

1GigE Industrial Area Scan Camera

PMS-CCN120VP2ABSC

12.6 MP | 1.1-inch | Monochrome | Global Shutter

Designed for reliable machine-vision deployment

A compact 12.6 MP monochrome GigE camera platform combining global-shutter imaging, low power consumption and industrial connectivity for inspection and measurement applications.

1

Classic 1GigE compact area-scan architecture

Proven platform for general-purpose industrial imaging.

2

Ultra-low power consumption

Designed for stable, reliable continuous operation.

3

Gigabit Ethernet, up to 100 m

Long-distance transmission without a repeater, subject to network configuration.



PRECISION IMAGING | STABLE DATA | LONG-DISTANCE CONNECTIVITY

RESOLUTION

4096 x 3072

PIXEL SIZE

3.4 um

SENSOR

1.1-inch

INTERFACE

1GigE / RJ45

Series Upgrade Highlights

POMEAS 1GigE area-scan camera platform

1. Significant improvements in ease of use, stability and reliability.
2. Available resolutions include 0.4 MP, 1.3 MP, 1.6 MP, 2.0 MP, 2.3 MP, 5.0 MP, 6.0 MP, 6.3 MP, 8.0 MP, 12.0 MP and 20.0 MP.
3. Most models use mainstream high-performance domestic imaging chips to deliver high image quality.
4. Industry-leading ultra-low-power design.
5. Uses a common driver and SDK, with compatibility to the previous-generation MGS product family.
6. Supports a wide 12-24 V input range.
7. Expanded functionality:
 - (1) Upgraded B3 acquisition software aligned with mainstream industry workflows for improved usability.
 - (2) Supports SUM (adjacent-pixel summing), BIN (adjacent-pixel averaging) and SKIP (line skipping).
 - (3) Arbitrary ROI adjustment down to 1 pixel.
 - (4) Hardware ISP processing without consuming industrial-PC CPU resources.
 - (5) Trigger buffer function.
 - (6) Multi-frame triggering with adjustable parameters.
 - (7) Minimum exposure down to 1 us for high-speed capture.
 - (8) Global-shutter models support multiple exposure sets and fast parameter switching (except MGV1209 color models).
8. High cost-performance ratio.

Performance Specifications

Parameter	Specification
Model	PMS-CCN120VP2ABSC 12.6 MP Monochrome GigE Industrial Camera
Sensor Type	CMOS, Global Shutter
Pixel Size	3.4 um x 3.4 um
Sensor Format	1.1-inch, 17.4 mm diagonal
Resolution	4096 x 3072; supports 1/2 line skipping
Mono / Color	Monochrome
Max. Frame Rate	9.4 FPS @ 4096 x 3072 MONO8
Dynamic Range	67.9 dB
SNR	39.5 dB
Bit Depth	12 bit
Gain	1x-16x (1x-5x step: 0.25x; 5x-16x step: 1x)
Exposure Time	1 us - 10 s; step: 1 us

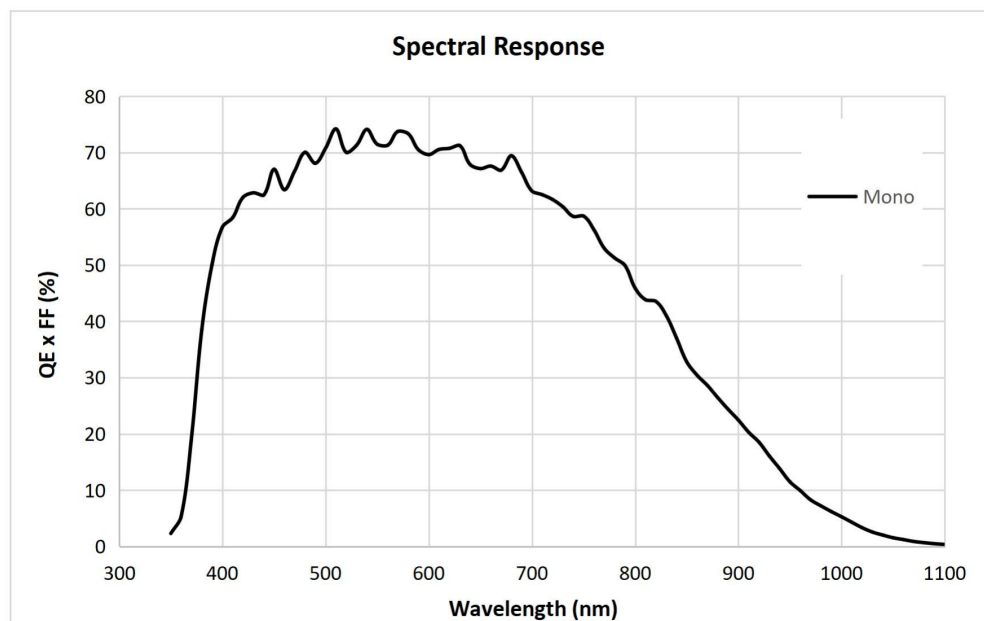
PMS-CCN120VP2ABSC

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Technical Specifications - Continued

