

XCG-H280E

Sony is expanding its popular XCG GigE camera series with the introduction of a new high-quality, high-sensitivity monochrome camera.

The new XCG-H280E incorporates a 2/3-type EXview HAD CCD II™ sensor which provides greater sensitivity in the visible and near-infrared wavelengths than previous models. In addition to inheriting some of the unique features of Sony's XCD Series such as Bulk Trigger and Sequential Trigger modes, the XCG-H280E features a full-HD high frame rate image-transfer capability with 8-, 10-, or 12-bit video data output.

The XCG-H280E incorporates the GigE Vision® interface standard, based on Gigabit Ethernet technology. In response to the growing demand for large-scale systems, this interface enables the camera to transfer a large amount of data over long distances. The use of an Ethernet cable and the availability of a wide variety of peripheral devices contribute to significant cost-cutting benefits when designing a complete vision system.

By utilizing the features and benefits of the GigE Vision, the XCG-H280E camera is ideally suited to the demanding requirements of ITS (Intelligent Transportation Systems) and machine vision applications.

Features

GigE Vision Interface

The adoption of the GigE Vision® Version 1.2 adds to the outstanding value and performance of the XCGH280E camera. Being GenICam compatible, the XCG-H280E is easy to integrate, thanks to a host of commercially available image processing libraries.

High Frame Rate Image Transfer

The XCG-H280E features a high readout rate of uncompressed images for smooth and clear results. This also enables the camera to capture fast-moving objects without sacrificing image quality.

High Sensitivity

Utilizing Sony's latest EXview HAD CCD II technology enables the XCGH280E to capture clear images in lowlight environments. When used with an infrared strobe, the camera's high sensitivity in the near-infrared wavelength delivers outstanding picture quality.

Image Buffer

The XCG-H280E is equipped with an image buffer, which serves as temporary storage for captured images for later transmission or retransmission. This function allows users to maximize bandwidth in multiple-camera operations or reconfirm specific images as required.

Bulk Trigger Mode & Sequential Trigger Mode

In addition to conventional Trigger mode, the XCG-H280E camera features advanced Bulk Trigger and Sequential Trigger modes. The camera supports 16 memory channels that can store up to 16 different camera setups (exposure, gain, LUT).

Bulk Trigger mode allows the XCG camera to capture up to 16 images in rapid succession using a single software or hardware trigger.

Sequential Trigger mode allows the camera to capture a single image using successive setups stored in the memory channels with each software or hardware trigger.

Low Power Consumption and Compact Design

The XCG-H280E camera features low power consumption and a compact 50 x 50 x 57.5 mm (2 x 2 x 2 3/8 in) design. The camera also has the ability to operate at temperatures of up to 50°C / 122°F.

Technical Specifications

General	
Dimensions (W x H x D)	50 x 50 x 57.5 mm (2 x 2 x 2 3/8 inches) (Not including protruding parts)
Mass	200 g (7.0 oz)
Regulations	UL2044, FCC Class A, CE: EN55022, AS/NZ: EN55022, VCCI: Class A, KN22/KN24: Class A
Supplied accessories	Lens mount cap (1) Terminal block (1) Operating instructions (1)
Digital interface	Gigabit Ethernet (1000BASE-T)
Camera specification	GigE Vision® Version 1.2
Digital I/Os	TTL IN (2x), TTL OUT (2x)
Power requirements	DC +12 V (+10.5 V to +15.0 V)
Power consumption	5.3 W (typ.)
Operating temperature	-10°C to +50°C (14°F to 122°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)
Shock resistance	70 G

Lens

Lens mount	C mount
------------	---------

Camera Section

Image sensor	2/3-type progressive scan IT CCD
--------------	----------------------------------

Sensor technology	EXview HAD CCD II
Standard resolution	1,920 x 1,080
Standard resolution (H x V) Full resolution (H x V)	1,920 x 1,440
Standard frame rate	32fps at standard resolution (2ch readout)* *Up to 59.6 fps possible (4ch readout) – subject to network capability.
Cell size (H x V)	4.54 x 4.54 μm
Minimum illumination (50%)	0.5 lx (F1.4, +18 dB, Shutter: OFF)
Sensitivity	400 lx at F8 (0 dB)
Gain	Auto, Manual : 0 dB to +18 dB
Shutter speed	2 sec to 1/100,000 sec
Readout modes	Normal, Binning (2 x 2, 1 x 2, 2 x 1), Partial Scan
Readout features	Gamma (variable), Built-in test pattern
Synchronization	Hardware trigger, Software trigger
Trigger modes	Trigger start, Trigger start and duration, Bulk trigger and Sequential trigger mode
Memory channel (UserSets)	16 channels
User memory	64 Byte x 16 ch
Image buffer	16 frames

Inputs/Output

Video data output	8, 10, 12-bit digital
-------------------	-----------------------