-62	
Clear lens cover	DM150-CVR-CLR	
Clear lens cover, ESD safe*	DM150-CVR-ESD	
Polarized front cover	DM260-LENS-62CVR-F	
Red LED illumination (Risk Group Exempt acc. IEC 62471) White LED illumination (Risk Group Exempt acc. IEC 62471) Blue LED illumination (Risk Group Exempt acc. IEC 62471)	DM150-LED-RED DM150-LED-WHT DM150-LED-BLU	
High Powered red LED illumination	DM260-LED-RED-HP	

Cables

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	

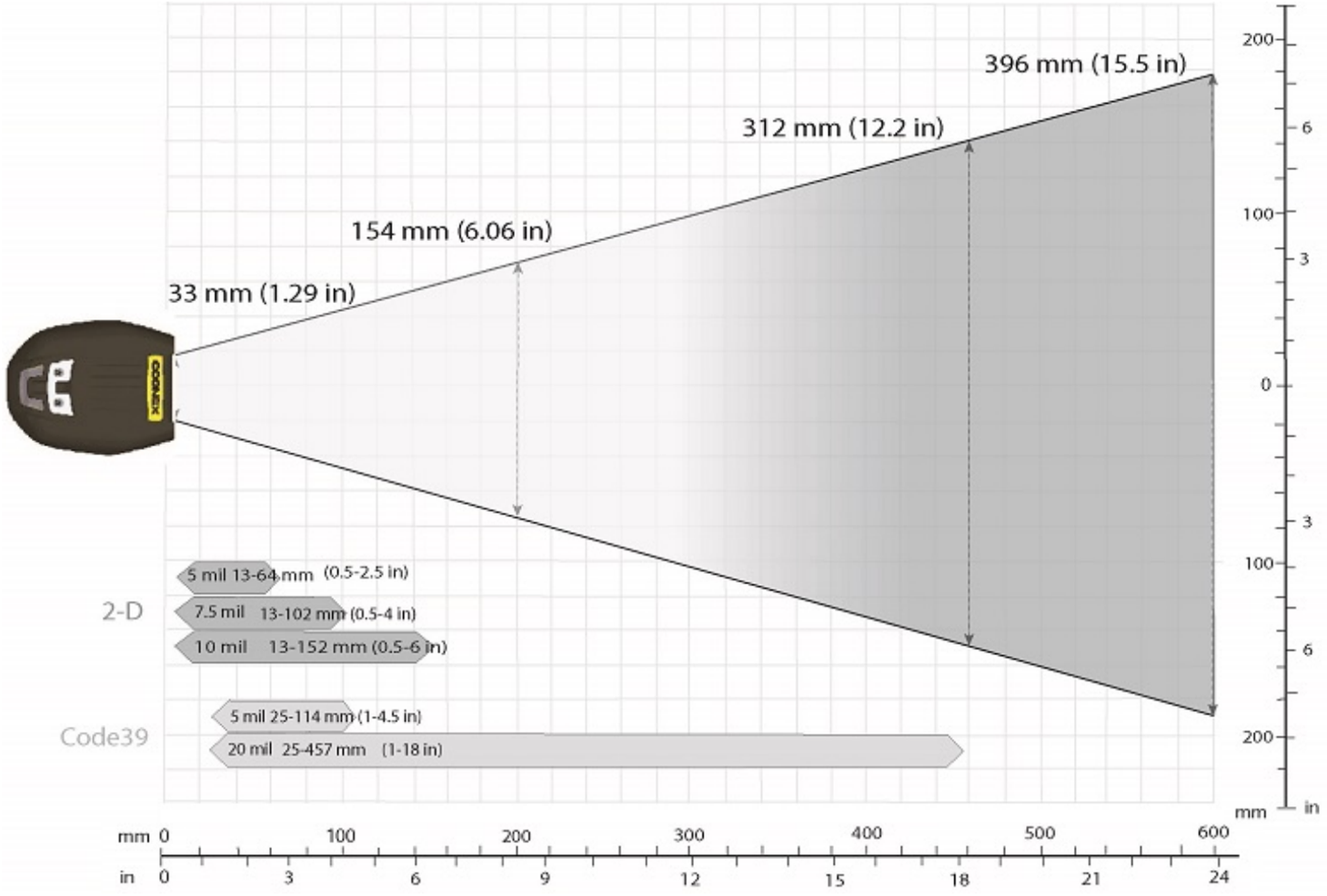
Ethernet cable, 30 m	DM8000-ECABLE-30	
Ethernet cable, 5 m	DM8000-ECABLE-05	
USB cable, 2.5 m	DM8500-USB-00	
Coiled Ethernet cable, 5m	DM8000-ECABLEC-05**	
Coiled Ethernet cable with X-coded M12 connector, 5m	DM8000-ECABLEC-M12	
RJ25 (RJ12) to DSUB9 cable for base station, 5 m	DMA-RS232RJ-05	

