Smart Code Readers

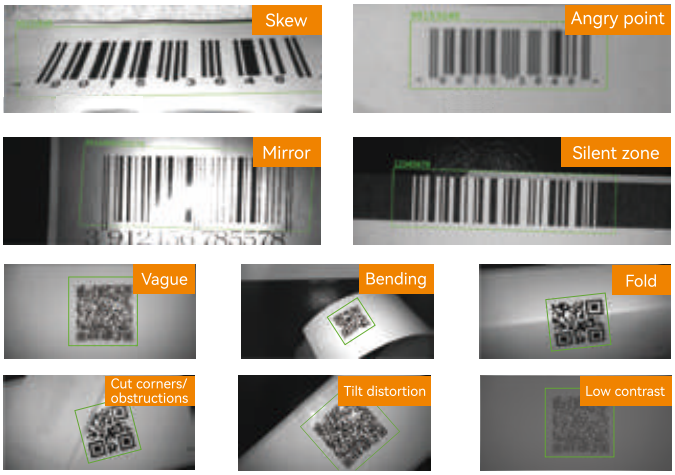
- Built-in million-pixel image sensor combined with proprietary advanced sampling technology and millisecond-level decoding algorithm
- Convenient operation with one-click parameter adjustment, significantly saving debugging time.
- Powerful networking function, supporting the combination of 32 code readers
- The preset multiple sets of algorithms and imaging parameters are cyclically decoded, simultaneously compatible with bright and dark field conditions and scenes with product height differences

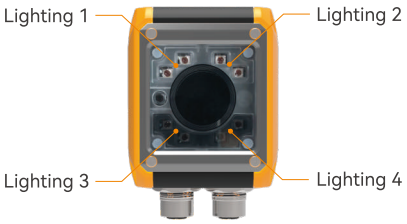
Smart code reader

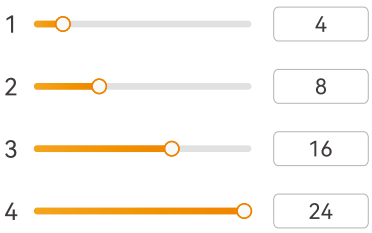
RCD-AI100-X series

Fast Barcode Scanning in Harsh Environments

Equipped with high-performance deep learning chips, capable of effectively reading codes in complex conditions such as damaged codes, low contrast, poor printing quality, skewing, noise, mirrored surfaces, quiet zones, blurriness, bending, folding, missing corners/obstructions, etc., with strong robustness





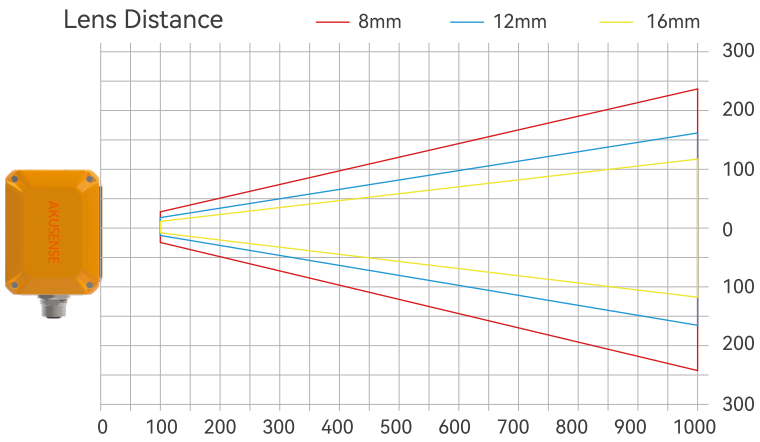


Highly Flexible Lighting System

Red/White light optional, 4 groups of light sources can be controlled independently, brightness adjustment for 1-24 sections of light sources, providing 16 supplementary lighting schemes.

