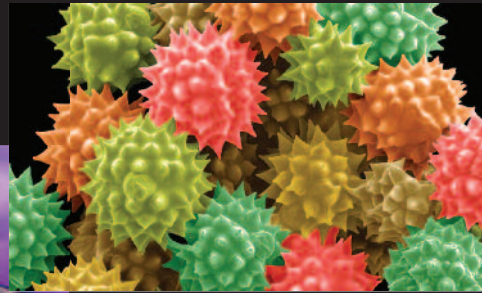
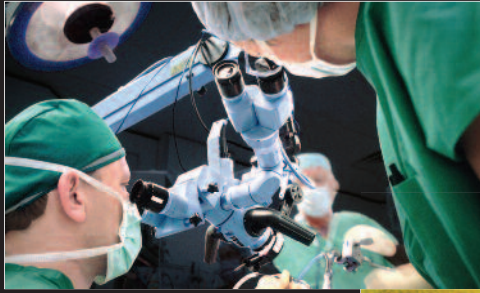


**Panasonic System Solutions Company**

the best in HD just got better



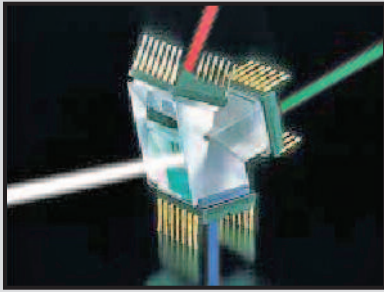
**Now  
1080p  
HD!**



GP-US932A HD Series

# Panasonic's True HD 3CCD Remote Head 1080p Output Camera System

*Now, get the sharpest, purest color images imaginable, from Panasonic's small 3CCD remote head camera with true 16x9 Multi Format High Definition. Ideal for medical, microscopy, broadcast, inspection, industrial and professional applications, this revolutionary solution is available only from Panasonic. Take a look – you'll be amazed to see what you've been missing.*



## True Multi-Format HD

The unit is 1080p, 1080i or 720P selectable and uses three 1/3" type 16x9 Progressive HD sensors running at full 60 frames per second. Offering sharp, flicker-free images with better vertical resolution.

## New High-Sensitivity Progressive CCD

Each pixel has a large light-receiving area, giving this newly developed 1/3" type progressive CCD exceptional high sensitivity. This advanced CCD and a newly developed digital signal processor (DSP), in combination with a very sophisticated offset spatial technology, achieves a balance of high resolution and high S/N ratio required for critical HD applications.

## New DSP with 14-bit A/D Conversion and 19-bit Processing

Starting from progressive capture, the GP-US932A's newly developed DSP uses 14-bit A/D conversion and 19-bit inner processing to attain unprecedented accuracy and results in true 1920x1080i, 1920x1080p or 1280x720p HD outputs. From this progressive capture, the DSP converts the signal to multiple, simultaneous HD and SD outputs.



GP-US932A HD image

Conventional image

## Special Expanded Dynamic Range Function

Our unique new dynamic range feature expands the contrast of the dark areas while maintaining detail in the bright areas of the picture.

## High-Resolution Native Progressive Scan

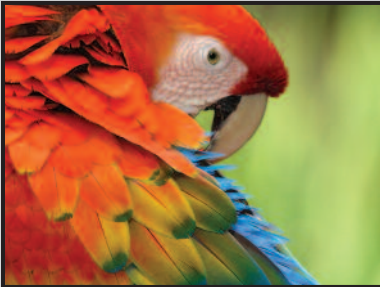
Progressive to interlace conversion, cross conversion and down conversion all start with the progressive scan. That initial Native Progressive Scan offers a higher level of vertical resolution. The result is outstanding HD and SD video output image quality that electronically processed scans cannot match.

