

High Resolution Smart Vision Sensor

[SC-6500]

- 5 MP high resolution with liquid lens
- Easy to integrate with robotic mechanism
- Up to 15+ functions all-in-one
- 100 to 2,000 mm installations height



Vision Sensor

Built-in controller, no additional controller needed

Designed with an integrated controller, it eliminates the need for any external processing unit, simplifying system architecture and reducing installation space.



Smart vision camera for robotic gripping and automated handling



Gripping guidance

- Gripping positioning guidance
- Automated Sorting
- Vibratory Feeder Sorting



Loading / unloading

- Loading and Unloading Guidance for Robotic Arms



Assembly guidance

- High-efficiency assembly guidance with tight tolerance

Versatile connectivity for integration

Offers diverse optical accessories for various materials, including polarizers and red/white light sources. LED lighting allows software-controlled illumination adjustments.

Zero coding, user-friendly software

User-friendly software requires no coding experience, enabling quick setup and modifications in just four steps.

Overview

Code Reader

Handheld Reader

Vision Sensor

Vision System

Fiberoptic Sensor

Photoelectric Sensor

RGB Colour Sensor

Proximity Sensor

Ultrasonic Sensor

Safety Curtain

Ionizer

Overview

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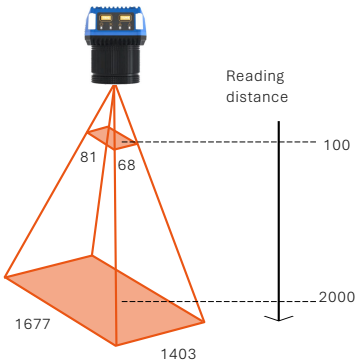
Reading Range

unit: mm

SC-6500

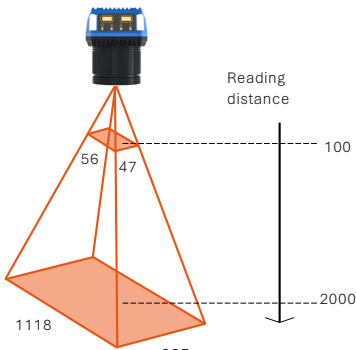
8 mm lens

Reading Range	Width	Height	Minimum Resolution	
			Barcode	2D
100	81	68	0.040	0.066
200	162	135	0.079	0.132
300	242	203	0.119	0.198
400	323	270	0.158	0.264
500	404	338	0.198	0.330
600	485	406	0.238	0.396
700	566	473	0.277	0.462
800	647	541	0.317	0.529
900	727	608	0.356	0.594
1000	808	676	0.396	0.660
1200	970	811	0.475	0.792
1500	1212	1014	0.594	0.990
1800	1509	1263	0.740	1.233
2000	1677	1403	0.822	1.370



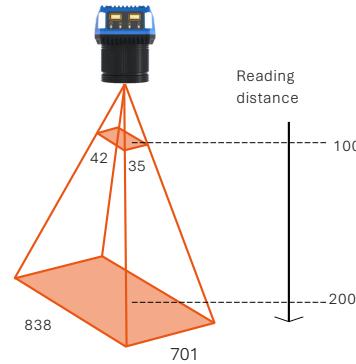
12 mm lens

Reading Range	Width	Height	Minimum Resolution	
			Barcode	2D
100	56	47	0.027	0.046
200	112	94	0.055	0.092
300	168	140	0.082	0.137
400	224	187	0.110	0.183
500	279	234	0.137	0.228
600	335	281	0.164	0.274
700	391	327	0.192	0.319
800	447	374	0.219	0.365
900	503	421	0.247	0.411
1000	559	468	0.274	0.457
1200	671	561	0.329	0.548
1500	838	701	0.411	0.685
1800	1006	842	0.493	0.822
2000	1118	935	0.548	0.913



