

REDWOOD™

45MP CAMERAS



CoaxPress

Video Cameras with ON Semiconductor XGS 45000 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

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SPECIFICATIONS

Camera Model	Redwood 45MP
Sensor Size (H x V)	8192 x 5468 (44.7 MP)
Frame rate (full resolution)	52 fps (8-bit), 52 fps (10-bit), 47 fps (12-bit)
Optical Format	Super 35 (31.5 mm diagonal)
Sensor Type	CMOS w. global electronic shutter
Sensor Options	Monochrome or color (Bayer)
Pixel Size	3.2 x 3.2 μ m
Dynamic Range	67.5 dB (up to 73dB with Dual ADC Gain 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 windows with optional 2x2 binning, or with full-size window 1/2 subsampling can be used
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, 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	F-mount, M52 x 0.75 or Active Canon EF-mount
Weight	715 g (with F-mount, no lens)
Power Requirements	Approx. 12W @ 12V DC via Hirose 6-pin, CX models support PoCXP (min. 2 links required)
Additional I/O	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: Output:	10-bit		12-bit		
			8-bit	10-bit	8-bit	10-bit	12-bit
Maximum (8192 x 5468)	4x CXP-12		52	52	47	47	47
	2x CXP-12 / 4x CXP-6		52	41	47	41	34
	2x CXP-10 / 4x CXP-5		38	30	38	30	25
8K UHD TV2 (7680 x 4320)	1x CXP-12 / 2x CXP-6 / 4x CXP-3		26	20	26	20	17
	4x CXP-12		65	65	60	60	60
	2x CXP-12 / 4x CXP-6		65	56	60	56	46
	2x CXP-10 / 4x CXP-5		35	28	35	28	23
	1x CXP-12 / 2x CXP-6 / 4x CXP-3		51	41	51	41	34

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

ORDERING

Example: 447X52MCX-F

Camera
447X52

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

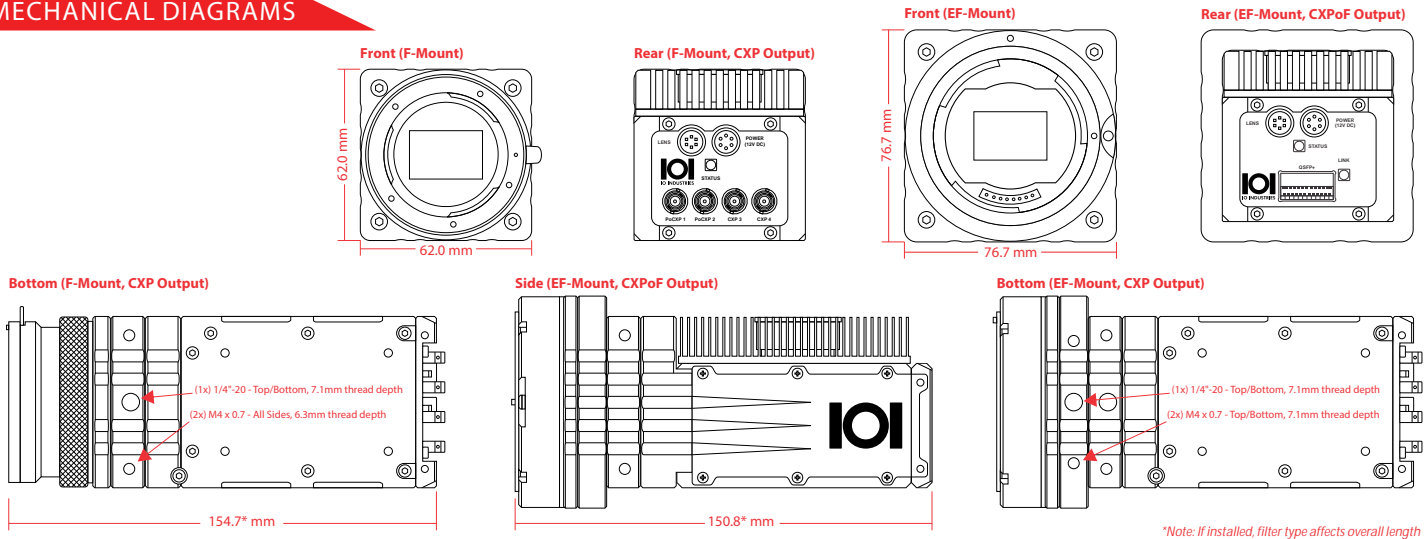
C - Color (with IR-Cut filter)

Interface

CX - CoaXPress (Coaxial)

CQ - CoaXPress-over-Fiber (QSFP+)

MECHANICAL DIAGRAMS



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Datasheet Rev. 2.0 (09/16/2021)
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