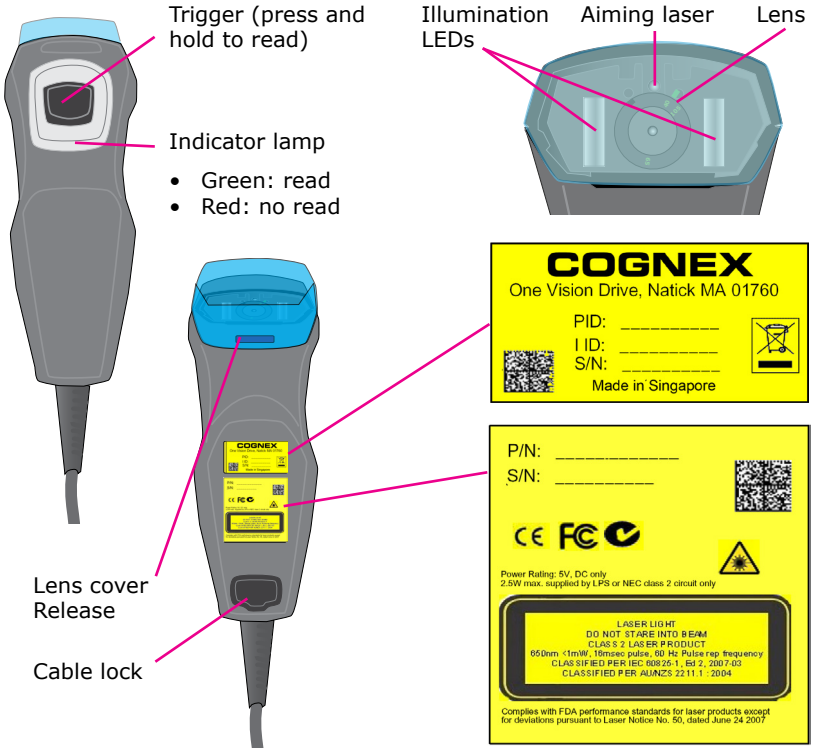
COGNEX®

DataMan® 700 Series

Quick Reference Guide

DATAMAN
ID Readers

Physical Layout



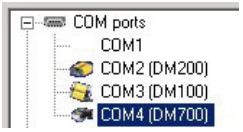
Installation

Check the Release Notes for a full list of system prerequisites.

2. Download the DataMan Setup Tool from http://www.cognex.com/support/dataman and follow the on-screen steps.

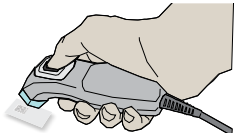
Connect reader to PC.

- See pages 6-7 for connection details.
- Reader auto-detects USB, RS-232 and PS/2 connections.



Launch Setup Tool and click **Refresh**.

- Reader appears under COM ports as DM700
- Click **Connect**.

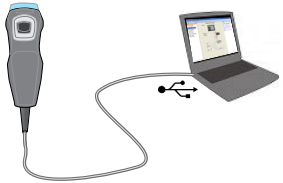


Start reading codes.

- See section **Setting the Focus Position** on page 12 to adjust lens for desired reading distance.
- Pages 10-11 list reading distances.

USB and PS/2 Keyboard Connections

USB

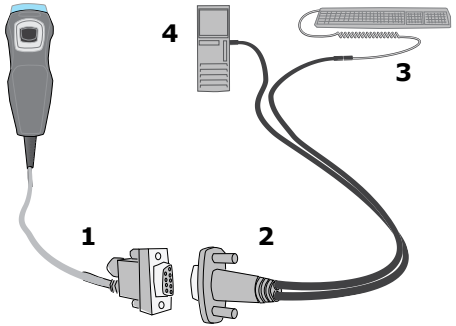


USB Serial

USB Keyboard

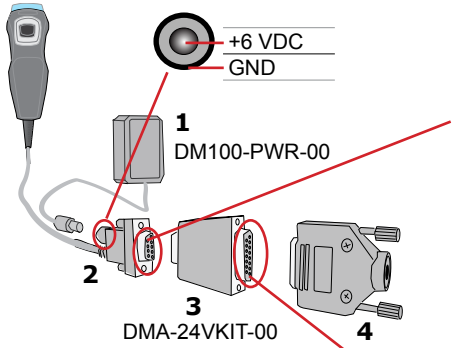
1. Connect USB cable (DM700-USB-00) to USB port.
2. Scan code for serial port or keyboard emulation. **Note**: You must use serial mode to connect to the DataMan Setup Tool.