Product Highlights

RCD-AI100-X series

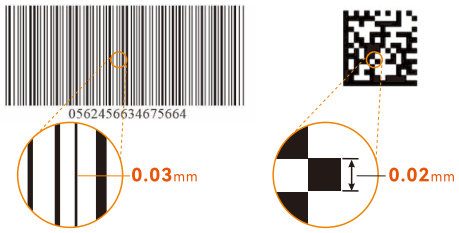


Versatile Working Distance

Offering three different focal length lenses of 8mm, 12mm, and 16mm, supporting automatic mechanical focusing from 100mm to 1000mm, meeting application requirements for various installation spaces

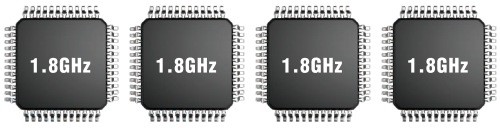
Enabling Ultra-Small Code Reading

Million-pixel image sensor, combined with ME-mind advanced sampling technology and deep learning algorithms, achieves a recognition accuracy of up to 0.06mm, supporting ultra-small code reading



Automatic Polling Function

Pre-set multiple sets of algorithms and imaging parameters for cyclic decoding, simultaneously compatible with bright and dark field conditions and scenes with product height different



Quad-core SMP Processor

Pixels	1280*800pixel
Ordinary code reader	30ms
RCD-AI Series	10ms

Millisecond-level Decoding Speed

Equipped with a Cortex Quad-core processor, with a single core clock speed of up to 1.8 GHz, achieving ultra-fast positioning of one/two-dimensional codes, increasing decoding speed from the average speed of 30ms of ordinary code readers to 10ms, 3 times faster

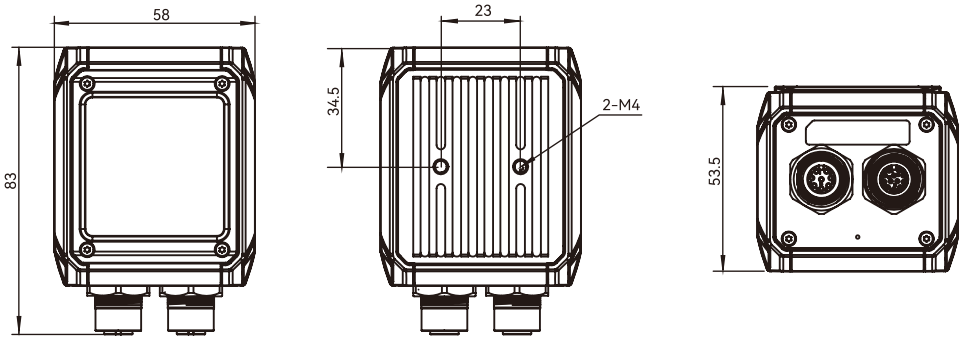
RCD-AI100-X Series

NEW!

Basic Features	Operating Principle	CMOS		
	Shell Style	Square		
	Detection Range	100~1000mm		
	Field of View	Maximum 480mm x 300mm (@1000mm distance, 8mm focal length)		
	Focal Length	8mm	12mm	16mm
	Focus Adjustment Method	Mechanical focus		
	Resolution	1280×800		
	Light Source	Non-polarized Red Light/Non-polarized White Light/Polarized Red Light/Polarized White Light		
	Code Type	One-dimensional Code：Code39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC,Pharmacode; Two-dimensional Code：QR code,DataMatrix		
	Color/Black and White	Black and White		
	Shutter	Global		
	Indicator Light	Position Indication: 1 green light spot indicates the center area of the scanning position; Status Indication: 5 status LEDs and and buzzer		
Electrical data	Image Sensor Size	3μmx3μm		
	Target Surface Size	1/4"		
	Maximum Reading Speed	60/second		
	Exposure Time	20μs~1sec		
	Gain	0dB~255dB		
	Operating Voltage	24VDC		
	Power Consumption	15W		
	Output Type	Input Control: Two-channel optocoupler isolated inputs, supporting NPN and PNP types; Output Control: Three-channel output control, optocoupler isolated		
	Communication Protocol	TCP Server,TCP Client, ModBus TCP,ModBus RTU,Profinet, Ethernet/IP, Fins, MELSEC/SLMP,Serial		
	Communication Interface	RS232、Ethernet		
Environmental conditions	Operating Temperature	0~45℃		
	Storage Temperature	–20~70℃		
	Humidity	5%~95%RH(non-condensing)		
	Protection Level	IP67		
Mechanical data	Connection Method	Cable Connection		
	Dimensions	58x53.5x83mm		
	Weight	about 220g		
	Accessories	M12-12PIN-3M (3m high-flex), M12-8PIN-3M (3m high-flex), L-shaped mounting bracket, 24V power adapter (optional), screw kit		
Model	Non-polarized Red Light	RCD-AI100-X08R	RCD-AI100-X12R	RCD-AI100-X16R
	Non-polarized White Light	RCD-AI100-X08W	RCD-AI100-X12W	RCD-AI100-X16W
	Polarized Red Light	RCD-AI100-X08RD	RCD-AI100-X12RD	RCD-AI100-X16RD
	Polarized White Light	RCD-AI100-X08WD	RCD-AI100-X12WD	RCD-AI100-X16WD