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

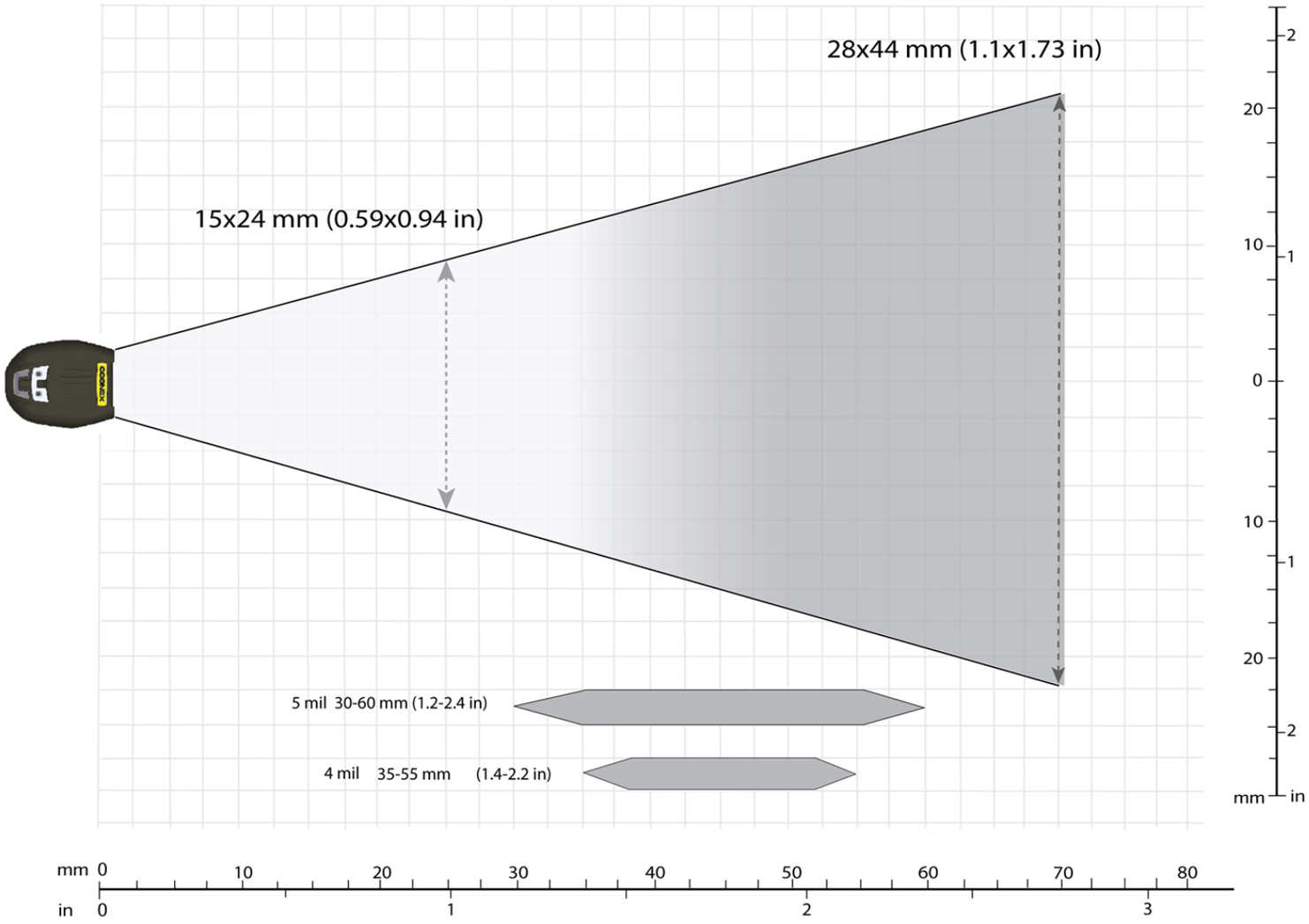
- USB cable for base station: Use any standard USB-A to USB-B 2.0 cable up to 3 meters.
- Ethernet cable for base station: Use any standard CAT5/5e, SF/FTP or S/FTP cable.
- DMA-USB-00: Straight 10ft USB cable.

