590-007: SPEC Sensors Recommended Barcode Scanners

1. Scope

This document recommends barcode scanners that have been validated to work with all SPEC Sensors' barcodes under most conditions. Barcode readability quality checks are routinely performed on all SPEC Sensor manufacturing lots. Barcodes that have been damaged after leaving the factory may not be readable by any technology or product. This document is NOT intended to be exhaustive. Many other products with similar specifications will also work well.

Refer to document *590-002 SPEC Sensors Marking Specification* for more details on encoded data and formatting.

2. SPEC Sensors' Barcodes

Three barcode label specifications are used throughout SPEC Sensors' product lines.

Code Type	QR Code[1]	Data Matrix[2]	Data Matrix[2,3]
Matrix Size	25 x 25	22 x 22	24 x 24
Feature Size	0.25 mm	0.25 mm	0.17 mm
Example			

NOTES:

[1] QR Codes are widely recognize by most generic smart phone apps.

[2] Data Matrix codes are different than QR Codes and may not be recognized by some generic QR Code smart phone apps. In some cases, Data Matrix codes must be enabled within the app settings. Data Matrix and QR Codes are selected by default in the app listed below.

[3] The small 0.17 mm feature size of the 24 x 24 data matrix code is challenging for very low-cost scanners and most generic smart phone apps. However, the scanners and apps listed below have been verified to work under most conditions.

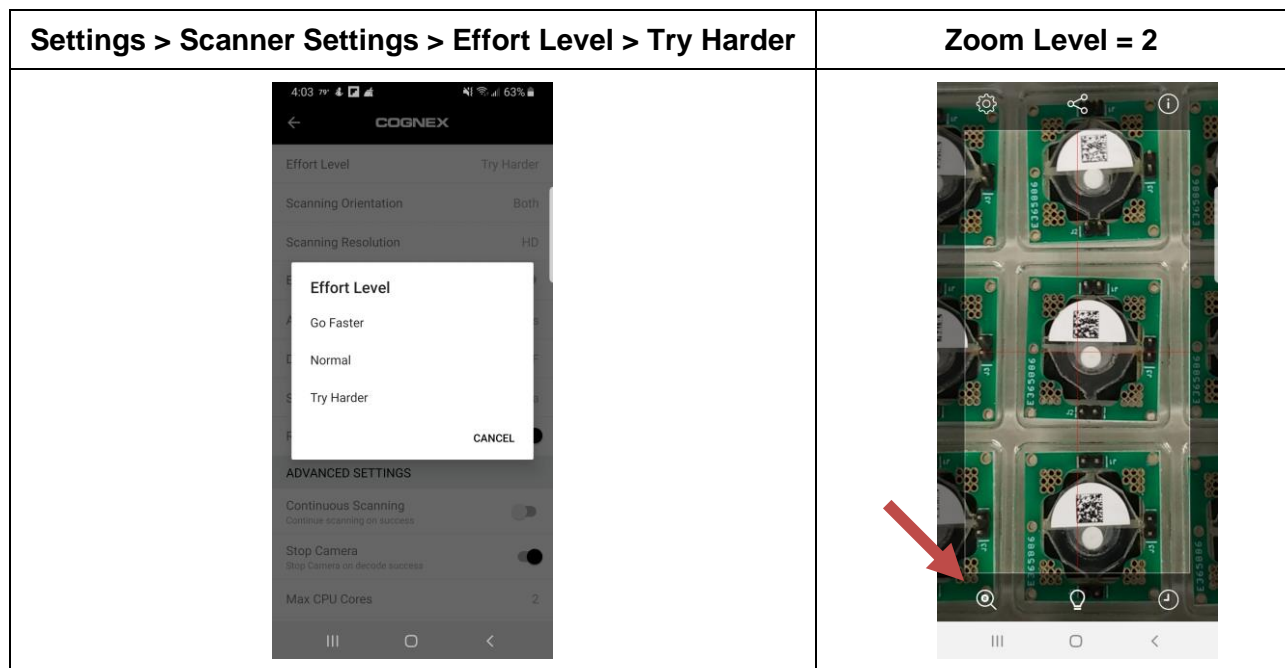| Prepared by: B. Meulendyk	Doc #: 590-007	Rev: 01	
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3. Recommended Production Barcode Scanner Tools

SPEC Sensors recommends the **Motorola/Zebra DS4208 & DS4308** Barcode Scanners. These scanners are used throughout the production process at SPEC Sensors.

4. Smart Phone Apps

SPEC Sensors recommends the **Cognex Barcode Scanner** app. The default settings will work well for the QR Code and the Data Matrix code with feature size of 0.25 mm.

However, due to the small, 0.17 mm feature size of the 24 x 24 Data Matrix code, the following settings changes are recommended:

Settings > Scanner Settings > Effort Level > Try Harder	Zoom Level = 2

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