



# GVCAM Crystal Clear Picture Quality Day/Night Solutions

## GVCAM SD/HD-SDI, DVI, YUV, or Fibre Interface Camera

Over 20 years of experience in video hardware and software design have rendered GVS a most insightful and versatile partner for sophisticated VTR/DDR, Storage, Server, and Controller productions. GVS's high-quality products and solutions meet the individual requirements of a broad spectrum of clients including broadcasting corporations, film and TV productions, R&D departments of universities and companies active in medicine, aviation, security and defense. The products are comprised of customized devices as well as proprietary developments and range from single items to large productions manufactured in a most cost effective manner.

With its latest development, the "Smallest True HD Camera", GVS has managed to enclose state-of-the-art video quality in an ultra-compact housing perfect for action animated live programs and high-quality movie applications. With native RAW HD SDI out put at rate of 1.4Gbit/sec, pixel to pixel accuracy without any compression.

compact high resolution camera:

# 1920x1080



Available options include:

- 1920x1080 True HD Resolution
- HD CMOS Megapixel Sensor over 2,000,000 pixels
- Advanced HD/SD With eight video formats
- Integrated Browser interface support
- Day/Night Capability Offers Optimal Sensitivity
- 120x Zoom Ratio (10x Optical + 12x Digital)
- 12-bit HD analog component I/O option
- Designed with both Auto Focus and Manual Mode
- One Push Trigger Mode and Infinity Mode

- Auto or Manual White Balance 3000 to 7500K
- Automatic Exposure without slow shutter limit
- HD/SD SDI Interface with Fibre Optic Option
- Slow Shutter 59.94/NTSC & 50/PAL Video Format
- Variable Iris (F1.8 to Close, 18 steps), Auto Gain
- Automatic Exposure Shutter Priority 1/10,000sec
- GVCam Vibration Specification over 1.46G
- Supports full bandwidth 4:2:2 10-bits (12-bit capable) for 1080i, and 720p formats.
- 4:2:2 formats for single link SD/HD-SDI output.
- Near Limit Mode can be set 4.5m to 1cm
- 256 Steps of Manual Control White Balance
- 1/10,000 to 1/2, 21 Steps High Speed Shutter
- 21 Steps Automatic Exposure Manual
- 16 Level Aperture Control adjustment
- Built-in Back Light Compensation
- Infrared (IR) built-in for Low Light environment
- Automatically Disabled Infrared Sensitivity (ICR)
- Field Memory Freeze mode for single image output



3D HD-SDI Dual zoom GVCAM-3D camera



5000 meter under water GVCAM-FIB camera

## Combining Excellent Picture Quality, Multiple Video Outputs, and Day/Night Function, the GVCAM Makes Vision Solutions Crystal Clear

The world of HD expanded into the industrial imaging arena with the debut of GVS's first HD camera, the GVCAM. Now, continuing its commitment to HD picture quality for applications that require dynamic high-resolution images while remaining flexible, GVS introduces the GVCAM. The stunning new model extends application possibilities by incorporating a new Day/Night function that enables the camera to capture high-quality, HD SCI RAW color, pixel to pixel images during the day and clear, black-and-white images at night. In addition, the GVCam achieves a minimum illumination of 1.0lx by dynamically removing the infrared cut filter and allowing the spectral responsive range to extend into the near infrared.

The GVCAM incorporates a 1/3-type HD CMOS image sensor boasting approximately two million effective pixels, and provides a 16x9 aspect ratio, making it ideal for use with wide-screen displays. This camera also features multi-format video outputs, satisfying user needs for high-definition HD and standard -definition SD in SDI, Analog and Fibre optics output directly from the camera. These three different interface modes are the only difference among the GVCAM models.

| Part Number     | Model Number | GVCAM Interface | Distance from Rec | 3-D Support | Remote Interface | Effective Pixels | 4:2:2 Interface | Custom Housing |
|-----------------|--------------|-----------------|-------------------|-------------|------------------|------------------|-----------------|----------------|
| GC001192010YU02 | GVCAM-YUV    | Analog YUV      | 10ft              | N           | RS232C           | 2,000,000        | 1080i/720p      | N              |
| GC001192010DV04 | GVCAM-DVI    | SD/HD-DVI       | 15ft              | N           | RS232            | 2,000,000        | 1080i/720p      | N              |
| GC001192010SD06 | GVCAM-SDI    | HD-DVI SD-CVBS  | 300ft             | Y           | RS232C           | 2,000,000        | 1080i/720p      | Y              |
| GC001192010FI08 | GVCAM-FIB    | SD/HD-Fibre     | 80KM              | Y           | RS232            | 2,000,000        | 1080i/720p      | Y              |



## GVCAM Makes HD Vision Solutions Easy and Affordable

When extremely clear, super picture quality HD images are required, the GVCAM offers 1080i and 720p signals. This versatile and flexible camera can also be used with an SD system to allow easy migration from SD to HD.