Field of View and Reading Distances

DataMan 8050 field of view and reading distances:



DataMan 8050HDX field of view and reading distances:



Note: Due to tolerances, ranges can vary by +/- 5 mm for small codes to +/- a couple of centimeters for large codes.

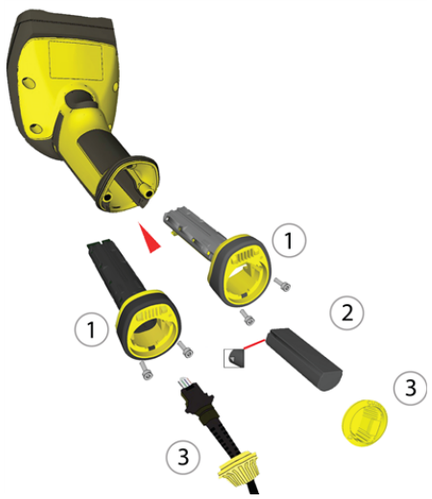
Connecting the Reader

Wireless 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 8050 from power or remove the battery before inserting/removing the communication modules.

Installation

Installation procedures and specifications are presented in detail in the *DataMan 8050 Reference Manual*, which is installed with the DataMan Setup Tool. From the Windows Start menu, select the following to access the manual: *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.

Install Software and Documentation and Connect the Reader

To configure a DataMan 8050 reader, the DataMan Setup Tool software must be installed on a networked PC. The DataMan Setup Tool is available from the DataMan support site: http://www.cognex.com/support/dataman.

1. After installing the software, connect the DataMan 8050 to your PC.
2. Launch the DataMan Setup Tool and click **Refresh**.
3. Select your DataMan 8050 reader from the list and click **Connect**.

DataMan 8050 Specifications

Weight	400 g (with battery)
Operating Temperature	0ºC — 45ºC (32ºF — 113ºF)
Storage Temperature	-10ºC — 60ºC (14ºF — 140ºF)
Maximum Humidity	< 95% (non-condensing)
Environemntal	IP65
ESD Safety (option for DM8050 and DM8050HDX)	The products fulfill the requirements of IEC 61340-5-1
Codes	**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
Power Supply Requirements	USB: bus powered (optionally: external 2.5W max LPS or NEC class 2 power supply +5V - +6V DC) RS232: external 2.5W max LPS or NEC class 2 power supply +6V 1A DC 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. 30µs Electrical charge: 60µAs at 6V
Battery life for wireless reader (typical use case)	ca. 3200 triggers can be operated within a 10 hour working shift
Ethernet	10/100 Base-T FULL/HALF DUPLEX, IEEE 802.3
Bluetooth	Bluetooth™ 2.1, 2.4 GHz
WiFi	802.11 b/g, 2.4 GHz, User Selectable channels 1-11

