



AI100-AI105 series Industrial Barcode Reader

SCANTECH ID[®]
CHAMPTEK Group

Introduction

SCANTECH ID Industrial Fixed-Mount Barcode Reader Series, the AI100 equipped a high-quality 1.6-megapixel resolution global shutter image sensor and a quad-core processor, capable of capturing full-frame, high-quality images at speeds up to 60 frames per second. It is particularly suitable for reading multiple barcodes or ultra-small barcodes within a certain range in dynamic scenarios. It integrates a liquid lens with patented technology, allowing for automatic focusing and high-speed code reading within a working range of 35mm-600mm. The professional dual-wavelength red and blue LED light source design provides excellent performance for reading DPM (Direct Part Marking) codes.

Its unique optical design achieves high-resolution, deep depth-of-field, and highly uniform imaging. It is also equipped with multiple lenses, enabling the reading of 2D codes as small as 0.5x0.5mm. The global shutter technology allows for reading in high-speed motion states.

Its excellent code reading capability can easily solve problems faced in electronics manufacturing and traceability industries, making it suitable for applications in electronic assembly, new energy, LCD screens, pharmaceutical traceability, and other industries.

Please refer to the **PRODUCT SELECT LIST** for detailed specifications of 1.6M~8M pixels AI101~AI105 models.

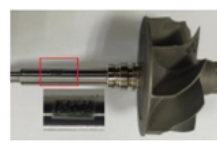
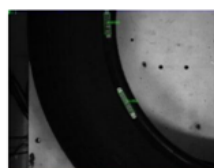
Features

- Compact size
- The quad-core processor can analyze 4 images at the same time
- High-speed liquid lens autofocus design
 - Improve hardware installation efficiency by 30%
 - No need to adjust product model when changing inspection stations
- Superior performance in decoding DPM codes
- Simultaneous reading of multiple codes
- Optional OCR, DM code level function and polarizing filter
- IP65 sealing protection
- Multiple status indicators for daily status observation
 - Power supply indication, Network diagnosis, Output status and Learning status
- The light sources in 8 areas can be individually controlled to be applied to a variety of code reading scenarios
- Flexible and easy-to-use software, 3 steps to complete setting, support various configuration methods

AI100 & AI101 Series

Typical application

- Manufacturing automation
- 3C, home appliances
- Pharmaceuticals
- Packaging industry
- Semiconductors
- Automobile industry



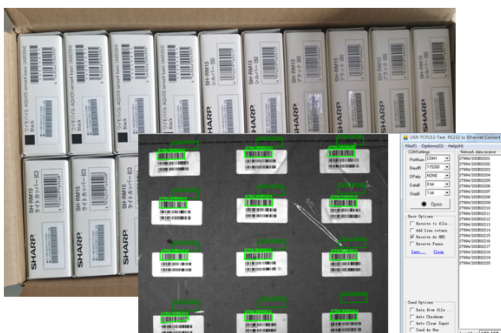
Specifications

Model	AI100-C	AI100-L		AI101-C	AI101-L	
Auto-Focus	Not supported	Supported (Stanard)	Supported (High desity)	Not supported	Supported (Stanard)	Supported (High desity)
Focus position (mm)	38-1000 (default)	38-600		38-1000 (default)	35-600	
Min. Resolution (mm) for 2D code	1.0x1.0		0.5x0.5	1.0x1.0		0.5x0.5
OCR (character recognition)	Not supported		(Option) Supported	Not supported		
DM code level	Not supported		(Option) Supported	(Option) Supported		
Image resolution	1.6M Pixels (Global shuttle)					
Reading frequency	60Hz			30Hz		
Positioning	Dual laser positioning					
Light source	High brightness red/white LED+blue LED, optional long-distance light source					
Status output	Buzzer and power indicator light, network transmission indicator light, 5 status indicators					
Reading symbology	2D- QR 、 Micro QR 、 Data Matrix 、 PDF417 、 Micro PDF417					
	1D- CODE39 、 CODE128 、 CODE93 、 CODE11 、 CODABAR 、 Interleaved 25 、 Matrix25 、 MSI 、 Standard25 、 UPC 、 EAN					
Scan triggering	1 channel photoelectric isolation acquisition trigger signal input					
Reading Speed	3m / s					
IO Input	1 way photoelectric isolation input					
IO Output	3 channels of photoelectric isolation output					
	(1 channel can be switched to flash sync output)					
Communication	1 RS232 serial port; 1 Ethernet port, supports TCP/IP					
Sealing Protection	IP65					
Working temperature	0 - 45℃					
Storage temperature	-20 - 70℃					
Dimension	92 x 61 x 43mm					
Weight	Approx. 228.2g					
Working voltage	10 - 28V DC					
Working current	1.2 - 0.6A					
Certificate	CE FCC RoHS					

AI102 & AI103 Series

Typical application

- Manufacturing automation
- 3C, home appliances
- Pharmaceuticals
- Packaging industry
- Semiconductors
- Automobile industry