The GVCAM is designed with a multitude of functions. With a 120x zooming capability, Picture Freeze function, SPORT AE function, and Slow Shutter, the GVCAM is ideal for applications such as TV Broadcast, Video Conferencing, Inspection, Cable TV Broadcasting, Point-of-view (POV), Defense, Deep Sea, Medical, and Extended Shooting. Furthermore, with the incorporation of the Day/Night function, which is essential for monitoring, this camera is a great choice for a wide range of Security, and high quality Surveillance applications.



GVCAM camera shot of Bay Bridge, recorded onto GVS9000 2XU VTR



GVCAM camera shot of Bay Bridge with 120X zoom, recorded onto GVS9000 2XU VTR

## GVCAM 1080/720p 4:2:2 HD/SD Digital Camera specifications

### Image sensor

CMOS

### Effective number of pixels

Approx. 2,000,000 pixels

### Video signal Output

HD: 1080i/59.94, 1080i/50, 720p/59.94, 720p/50  
SD: NTSC (CROP), NTSC (SQUEEZE), PAL (CROP)  
PAL (SQUEEZE)

### Digital Output Modes

Visually lossless

HD SDI, SD SDI HD 1920x1080 1080i

SD D1 720x486 720p SD D1 720x576 625i 525i

### Analog: SD and HD Output

HD: YPbPr SD: YPbPr (option) Composite or S-Video (option)

### Aspect ratio

HD 16:9 SD 4:3/16:9

### Full Screen On

Ability to have full pixel to pixel video source on SD/HD-SDI.

### Lens

10x optical zoom, f=5.1 mm (wide) to 51.0 mm (tele), F1.8 to F2.1

### Digital Zoom

12x (120x with optical zoom)

### Horizontal angle of view

50° (wide) to 5.4° (tele)

### Minimum object distance

10 mm (wide) to 800 mm (tele)

### Sync System

Internal

### ICR (IR Cut-Removable) Mode

An infrared (IR) Cut-Filter automatically engage to increased sensitivity in low light environments, allowing the camera to be effective in day/night environments

### Minimum illumination

ICR off mode : 12 lx (F1.8, 50 IRE) ICR on mode : 1 lx (F1.8, 50 IRE)

### Preview During Capture

From SDI input. SD or HD, as well as video output, can be previewed on Flypack SDI LCD or external SDI

### Standard Sync

Programmed to VBS: 1.0 Vp-p (sync negative) Y/C.

### Electronic shutter speed

1/2 to 1/10000 sec. (21 steps)

### Focus

Full Auto (Normal AF/Interval AF/Zoom Trigger AF)  
One Push Trigger/Manual/Infinity/Near Limit setting

### White balance

Auto, Indoor, Outdoor, One-push, Manual

### Gain

Auto/Manual (-3 to 18 dB, 8 steps)

### Automatic Exposure (AE) control Mode

Auto, Manual, Shutter Priority, Iris Priority, Bright, Spot AE

### Exposure compensation

-10.5 to 10.5 dB (15 steps, 1.5 dB increments)

### Backlight compensation

On/Off

### Picture effects

Auto, Indoor, Outdoor, One-push, Manual, Black &

white/Negative positive reversal, still image (frozen)

### Gamma

Normal/Cinema Type 1/Cinema Type 2

### Camera operation switch

Zoom tele, Zoom wide

### Infrared Cut-Removable mode

ON/OFF (Auto/Manual)

### Aperture control preset

16 steps Position preset; 6 presets Custom preset

### Camera control interface

RS-232C signal level:TTL/ CMOS

### Aperture control

Auto, Indoor, Outdoor, One-push, Manual

### Electrical and environmental requirements:

Maximum current: 6 to 12 V DC/4.8 W)

Operating temperature: 32 to 81 °F (0 to 45 °C)

Storage temperature: -4 to 140 °F (-20 to 60 °C)

Relative humidity: 5% to 95% noncondensing

Maximum altitude: 10,000 feet

### Size and weight:

Minimum size 2.77 x 2.4 x 3.76 inches (70.4 x 61.0 x 95.5 mm) (w x h x d)

Width: 17.0 inches (416mm)

Weight: 0.76 pounds (345 g), base configured

### Camera model option

GVCAM-SDI: SD/HD-SDI, GVCAM-FIB: Fibre Interface, GVCAM-ANG: Analog component Y/Pb/Pr, and GVCAM-DVI: DVI Interface option

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Product specifications are subject to change without notice.

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