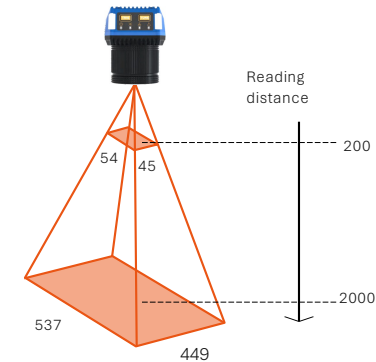
16 mm lens

Reading Range	Width	Height	Minimum Resolution	
			Barcode	2D
100	42	35	0.023	0.034
200	84	70	0.041	0.069
300	126	105	0.062	0.103
400	168	140	0.082	0.137
500	210	175	0.100	0.172
600	252	210	0.118	0.207
700	293	252	0.136	0.242
800	335	294	0.164	0.274
900	377	316	0.185	0.208
1000	419	351	0.205	0.342
1200	503	421	0.247	0.411
1500	629	526	0.308	0.514
1800	755	631	0.370	0.617
2000	838	701	0.411	0.685



25 mm lens

Reading Range	Width	Height	Minimum Resolution	
			Barcode	2D
200	54	45	0.026	0.044
300	80	67	0.039	0.065
400	107	90	0.052	0.087
500	134	112	0.066	0.109
600	161	135	0.079	0.132
700	188	157	0.092	0.154
800	215	180	0.105	0.176
900	241	202	0.118	0.197
1000	268	224	0.131	0.219
1200	322	269	0.158	0.263
1500	402	337	0.197	0.328
1800	483	404	0.237	0.395
2000	537	449	0.263	0.439



SC-6500 Series Variant

Model	Light Source	Megapixel	Lens	Focus Mode
SC-6500-111	White	5 MP (2448 x 2048)	8 mm	Auto
SC-6500-112	Red	5 MP (2448 x 2048)	8 mm	
SC-6500-121	White	5 MP (2448 x 2048)	12 mm	
SC-6500-122	Red	5 MP (2448 x 2048)	12 mm	
SC-6500-131	White	5 MP (2448 x 2048)	16 mm	
SC-6500-132	Red	5 MP (2448 x 2048)	16 mm	
SC-6500-141	White	5 MP (2448 x 2048)	25 mm	
SC-6500-142	Red	5 MP (2448 x 2048)	25 mm	

Accessories Lineup

Main unit



Code Reader
SC-6500

Cable



Control Cable (RS232)
3 m: M12-12PIN-PC-3M-F-B
5 m: M12-12PIN-PC-5M-F-B
10 m: M12-12PIN-PC-10M-F-B

Ethernet Cable



Ethernet Cable (RJ45)
3 m: M12-8PIN-3M
5 m: M12-8PIN-5M
10 m: M12-8PIN-10M

Power Supply



24V Power Adapter
FG-168

Bracket & Screw



L Shape Installation Bracket
FG-6501

Software



Vision Sensor Software
FG-S02

Specifications

Model			SC-6500 (5 megapixels)
Receiver	Sensor		CMOS image sensor
	Number of pixels		2448 x 2048
	Colour		Monochrome
	Focus		Autofocus
	Frame Rate		30
	Pixel Size		2.74 μm x 2.74 μm
	Sensor Size		1/1.8"
Emitter	Illumination light source		High intensity red/white LED
	Pointer light source		Green LED
Reading	Functions		Position correction: absence/ presence, spots check, edge check, and circles. Counting: Pattern count, spot count, edge count. Measurement: Area detection, width measurement. Recognition: OCR, code reading, classification. Logic, logic judgement, numerical ranking
	Focal lens		8 / 12 / 16 / 25 mm
	Reading distance		100 to 2000 mm
I/O	Input		2 (NPN, PNP)
	Output		3
	Supported protocol	Ethernet	TCP / IP, Ethernet / IP, Modbus, Profinet, Serial
		Serial	RS-232C
Environment Resistance	Enclosure rating		IP67
	Surrounding temperature		0 to +45°C
	Ambient storage temperature		-20 to +70°C
	Relative humidity		5 to 95% RH (No condensation)
Rating	Power consumption		5 W
	Power supply voltage		24 VDC
Weight			Approx. 800 g
Dimension			100.5 x 74.5 x 47.6 mm