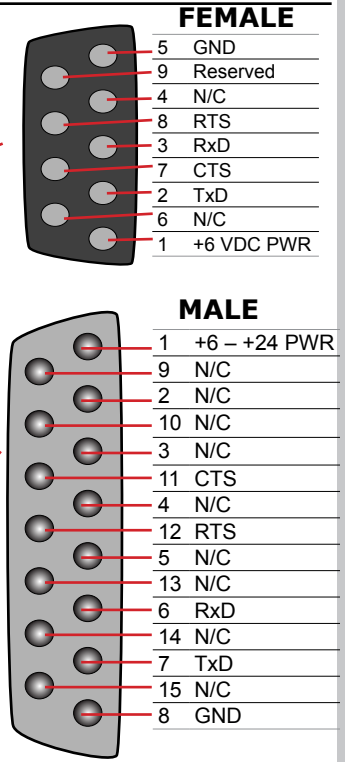
PS/2 Keyboard



1. Connect serial cable. Do not connect power supply; reader powered through PS/2 connection.
2. Connect keyboard wedge cable. Reader automatically detects connection type.
3. (Optional) PS/2 keyboard; with no keyboard present, all keyboard input comes from reader.
4. PC with PS/2 keyboard connector.

RS-232 Serial Connections



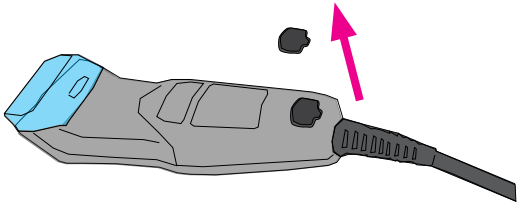


1. 6VDC power supply
2. Serial cable (DM700-RS232-00). Provide +5 to +6 VDC to connector on reverse *or* on pin 1.
3. (Optional) 24V to 5V power supply adapter (not included). Provide +6 to +24 VDC on pin 1; connect shield to ground. Adapter also converts TTL-level RS-232 signals to true RS-232 levels.
4. (Optional) Screw terminal plug (included with 24V-6V power supply adapter); use for your equipment.

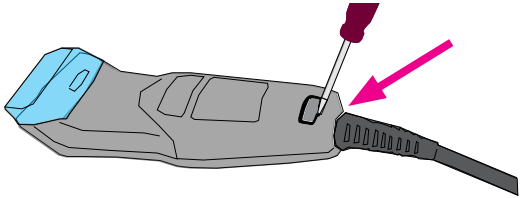
Changing Cables

Disconnect DataMan from Power before adjusting focus.

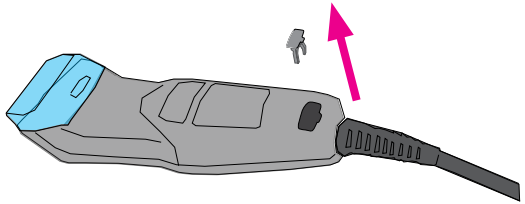
Remove rubber plug.



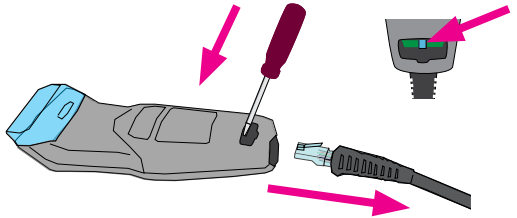
Release cable lock using flat-head screwdriver.



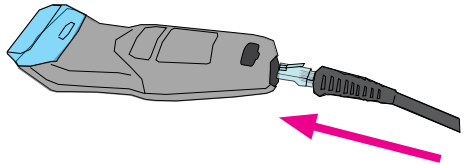
Remove cable lock.



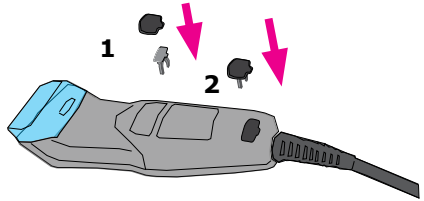
Using fine screwdriver, pick, or similar instrument, press RJ48 plug release tab while withdrawing cable.