# The best in HD just got better!

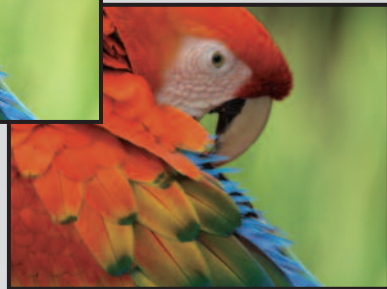
1080p Output • Smaller Head

Improved Sensitivity by 6dB

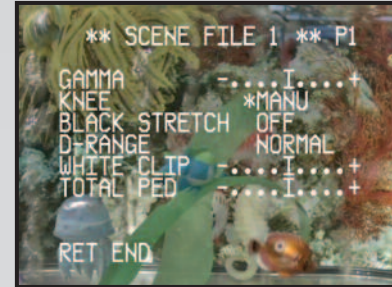
Longer Cables Available • HDMI Outputs



GP-US932A HD image



Conventional image



## Powerful, Flexible Menu Set-up

### Three Scene Files

There are three separate scene files each with eleven programmable parameter settings that can be customized to the user's preference, i.e. surgical modalities.

### Full, Flexible Parameter Settings

- Gamma • Red Detail • Precise ELC Control • Gain
- KNEE, Black Stretch • Detail Enhancement (frequency selectable / multiple levels)

### Other Features

Includes Electronic Zoom up to 2.5x, freeze, mirror, rotate and flip functions.

## Major Operating Controls & Switches

- HD Outputs: HDMI, HD-SDI; Analog Component (RGB/YPbPr)
- Standard outputs: S-Video, composite
- RS-232 for control



Underwater



Microscopy



Reality TV



Specialty Broadcast



Aerial



Sports



Medical

# GP-US932A HD Series Remote Camera System Specifications

## Specifications

<b>Scan Frequency</b>	59.94 Hz (NTSC for SD)
<b>Power Source</b>	12 V DC
<b>Power Consumption</b> (including camera head)	GP-US932CA - approx.15.6W GP-US932CSA - approx.16.8W
<b>Pick-up System</b>	Micro prism system
<b>Image Sensor</b>	Three 1/3" interline transfer (IT) progressive CCDs
<b>Synchronization</b>	Internal or external synchronization
<b>Video Output</b>	
<b>Video Output</b>	BNC Connector x 1, 1.0 V [P-P] / 75 Ω
<b>S-Video Output</b>	S-Video connector x 1 Y: 0.714 V [P-P] / 75 Ω C: 0.286 V [P-P] / 75 Ω
<b>RGB/YpBpR Output</b>	D-sub 9-pin connector x 1 R, G, B: 0.7 V [P-P] / 75 Ω Y: 0.7 V [P-P] / 75 Ω Pb, Pr: 0.525 V [P-P] / 75 Ω SYNC: 0.6 V [P-P] / 75 Ω (at output using 1080i or 720p) 0.3 V [P-P] / 75 Ω (at output using 480p or 480i) VIDEO: 1.0 V [P-P] / 75 Ω
<b>HDMI Output</b>	HDMI connector x 1
<b>SDI Output</b>	BNC connector x 2 (GP-US932CSA only)
<b>Video Format</b>	
<b>Video Output</b>	480/59.94i
<b>S-Video Output</b>	480/59.94i
<b>RGB/YpBpR Output</b>	1080/59.94i, 1080/29.97p(sF), 720/59.94p, 480/59.94p, 480/59.94i
<b>HDMI Output</b>	1080/59.94p, 1080/59.94i, 1080/29.97p(sF), 720/59.94p, 480/59.94p
<b>SDI Output</b>	1080/59.94i, 1080/29.97p(sF), 720/59.94p, 480/59.94i (GP-US932CSA only)
<b>Required Illumination</b>	2000 lux (3200 K, F8.0)
<b>Minimum Illumination</b>	12 lux (1.1 fc) (F2.2, GAIN: HIGH, 30 % output at center)
<b>Signal-to-Noise Ratio</b>	54 dB (at output using 1 080i)
<b>Horizontal Resolution</b>	700 TV lines at center (when 1 080i output)
<b>Color Bar</b>	SMPTE color bar with 0 % set-up
<b>Functions</b>	Camera title, ELC, electronic shutter, gain adjustment, electronic sensitivity enhancement, selection of multiple output signal, scene files, white balance, black balance, synchronization, electronic zoom, image freezing, flip, mirror, status display
<b>External Control</b>	RS-232C D-sub 9-pin connector x 1
<b>Ambient Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Ambient Operating Humidity</b>	30 % to 90 %
<b>Dimensions</b>	
GP-US932CA	170 (W) x 44 (H) x 229 (D) mm
GP-US932CSA	(6-11/16" (W) x 1-3/4" (H) x 9-1/16" (D)) (excluding rubber feet and projections)
GP-US932HA	37 (W) x 47 (H) x 60 (D) mm (1-7/16" (W) x 1-7/8" (H) x 2-1/8" (D)) (excluding tripod socket and projections)
<b>Weight</b>	
GP-US932CA	1.40 kg (3.1 lbs.)
GP-US932CSA	1.45 kg (3.2 lbs.)
GP-US932HA	140 g (0.3 lbs.)
<b>Finish</b>	Ivory color coating