Demensions

Unit：mm



Intelligent code reader

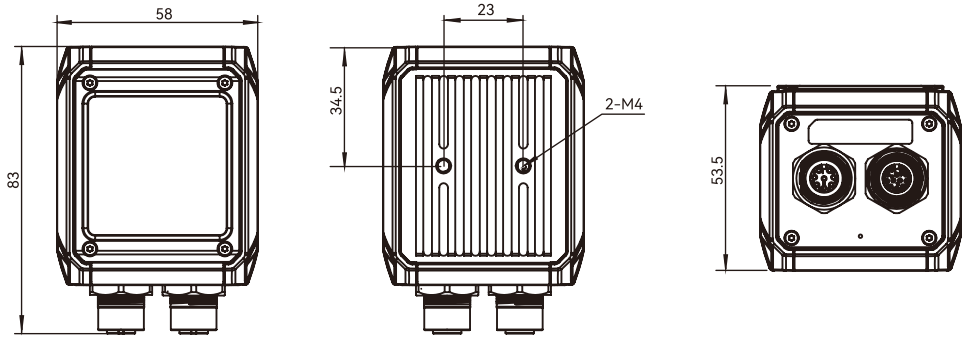
RCD-AI230-X Series

NEW!

Basic Features	Operating Principle	CMOS		
	Shell Style	Square		
	Detection Range	100~1000mm		
	Field of View	Maximum 480mm x 300mm (@1000mm distance, 8mm focal length)		
	Focal Length	8mm	12mm	16mm
	Focus Adjustment Method	Mechanical focus		
	Resolution	1920×1200		
	Light Source	Non-polarized Red Light/Non-polarized White Light/Polarized Red Light/Polarized White Light		
	Code Type	One-dimensional Code:Code 39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC,Pharmacode; Two-dimensional Code:QR code,DataMatrix		
	Color/Black and White	Black and White		
	Shutter	Global		
	Indicator Light	1 green light spot indicates the center area of the scanning position; Status Indication: 5 status LEDs and and buzzer		
Electrical data	Image Sensor Size	3μmx3μm		
	Target Surface Size	1/2.6"		
	Maximum Reading Speed	60/second		
	Exposure Time	20us~1sec		
	Gain	0dB~255dB		
	Operating Voltage	24V DC		
	Power Consumption	15W		
	Output Type	Two-channel input control, optocoupler isolated - supports NPN, PNP types; Three-channel output control, optocoupler isolated		
	Communication Protocol	TCP Server、TCP Client、ModBus TCP、ModBus RTU、Profinet、Ethernet/IP、Fins、MELSEC/SLMP、Serial		
	Communication Interface	RS232、Ethernet		
Environmental conditions	Operating Temperature	0~45℃		
	Storage Temperature	–20~70℃		
	Humidity	5%~95%RH(non-condensing)		
	Protection Level	IP67		
Mechanical data	Connection Method	Cable Connection		
	Dimensions	58x53.5x83mm		
	Weight	about 220g		
	Accessories	M12-12PIN-3M (3m high-flex), M12-8PIN-3M (3m high-flex), L-shaped mounting bracket, 24V power adapter (optional), screw kit		
Model	Non-polarized Red Light	**RCD-AI230-X08R**	**RCD-AI230-X12R**	**RCD-AI230-X16R**
	Non-polarized White Light	**RCD-AI230-X08W**	**RCD-AI230-X12W**	**RCD-AI230-X16W**
	Polarized Red Light	**RCD-AI230-X08RD**	**RCD-AI230-X12RD**	**RCD-AI230-X16RD**
	Polarized White Light	**RCD-AI230-X08WD**	**RCD-AI230-X12WD**	**RCD-AI230-X16WD**

