OEM Automatic Ltd
Address: Whiteacres, Whetstone Leicester, LE8 6ZG
0116 284 9900 | Orders@oem.co.uk | www.oem.co.uk

ZEBRA VS40 SMART CAMERA

VS40-WA50M4-3X00W
VS40, WIDE ANGLE, 5.1 MP, MV TOOLS, WHITE, RGB FILTER



- 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	White
Size	54.0 x 64.0 x 91.4
Software performance	STANDARD MV TOOLSET
Type of lens	Wide angle
Type of scanner	Smart Camera



Machine Vision (MV) Tools

Tool	Description	Sensor	Standard	Advanced
Object Locate	Find high-contrast features	•	•	•
Pixel Counter	Count pixels with a set/given grey level in a specific area	•	•	•
Brightness	Provide the average brightness for an area	•	•	•
Contrast	Provide the average contrast for an area	•	•	•
Edge Tool	Find edges for fixturing and presence/absence	•	•	•
Distance Tool	Measure the distance between two existing tool results	•	•	•
Advanced Pattern	Find challenging features		•	•
Blob	Find, sort and count areas of joined pixels with a similar grey 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		•	•
Filters	Enhance image quality for more robust inspection		•	•
1D/2D/DPM	Read 1D, 2D and DPM barcodes		•	•
Deep Learning OCR	Deep Learning-based OCR			•

Footnotes

1. Some features available in a future release. Contact your Zebra Partner or sales representative for more information.
2. Refer to Product Reference Guide for complete list of symbologies.
3. Printing resolution, contrast, power source, illumination source, and ambient light dependent.

Specifications subject to change without notice.

Specifications

VS40-SR—30° FOV Lens

Symbology/Resolution	Near	Far
5 mil Code 128	3 in./8 cm	24 in./61 cm
10 mil Code 128	3 in./8 cm	49 in./124 cm
15 mil Code 128	3 in./8 cm	70 in./178 cm
20 mil Code 128	3 in./8 cm	92 in./234 cm
5 mil DataMatrix	3 in./8 cm	13 in./33 cm
10 mil DataMatrix	3 in./8 cm	28 in./71 cm
15 mil DataMatrix	3 in./8 cm	40 in./102 cm
30 mil DataMatrix	3 in./8 cm	78 in./198 cm

VS40-WA—46° FOV Lens

Symbology/Resolution	Near	Far
5 mil Code 128	3 in./8 cm	14 in./36 cm
10 mil Code 128	3 in./8 cm	30 in./76 cm
15 mil Code 128	3 in./8 cm	42 in./107 cm
20 mil Code 128	3 in./8 cm	56 in./142 cm
5 mil DataMatrix	3 in./8 cm	8 in./20 cm
10 mil DataMatrix	3 in./8 cm	18 in./46 cm
15 mil DataMatrix	3 in./8 cm	27 in./69 cm
30 mil DataMatrix	3 in./8 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



1	Power Serial and GPIO
2	USB-C (with DisplayPort)
3	External Lighting
4	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

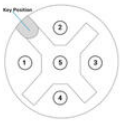


Table: External Light Connector Pinout Diagram

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

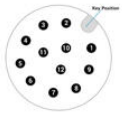


Table: Power and I/O Connector Pinout Diagram

Pin	Color	Description
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	GPIO0
11	Blue	GPIO1
12	Grey	GPIO3
SHELL	Bare	SHIELD

Machine Vision (MV) Tools

Tool	Description	Sensor	Standard	Advanced
Object Locate	Find high-contrast features	•	•	•
Pixel Counter	Count pixels with a set/given grey level in a specific area	•	•	•
Brightness	Provide the average brightness for an area	•	•	•
Contrast	Provide the average contrast for an area	•	•	•
Edge Tool	Find edges for fixturing and presence/absence	•	•	•
Distance Tool	Measure the distance between two existing tool results	•	•	•
Advanced Pattern	Find challenging features		•	•
Blob	Find, sort and count areas of joined pixels with a similar grey 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		•	•
Filters	Enhance image quality for more robust inspection		•	•
1D/2D/DPM	Read 1D, 2D and DPM barcodes		•	•
Deep Learning OCR	Deep Learning-based OCR			•

Footnotes

1. Some features available in a future release. Contact your Zebra Partner or sales representative for more information.
2. Refer to Product Reference Guide for complete list of symbologies.
3. Printing resolution, contrast, power source, illumination source, and ambient light dependent.

Specifications subject to change without notice.

Specifications

VS40-SR—30° FOV Lens

Symbology/Resolution	Near	Far
5 mil Code 128	3 in./8 cm	24 in./61 cm
10 mil Code 128	3 in./8 cm	49 in./124 cm
15 mil Code 128	3 in./8 cm	70 in./178 cm
20 mil Code 128	3 in./8 cm	92 in./234 cm
5 mil DataMatrix	3 in./8 cm	13 in./33 cm
10 mil DataMatrix	3 in./8 cm	28 in./71 cm
15 mil DataMatrix	3 in./8 cm	40 in./102 cm
30 mil DataMatrix	3 in./8 cm	78 in./198 cm

VS40-WA—46° FOV Lens

Symbology/Resolution	Near	Far
5 mil Code 128	3 in./8 cm	14 in./36 cm
10 mil Code 128	3 in./8 cm	30 in./76 cm
15 mil Code 128	3 in./8 cm	42 in./107 cm
20 mil Code 128	3 in./8 cm	56 in./142 cm
5 mil DataMatrix	3 in./8 cm	8 in./20 cm
10 mil DataMatrix	3 in./8 cm	18 in./46 cm
15 mil DataMatrix	3 in./8 cm	27 in./69 cm
30 mil DataMatrix	3 in./8 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



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

Ethernet Connector

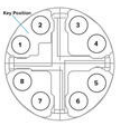


Table: Ethernet Connector Pinout Diagram

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

External Light Connector

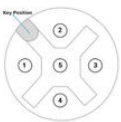


Table: External Light Connector Pinout Diagram

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

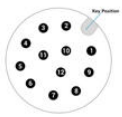


Table: Power and I/O Connector Pinout Diagram

Pin	Color	Description
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	GPIO0
11	Blue	GPIO1
12	Grey	GPIO3
SHELL	Bare	SHIELD