

# 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**  
INDUSTRIES

# SPECIFICATIONS

<b>Camera Model</b>	<b>Redwood 12MP</b>
<b>Sensor Size (H x V)</b>	4096 x 3072 (12.6 MP)
<b>Frame rate (full resolution)</b>	335 fps ( 8-bit), 299 fps (10-bit), 132 fps (12-bit)
<b>Optical Format</b>	APS-C (28.1 mm diagonal)
<b>Sensor Type</b>	CMOS w. global electronic shutter
<b>Sensor Options</b>	Monochrome or color (Bayer)
<b>Pixel Size</b>	5.5 x 5.5 $\mu$ m
<b>Dynamic Range</b>	59.5 dB; optional Piecewise HDR or Interleaved HDR
<b>Output Configurations</b>	1/2/4 links at 3.125 / 5.0 / 6.25 / 10.0 / 12.5 Gbps via coaxial or fiber cabling (QSFP+)
<b>Multiple ROI / Binning</b>	Up to 16 windows with optional 2x2 binning, or with full-size window 1/2 subsampling can be used
<b>Pixel Bit Depth</b>	8/10/12-bit output
<b>Exposure Control</b>	Programmable or level-controlled exposure, triggered double exposure (PIV), or auto exposure
<b>Image Correction</b>	Black level, FPN/PRNU, bad pixel replacement, FFC, denoise filter, detail enhancement filter
<b>Color Processing</b>	White balance (Auto one-shot, tracking, or manual), Gamma LUTs
<b>Camera Configuration</b>	GenICam or Redwood Control software

## Mechanical/Electrical

<b>Dimensions</b>	62.0 mm x 62.0 mm x 154.7 mm (WxHxD, with F-mount)
<b>Lens Mount</b>	F-mount, M52 x 0.75 or Active Canon EF-mount
<b>Weight</b>	715 g (with F-mount, no lens)
<b>Power Requirements</b>	Approx. 12W @ 12V DC via Hirose 6-pin, CX models support PoCXP (min. 2 links required)
<b>Additional I/O</b>	TTL-level trigger input/output
<b>Operating Temperature</b>	-10°C to 50°C, 20-85% humidity (non-condensing)
<b>Storage Temperature</b>	-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
	Output:	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  
F - F-mount

M - M52 x 0.75

A - Active EF-mount

AO - Active EF-mount w. OLPF/IR-Cut Filter

Sensor Type

M - Monochrome

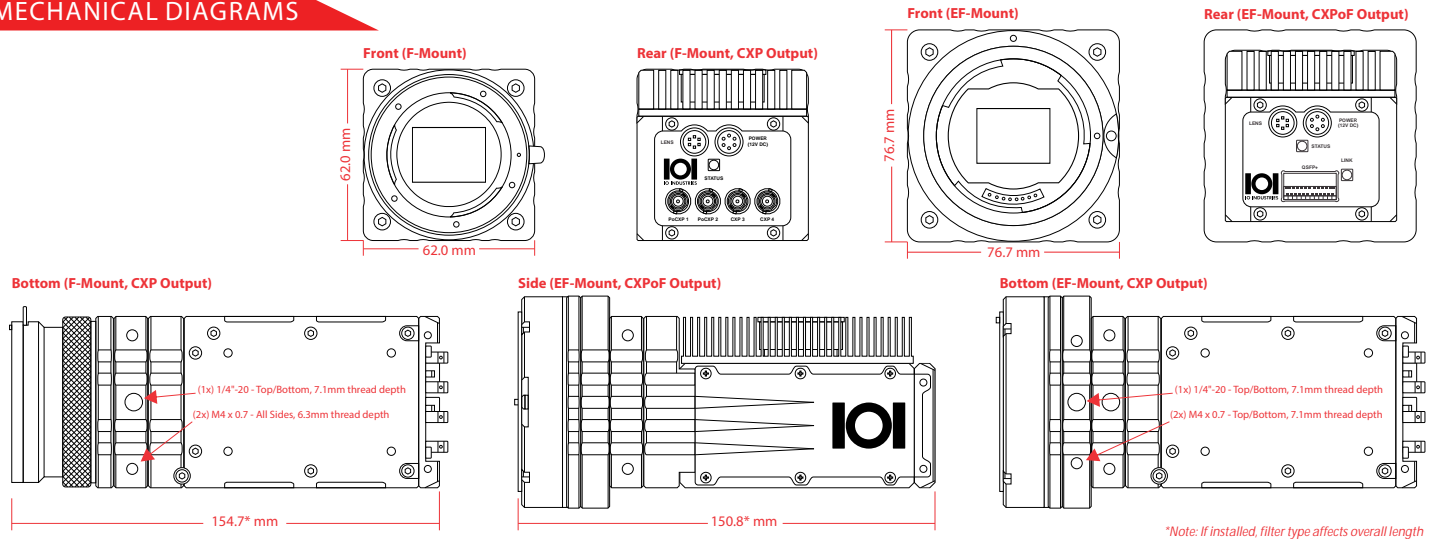
C - Color (with IR-Cut filter)

Interface

CX - CoaXPress (Coaxial)

CQ - CoaXPress-over-Fiber (QSFP+)

## MECHANICAL DIAGRAMS



Visit us at: [www.ioindustries.com](http://www.ioindustries.com)  
 15940 Robin's Hill Road  
 London, Ontario, Canada, N5V 0A4  
 Tel: +1 519 663 9570  
 Email: [sales@ioindustries.com](mailto:sales@ioindustries.com)

## LET'S STAY CONNECTED!



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