## Recommended Lenses

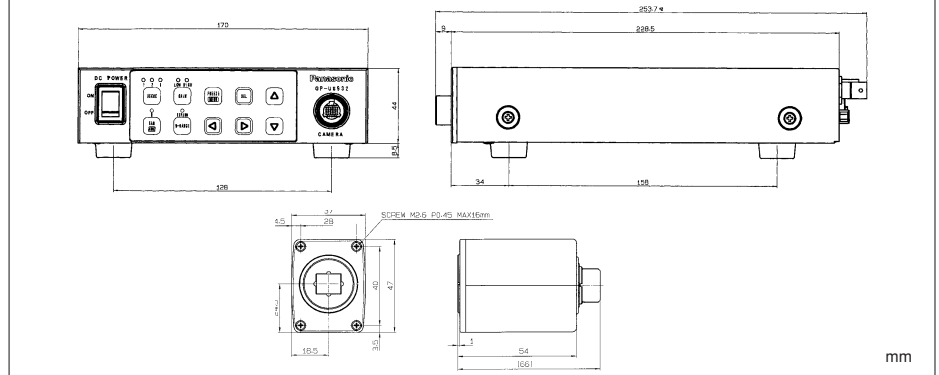


## Specifications of Recommended Lenses

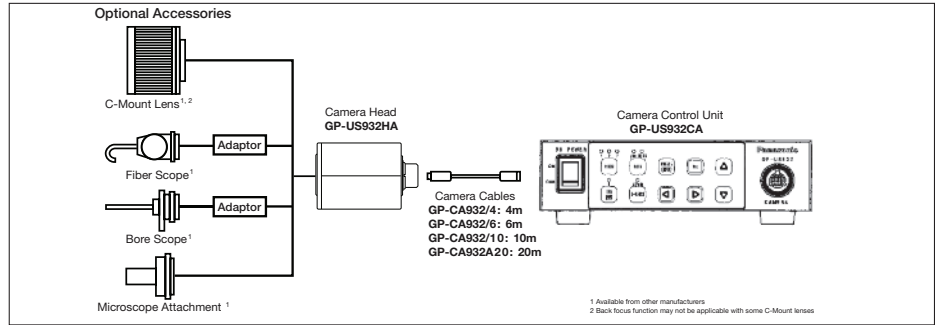
Model No.	HD Lenses			SD Lenses		
	HAF4.8DA-1	XA4x7.5DA-1	TF2.8DA-8	TF4DA-8	TF8DA-8	TF15DA-8
Manufacturer	Fujinon*	Fujinon*	Fujinon*	Fujinon*	Fujinon*	Fujinon*
Focal Length (mm)	4.8	7.5 - 30	2.8	4	8	15
Zoom Ratio		4				
Maximum Aperture Ratio	2.2	2.8	2.2	2.2	2.2	2.2
Angle of View (°)						
Horizontal	57.07'	38.38' - 9.94'	85.98'	66.25'	36.14'	19.74'
Vertical	34.05'	22.18' - 5.61'	55.40'	40.36'	20.82'	11.19'
Minimum Object Distance (m / ft)	0.1 / 0.33	0.45 / 1.48	0.1 / 0.33	0.1 / 0.33	0.1 / 0.33	0.1 / 0.33
Filter Thread	M55	M52	N/A	M27 x 0.5	M25.5 x 0.5	M25.5 x 0.5
Mount	C	C	C	C	C	C
Focus	Manual	Manual	Manual	Manual	Manual	Manual
iris	Manual	Manual	Manual	Manual	Manual	Manual
Length (from focal plane)	53.126 / 2.092	178.926 / 7.044	64.025 / 2.521	63.025 / 2.481	56.526 / 2.225	56.526 / 2.225
(mm / inch)	(in air)	(in air)	(in air)	(in air)	(in air)	(in air)
