Flare™

2MP/4MP CAMERAS

Video cameras with CMOSIS CMV2000 & CMV4000 Sensors

APPLICATIONS

- **Automated Inspection**
- **High Speed Motion Analysis**
- **Research Imaging**
- **Specialty Video Production**

FEATURES INCLUDE:

- Monochrome, Colour and Near-IR Models
- Global Shutter CMOS with CDS
- Camera Link Output
- C-mount or optional Active EF-mount
- Selectable 8-bit or 10-bit Data Formats
- Multiple ROIs and Subsampling
- High Sensitivity with Low Noise
- Low Power Consumption

IO INDUSTRIES

SPECIFICATIONS

Camera Model	Flare 2MP	Flare 4MP
Sensor Size (H x V)	2048 x 1088	2048 x 2048
Frame rate (full resolution)	337 fps (8-bit), 281 fps (10-bit)	179 fps (8-bit), 149 fps (10-bit)
Optical Format	Approx. 2/3" (12.7mm diagonal)	1" (15.9mm diagonal)
Sensor Type	CMOS w. global electronic shutter	
Sensor Options	Monochrome, color (Bayer) or NIR-enhanced monochrome	
Pixel Size	5.5 x 5.5µm	
Dynamic Range / Sensitivity	60 dB, 5.56 V/lux.s	
Output Configurations	Base, Medium, Full, Full 80-bit (80MHz Pixel Clock)	
Pixel Bit Depth	8-bit or 10-bit	
Exposure Control	Trigger width, timed, or auto-exposure control	
Image Correction	Column-based FPN/PRNU correction, bad pixel replacement	
Color Processing	Auto white balance (tracking or manual), programmable LUTs	
Camera Configuration	ASCII commands or Flare Control software	
Mechanical/Electrical		
Dimensions	63.5 mm x 63.5 mm x 44.1 mm	
Lens Mount	C-mount or T-mount (M42 x 0.75)	
Weight	310g	
Power Requirements	2.5W, 12V DC via Hirose 12-pin or PoCL	
Additional I/O (Hirose 12-pin)	Opto-isolated trigger input/output, EF-mount lens control interface	
Operating Temperature	-10°C to 50°C, 20-85% humidity (non-condensing)	
Storage Temperature	-40°C to 85°C, 10-90% humidity (non-condensing)	

ORDERING

Example: 2M360CCL-E

Camera
2M360
4M140

Sensor Type
M - Monochrome
C - Color (with IR filter)
N - Near-IR Enhanced Monochrome

E - Enhanced Noise Reduction
(available for 2M360CCL only)
N - No IR filter installed
(available for color models only)

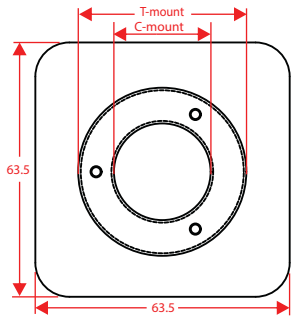
Interface
CL - Camera Link

FRAME RATE CHART

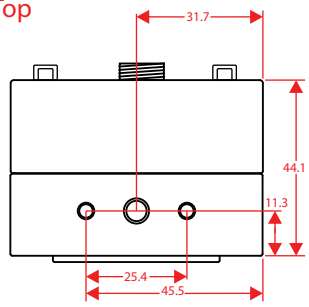
Frame Rates by Resolution and Bit Depth	2M360xCL (CL Full 80-bit)		4M180xCL (CL Full 80-bit)	
	8-bit	10-bit	8-bit	10-bit
2048 x 2048	-	-	179	149
2048 x 1536	-	-	238	198
2048 x 1088	337	281	334	278
1920 x 1080	340	283	337	280
1280 x 1024	358	298	355	295
1280 x 720	507	422	500	417
800 x 600	607	505	597	497
640 x 480	755	629	740	616

