

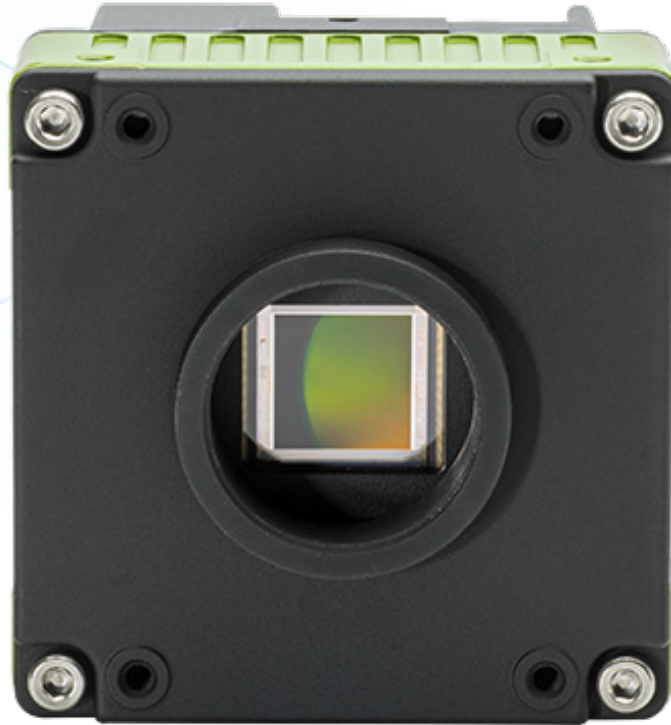
# SP-25000C-CXP4A

## Technical Datasheet



See the possibilities

**GMAX0505**



## Apex Series



Spark Series area scan cameras are the perfect choice for machine vision applications demanding high quality images with the highest possible throughput. They feature the latest CMOS imagers delivering high resolution images at speeds as much as 10 times faster than traditional CCD cameras.

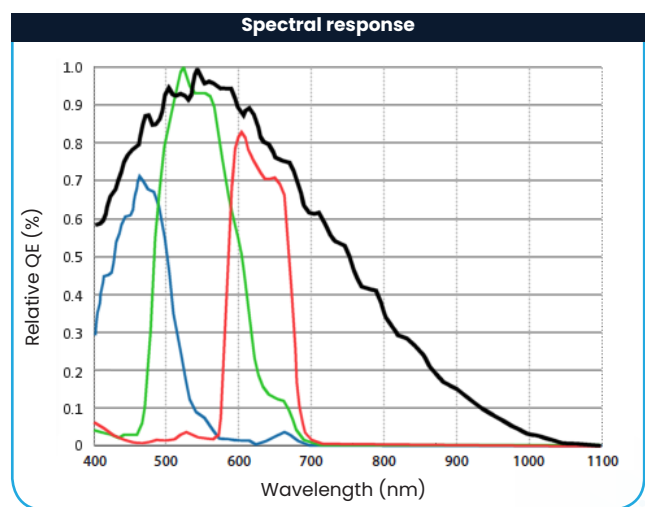
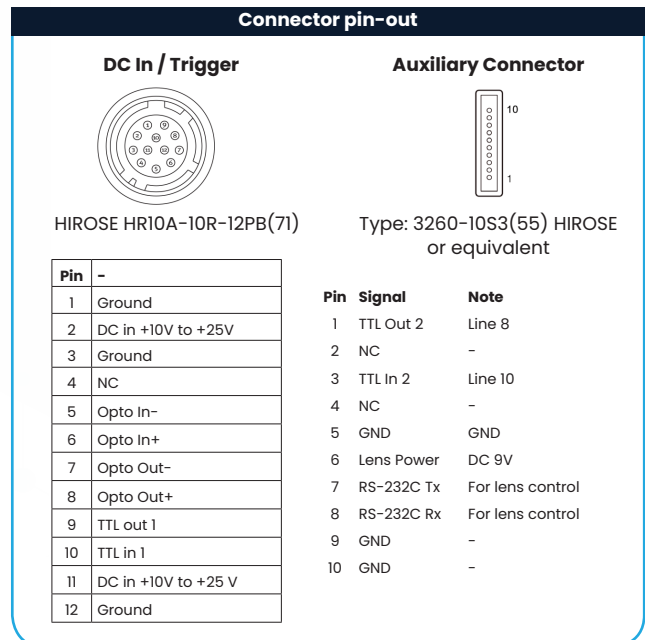
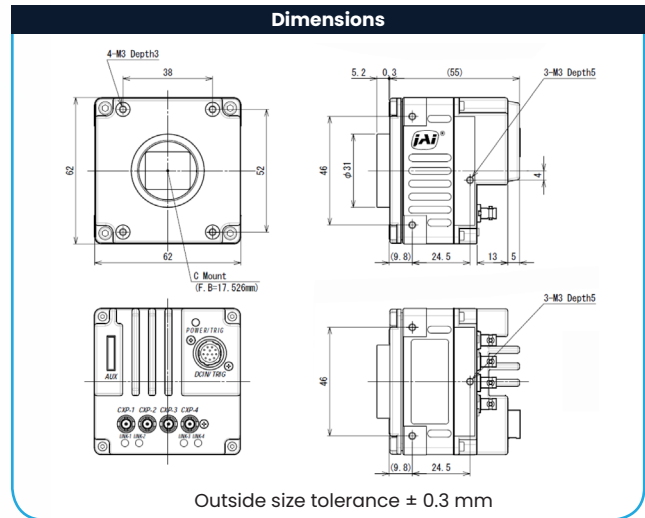
For example, 45-megapixel (MP) models can deliver over 50 fps output while some 5-MP models run at 250 fps or more. Using the region-of-interest (ROI) feature, even higher frame rates can be achieved.