Specifications

Model	2.4M Pixels			5M Pixels		
	AI102-C	AI102-L		AI103-C	AI103-L	
Auto-Focus	Not supported	Supported (Standard)	Supported (High Desity)	Not supported	Supported (Standard)	Supported (High Desity)
Focus position (mm)	38-1000(Default)	35 - 600		38-1000(Default)	35 - 600	
Min. Resolution (mm) for 2D code	1.0x1.0		0.3x0.3	1.0x1.0		0.3x0.3
OCR (character recognition)	Supported (Option)					
DM code level	Supported (Option)					
Image resolution	2.4M Pixels (Global Shutter)			5M Pixels (Global Shutter)		
Reading frequency	55Hz			40Hz		
Positioning	Dual laser positioning					
Light source	High brightness red/white LED+blue LED, optional long-distance light source					
Status output	Buzzer and power indicator light, network transmission indicator light, 5 status indicators					
Reading symbology	2D- QR 、 Micro QR 、 Data Matrix 、 PDF417 、 Micro PDF417					
	1D- CODE39 、 CODE128 、 CODE93 、 CODE11 、 CODABAR 、 Interleaved 25 、 Matrix25 、 MSI 、 Standard25 、 UPC 、 EAN					
Scan triggering	1 channel photoelectric isolation acquisition trigger signal input					
Reading Speed	3m / s					
IO Input	1 way photoelectric isolation input					
IO Output	3 channels of photoelectric isolation output (1 channel can be switched to flash sync output)					
Communication	1 RS232 serial port; 1 Ethernet port, supports TCP/IP					
Sealing Protection	IP65					
Working temperature	0 - 45℃					
Storage temperature	-20 - 70℃					
Dimension	92 x 61 x 43mm		92x61x50mm	92 x 61 x 43mm		92x61x50mm
Weight	Approx. 228.2g		Approx.220.4g	Approx. 228.2g		Approx.220.4g
Working voltage	10 - 28V DC					
Working current	1.2 - 0.6A					
Certificate	CE FCC RoHS					

AI104 & AI105 Series

PRODUCT SELECT LIST

Model	CPU Core	Pixels	CMOS R/G	Hz/ FPS	Application Speed	Version	Minimum 2D code size	Part Number
AI101-L	1 Core	1.6M	Global	30	1.5m/s	Standard	1.0x1.0mm	8188-AI101LS1
	1 Core	1.6M	Global	30	1.5m/s	High Density	0.5x0.5mm	8188-AI101LH1
AI100-L	Quad Cores	1.6M	Global	60	3m/s	Standard	1.0x1.0mm	8188-AI100L01
	Quad Cores	1.6M	Global	60	3m/s	High Density	0.5x0.5mm	8188-AI100L02
AI102-L	Quad Cores	2.4M	Global	55	3m/s	Standard	1.0x1.0mm	8188-AI102LS1
	Quad Cores	2.4M	Global	55	3m/s	High Density	0.3x0.3mm	8188-AI102LH1
AI103-L	Quad Cores	5M	Global	40	3m/s	Standard	1.0x1.0mm	8188-AI103LS1
	Quad Cores	5M	Global	40	3m/s	High Density	0.3x0.3mm	8188-AI103LH1
AI105-L	Quad Cores	5M	Rolling	10	Static	Standard	0.3x0.3mm	8188-AI105LS1
	Quad Cores	5M	Rolling	10	Static	High Density	0.18x0.18mm	8188-AI105LH1
AI104-L	Quad Cores	8M	Rolling	10	Static	Standard	0.3x0.3mm	8188-AI104LS1
	Quad Cores	8M	Rolling	10	Static	High Density	0.18x0.18mm	8188-AI104LH1
AI150-L	1 Core	0.5M	Global	45	1.2m/s		2x2mm	8188-AI150L01

Specifications

Model	5M Pixels			8M Pixels		
	AI105-C	AI105-L		AI104-C	AI104-L	
Auto-Focus	Not supported	Supported (Standard)	Supported (High Desity)	Not supported	Supported (Standard)	Supported (High Desity)
Focus position (mm)	38-1000(Default)	35 - 600		38-1000(Default)	35 - 600	
Min. Resolution (mm) for 2D code	1.0x1.0		0.3x0.3	0.3x0.3		0.18x0.18
OCR (character recognition)	Supported (Option)					
DM code level	Supported (Option)					
Image resolution	5M Pixels (Rolling Shutter)			8M Pixels (Rolling Shutter)		
Reading frequency	10Hz			10Hz		
Positioning	Dual laser positioning					
Light source	High brightness red/white LED+blue LED, optional long-distance light source					
Status output	Buzzer and power indicator light, network transmission indicator light, 5 status indicators					
Reading symbology	2D- QR 、 Micro QR 、 Data Matrix 、 PDF417 、 Micro PDF417					
	1D- CODE39 、 CODE128 、 CODE93 、 CODE11 、 CODABAR 、 Interleaved 25 、 Matrix25 、 MSI 、 Standard25 、 UPC 、 EAN					
Scan triggering	1 channel photoelectric isolation acquisition trigger signal input					
Reading Speed	3m / s					
IO Input	1 way photoelectric isolation input					
IO Output	3 channels of photoelectric isolation output (1 channel can be switched to flash sync output)					
Communication	1 RS232 serial port; 1 Ethernet port, supports TCP/IP					
Sealing Protection	IP65					
Working temperature	0 - 45℃					
Storage temperature	-20 - 70℃					
Dimension	92 x 61 x 43mm		92x61x50mm	92 x 61 x 43mm		92x61x50mm
Weight	Approx. 228.2g		Approx. 220.4g	Approx. 228.2g		Approx. 220.4g
Working voltage	10 - 28V DC					
Working current	1.2 - 0.6A					
Certificate	CE FCC RoHS					