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XCG-U100E

Sony expands its line of digital interface cameras to include a new series of models equipped with the GigE Vision interface, satisfying the demand for a long-distance image transfer system that operates over a network (for Machine Vision or Security). These cameras keep the features of the XCD series cameras, which use the EEE1394.b-2002 standard while complying with the GigE Vision ™ and GenICam™ standards.

The XCG Series incorporates the GigE Vision interface, which is specifically standardized for machine vision applications based on Gigabit Ethernet technology. In accordance with the growing demand for large-scale systems, this interface enables the cameras to transfer a large amount of data over long distances. The use of an Ethernet cable and availability of a wide variety of peripheral devices contribute to significant cost-cutting benefits when designing a complete vision system. Moreover, by incorporating a packet re-send mechanism, the XCG Series can securely transmit data to the host computer. These cameras retain some functionality such as bulk trigger mode, sequential trigger mode, and a partial scanning function. The XCG camera series offers choice, flexibility, and high image quality options to match your specific inspection application requirements. By utilizing the features and benefits of the GigE Vision interface, the XCG Series expands the possibilities for factory automation and security applications, while also delivering the potential of significant cost savings.

Features

Compact size
This new camera is quite compact (44 x 33 x 67.5 mm). Its form factor is standard and could facilitate its integration inside various vision systems.

GigE Vision interface
The adoption of the GigE Vision interface adds to the outstanding value and performance of the XCG camera series. Answering the growing demand for large-scale systems, the XCG Series can transfer large data over long distances (up to 100m). In addition, the cameras are reinforced with a packet re-send

mechanism that can eliminate the loss of transferred data. Furthermore, the overall cost of a vision system can be reduced with these cameras thanks to the availability of a variety of peripheral devices.

Driver for XCG Series
The XCG Series is equipped with a Sony-provided, dedicated driver. This image filter driver enables jumbo-packet data transfer across all industry-standard hardware. It is also capable of non-GigE Vision data transfer in GigE Vision environment.

Bilk Trigger Mode/Sequential trigger Mode
The XCG Series features an advanced "Bulk Trigger Mode" and "Sequential Trigger Mode", in addition to its conventional trigger mode. "Bulk Trigger Mode" allows the XCG Series to capture up to 16 images in rapid succession using a single software or hardware trigger. "Sequential Trigger Mode" periodically sends a software or hardware trigger to the camera to capture the successive images. With the cameras' memory channel, up to 16 different settings can be called up to capture these images. Thanks to these beneficial trigger options, the XCG Series reduces the need to receive signals from the host PC.

High Shock and Vibration Resistance
Thanks to their excellent quality of its mechanical design, the XCG Series cameras deliver outstanding performance in the most challenging environmental conditions.

Vertical and Horizontal scanning
Vertical binning

Technical Specifications

Image device	1/1.8" type progressive scan IT CCD
Standard picture size	(HxV) 1,600 x 1,200 (2,000,000 pixels)

Cell size	4,4 x 4,4 µm
Resolution depth	8/10/12 bits/pixel
Lens mount	C mount

Digital interface	100BASE-T (GigE Vision compatible)
Frame rate	15 fps
Sensitivity	400 lx F5.6 (0 dB)
Minimum Illumination	Less than 1 lx (GAIN + 18 dB, F1,4)
Gain control	0 to + 18 dB
Partial scan	Vertical/Horizontal
Binning	Vertical (1x2)
Readout mode	Normal Binning/partial scan
Shutter speed	2 to 1/100,000 s
External trigger shutter	Pulse-edge detection mode, Pulse-width detection mode, special trigger mode (Bulk trigger mode/Sequential trigger mode)
Readout features	• Gamma correction (LUT) • Built-in test pattern • Binarization
Memory channel	16 channels

Power requirements	DC +10.5V to +15.0V
Power consumption	3.1 W
Dimensions	44 (W) x 33 (H) x 67.5 (D) mm
Mass Approx.	Less than 145 g
Operating temperature	-5° to 45°C (23 to 113° F)
Storage temperature	-30° to 60°C (-22° to 140° F)
Operating humidity	20 to 80% (no condensation)
Storage humidity	20 to 95% (no condensation)
Vibration resistance	10 G (20 to 200 Hz)
Shock resistance	70 G

Supplied Accessories

Lens mount cap.	
Operating instructions	