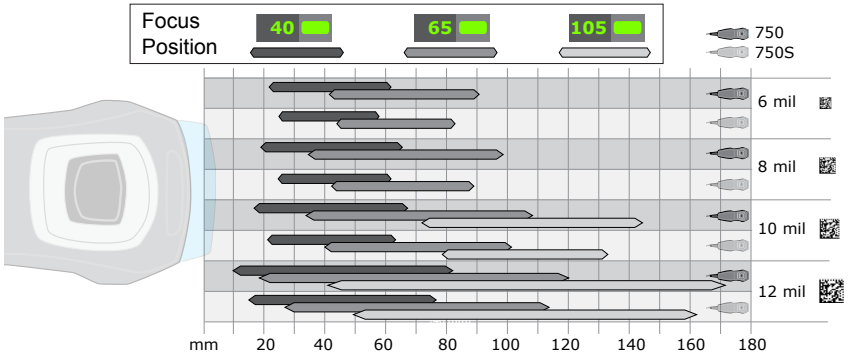
Insert new cable, noting orientation of RJ48 plug. Press cable in until it locks in place.



1. Attach rubber plug to cable lock.
2. Press plug and lock into unit until it locks in place.

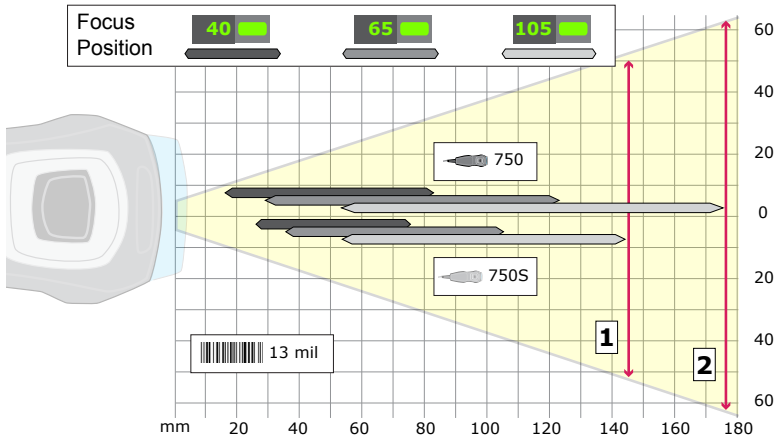


2D Code Reading Distances



A range of reading distances are available for different code sizes and focus positions (40mm, 65mm, and 105mm). Select a focus position that allows you to read the desired code sizes at the desired working distance.

1D Code Reading Distances

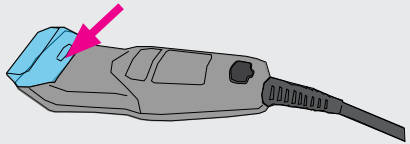


1. 102mm maximum code width at 143mm distance with 105mm focus setting (750S)
2. 140mm maximum code width at 177mm distance with 105mm focus setting (750)

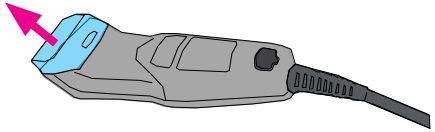
Setting the Focus Position

Disconnect DataMan from Power before adjusting focus.

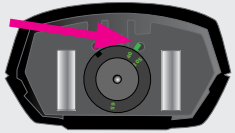
Release lens cover latch using screwdriver tip or coin.



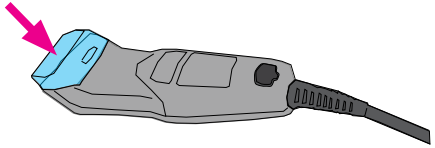
Remove lens cover.



Align focus position to mark.



Replace lens cover.



Trigger Types

A DataMan 750 reader supports two trigger types:

- Presentation: Repeatedly scans for a symbol and decodes it whenever one is detected. The reader relies on an internal timing mechanism to acquire images.
- Manual (default): Begins acquiring images when you press the trigger button on the reader, and continues acquiring images until a symbol is found and decoded or you release the button.

DataMan 700 Series Imager Specifications

Specification	DataMan 700 Series Imager
Image Sensor	1/3 inch CMOS
Image Sensor Properties	4.51mm x 2.88mm (W x H), 6.0µm square pixels
Image Resolution (Pixels)	752 x 480

The Setup Tool

Connect the reader to the Setup Tool to configure it with the type of symbologies it will decode as well as other parameters, such as the type of trigger it will use and the format of the results it will generate.

Connect to Reader

Establish a connection to the reader

Results Display

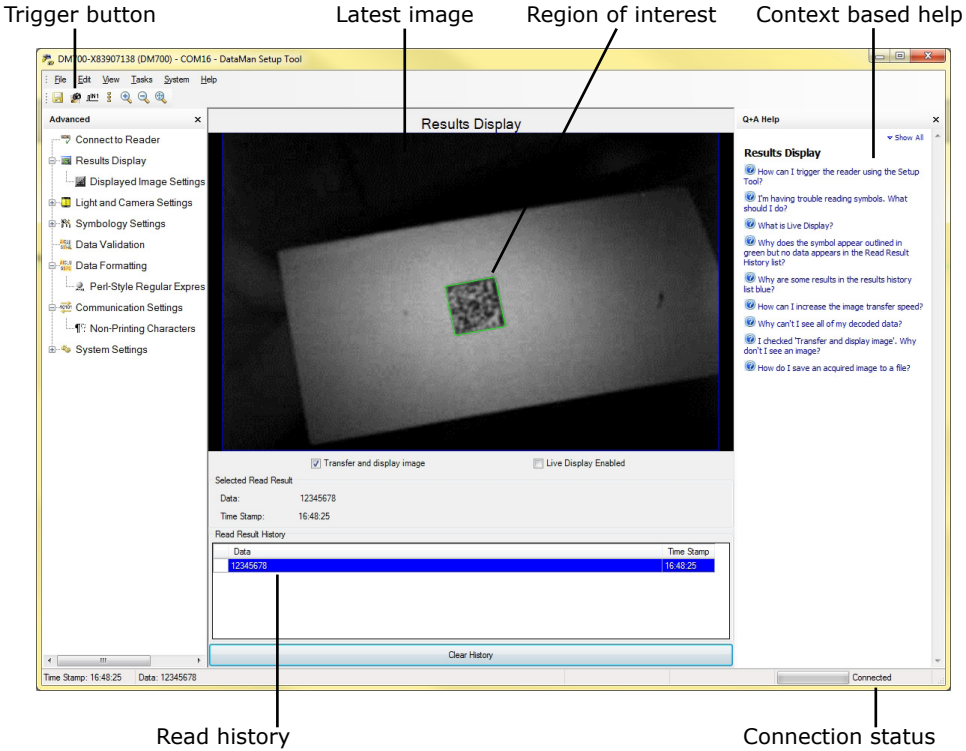
View results

Light and Camera Settings

Choose a trigger type and other acquisition parameters

System Settings

Configure input and output signals



Use the Setup Tool Menu Bar

Each reader can store its current set of run-time parameters to a configuration (.cfg) file, which contains information such as the enabled symbologies and how any output data should be formatted.

The same configuration file can be loaded onto multiple readers, as the file does not contain identification information such as the device name of the reader used to create it.

A reader can also generate a Cognex device configuration (.cdc) file, which stores the set of run-time parameters plus any identification and communication data, such as the name of the device, baud rate, and so on. Cognex recommends generating a device configuration file for each reader to allow you to restore a reader to its operating state with minimal effort.

Use the **File** menu of the Setup Tool to manage .cfg and .cdc files:

File Menu	
Open Configuration	Open a saved .cfg configuration file.
Save Configuration	Create a .cfg configuration file of current run-time parameters.
Print Configuration Code	Generate a programming codes sheet representing your reader's configuration.
Restore Device	Load a saved device configuration .cdc file, with run-time parameters plus device-specific information for a particular DataMan 700.
Backup Device	Create a device configuration .cdc file for a specific reader.
Save Image	Save the latest acquired image with the .jpg or .bmp file format.

Use the **Edit** menu for standard Cut, Copy and Paste operations.

Use the **View** menu to view reader information (serial number, firmware version, and so on) and to enable and disable various elements of the Setup Tool, and the **Tasks** menu to switch between various Setup Tool options.

Use the **System** menu to manage the current settings on the reader and to upgrade the features it currently supports:

System Menu	
Save Settings	Save the current parameters to non-volatile memory, which allows the reader to restore these settings each time you reboot it.
Reset Configuration	Reset all configuration parameters in RAM (volatile memory) to the default settings.
Update Firmware	Update the reader software.
Upload Feature Key	Unlock additional features available in the reader software if you have the right key.
VeriCode License	Add VeriCode decoding by entering a license string provided by Veritek. Ask your Cognex sales representative for details.

Use the **Help** menu to display Setup Tool version information.

Agency Compliance Statements

The DataMan 700 series 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.

