

REDWOOD™

12MP CAMERAS



CoaXPress

Video Cameras with AMS CMV12000 Sensors

APPLICATIONS

Automated Optical Inspection

Wide Area Observation

Virtual Reality and Special Effects

Scientific Research



FEATURES INCLUDE:

- Monochrome and Color Models
- High Resolution with High Speed Output
- Advanced Global Shutter CMOS Sensor
- Fast CoaXPress 2.0 Video Output with Coaxial or Fiber Optic Cabling Options
- Selectable 8/10/12-bit Data Formats
- Multiple Lens Mount Options
- Multi-ROI with up to 16 Separate Windows
- Flexible Image Adjustment and Enhancement

IO
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SPECIFICATIONS

Camera Model	Redwood 12MP
Sensor Size (H x V)	4096 x 3072 (12.6 MP)
Frame rate (full resolution)	335 fps (8-bit), 299 fps (10-bit), 132 fps (12-bit)
Optical Format	APS-C (28.1 mm diagonal)
Sensor Type	CMOS w. global electronic shutter
Sensor Options	Monochrome or color (Bayer)
Pixel Size	5.5 x 5.5 μ m
Dynamic Range	59.5 dB; optional Piecewise HDR or Interleaved HDR
Output Configurations	1/2/4 links at 3.125 / 5.0 / 6.25 / 10.0 / 12.5 Gbps via coaxial or fiber cabling (QSFP+)
Multiple ROI / Binning	Up to 16 non-overlapping windows. Optional 2x2 binning/summing or 1/2 subsampling.
Pixel Bit Depth	8/10/12-bit output
Exposure Control	Programmable or level-controlled exposure, triggered double exposure (PIV), or auto exposure
Image Correction	Black level, FPN/PRNU, bad pixel replacement, FFC, denoise filter, detail enhancement filter
Color Processing	White balance (Auto one-shot, tracking, or manual), Gamma LUTs
Camera Configuration	GenICam or Redwood Control software
Mechanical/Electrical	
Dimensions	62.0 mm x 62.0 mm x 154.7 mm (WxHxD, with F-mount)
Lens Mount	C-mount, F-mount, M52 x 0.75, Active Canon EF-mount or Active Canon RF-mount.
Weight	715 g (with F-mount, no lens)
Power Requirements	Approx. 20W @ 12V DC via Hirose 6-pin, CX models support PoCXP (min. 2 links required)
Additional I/O (Hirose 12-pin)	TTL-level trigger input/output
Operating Temperature	-10°C to 50°C, 20-85% humidity (non-condensing)
Storage Temperature	-40°C to 85°C, 10-90% humidity (non-condensing)

FRAME RATE CHART

Example Output Resolution:	CXP Connection*:	ADC Mode:		
		8-bit	10-bit	12-bit
		8-bit	8/10-bit	8/10/12-bit
Maximum (4096 x 3072)	4x CXP-12	335	299	132
	2x CXP-12 / 4x CXP-6	188	150	125
	1x CXP-12 / 2x CXP-6 / 4x CXP-3	94	75	62
4K UHD (3840 x 2160)	4x CXP-12	475	424	187
	2x CXP-12 / 4x CXP-6	266	213	177
	1x CXP-12 / 2x CXP-6 / 4x CXP-3	133	107	89
HD 1080p (1920 x 1080)	4x CXP-12	936	838	371
	2x CXP-12 / 4x CXP-6	936	838	371
	1x CXP-12 / 2x CXP-6 / 4x CXP-3	528	424	352

*both Coaxial and CoaxPress-over-Fiber models support configurations up to 4x CXP-12

ORDERING

Example: 120C335CCX-F

Camera
120C335

Lens Type

C - C-mount
F - F-mount
M - M52 x 0.75
A - Active EF-mount
AO - Active EF-mount w. OLPF/IR-Cut Filter
R - Active RF-mount

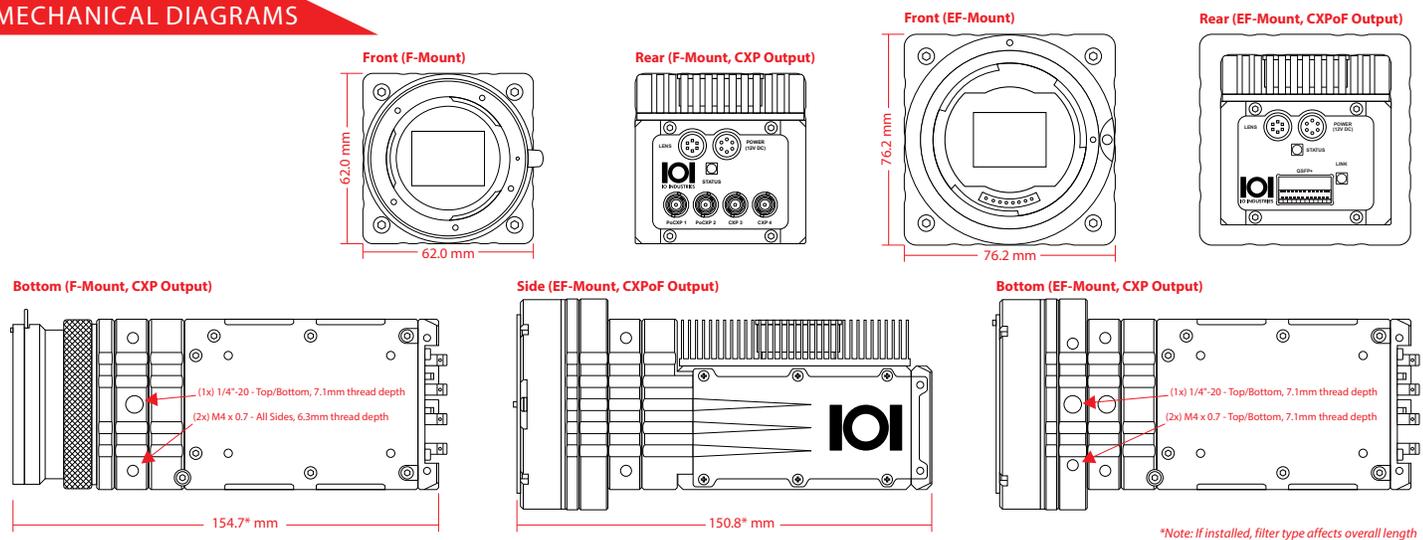
Sensor Type

M - Monochrome
C - Color (with IR-Cut filter)

Interface

CX - CoaXPress (Coaxial)
CQ - CoaXPress-over-Fiber (QSFP+)

MECHANICAL DIAGRAMS



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Specifications subject to change without notice