Demensions

Unit：mm

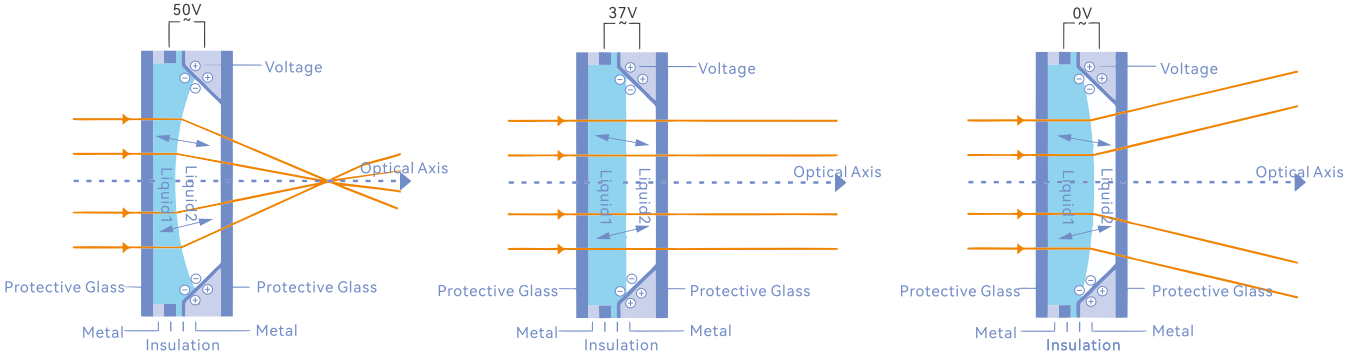


Smart code reader

RCD-AI100-S series

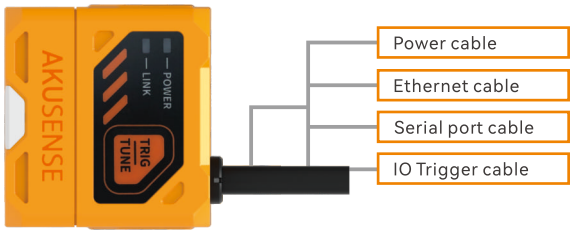
Liquid Lens Autofocus Technology

Equipped with liquid lens zoom lens, focusing can be completed with just a few sampled images, offering the advantages of fast, accurate, and clear focusing



Small Size, Easy Installation

The body size is only 47mm x 25mm x 43mm, making it installable even in tight spaces



Integrated cable for easy deployment

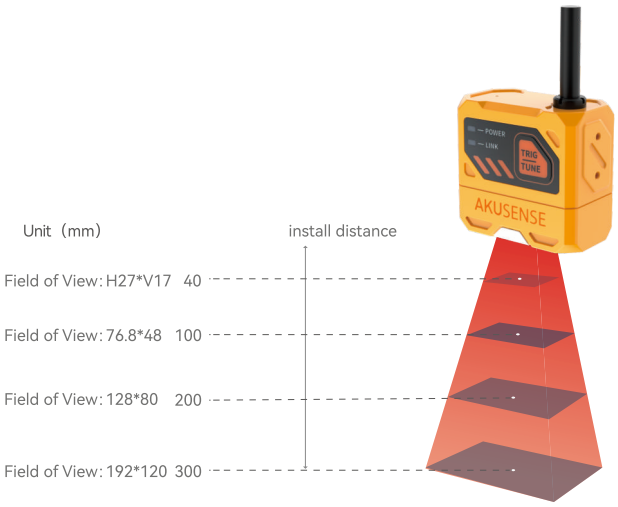
Integrate power line, Ethernet cable, serial port cable, and IO trigger cable into one cable,providing users with a convenient deployment method

Product Highlights

RCD-AI100-S series

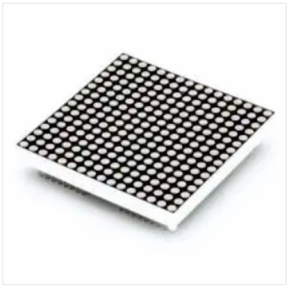
Flexible Working Distance

Supports a working distance of 40mm to 300mm, covering mainstream code reading applications on the market