MECHANICAL DIAGRAMS

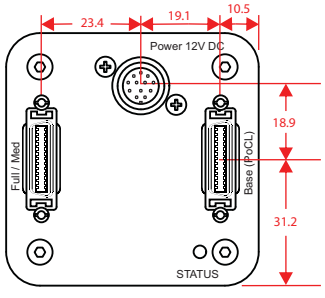
Front



Top



Rear



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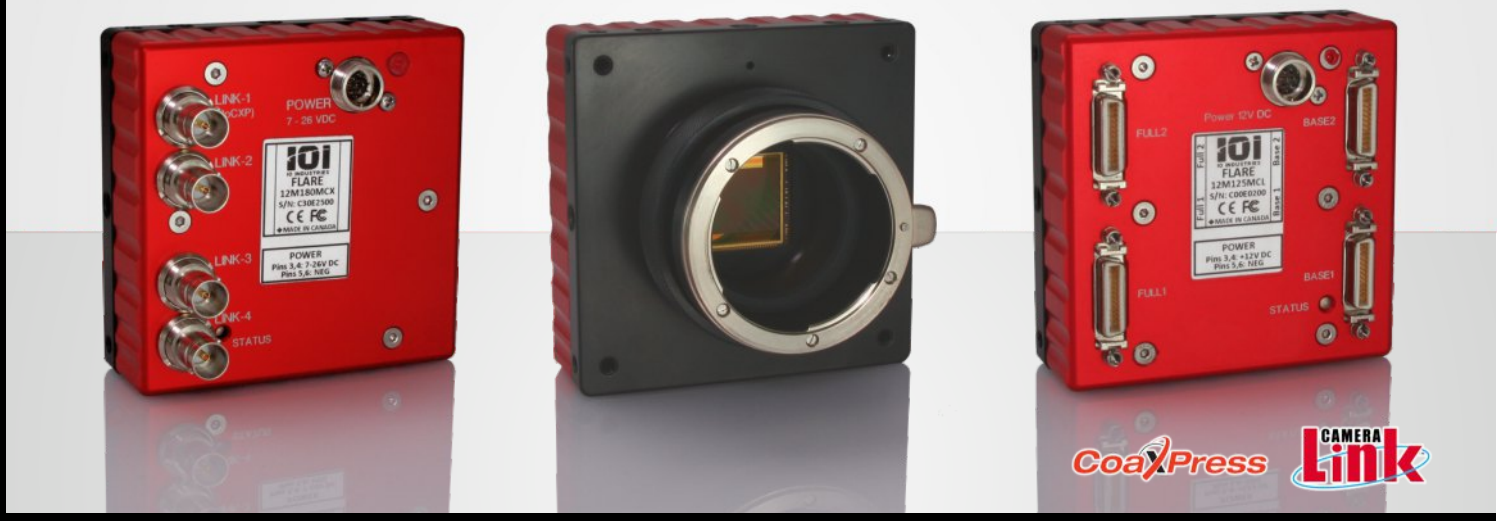
Flare™

12MP CAMERAS



Video cameras with CMOSIS CMV12000 Sensors

APPLICATIONS

- **Automated Inspection**
- **High Speed Motion Analysis**
- **Research Imaging**
- **Specialty Video Production**

FEATURES INCLUDE:

- Monochrome and Color Models
- Global Shutter CMOS with CDS
- CoaXPress or Camera Link Output
- Multiple Lens Mount Options
- Selectable 8-bit or 10-bit Data Formats
- High Sensitivity with Low Noise
- Advanced Auto Exposure Control
- Auto White Balance

