

# XCG-H280CR

## Digital Video Camera Module

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

**EXview HAD CCD II™**



### Features

#### GigE Vision Interface

The adoption of the GigE Vision® Version 1.2 interface adds to the outstanding value and performance of the XCG-H280CR camera. Being GenICam-compatible, the XCG-H280CR is easy to integrate, thanks to a host of commercially available image-processing libraries.

#### High Frame Rate Image Transfer

The XCG-H280CR 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.

Resolution	Frame rate*1	
	2ch*2 (default)	4ch*2
1,920 (H) x 1,080 (V) (16:9, default)	32fps	64fps*3
1,920 (H) x 1,440 (V) (4:3)	26fps	52fps*3

\*1 Approx. value in free run mode

\*2 Readout mode of image sensor

\*3 Frame rate of image sensor. Some image data may not be transferred when the frame rate exceeds transmission capacity.

#### Image Buffer

The XCG-H280CR 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-H280CR 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.

The new XCG-H280CR incorporates a 2/3-type EXview HAD CCD II™ colour sensor which provides great sensitivity with a full-HD high frame rate image-transfer capability with 8-, 10-, or 12-bit video data output.

In addition to inheriting some of the unique features of Sony's XCD Series, such as Bulk Trigger and Sequential Trigger modes, the XCG-H280CR supports useful features for ITS (Intelligent Transportation System) applications such as Chunk Data and Auto Exposure.

The XCG-H280CR incorporates the GigE Vision® interface standard based on Gigabit Ethernet technology. In response to 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-H280CR camera is ideally suited to the demanding requirements of ITS and machine-vision applications.

# XCG-H280CR Specifications

Features

## Chunk Data

The XCG-H280CR camera features metadata readout over Ethernet. The metadata includes Trigger Counter, Offset X, Offset Y, Exposure Time, and GPI Status which are useful in ITS applications.

## Auto Exposure

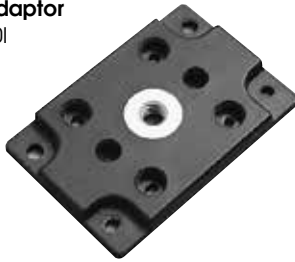
The XCG-H280CR features Auto Exposure which enables the camera to capture high-quality images under various lighting conditions.

## Low Power Consumption and Compact Design

The XCG-H280CR 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.

Optional accessories

## Tripod Adaptor VCT-ST70I



Camera	XCG-H280CR
Image Sensor	2/3-type progressive scan IT CCD
Image Sensor (Number of Effective Pixels, H x V)	1,940 x 1,460
Cell Size (H x V)	4.54 µm x 4.54 µm
Output Pixels (H x V)	1,920 x 1,080
Output Pixels (H x V, Full Resolution)	1,920 x 1,440
Colour Filter	Elementary colour mosaic
Frame Rate	32 fps @ 1,920 (H) x 1,080 (V), 2ch
Minimum Illumination (50%)	6 lx (Iris: F1.4, Gain: +18 dB, Tentative)
Sensitivity	F8 (2000 lx, Gain: 0 dB)
S/N Ratio	Less than 1 step (Lens close, Gain: 0 dB, 8 bits)
Gain	Auto, Manual : 0 dB to +18 dB
Shutter Speed	2 s to 1/100,000 s, Auto
White Balance	One push WB, Manual
Camera Features	
Readout Modes	Normal, Partial scan
Readout Features	Gamma (variable), Built-in test pattern
Synchronization	Hardware trigger, Software trigger
Trigger Modes	Edge detection, Pulse width detection, Bulk trigger, Sequential trigger
Memory Channel (Usersets)	16 channels
User Memory	64 bytes x 16 channels
Image Buffer	16 frames
Other Features	Internal temperature sensor
Interfaces	
Video Data Output	8, 10, 12-bit RAW, digital
Digital Interface	Gigabit Ethernet (1000BASE-T)
Camera Specification	GigE Vision® Version 1.2
Digital Input/Output	TTL IN (x2), TTL OUT (x2)
General	
Lens Mount	C mount
Power Requirements	DC +12 V (+10.5 V to +15.0 V)
Power Consumption	5.8 W (max.)
Operating Temperature	-10°C to +50°C (14°F to 122°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)
Shock Resistance	70 G
Dimensions (W X H X D)	50 x 50 x 57.5 mm (2 x 2 x 2 3/8 inches) (excluding protrusions)
Mass	200 g (7 oz.)
Regulations	UL2044, FCC Class A, CE: EN55022, AS/NZ: EN55022, VCCI Class A, KC: KN22/KN24 Class A
Supplied Accessories	Lens mount cap (1), Terminal block (1), Operating instructions (1)

Pin assignment & connector

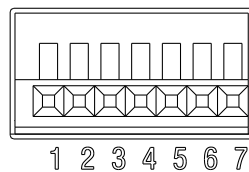
## DC IN connector

Pin No.	
1	DC IN
2	GND



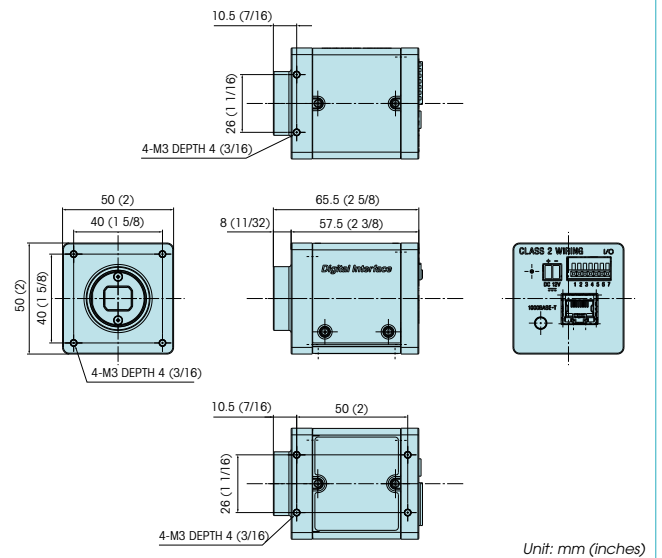
## I/O connector

Pin No.	
1	GPIO OUT (1)
2	GPIO OUT (2)
3	Trigger IN (1)
4	Trigger IN (2)
5	GPIO IN (1)
6	GPIO IN (2)
7	GND



\*GPIO OUT is selectable from Exposure output/  
Strobe control signal/GPIO output.

Dimensions (mm)



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