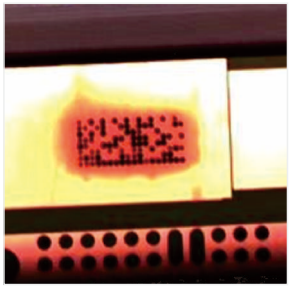


Supports barcode reading for different coding processes

Hollow Dot Matrix Code, Hole Array Code, Curved DPM Code, Pin Collision DPM Code, Dot Matrix Code



Hollow Dot Matrix Code



Hole Array Code

Curved DPM Code

Pin Collision DPM Code

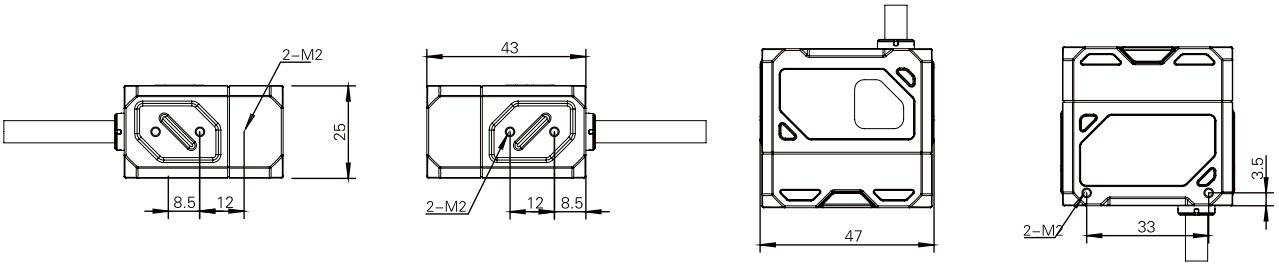
RCD-AI100-S Series

NEW!

Basic Features	Working Principle	CMOS		
	Housing	Square		
	Detection Distance	40~300mm	30~300mm	100~400mm
	Field of View	Maximum 192mm*120mm (@300mm distance)		
	Focal Length	6mm		16mm
	Focusing Method	Liquid focusing	Manual focusing	Liquid focusing
	Resolution	1280×800		
	Light Source	Red/White light available		
	Barcode Types	1D：Code 39、Code93、Code128、EAN-8、EAN-13、Interleaved 2 of 5、UPC、Pharmacode；2D：QR code, DataMatrix		
	Color/Monochrome	Monochrome		
	Shutter	Global		
	Indicator	Position Indication: 2 green light spots indicate the scanning position center area; Status Indication: 3 status LEDs and buzzer		
Electrical data	Image Native Resolution	3μm×3μm		
	Target Surface Dimensions	1/4"		
	Maximum Reading Speed	60/second		
	Exposure Time	20μs~1sec		
	Gain	0dB~255dB		
	Operating Voltage	24 VDC		
	Power Consumption	5W		
	Output Types	Two channels of optically isolated inputs, supporting NPN and PNP types;Output Control: Three channels of non-isolated outputs		
	Communication Protocol	TCP Server,TCP Client、ModBus TCP、ModBus RTU、Profinet、Ethernet/IP,MELSEC/SLMP、Fins、Serial		
	Communication Interface	RS232, Ethernet		
Environmental conditions	Operating Temperature	0~45℃		
	Storage Temperature	-20~70℃		
	Humidity	5% to 95% RH (non-condensing)		
	Protection Rating	IP67		
Mechanical data	Connection Method	Cable Connection		
	Dimension	47x25x43mm		
	Weight	about 100g		
	Accessories:Cable	M12-17PIN connection cable;Power Supply: 24V power adapter (optional);L-shaped mounting bracket + screws		
Model	Non-Polarized Red Light	RCD-AI100-SQ06R	RCD-AI100-SH06R	RCD-AI100-SQ16R
	Non-Polarized White Light	RCD-AI100-SQ06W	RCD-AI100-SH06W	RCD-AI100-SQ16W
	Polarized Red Light	RCD-AI100-SQ06RD	RCD-AI100-SH06RD	RCD-AI100-SQ16RD
	Polarized White Light	RCD-AI100-SQ06WD	RCD-AI100-SH06WD	RCD-AI100-SQ16WD