Full Aperture (mm / inch)	ø42 / ø1.654	ø54 / ø2.126	ø34 / ø1.339	ø29 / ø1.142	ø29 / ø1.142	ø29 / ø1.142
Weight (g / lbs)	95 / 0.21	500 / 1.1	75 / 0.17	70 / 0.15	60 / 0.13	60 / 0.13

\* Fujinon Lenses: Please contact to your distributor

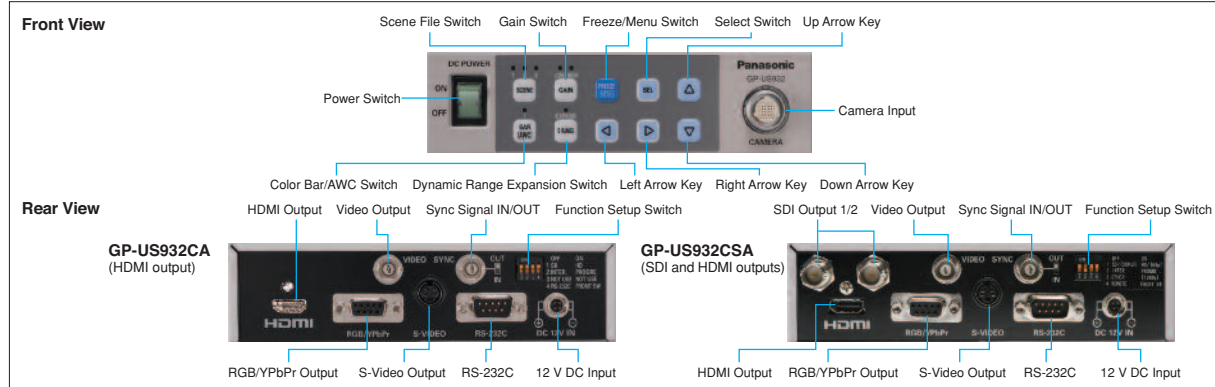
## Dimensions



## System Block Diagram



## Part Names and Functions



- Lens, power supply and cable are optional equipment
- All TV pictures and menus are simulated and shown for the purpose of explanation
- Weights and dimensions are approximate
- Specifications are subject to change without notice
- These products may be subject to export control regulations

**IMPORTANT- Safety Precaution:** carefully read the operating instructions and installation manual before using this product.

Panasonic is registered with "ISO 14001," the international standard for the environment. To ensure a bright future for the earth, Panasonic has begun numerous activities to promote clean global manufacturing.

# Panasonic System Solutions Company

1.888.880.8474  
panasonic.com/visionsystems

DISTRIBUTED BY: