

# XCG-CG Series

Digital Video Camera Module

# SONY

2/3-type 5.1 MP 24fps

**XCG-CG240** (B/W) **XCG-CG240C** (Color)

1/1.2-type 2.4MP 41fps

**XCG-CG510** (B/W) **XCG-CG510C** (Color)

## Global Shutter CMOS Sensor

### Cubic Size

Dimensions

29 (W) x 29 (H) x 42 (D) mm

### Unique Image Processing

- Area gain
- Defect pixel correction
- Shading correction

### System Optimization

- PoE/DC12V support
- Noise filter
- IEEE1588 compliant



Exmor

Pregius

GigE VISION

PoE

Sony proudly introduces four new GigE Vision™ cameras to its popular XCG Series: the high-quality, high-resolution XCG-CG240, XCG-CG240C, XCG-CG510, and XCG-CG510C. These cameras incorporate Sony's CMOS image sensor with a global shutter function which is able to accurately capture high-speed moving images. In addition, these new cameras incorporate some unique image processing features including area gain, defect pixel correction, and shading correction. With a compact design, each camera can be integrated into a variety of space-restricted environments. These new advanced features and benefits make XCG GigE Vision Series cameras ideal for various applications such as ITS (Intelligent Transportation Systems) as well as traditional machine-vision applications.

	5.1M GigE Vision		2.4M GigE Vision	
	XCG-CGG510	XCG-CGG510C	XCG-CGG240	XCG-CG240C
B/W /Color	B/W	Color	B/W	Color
Image Sensor	2/3-type Global Shutter CMOS sensor		1/1.2-type Global Shutter CMOS sensor	
Image Sensor (Number of Effective Pixels, H x V)	2,464 x 2,056		1,936 x 1,216	
Cell Size (H x V)	3.45 μm x 3.45 μm		5.86 μm x 5.86 μm	
Frame Rate (8 bit)	23 fps		41 fps	

- External trigger, software trigger
- Short latency
- Special trigger modes : Bulk Trigger, Sequential Trigger
- Look Up Table (LUT)
- Partial scan
- GigE Vision Version 2.0/1.2
- SDK OS support : Windows / Linux
- C mount
- High shock and vibration resistance

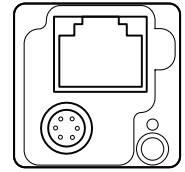
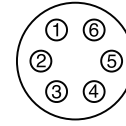
## SPECIFICATIONS

	XCG-CG510	XCG-CG510C	XCG-CG240	XCG-CG240C
<b>Camera</b>				
Image Sensor	2/3-type CMOS Image sensors with a global shutter function (PREGIUS)		1/1.2-type CMOS Image sensors with a global shutter function (PREGIUS)	
Image Sensor (Number of Effective Pixels, H x V)	2,464 x 2,056		1,936 x 1,216	
Cell Size (H x V)	3.45 μm x 3.45 μm		5.86 μm x 5.86 μm	
Output Pixels (H x V)	2,448 x 2,048		1,920 x 1,200	
Frame Rate	23 fps		41 fps	
Minimum Illumination (50%)	0.5 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/23 s)	10 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/23 s)	0.5 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)	10 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)
Sensitivity	F8 (400 lx, Gain: 0 dB, Shutter: 1/23 s)	F8 (2000 lx, Gain: 0 dB, Shutter: 1/23 s)	F5.6 (400 lx, Gain: 0 dB, Shutter: 1/30 s)	F5.6 (2000 lx, Gain: 0 dB, Shutter: 1/30 s)
S/N Ratio	More than 50 dB (Lens close, Gain: 0 dB, 8 bits)			
Gain	Auto, Manual : 0 dB to +18 dB			
Shutter Speed	Auto, Manual : 60 s to 1/100,000 s		Auto, Manual : 60 s to 1/40,000 s	
White Balance	-	Manual, One push, Auto	-	Manual, One push, Auto
<b>Camera Features</b>				
Readout Modes	Normal, Partial scan			
Readout Features	Binnarization, Built-in test pattern			
Synchronization	Hardware trigger, Software trigger, PTP (IEEE1588)			
Trigger Modes	Edge detection, Pulse width detection, Bulk trigger, Sequential trigger			
User Set	16 channels			
User Memory	64 bytes x 16 channels			
Other Features	Shading correction, Defect correction, Temperature readout, Noise filter, LUT, Area gain			
<b>Interface</b>				
Video Data Output	Mono8, 10, 12-bit	Raw8, 10, 12-bit, RGB, YUV444, YUV422	Mono8, 10, 12-bit	Raw8, 10, 12-bit, RGB, YUV444, YUV422
Digital Interface	Gigabit Ethernet (100BASE-TX / 1000BASE-T)			
Camera Specification	GigE Vision Version 1.2/2.0			
Digital Input/Output	ISO IN (x1), GP IN/OUT (x2, selectable)			
<b>General</b>				
Lens Mount	C mount			
Power Requirements	DC +12 V (+10.5 V to +15.0 V), IEEE802.3af (+37 V to +57 V)			
Power Consumption	DC +12 V : 3.0 W (max.) IEEE802.3af : 3.7 W (max.)		IEEE802.3af : 3.6 W (max.)	
Operating Temperature	-5°C to +45°C 23°F to +113°F			
Performance Guarantee Temperature	0°C to 40°C 32°F to 104°F			
Storage Temperature	-30°C to +60°C -22°F to 140°F			
Operating Humidity	20% to 80% (no condensation)			
Storage Humidity	20% to 95% (no condensation)			
Vibration Resistance	10 G (20 Hz to 200 Hz)			
Shock Resistance	70 G			
Dimensions (W × H × D) *1	29 x 29 x 42 mm (excluding protrusions) 1 3/16 x 1 3/16 x 1 11/16 inches (excluding protrusions)			
Mass	65g 2.3 oz			
Regulations	UL60950-1, FCC Class A, CSA C22.2-No.60950-1, IC Class A Digital Device, CE : EN61326 (Class A), AS EMC: EN61326-1, VCCI Class A, KCC, CISPR22/24+IEC61000-3-2/-3			
Supplied Accessories	Lens mount cap (1) Operating instructions (1)			

\*1 The values for dimensions are approximate.

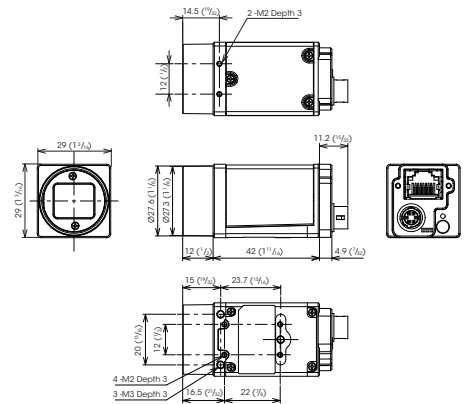
## PIN ASSIGNMENTS

Pin No.	Signal	Pin No.	Signal
1	DC input (10.5 V to 15 V)	4	GP13/GPO3
2	GP11 (ISO +)	5	GP11 (ISO -)
3	GP12/GPO2	6	GND



## DIMENSIONS

Unit: mm (inches)



Distributed by **InterTest, Inc.**  
 303 Route 94  
 Columbia, NJ 07832  
 908-496-8008  
 sales@intertest.com  
 www.intertest.com

MK20084V1YIT16JAN

©2015 Sony Corporation. All rights reserved.  
 Reproduction in whole or in part without written permission is prohibited.  
 Features and specifications are subject to change without notice.  
 The values for mass and dimension are approximate.  
 "SONY", "Pregius" and "Exmor" are registered trademarks of Sony Corporation. All other trademarks are the property of their respective owners.