Regulator	Specification
USA	FCC Part 15, Class A
	FDA/CDRH Laser Notice No 50
Canada	ICES-003
European Community	EN55022 (CISPR 22) Class A
	EN55024:1998 +A1:2001 +A2: 2003
	EN60950
	EN60825-1
Australia	C-TICK, AS/NZS CISPR 22 / EN 55022 for Class A Equipment
Japan	J55022, Class A

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 instructions, 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 personal 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.

C-Tick Statement

N15641

Conforms to AS/NZS CISPR 22/ EN 55022 for Class A Equipment.

European Compliance

The CE mark on the product indicates that the system has been tested to and conforms with the provisions noted within the 2004/108/EC Electromagnetic Compatibility Directive and the 2006/95/EC Low Voltage Directive.

For further information please contact:

Cognex Corporation
One Vision Drive
Natick, MA 01760
USA

Cognex Corporation shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

Laser Safety Statement

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 2nd ed., and has been certified to be under the limits of a Class 2 Laser device.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

UL and cUL Statement

UL and cUL listed: UL60950-1 1st ed. and CSA C22.2 No.60950-1 1st ed.

For European Community Users

Cognex complies with Directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 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.

Specifications and Precautions

Weight	110 g
Operating Temperature	0ºC — 50ºC (32ºF — 122ºF)
Storage Temperature	0ºC — 60ºC (32ºF — 140ºF)
Maximum Humidity	95% (non-condensing)
ESD Safety (DataMan 750 only)	EN61000-4-2, IEC 61340-5-2, IEC 61340-5-1
Vibration	EN61373 including IEC 60068-2-6 and 60068-2-27
Codes	Data Matrix™ (DataMan 750: ECC 0, 50, 80, 100, 140, and 200; DataMan 750S: ECC200); QR Code and microQR Code; UPC/EAN/JAN; Codabar, Interleaved 2 of 5, Code 39, Code 128, and Code 93, Pharma, Postal, RSS/CS, PDF 417, MicroPDF 417
Power Supply Requirements	5-6 VDC 2.5 W maximum LPS or NEC class 2 power supply

- **CAUTION**: Cable shield must be connected to earth ground to achieve listed ESD ratings.
- **CAUTION**: This device requires the use of an LPS or NEC class 2 power supply

Laser Information

LASER LIGHT, DO NOT STARE INTO BEAM: CLASS 2 LASER PRODUCT

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY CAUSE SERIOUS INJURY

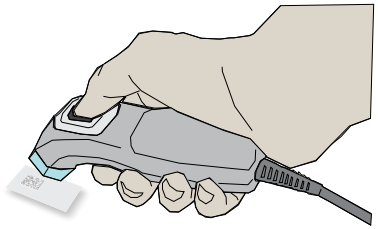
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- Do not attempt to service or repair this product -- return it to Cognex for service.
- Do not permit anyone other than Cognex Corporation or Cognex-authorized personnel to service, repair, or adjust this product.
- Do not attempt to open or modify this device except as described in this document.
- Do not direct or reflect laser light toward people or reflective objects.
- Do not operate this device if it is damaged or if the covers or seals are missing or damaged.

This Laser Product is designated as Class 2 during all procedures of operation.

Wavelength	650 nm
Laser Power for classification	< 1 mW
Beam Diameter	< 3mm at aperture
Divergence	< 1.5 mrad

For assistance contact Cognex Corporation at http://support.cognex.com

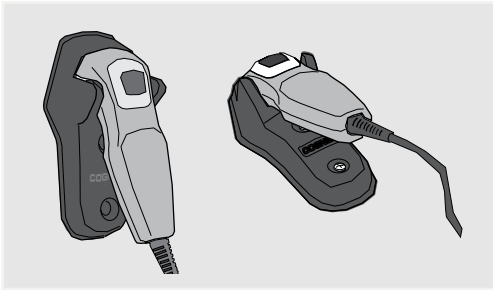
Models and Accessories



DataMan 750 and 750S

The DataMan 750 includes the Cognex IDMax reading algorithm for reading difficult 2D codes which include low contrast and damaged codes. The DataMan 750S uses standard 1D and 2D reading algorithms for reading high quality 1D and 2D codes.

DM700-HOLDER-00



Reader Control Codes

Reset Scanner to Factory Defaults

Reboot Scanner

USB Serial

USB Keyboard

Keyboard Language

US English

German

French

Spanish

Japanese