Demensions

Unit：mm



Intelligent code reader

RCD-AI100-F(HF) Series

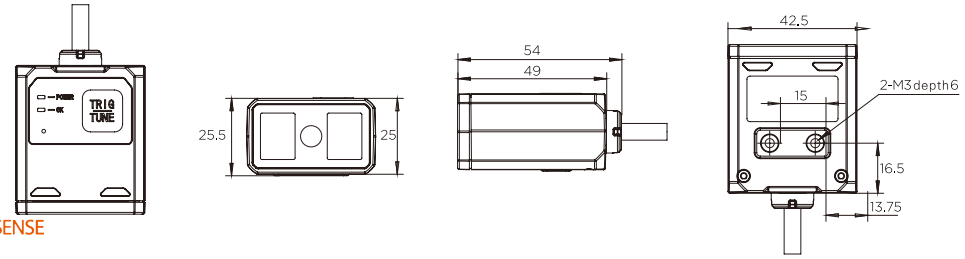
NEW!

CE

Basic Features	Operating Principle	CMOS	
	Shell Style	Square	
	Detection Range	Fixed Focus：180mm Code 39(5 mil):85~220 mm，Code 128(10 mil):51~415 mm QR Code(15 mil):42~313 mm，Data Matrix(10 mil) :60~150 mm	Fixed Focus：50mm Code 39(3 mil):30~60 mm，Code 128(10 mil):40~122 mm QR Code(5 mil):30~80 mm，Data Matrix(5 mil) :35~74 mm
	Field of View	–	
	Focal Length	–	
	Focus Adjustment Method	Fixed Focus	
	Resolution	1280×800	
	Light Source	Red/White Light Source Optional	
	Code Type	One-dimensional codes：Code39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC,Pharmacode; Two-dimensional codes：QR code,DataMatrix	
	Color/Black and White	Black and White	
	Shutter	Global	
	Indicator Light	2 green light spots indicate the central area of the scanning position, 2 status LEDs (code reading status, power status) and buzzer	
Electrical data	Image Sensor Size	3μmx3μm	
	Target Surface Size	–	
	Maximum Reading Speed	60/second	
	Exposure Time	20us~100000us	
	Gain	0dB~255dB	
	Operating Voltage	24 VDC/USB5V	
	Power Consumption	5W	
	Output Type	Two non-isolated inputs; two non-isolated outputs	
	Communication Protocol	TCP Server,TCP Client,ModBus TCP,ModBus RTU,Profinet,Ethernet/IP,MELSEC/SLMP,Fins,Serial	
	Communication Interface	RS232、RJ45、USB	
Environmental conditions	Operating Temperature	0~45℃	
	Storage Temperature	–20~70℃	
	Humidity	5%~95%RH(Non-Condensing)	
	Protection Level	IP54	
Mechanical data	Connection Method	Two types of wires: 1. Connect to the smart code reader through DB15 Puruo wire, which outputs a total of 3 physical interfaces: network port, serial port, and IO port; 2. Connect to the smart code reader through DB15 Puruo cable, which outputs a total of 2 physical interfaces: USB port and IO port	
	Dimensions	49x25.5x42.5mm	
	Weight	about 80g	
	Accessories	HDB15P-M-ETH-3M (Network port 3 meters Plug) or HDB15P-M-USB-3M (USB port 3 meters Plug) L-shaped mounting bracket, screw kit	
Model	Non-polarized Red Light	**RCD-AI100-F06R**	**RCD-AI100-HF06R**
	Non-polarized White Light	**RCD-AI100-F06W**	**RCD-AI100-HF06W**
	Polarized Red Light	**RCD-AI100-F06RD**	**RCD-AI100-HF06RD**
	Polarized White Light	**RCD-AI100-F06WD**	**RCD-AI100-HF06WD**

Demensions

Unit：mm



RCD-AI500 Series

NEW!

