# XCG-H280E

Digital Video Camera

SONY
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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 II™ CCD 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 interface, the XCG-H280E camera is ideally suited to the demanding requirements of ITS (Intelligent Transportation Systems) and machine-vision applications.

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## KEY FEATURES

### GigE Vision Interface

The adoption of the GigE Vision® Version 1.2 adds to the outstanding value and performance of the XCG-H280E 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.

| 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.

### High Sensitivity

Utilizing Sony's latest EXview HAD II CCD technology enables the XCG-H280E 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.

## SPECIFICATIONS

| | XCG-H280E |
|---|---|
| **Camera** | |
| Image sensor | 2/3-type progressive scan IT CCD |
| Sensor technology | EXview HAD II CCD |
| Standard resolution (H x V) | 1,920 x 1,080 |
| Full resolution (H x V) | 1,920 x 1,440 |
| Standard frame rate | 32fps at standard resolution (2ch readout) |
| 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 |
| **Camera Features** | |
| 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 |
| **Interfaces** | |
| Video data output | 8, 10, 12-bit digital |
| Digital interface | Gigabit Ethernet (1000BASE-T) |
| Camera specification | GigE Vision® Version 1.2 |
| Digital I/Os | TTL IN (2x), TTL OUT (2x) |
| **General** | |
| Lens mount | C mount |
| Power requirements | DC +12 V (+10.5 V to +15.0 V) |
| Power consumption | 5.3 W (typ.) |
| Operating temperature | 14°F to 122°F (-10°C to +50°C) |
| Storage temperature | -22°F to +140°F (-30°C to +60°C) |
| Operating humidity | 20% to 80% (no condensation) |
| Storage humidity | 20% to 95% (no condensation) |
| Shock resistance | 70 G |
| Dimensions (W x H x D) | 2 x 2 x 2 3/8 inches (50 x 50 x 57.5 mm) (Not including protruding parts) |
| Weight | 7.0 oz (200 g) |
| Regulations | UL2044, FCC Class A, CE: EN55022, AS/NZ: EN55022, VCCI: Class A, KN22/KN24: Class A |
| Supplied accessories | Lens mount cap (1)<br>Terminal block (1)<br>Operating instructions (1) |

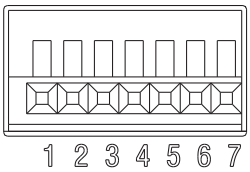
## PIN ASSIGNMENTS

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 |

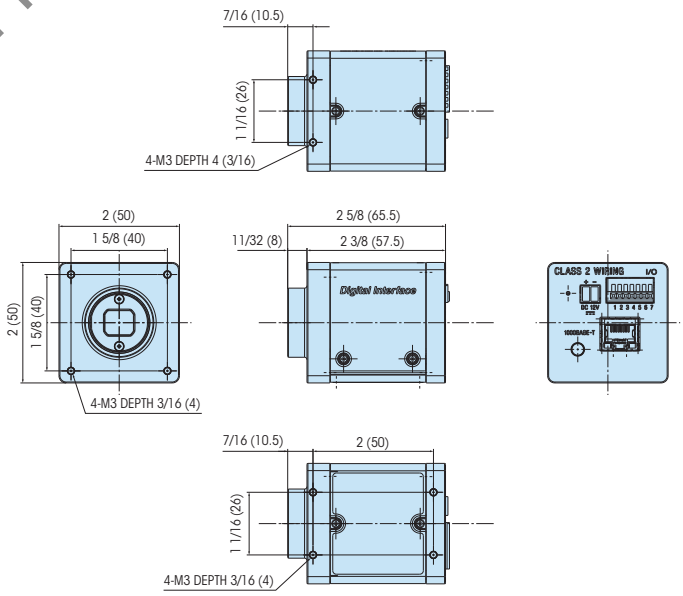



*GPIO OUT is selectable from Exposure output/Strobe control signal/GPIO output.

## OPTIONAL ACCESSORIES

Tripod Adapto
VCT-ST701

## DIMENSIONS




Unit: inches (mm)

Compliments of Phasetech.com

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