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SPECIFICATIONS

Camera Model	**Flare 12MP**
Sensor Size (H x V)	4096 x 3072
Frame rate (full resolution)	CX: 187 fps (8-bit), 149 fps (10-bit) CL: 124 fps (8-bit), 100 fps (10-bit)
Optical Format	Super 35mm / APS-C (28.1mm diagonal)
Sensor Type	CMOS w. global electronic shutter
Sensor Options	Monochrome or Color (Bayer)
Pixel Size	5.5 x 5.5µm
Dynamic Range / Sensitivity	60 dB, 4.64 V/lux.s
Output Configurations	CX: 1/2/4 links at 3.125Gbps (CXP-3), 5.0Gbps (CXP-5) or 6.25Gbps (CXP-6) CL: Base, Medium, Full, Full 80-bit, Dual Full 80-bit (80MHz Pixel Clock)
Pixel Bit Depth	8-bit or 10-bit
Exposure Control	Trigger width, timed, or auto-exposure control
Image Correction	Black level, row and column-based FPN/PRNU correction, bad pixel replacement
Color Processing	Auto white balance (tracking or manual), programmable LUTs
Camera Configuration	GenICam (CX), ASCII commands (CL), or Flare Control software
Flat Field Correction	Available for CX camera models
	Mechanical/Electrical
Dimensions	91.7 mm x 91.7mm x 74.5 mm (with F-mount)
Lens Mount	F-mount, Active EF-mount, C-mount or T-mount (M42 x 0.75)
Weight	600g (with F-mount)
Power Requirements	CX: 9.5W, 7-26V DC via Hirose 12-pin or 24V via PoCXP CL: 7.5W, 12V DC via Hirose 12-pin
Additional I/O (Hirose 12-pin)	TTL-level trigger input/output, EF-mount lens control interface
Operating Temperature	-30°C to 45°C, 20-85% humidity (non-condensing)
Storage Temperature	-40°C to 85°C, 10-90% humidity (non-condensing)

ORDERING

Example: 12M180MCX-F

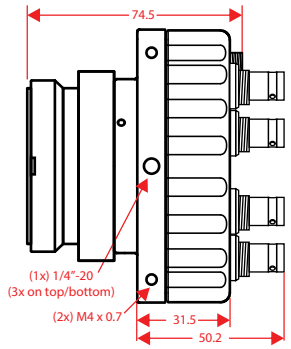
- Camera: 12M180 (CX), 12M125 (CL)
- Sensor Type: M - Monochrome, C - Color (with IR filter)
- Lens Type: F - F-mount, C - C-mount, M - M42 x 0.75
- Interface: CX - CoaXPress, CL - Camera Link

FRAME RATE CHART

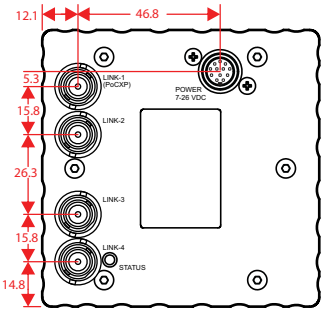
Frame Rates by Resolution and Bit Depth	12M180xCX (4x CXP-6)		12M125xCL (2x Full 80-bit)	
	8-bit	10-bit	8-bit	10-bit
4096 x 3072	187	149	124	100
4096 x 2160 (4K)	266	212	175	141
3360 x 2496	231	184	152	122
2048 x 2048	500	447	370	296
1920 x 1080	935	838	692	555
1000 x 1000	1008	903	924	829
1280 x 720	1384	1242	1268	1139
640 x 480	2032	1827	1863	1677

MECHANICAL DIAGRAMS

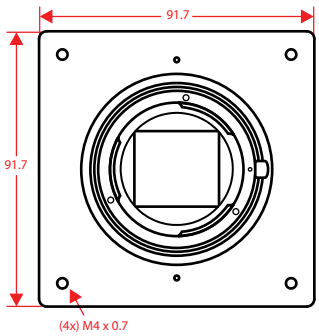
Side (CoaXPress F-Mount Model)



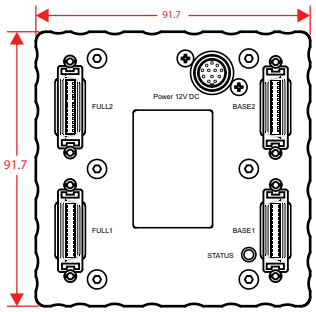
Rear (CoaXPress Model)



Front



Rear (Camera Link Model)



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