COGNEX

DataMan® 8600 Series Handheld Verifier

Reference Manual

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Symbols

The following symbols indicate safety precautions and supplemental information.

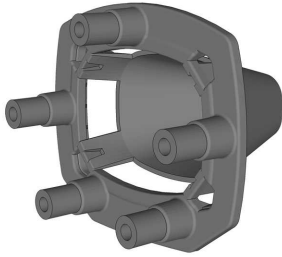⚠ **WARNING**: This symbol indicates the presence of a hazard that could result in death, serious personal injury or electrical shock.

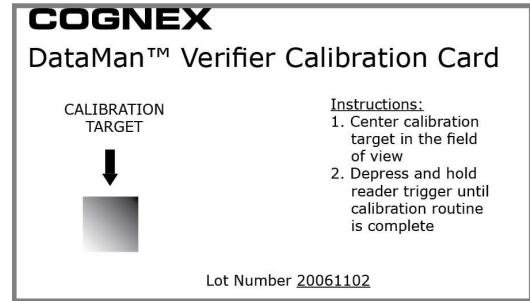⚠ **CAUTION**: This symbol indicates the presence of a hazard that could result in property damage.

ⓘ **Note**: Notes provide supplemental information about a subject.

💡 **Tip**: Tips provide helpful suggestions and shortcuts that may not otherwise be apparent.
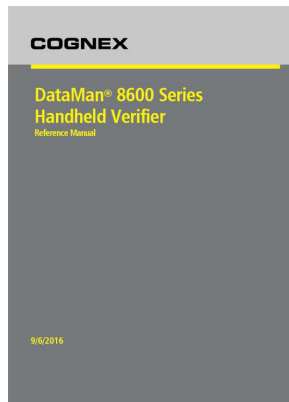
8600 Series Handheld Verifier Kit Contents

8600 verifier stand-off

COGNEX

DataMan™ Verifier Calibration Card

CALIBRATION
TARGET

Instructions:
1. Center calibration target in the field of view
2. Depress and hold reader trigger until calibration routine is complete

Lot Number 20061102

Calibration card (stored in protective sleeve)

COGNEX

DataMan® 8600 Series
Handheld Verifier
Reference Manual

9/6/2016

This document

ⓘ **Note**: Refer to your *DataMan 8600 Reference Manual* for information on initial setup and establishing communication with the reader itself, as well as compliance information.

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

LASER LIGHT
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT
650nm <1mW, 16msec pulse, 60 Hz Pulse rep frequency
CLASSIFIED PER IEC 60825-1, Ed 2, 2007-03
CLASSIFIED PER AU/NZS 2211.1 : 2004

Data Matrix Symbol Quality Verification

Cognex DataMan 8600 handheld verifiers ensure that a Data Matrix symbol meets the AIM DPM (Direct Part Mark) / ISO/IEC TR 29158 Quality Guideline.

The DataMan 8600 handheld verifiers provide:

- Contract Compliance: The DataMan 8600 software, integrated lighting, and fixed optics meet the AIM-DPM / ISO/IEC TR 29158 Quality Guideline.

- System Calibration: The DataMan 8600 verifier includes a certified calibration card necessary to calibrate the reader.

Upgrading a Device for Verification

If you are upgrading a previously purchased DataMan 8600 reader to be used as a verifier, your reader must be using firmware version 5.4.4 or newer. To update the firmware:

1. Connect your reader to the DataMan Setup Tool.

2. Choose **System > Update Firmware**.

3. Select the file *DM8600_v.5.4.4.bin.gz* or newer from the directory where the firmware update automatically navigates (Cognex\DataMan\Firmware\DM8000 Series).

To enable the DPM Verification feature, you must upload a feature key file to the reader:

1. Connect the reader to the DataMan Setup Tool.

2. Choose **System > Upload Feature Key**.

3. Select the feature key file that you received from Cognex.

4. The reader automatically reboots after the upgrade and it is ready to use for verification.

Getting Started

Stand-off

The stand-off is an accessory that consists of a plastic frame that is attachable to the device (see below).

