

Al100-Al105 series Industrial Barcode Reader



Introduction

SCANTECH ID Industrial Fixed-Mount Barcode Reader Series, the Al100 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 Al101~Al105 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

Al100 & Al101 Series

Typical application

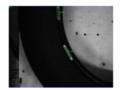
- Manufacturing automation
- 3C, home appliances
- Pharmaceuticals
- Packaging industry
- Semiconductors
- Automobile industry

















Specifications

Model	AI100-C	Al100-L		AI101-C	Al10)1-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.	1.0x1.0		1.0)	1.0x1.0 0.5x		
OCR (character recognition)	Not supported		(Option) Supported		Not supported		
DM code level	Not supported		(Option) Supported	(O	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						
IO 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°C						
Storage temperature	-20 - 70°C						
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						

Al102 & Al103 Series

Typical application

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







Specifications

Model	2	2.4M Pixels		5M Pixels			
	Al102-C	Al102-L		AI103-C	Al103-L		
Auto-Focus	Not supported	Supported (Standard)	Supported (High Desity)	Not supported	Supported (Standard)	Supported (High Desity)	
Focus position (mm)	38-1000(Default)			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			Supporte	d (Option)			
Image resolution	2.4M Pi	xels (Global Sh	utter)	5M Pi	xels (Global Shu	utter)	
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						
	2D- QR \ Micro QR \ Data Matrix \ PDF417 \ Micro PDF417						
Reading symbology	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°C						
Storage temperature	-20 - 70°C						
Dimension	92 x 61 x	43mm	92x61x50mm	92 x 61 x	43mm	92x61x50mm	
Weight	Approx. 2	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
Al101-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
Al100-L	Quad Cores	1.6M	Global	60	3m/s	Standard	1.0x1.0mm	8188-Al100L01
	Quad Cores	1.6M	Global	60	3m/s	High Density	0.5x0.5mm	8188-Al100L02
Al102-L	Quad Cores	2.4M	Global	55	3m/s	Standard	1.0x1.0mm	8188-Al102LS1
	Quad Cores	2.4M	Global	55	3m/s	High Density	0.3x0.3mm	8188-AI102LH1
Al103-L	Quad Cores	5M	Global	40	3m/s	Standard	1.0x1.0mm	8188-Al103LS1
	Quad Cores	5M	Global	40	3m/s	High Density	0.3x0.3mm	8188-AI103LH1
Al105-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
Al104-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
Al150-L	1 Core	0.5M	Global	45	1.2m/s		2x2mm	8188-Al150L01

Specifications

Model		5M Pixels		8M Pixels				
iviodei	AI105-C	Al105-L		AI104-C	Al1	104-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 Pix	els (Rolling Sh	utter)	8M Pix	els (Rolling Sh	nutter)		
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							
	2D- QR \ Micro QR \ Data Matrix \ PDF417 \ Micro PDF417							
Reading symbology	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°C							
Storage temperature	-20 - 70°C							
Dimension	92 x 61 x	43mm	92x61x50mm	92 x 61 x	43mm	92x61x50mm		
Weight	Approx. 2	28.2g	Approx. 220.4g	Approx. 2	28.2g	Approx. 220.4g		
Working voltage	10 - 28V DC							
Working current	1.2 - 0.6A							
Certificate	CE FCC R₀HS							

