

## ZEBRA VS40 SMART CAMERA

VS40-SR20M4-2C00W

VS40, SR, 2.3 MP, SR MV TOOLS, RED

- **Ease of Setup with Auto-Tune:** The VS40 offers a one-button Auto-Tune feature that simplifies setup, optimizing image quality for reliable inspections straight out of the box
- **IoT and Cloud-Ready:** Equipped to send data to Zebra's Savanna™ cloud service, the VS40 supports compliance and image storage without requiring local server infrastructure
- **Power Over Ethernet (PoE):** The device can be powered via Ethernet, reducing setup complexity and removing the need for additional power supplies
- **Integrated with Zebra Aurora:** Managed by Zebra Aurora software, the VS40 allows users to control multiple machine vision and industrial scanner devices through a single platform, offering tools for experts and guidance for beginners
- **Advanced Lighting and Optics:** Featuring integrated, customizable lighting options (such as red, blue, and infrared LEDs) and a rugged, industrial-grade design, the VS40 achieves high-quality imaging suitable for challenging environments



### PRODUCT DESCRIPTION

The VS40 can be used in almost any inspection application on a production line, thanks to its wide range of Machine Vision tools. Tailor the device to your application with a wide range of lenses, lighting, I/Os and filters. In addition, you can upgrade to more advanced features by simply purchasing a software license. With Zebra Aurora's powerful software platform, you can easily set up, deploy and run your VS40 smart cameras.

### TECHNICAL DATA

Focus

Liquid lens

|                      |   |
|----------------------|---|
| Interface out        | Ethernet with POE, Serial, USB & Industrial Protocols |
| Lighting             | Red   |
| Resolution           | 2.3 MP  |
| Size                 | 54.0 x 64.0 x 91.4                                    |
| Software performance | STANDARD MV TOOLSET                                   |
| Type of lens         | Standard  |
| Type of scanner      | Smart Camera  |

| Machine Vision (MV) Tools  |  |        |          |          |
|--|--|--------|----------|----------|
| Tool   | Description  | Sensor | Standard | Advanced |
| Open Locate  | Find high contrast features  | •      | •        | •        |
| Pixel Counter  | Count pixels with a setpoint gray level in a specific area           | •      | •        | •        |
| Brightness   | Provides the average brightness for an area                          | •      | •        | •        |
| Contrast   | Provides the average contrast for an area                            | •      | •        | •        |
| Edge Tool  | Find edges for feature and process alignment                         | •      | •        | •        |
| Distance Tool  | Measure the distance between two existing tool results               | •      | •        | •        |
| Advanced Pattern   | Find challenging features  | •      | •        | •        |
| Blue   | Find, sort and count areas of colored pixels with a color gray level | •      | •        | •        |
| Optical Character Verification (OCV)   | Inspects the quality of text or logos                                | •      | •        | •        |
| Find Circle  | Find and measure circles   | •      | •        | •        |
| Caliper Tool   | Find and measure the distance between two edges                      | •      | •        | •        |
| Filter   | Enhance image quality for more robust inspection                     | •      | •        | •        |
| ISO-DPM  | Read 1D, 2D and DPM barcodes   | •      | •        | •        |
| Deep Learning OCR  | Deep Learning based OCR  | •      | •        | •        |
| <b>Footnotes</b>   |  |        |          |          |
| 1. Some features available in a future release. Contact your Delta Partner or sales representative for more information. |  |        |          |          |
| 2. Refer to Product Reference Guide for complete list of capabilities.   |  |        |          |          |
| 3. Timing resolution, contrast, power source, illumination source, and ambient light dependent                           |  |        |          |          |
| Specifications subject to change without notice.   |  |        |          |          |

## Specifications

| VS40-SB-30° FOV Lens |             |               | VS40-WA-40° FOV Lens |             |                |
|----------------------|-------------|---------------|----------------------|-------------|----------------|
| Symbology/Resolution | Near        | Far           | Symbology/Resolution | Near        | Far            |
| 5 mil Code 128       | 3 in./76 cm | 24 in./61 cm  | 5 mil Code 128       | 3 in./76 cm | 34 in./86 cm   |
| 10 mil Code 128      | 3 in./76 cm | 49 in./124 cm | 10 mil Code 128      | 3 in./76 cm | 59 in./150 cm  |
| 15 mil Code 128      | 3 in./76 cm | 70 in./178 cm | 15 mil Code 128      | 3 in./76 cm | 82 in./207 cm  |
| 20 mil Code 128      | 3 in./76 cm | 92 in./234 cm | 20 mil Code 128      | 3 in./76 cm | 104 in./265 cm |
| 5 mil DataMatrix     | 3 in./76 cm | 13 in./33 cm  | 5 mil DataMatrix     | 3 in./76 cm | 8 in./20 cm    |
| 10 mil DataMatrix    | 3 in./76 cm | 28 in./71 cm  | 10 mil DataMatrix    | 3 in./76 cm | 18 in./46 cm   |
| 15 mil DataMatrix    | 3 in./76 cm | 40 in./102 cm | 15 mil DataMatrix    | 3 in./76 cm | 27 in./69 cm   |
| 20 mil DataMatrix    | 3 in./76 cm | 59 in./150 cm | 20 mil DataMatrix    | 3 in./76 cm | 52 in./132 cm  |

## xS40 Connections

The xS40 supports connections for USB-C with DisplayPort, power serial and GPIO, x-coded Ethernet, and external lighting.

Figure: xS40 Connections



- Power Serial and GPIO
- USB-C (with DisplayPort)
- External Lighting
- X-Coded Ethernet Port

## Ethernet Connector

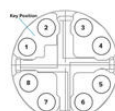


Table: Ethernet Connector Pinout Diagram

| Pin   | Description |
|-------|-------------|
| 1     | TP1+        |
| 2     | TP1-        |
| 3     | TP2+        |
| 4     | TP2-        |
| 5     | TP4+        |
| 6     | TP4-        |
| 7     | TP3-        |
| 8     | TP3+        |
| SHELL | SHIELD      |

## External Light Connector

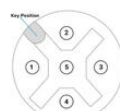


Table: External Light Connector Pinout Diagram

| Pin   | Color | Description    |
|-------|-------|----------------|
| 1     | Brown | DC_OUT / GPIO8 |
| 2     | White | GPIO7          |
| 3     | Blue  | GND            |
| 4     | Black | GPIO6          |
| 5     | Grey  | ANALOG_OUT     |
| SHELL | Bare  | SHIELD         |

## Power and IO Connector

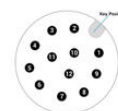


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| 1     | Yellow       | GPIO2       |
| 2     | White/Yellow | TXD         |
| 3     | Brown        | RXD         |
| 4     | White/Brown  | GPIO4       |
| 5     | Violet       | GPIO5       |
| 6     | White/Violet | COMMON_IN   |
| 7     | Red          | DC_IN       |
| 8     | Black        | GND         |
| 9     | Green        | COMMON_OUT  |
| 10    | Orange       | GPIO8       |
| 11    | Blue         | GPIO1       |
| 12    | Grey         | GPIO3       |
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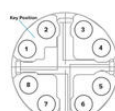


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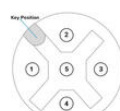


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Power and IO Connector



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| 7     |     | Red          | DC_IN       |
| 8     |     | Black        | GND         |
| 9     |     | Green        | COMMON_OUT  |
| 10    |     | Orange       | GPIO0       |
| 11    |     | Blue         | GPIO1       |
| 12    |     | Grey         | GPIO3       |
| SHELL |     | Base         | SHIELD      |