The stand-off accessory comes with one set of 7mm spacers which must be screwed onto the stand-off.
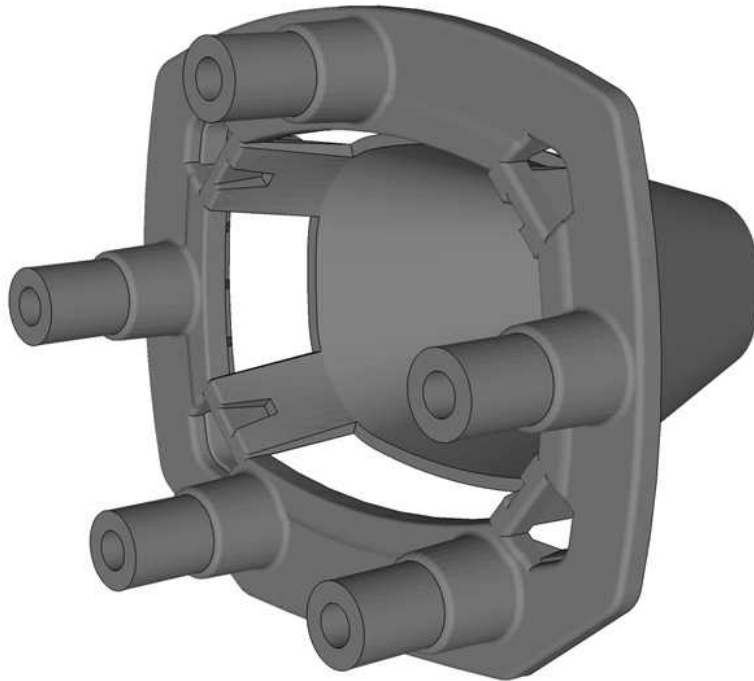
The reading distance the spacer provides is **7mm**.

Stand-off Installation

1. Attach the stand-off carefully to your DataMan 8600 reader.

This way up

2. The stand-off snap-fits into the reader.

Calibration

1. Start the DataMan Setup Tool and connect to your reader.

2. Select the **Code Quality Settings** task pane.

3. Check the box for **Verification Enabled** under the **Verification** tab.

4. Place the verifier against the calibration card with the symbol centered below the reader, and squeeze the trigger.

5. Continue squeezing the trigger. Calibration can take several seconds.

   The DataMan Setup Tool displays a graphic guide if the symbol is not precisely aligned with the reader. Adjust the position and rotation of the reader until the center of the red rectangle lies inside the green rectangle and there is no more than 10 degrees rotation between the symbol and the reader. The reader beeps once when calibration is complete.

6. The system displays a green check box that says **System Calibrated** under **Calibration** in **Verification Settings**.
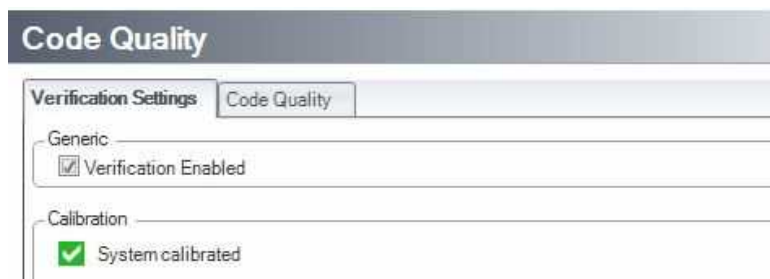
Code Quality

Verification

In order to perform Direct Part Mark Verification, your reader must be calibrated as described in the previous section. To read symbols and view verification results, perform the following steps:

1. Start the DataMan Setup Tool and connect to your reader.

2. Navigate to **Settings > Code Quality**.

3. Under the Verification Settings tab, check **Verification Enabled**.

4. Select the **Results Display** task pane by clicking **Code Quality** under **View**).

5. Place the verifier against the symbol and squeeze the trigger. The symbol must be centered within the field of view, and the reader must be perpendicular to the surface containing the symbol and at the correct rotation. If the reader is out of position, the DataMan Setup Tool displays this guide:
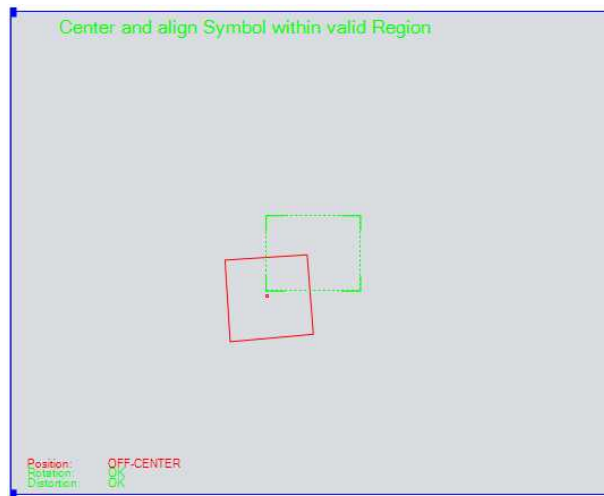
> The verifier stand-off must be used to ensure correct symbol presentation and lighting requirements for the AIM-DPM / ISO/IEC TR 29158 Quality Guideline.

6. Move the reader until the center of the red rectangle lies within the green target rectangle. The reader beeps to indicate that the symbol has been read and verified.

Results

The **Results Display** task pane presents the results of the verification on the right-hand side (you activate the Results Display task pane by clicking **Code Quality** under **View**).

For more information on interpreting the verification results, enable Q and A (**View > Q+A Help**). The **Results Display** task pane can toggle between displaying results and Q&A information.

Formatting Output Data

Use the **Data Formatting** task pane of the DataMan Setup Tool to construct a customized output string each time you read and verify a symbol. This allows the verifier to return Code Quality results when connected to a third-party application instead of the DataMan Setup Tool.

> **Note**: Consult the Q and A of the **Data Formatting** task pane for more detailed information on how data formatting works.

> **Note**: Code Quality metrics are available in script-based formatting. An example snippet is available at **Insert Snippet > Simple formatting > Outputting Code quality parameters**.
> For more detailed information, please refer to the *Communications and Programming Guide*.

In addition to standard formatting, the DataMan Setup Tool supports the use of Perl-Style Regular Expression features in Advanced mode.

After verification, when connected to the DataMan Setup Tool, you can configure the Code Quality results be saved by enabling **Report Storage** under the **Data Logging** task pane.

Code Quality results can be sent from the reader by configuring the output format in the **Standard Formatting** task pane. The reader does not have to be connected to the DataMan Setup Tool to send Code Quality results.

Verification Configuration

Saving the Setup

Once you have configured your reader with the settings you want it to use, choose **System > Save Settings** to save the configuration or click the **Save Settings** icon on the top icon row.

Use the **Backup** feature to save the configuration to a directory on the PC. A saved configuration can be opened later and uploaded to any reader, allowing multiple readers to use the same configuration settings.

ⓘ **Note**: Each reader must be calibrated individually.

Code Quality Configuration Codes

Code Quality On   Code Quality Off

Precautions

Observe these precautions when installing the Cognex product, to reduce the risk of injury or equipment damage:

- To reduce the risk of damage or malfunction due to over-voltage, line noise, electrostatic discharge (ESD), power surges, or other irregularities in the power supply, route all cables and wires away from high-voltage power sources.

- Changes or modifications not expressly approved by the party responsible for regulatory compliance could void the user's authority to operate the equipment.

- Cable shielding can be degraded or cables can be damaged or wear out more quickly if a service loop or bend radius is tighter than 10X the cable diameter. The bend radius must begin at least six inches from the connector.

- This device should be used in accordance with the instructions in this manual.

- All specifications are for reference purpose only and may be changed without notice.