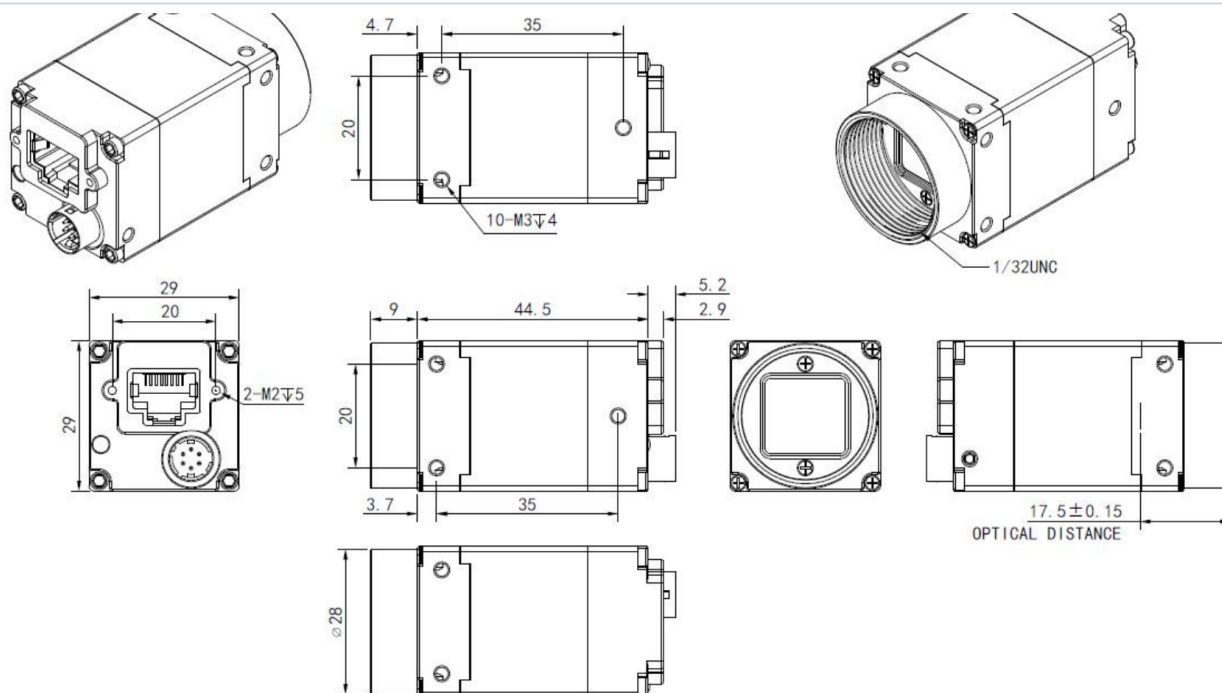
Camera Functions	
Exposure Modes	Auto exposure / Manual exposure / Pulse-width-controlled exposure / Multiple exposure
Strobe Function	Supported
Output Image Formats	MONO8, MONO12Packed
Pixel Combination	SUM2 / SUM4 / BIN2 / BIN4 / SKIP2 / SKIP4 User: 1x2, 2x1, 1x4, 4x1, 2x4, 4x2, 2x2, 4x4
Trigger Modes	Hardware trigger, software trigger
Image Buffer	1 Gbit
ISP Functions	Contrast, LUT, gamma correction, sharpness adjustment, noise reduction, flat-field correction, defect-pixel removal, multi-parameter exposure, horizontal/vertical mirroring
Electrical Characteristics	
Data Interface	1000 Mbps Ethernet; RJ45 connector with fixing screw holes
I/O Interface	1 opto-isolated input, 1 opto-isolated output, 1 GPIO (non-isolated)
Power Supply	12-24 V DC; PoE power supply
Typical Power	2.9 W @ 12 VDC
Mechanical & Environmental	
Lens Mount	C-mount
I/O & Power Connector	6-pin industrial circular connector
Optical Filter	Full-spectrum AR filter
Dimensions	29 mm x 29 mm x 44.5 mm (excluding lens mount)
Weight	Approx. 73.5 g
IP Rating	IP40 (with lens and cables correctly installed)
Temperature	Operating: -10 C to 40 C; Storage: -20 C to 70 C
Humidity	5% to 90% RH, non-condensing
Software & Protocols	
Software	SDK and related demo/calibration software: BasedCam3
Operating System	Windows 7/10 32/64-bit; PC Linux 32/64-bit
Protocol / Standard	GigE Vision V1.2, GenICam
Compatible Software	NI MAX, Halcon, LabView, VisionPro, MVS, VisionMaster
Certification	CE, RoHS

Spectral Response



Mechanical Dimensions

Unit: mm



Dimensions are taken from the source mechanical drawing.

I/O Pin Definition

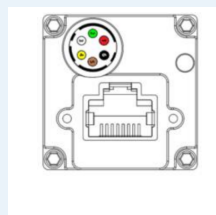
Pin	Color	Definition	Signal	Description	Isolation	Circuit	Input / Output
1	Red	POWER_IN		DC power positive			DC 12-24 V (+/-10%)
2	Green	TRIG+	Line 1+	Trigger input +	Isolated	Optocoupler	Low: 0-1 V High: 5-24 V
4	Yellow	Flash_out+	Line 2+	Strobe output +	Isolated	Optocoupler	Optocoupler current limit: 20 mA
5	Brown	COM	Line 1/2-	Common negative for trigger / strobe optocouplers			
3	White	GPIO	Line 3+	General-purpose input/output	Non-isolated		Input low: 0-0.7 V Input high: 2.9-3.6 V Output low: 0 V Output high: 3.6 V
6	Black	GND	Line 3-	Power negative / GPIO ground			
	Clear	Shield		Connected to camera housing			Note: shield wire covered with transparent heat-shrink tubing

Trigger / I/O Connector

6-pin industrial circular connector plus RJ45 GigE port.

Refer to the pin table above for electrical definitions.

Camera power input: 12-24 V DC or PoE.



T Operating Temperature & Heat Dissipation

1. If the ambient operating temperature is above 40 C and at or below 50 C, additional heat dissipation is required. It is recommended to mount the camera directly on an iron or aluminum metal block with an area of at least 270 cm² and a thickness of at least 2 mm.
2. Under all conditions, the ambient temperature around the camera must not exceed 50 C.