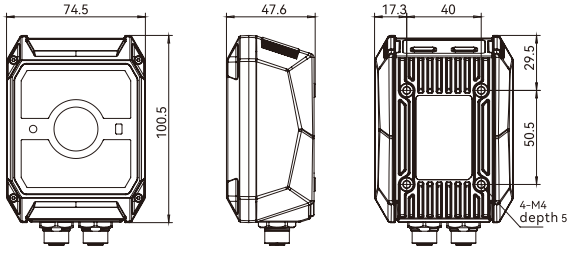
NEW!

Basic Features	Operating Principle	CMOS				
	Shell Style	Square				
	Detection Range	100-2000mm(@8/12/16mm)200-2000mm(@25mm)				
	Field of View	–				
	Focal Length	8mm	12mm	16mm	25mm	16mm
	Focus Adjustment Method	Mechanical focus				Liquid focus
	Resolution	2448x2048				
	Light Source	Red/White Light Source Optional				
	Code Type	One-dimensional codes: Code 39, Code93, Code128, EAN-8, EAN-13, Interleaved 2of5, UPC, Pharmacode; Two-dimensional codes:QR code, DataMatrix				
	Color/Black and White	Black and White				
	Shutter	Global				
	Indicator Light	1 green light point indicates the central area of the scanning position; 1 distance sensor for auxiliary focus, 5 status LEDs and buzzers				
Electrical data	Image Sensor Size	2.74μmx2.74μm				
	Target Surface Size	1/1.8"				
	Maximum Reading Speed	30/second				
	Exposure Time	20us~1sec				
	Gain	0dB~255dB				
	Operating Voltage	24VDC				
	Power Consumption	15W				
	Output Type	Two-channel input control, optocoupler isolation - supports NPN, PNP type; three-channel output control, optocoupler isolation				
	Communication Protocol	TCP Server、TCP Client、ModBus TCP、ModBus RTU、Profinet、Ethernet/IP、MELSEC/SLMP、Fins、Serial				
	Communication Interface	RS232, Ethernet				
Environmental conditions	Operating Temperature	0~45℃				
	Storage Temperature	–20~70℃				
	Humidity	5% to 95% RH (non-condensing)				
	Protection Level	IP67				
Mechanical data	Connection Method	Cable Connection				
	Dimensions	74.5x100.5x47.6mm 134.5x108.5x65.3mm（High power）				
	Weight	Standard light source: about 550g; high-power light source: about 750g				
	Accessories	M12-12PIN-3M (3m high-flex), M12-8PIN-3M (3m high-flex), L-shaped mounting bracket, 24V power adapter (optional), screw kit				
Model	Non-polarized Red Light	RCD-AI500-X08R	RCD-AI500-X12R	RCD-AI500-X16R	RCD-AI500-X25R	RCD-AI500-Q16R
	Non-polarized White Light	RCD-AI500-X08W	RCD-AI500-X12W	RCD-AI500-X16W	RCD-AI500-X25W	RCD-AI500-Q16W
	Polarized Red Light	RCD-AI500-X08RD	RCD-AI500-X12RD	RCD-AI500-X16RD	RCD-AI500-X25RD	RCD-AI500-Q16RD
	Polarized White Light	RCD-AI500-X08WD	RCD-AI500-X12WD	RCD-AI500-X16WD	RCD-AI500-X25WD	RCD-AI500-Q16WD
	Non-Polarized red light (High power)	RCD-AI500-X08RH	RCD-AI500-X12RH	RCD-AI500-X16RH	RCD-AI500-X25RH	RCD-AI500-Q16RH
	Non-polarized white light (High power)	RCD-AI500-X08WH	RCD-AI500-X12WH	RCD-AI500-X16WH	RCD-AI500-X25WH	RCD-AI500-Q16WH

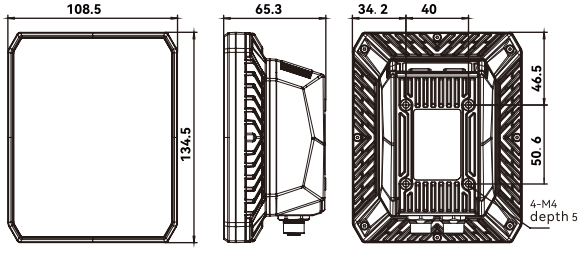
Demensions

Unit: mm

Standard



High Power



Intelligent code reader

RCD-AI2000 Series

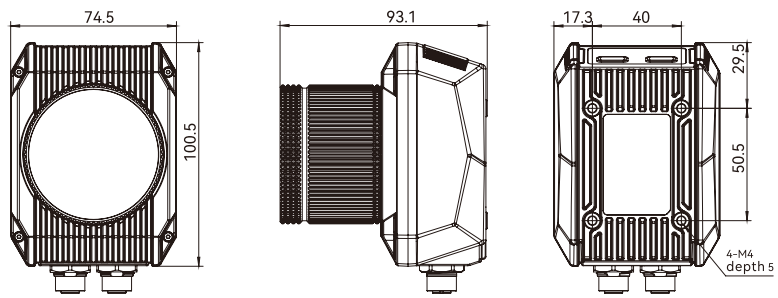
NEW!

CE

Basic Features	Operating Principle	CMOS
	Shell Style	Square
	Detection Range	Based on lens specifications
	Field of View	–
	Focal Length	–
	Focus Adjustment Method	C port
	Resolution	5472x3648
	Light Source	External light source
	Code Type	One-dimensional code：Code39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC,Pharmacode； Two–dimensional code：QR code,DataMatrix
	Color/Black and White	Black and White
	Shutter	Rolling shutter
	Indicator Light	1 green light point indicates the center area of the scanning position; 5 status LEDs and buzzers
Electrical data	Image Sensor Size	2.4μmx2.4μm
	Target Surface Size	1/1.8"
	Maximum Reading Speed	15/second
	Exposure Time	20μs~1sec
	Gain	–
	Operating Voltage	24V DC
	Power Consumption	15W
	Output Type	Two-channel input control, optocoupler isolation - supports NPN, PNP type; three-channel output control, optocoupler isolation
	Communication Protocol	TCP Server、TCP Client、ModBus TCP、ModBus RTU、Profinet、Ethernet/IP、MELSEC/SLMP、Fins、Seria
	Communication Interface	RS232, Ethernet
Environmental conditions	Operating Temperature	0~45℃
	Storage Temperature	–20~70℃
	Humidity	5% to 95% RH (non-condensing)
	Protection Level	IP67
Mechanical data	Connection Method	Cable Connection
	Dimensions	74.5x93.1x100.5mm
	Weight	about 450g
	Accessories	M12-12PIN-3M (3m high-flex), M12-8PIN-3M (3m high-flex), L-shaped mounting bracket, 24V power adapter (optional), screw kit
	Model	RCD-AI2000-HC

Demensions

Unit：mm



RCD-AI500 Series

NEW!

CE

Basic Features	Operating Principle	CMOS
	Shell Style	Square
	Detection Range	Based on lens specifications
	Field of View	–
	Focal Length	–
	Focus Adjustment Method	C port
	Resolution	2448x2048
	Light Source	External light source
	Code Type	One-dimensional code：Code39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC,Pharmacode； Two–dimensional code：QR code,DataMatrix
	Color/Black and White	Black and White
	Shutter	Rolling shutter
	Indicator Light	1 green light point indicates the center area of the scanning position; 5 status LEDs and buzzers
Electrical data	Image Sensor Size	2.74μmx2.74μm
	Target Surface Size	1/1.8"
	Maximum Reading Speed	30/second
	Exposure Time	20us~1sec
	Gain	0dB~255dB
	Operating Voltage	24VDC
	Power Consumption	15W
	Output Type	Two-channel input control, optocoupler isolation - supports NPN, PNP type; three-channel output control, optocoupler isolation
	Communication Protocol	TCP Server、TCP Client、ModBus TCP、ModBus RTU、Profinet、Ethernet/IP、MELSEC/SLMP、Fins、Serial
	Communication Interface	RS232, Ethernet
Environmental conditions	Operating Temperature	0~45℃
	Storage Temperature	–20~70℃
	Humidity	5% to 95% RH (non-condensing)
	Protection Level	IP67
Mechanical data	Connection Method	Cable Connection
	Dimensions	74.5x100.5x93.1mm
	Weight	about 450g
	Accessories	M12-12PIN-3M (3m high-flex), M12-8PIN-3M (3m high-flex), L-shaped mounting bracket, 24V power adapter (optional), screw kit
	Model	RCD-AI500-C

Demensions

Unit：mm