DataMan Base Station Specifications

	DMA-IBASE-BT-XX	DMA-IBASE-01
Weight	300 g	328 g
Operating Temperature	0ºC — 45ºC (32ºF — 113ºF)	0ºC — 40ºC (32ºF — 104ºF)

	DMA-IBASE-BT-XX	DMA-IBASE-01
Storage Temperature	-40ºC — 60ºC (-40ºF — 140ºF)	-40ºC — 60ºC (-40ºF — 140ºF)
Maximum Humidity	95% (non-condensing)	95% (non-condensing)
Power Supply Requirements	24V +-10%, 15 W maximum LPS or NEC class 2 power supply Recommended wire diameter is 14-18 AWG	24V +- 10%, 13 W maximum LPS or NEC class 2 power supply, or PoE class 3 (connect only to PoE networks without routing to the outside plant)

LED Wavelengths

The following table shows LED types and the related wavelengths:

LED	λ [nm]
RED	660

Regulations/Conformity

The DataMan 8050 has Regulatory Model 1AAH, the wireless slide-in has Regulatory model 1ABB, and the Bluetooth slide-in has Regulatory model 1AAJ, 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
European Community	EN55022, Class A EN61000-6-2 EN61000-6-4 EN60950

The following specifications apply to the DataMan 8050 wireless readers:

Regulator	Specification
USA	FCC Part 15B, Class A FCC Part 15.247
Canada	ICES-003 RSS 210
European Community	For Bluetooth: EN301 489-1 / -17 EN55022 EN55024 For wifi: EN300 328 EN61000-6-2

Safety and Regulatory	
Manufacturer	Cognex Corporation One Vision Drive Natick, MA 01760 USA
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.
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.
Brazilian Compliance	 This 1AAJ Bluetooth slide-in with model number DMCM-BTM-00 has frequency range between 2.402 GHz and 2.480 GHz. Its Bluetooth specification is 2.1, 2.4 GHz with FHSS modulation, PCB antenna with 3dB peak antenna gain.
Mexican Compliance	For Bluetooth: RCPCO1A15-0074 For wifi: RCPC01A15-1366
Chinese Compliance	For Bluetooth: CMIIT ID: 2015DJ0236 For wifi: CMIIT ID: 2015DJ3460

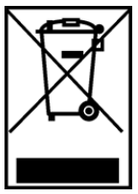
For European Community Users

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-01 has R00043, DMA-IBASE-BT-XX 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.

Regulator	Specification
USA	FCC Part 15B, Class A FCC Part 15.247
Canada	ICES-003
European Community	EN301 489-1 / -17 EN300 328-2 EN60950

Safety and Regulatory	
Manufacturer	Cognex Corporation One Vision Drive Natick, MA 01760 USA
European Compliance 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. DMA-IBASE-BT-XX: This equipment complies with the essential requirements of EU Directives 2014/30/EU and 2014/53/EU as applicable. Declarations are available from your local representative. DMA-IBASE-01 and DMA-CBASE-01: This equipment complies with the essential requirements of EU Directives 2014/30/EU and 2014/53/EU as applicable. Declarations are available from your local representative.

Safety and Regulatory	
FCC Class A Compliance Statement 	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. This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications made to this equipment not expressly approved by Cognex may void the FCC authorization to operate this equipment.
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.
UL and cUL Statement 	UL and cUL listed: UL60950-1 2nd ed. and CSA C22.2 No.60950-1 2nd ed.
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

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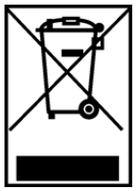
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If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

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

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 1AAH Regulatory Model 1ABB Regulatory Model 1AAJ Regulatory Model R00043 Regulatory Model 1AAG Regulatory Model R00046	X	O	O	O	O	O

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。

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。

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。