### Specification Highlights

**SENSOR:** GMAX0505  
**FORMAT:** 1.1"  
**PIXEL SIZE:** 2.5 x 2.5  $\mu\text{m}$   
**LENS MOUNT:** C-Mount  
**SPECTRUM:** Color (Visible)

**SHUTTER:** Global Shutter  
**FRAME RATE:** 150 fps  
**INTERFACE:** CoaXPRESS-4-Cable (PoCXP)  
**RESOLUTION MP:** 26.2 MP  
**RESOLUTION WxH:** 5120 x 5120 px

Specifications		SP-25000-CXP4A
Sensor	26.2 MP, 1.1-inch CMOS global shutter	
Active pixels	5120 (h) x 5120 (v)	
Frame rate, full frame	150 frames/sec. @ 8-bit mono/Bayer	
Active area	12.8 mm (h) x 12.8 mm (v) - 18.1 mm diagonal	
Pixel size	2.5 μm x 2.5 μm	
Read-out modes		
Full ROI (single)	5120 (h) x 5120 (v) up to 150 fps H: 128 - 5120 pixels in 128-pixel steps V: 8 to 5120 lines in 4-line steps	
Binning	1x2, 2x1, 2x2 (mono only)	
EMVA 1288 Parameters	12-bit output format	
Absolute sensitivity	Mono: TBD p Color: TBD p (λ = 531 nm)	
Maximum SNR	Mono: TBD dB Color: TBD dB	
Traditional SNR*	>47 dB mono, >47 dB color (0 dB gain, 150 fps, 8-bit)	
Video signal output	Monochrome: mono8 Color: BayerRG8, BayerGB8, BayerGR8, BayerBG8	
Video modes	Normal/Single ROI, Multi ROI, Sequencer (Trigger & Command)	
Interface	CoaXPress v2.0 (CXP-12, Micro BNC connectors) Link Configs: CXP12_X4, CXP12_X3, CXP12_X2, CXP12_X1, CXP6_X4, CXP6_X3, CXP6_X2, CXP6_X1	
Gain	Manual/auto 0 dB to +24 dB	
White balance	Off, presets (4000K, 4600K, 5000K, 6500K, 7500K), or one-push/continuous AWB (3000K to 9000K)	
Gamma/LUT	0.45 to 1.0 (9 steps) or 257-point programmable LUT	
Image correction & enhancement	Flat shading, color shading (color model only), edge enhancement	
Trigger input	Opto In, TTL In (2), Pulse Generators (4), Software, NAND Out (2), User Output (4)	
Exposure modes	Timed/EPS, Trigger Width, Auto	
Electronic shutter	Timed: 9 μs to 8 s Trigger width: 9 μs to ∞ s	
Auto Level Control (ALC)	Shutter range from 100 μs to ~6.6 ms, gain range from 0 dB to +24 dB. Tracking speeds and max. values adjustable.	
Operating temp. (ambient)	-5°C to +45°C (20 to 80% non-condensing)	
Storage temp. (ambient)	-25°C to +60°C (20 to 80% non condensing)	
Vibration	10G (20 Hz to 200 Hz, XYZ directions)	
Shock	80G	
Regulations	CE (EN 55032:2015, EN 55035:2017) FCC Part 15 Class B, RoHS/WEEE	
Power	12-pin PoCXP	+10V to +25V DC. 16.5 W typical @ +12 V Some limitations apply. See manual for details.
Lens mount	C-mount (17.526 mm FBD)	
Lens control	Signals available via 10-pin Aux connector	
Dimensions (H x W x L)	Signals available via 10-pin Aux connector	
Weight	305 g	
Ordering Information		
SP-25000M-CXP4A	26 megapixel monochrome camera with CoaXPress	
SP-25000C-CXP4A	26 megapixel color camera with CoaXPress	



\*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time.

## Product Highlights

- High resolution 26.2 megapixel CMOS image sensor (global shutter)
- Up to 150 fps for 8-bit output at full resolution (5120 x 5120)
- Two models - monochrome or raw Bayer color output provided
- Compact 1.1-inch optical format (18.1 mm diagonal) with 2.5  $\mu\text{m}$  square pixels
- Horizontal / vertical image flip function, single ROI and multi-ROI modes
- Excellent shock and vibration resistance (80G shock / 10G vibration)
- 4-channel, GenICam-compliant CoaXPress 2.0 interface
- 4 micro-BNC connectors support CXP-12 or CXP-6 lane speeds
- Can share processing across multiple PCs with the CXP link sharing function
- C-mount lens mount

## Additional Product Images



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners.

JAI A-S and Machine Vision Direct, LLC Cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notice