

VS40

Machine Vision Smart Camera

VS40-WA50M4-2C00W

VS40, WIDE ANGLE, 5.1 MP, MV TOOLS, RED

- Upplösning: 2.3 / 5.1 Megapixel
- Pixelstorlek: 3.0 / 2.2 μm
- Bildhastighet: 60 / 30 fps
- Integrerad fokus och belysning
- IP-klassning: IP65 & IP67



PRODUKTBESKRIVNING

<https://youtu.be/HancrRbSXOc?t=15>

VS40 kan användas i nästan alla inspektionsapplikationer på en produktionslinje, tack vare sitt breda utbud av Machine Vision verktyg. Skräddarsy enheten efter din applikation med ett brett utbud av linser, belysning, I/Os och filter. Dessutom kan du uppgradera till mer avancerade funktioner genom att enkelt köpa en mjukvarulicens. Med Zebra Auroras kraftfulla mjukvaruplattform kan du enkelt ställa in, distribuera och köra dina VS40 smartkameror.

TEKNISK DATA

Belysning	Röd
Fokus	Liquid lens
Interface out	Ethernet with POE, Serial, USB & Industrial Protocols
Linstyp	Wide angel

Software performance

STANDARD MV TOOLSET

Storlek

54.0 x 64.0 x 91.4

Typ av scanner

Smart Camera

Upplösning

5.1 MP

Machine Vision (MV) Tools				
Tool	Description	Sensor	Standard	Advanced
Object Locator	Find high contrast features	+	+	+
Pixel Counter	Count pixels with a selected gray 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 feature and presence detection	+	+	+
Distance Tool	Measure the distance between two existing tool results	+	+	+
Advanced Pattern	Find challenging features	+	+	+
Block	Find, sort and count areas of pixel parts with a similar gray level	+	+	+
Optical Character Verification (OCV)	Inspect 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	+	+	+
10/20-SPM	Read 1D, 2D and DPM barcodes	+	+	+
Deep Learning OCR	Deep Learning based OCR	+	+	+
Footnotes				
1. Some features available in a future release. Contact your Zeiss Partner or sales representative for more information.				
2. Refer to Product Reference Guide for complete list of symbols.				
3. Finding resolution, contrast, power source, illumination quality, and ambient light dependent				
Specifications subject to change without notice.				

Specifications

VS40 SB—30° POV Lens				VS40 WA—46° POV Lens			
Symbology/Resolution	Near	Far		Symbology/Resolution	Near	Far	
5 mil Code 128	3 in./8 cm	24 in./61 cm		5 mil Code 128	3 in./8 cm	18 in./46 cm	
10 mil Code 128	3 in./8 cm	49 in./124 cm		10 mil Code 128	3 in./8 cm	30 in./76 cm	
15 mil Code 128	3 in./8 cm	55 in./139 cm		15 mil Code 128	3 in./8 cm	42 in./107 cm	
20 mil Code 128	3 in./8 cm	62 in./158 cm		20 mil Code 128	3 in./8 cm	56 in./142 cm	
5 mil DataMatrix	3 in./8 cm	13 in./33 cm		5 mil DataMatrix	3 in./8 cm	9 in./23 cm	
10 mil DataMatrix	3 in./8 cm	28 in./71 cm		10 mil DataMatrix	3 in./8 cm	18 in./46 cm	
15 mil DataMatrix	3 in./8 cm	40 in./102 cm		15 mil DataMatrix	3 in./8 cm	27 in./69 cm	
20 mil DataMatrix	3 in./8 cm	55 in./139 cm		20 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

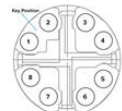


Table: Ethernet Connector Pinout Diagram

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

External Light Connector

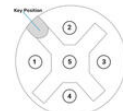


Table: External Light Connector Pinout Diagram

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

Power and IO Connector

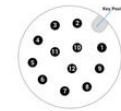


Table: Power and IO Connector Pinout Diagram

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 Locator	Find high contrast features	+	+	+
Pixel Counter	Count pixels with a selected gray 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 feature and presence detection	+	+	+
Distance Tool	Measure the distance between two existing tool results	+	+	+
Advanced Pattern	Find challenging features	+	+	+
Block	Find, sort and count areas of pixel parts with a similar gray level	+	+	+
Optical Character Verification (OCV)	Inspect 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	+	+	+
10/20-SPM	Read 1D, 2D and DPM barcodes	+	+	+
Deep Learning OCR	Deep Learning based OCR	+	+	+
Footnotes				
1. Some features available in a future release. Contact your Zeiss Partner or sales representative for more information.				
2. Refer to Product Reference Guide for complete list of symbols.				
3. Finding resolution, contrast, power source, illumination quality, and ambient light dependent				
Specifications subject to change without notice.				

Specifications

VS40 SB—30° POV Lens				VS40 WA—46° POV Lens			
Symbology/Resolution	Near	Far		Symbology/Resolution	Near	Far	
5 mil Code 128	3 in./8 cm	24 in./61 cm		5 mil Code 128	3 in./8 cm	18 in./46 cm	
10 mil Code 128	3 in./8 cm	49 in./124 cm		10 mil Code 128	3 in./8 cm	30 in./76 cm	
15 mil Code 128	3 in./8 cm	55 in./139 cm		15 mil Code 128	3 in./8 cm	42 in./107 cm	
20 mil Code 128	3 in./8 cm	62 in./158 cm		20 mil Code 128	3 in./8 cm	56 in./142 cm	
5 mil DataMatrix	3 in./8 cm	13 in./33 cm		5 mil DataMatrix	3 in./8 cm	9 in./23 cm	
10 mil DataMatrix	3 in./8 cm	28 in./71 cm		10 mil DataMatrix	3 in./8 cm	18 in./46 cm	
15 mil DataMatrix	3 in./8 cm	40 in./102 cm		15 mil DataMatrix	3 in./8 cm	27 in./69 cm	
20 mil DataMatrix	3 in./8 cm	55 in./139 cm		20 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

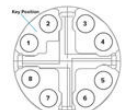


Table: Ethernet Connector Pinout Diagram

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

External Light Connector

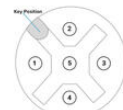


Table: External Light Connector Pinout Diagram

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

Power and IO Connector

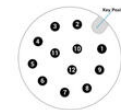


Table: Power and IO Connector Pinout Diagram

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