

XCL-SG Series- Specifications

Basic Specifications	12.4M Camera Link*		5.1M Camera Link*	
	XCL-SG1240	XCL-SG1240C	XCL-SG510	XCL-SG510C
B/W / Colour	B/W	Colour	B/W	Colour
Image Size	12.4 Mega		5.1 Mega	
Image Sensor	1.1-type Global Shutter CMOS sensors (Pregius)		2/3-type Global Shutter CMOS sensors (Pregius)	
Number of Effective Pixels (H x V)	4,112 x 3,008		2,464 x 2,056	
Cell Size (H x V)	3.45 µm x 3.45 µm			
Standard Output Pixels (H x V)	4,096 x 3,000		2,448 x 2,048	
Colour Filter	-	RGB colour mosaic filter	-	RGB colour mosaic filter
Frame Rate	6 fps (Base, 8 bit, 1 tap, Mono/Raw) 13 fps (Base, 8 bit, 2 tap, Mono/Raw)* 20 fps (Base, 8 bit, 3 tap, Mono/Raw) *At the time of shipment		16 fps (Base, 8 bit, 1 tap, Mono/Raw) 32 fps (Base, 8 bit, 2 tap, Mono/Raw)* 48 fps (Base, 8 bit, 3 tap, Mono/Raw) 64 fps (Medium, 8 bit, 4 tap, Mono/Raw) 124 fps (Full, 8 bit, 8 tap, Mono/Raw) 154 fps (80 bit(DECA), 8 bit, 10 tap, Mono/Raw) *At the time of shipment	
Minimum Illumination	0.5 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)	12 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)	0.5 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)	12 lx (Iris: F1.4, Gain: +18 dB, Shutter: 1/30 s)
Sensitivity	F5.6 (400 lx, Gain: 0 dB, Shutter: 1/30 s)	F5.6 (2000 lx, Gain: 0 dB, Shutter: 1/30 s)	F5.6 (400 lx, Gain: 0 dB, Shutter: 1/30 s)	F5.6 (2000 lx, Gain: 0 dB, Shutter: 1/30 s)
SNR	More than 50 dB Lens close, Gain: 0 dB, 8 bit)			
Gain	Auto, Manual : 0 to 18 dB			
Shutter Speed	Auto, Manual : 60 to 1/100,000 s			
White Balance	-	Manual, One push	-	Manual, One push
Camera features				
Readout Modes	Normal, Binning (1x2, 2x1, 2x2)*1, Partial Scan	Normal, Partial Scan	Normal, Binning (2x1, 1x2, 2x2), Partial Scan (Multi ROI)	Normal, Partial Scan (Multi ROI)
Readout Features	LUT (Binarization, Gamma (Arbitrary value settable)), Test pattern			
Synchronization	Hardware trigger, Software trigger			
Trigger Modes	OFF (Free run), ON (Edge detection, Trigger width detection), Burst trigger		OFF (Free run), ON (Edge detection, Trigger width detection), Special trigger (Burst trigger/Bulk trigger/Sequential trigger)	
Userset	16			
User Memory	32 kbytes + 64 bytes x 16ch			
Partial Scan	W (Pixel)	16 to 4,112		16 to 2,464
	H (Line)	4 to 3,008		4 to 2,056
GPO	EXPOSURE/Strobe/LVAL/FVAL/Sensor lead out/Trigger through/Pulse generation signal/User defined 1, 2, 3, 4 (Output switching)			
Other Features	Area gain, Defect correction, Shading correction, Temperature readout, LUT, 3 x 3 filter		Wide dynamic range, Frame accumulation, Area exposure, Area gain, Defect correction, Shading correction, Temperature readout, LUT, 3 x 3 filter	
Interface				
Video Data Output	digital Mono 8, 10, 12 bit (at the time of shipping 8bit)	digital Raw 8, 10, 12 bit (at the time of shipping 8bit)	digital Mono 8, 10, 12, 16** bit (at the time of shipping 8bit)	digital Raw 8, 10, 12, 16** bit (at the time of shipping 8bit)
Base Clock (No. of Taps)	45/65/85 MHz switchable			
Camera Link Tap	1/2/3 switchable		1/2/3/4/8/10 switchable	
Digital Interface	LVDS			
Camera Specification	Camera Link* Version 2.0			
Output Data Clock	45MHz (1, 2, 3tap), 65MHz (1, 2, 3tap), 85MHz (1, 2, 3tap)		45MHz (1, 2, 3, 4, 8, 10tap), 65MHz (1, 2, 3, 4, 8, 10tap), 85MHz (1, 2, 3, 4, 8, 10tap)	
Digital I/O	ISO IN (x1), ISO OUT (x2), TTL IN (x1), TTL IN/OUT (x2, selectable)			
General				
Lens Mount	C mount			
Flange Back	17.526 mm			
Power Requirements	DC +12 V (10.5 V to 15.0 V), PoCL (10 V to 13.0 V)			
Power Consumption	3.8 W max. (DC +12V)		5.0 W max. (DC +12V)*3	
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 80% (no condensation)			
Vibration Resistance	10 G (20 Hz to 200 Hz 20 minutes for each direction -x, y, z)			
Shock Resistance	70 G			
Dimensions (W x H x D)	44 x 44 x 30 mm (excluding protrusions) 13/4 x 13/4 x 13/16 inches (excluding protrusion)			
Mass	Approx. 96 g (Approx. 3.4 oz)			
MTBF	64,461 hours (Approx. 7.4 years)		70,523 hours (Approx. 8.1 years)	
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			
Supplied Accessories	Lens mount cap (1), Operating instructions (1)			

*1 The frame rate does not change. *2 A feature valid when the wide dynamic range feature is ON. *3 When supplying power (PoCL) with 1 camera cable, wide dynamic range, frame accumulation, and area exposure features are not available for use. *4 Safety Regulations: Notes related to safety. Conventional instruction manual content will be included in the "Technical Manual".