

POWERVIEW™ Plus HS-200 Camera Model 630061

...the next generation family of POWERVIEW cameras for fast image capture for global measurements from TSI.

Features

- High image capture rate up to 500 fps for time-resolved measurements
- Short frame straddling times for high-speed flows
- Protective mask for CCD array
- Low noise and high quantum efficiency
- Designed for global imaging applications

TSI's POWERVIEW Plus HS-200 Camera offers 640 × 480 pixel resolution and 12-bit intensity dynamic range, high image capture rate, short frame straddling times and variable exposure times for standard PIV, time-resolved PIV and PLIF applications.

Next Generation Cameras

TSI introduced to the marketplace a series of CMOS-based, high frame rate PIV cameras for time-resolved PIV applications in recent years. Now, based on our expertise in imaging techniques and global measurements, we have introduced a new camera based on a CCD design. The HS-200 Camera can be used with Nd:YAG dual lasers for standard PIV applications or with high speed Nd:YLF lasers for time-resolved PIV measurements with capture rates up to 500 fps.

High Signal Quality

The HS-200 camera provides a low noise level due to its unique electronic design. The CCD and its digitization circuit are completely shielded to prevent electronic noise from other camera circuit or the outside environment from affecting signal quality. The CCD array offers high quantum efficiency for PIV and PLIF applications with spectral response over a wide wavelength range.



Protective Mask

An integrated protective mask on the CCD array, a trademark of POWERVIEW Plus cameras, is included. The mask is important for preventing fatal damage to the output circuit of the CCD array due to potential laser light reflections. This improves camera reliability and extends camera life.

Industrial Standard for Camera Output

The camera employs the industrial standard Camera Link® interface as its output protocol to ensure fast and reliable data transfer to the host computer. The 64-bit interface transfers data at its full frame rate to the computer memory, consistently and reliably in single as well as stereo camera configurations. You see the results on-line while the camera is capturing data.

INSIGHT 3G™ Global Imaging, Analysis, and Display Software Platform

The *INSIGHT 3G* package features all of the tools needed for even the most advanced global imaging measurements, from our patented processing algorithms to the most elaborate data analysis features available. And now, equipped with the *HyperStreaming* Module, the power of the *INSIGHT 3G* Platform can be unleashed on enormous amounts of data, using features such as the POD Analysis Toolbox and distributed processing capability over a network of computers to quantify the flow properties of interest with the desired detail.



Compact Design and Remote Operation

This compact camera weighs less than 1 kg and can be used in packaged PIV systems as well as applications where space and/or accessibility is limited. For applications with long distances between the camera and the computer, a long Camera Link cable or a fiber optical cable can be selected. The camera can be equipped with a remote control camera lens for focusing and aperture adjustments and the Scheimpflug adjustment in stereoscopic PIV also can be incorporated.

Specifications

Model 630061 Camera

Imaging Device	Progressive Scan Interline CCD with microlens
Pixel Resolution	640 × 480 pixels
Pixel Size	7.4 μm (H) × 7.4 μm (V)
Imager Size	4.74 mm (H) × 3.55 mm (V)
Intensity Dynamic Range	12-bit
Frame Rate	Up to 200 fps (full scan) Up to 500 fps (partial scan)
Quantum Efficiency	55% maximum
CCD Operating Temperature	40°C
Spectral Range	380 nm to 700 nm
Pixel Clock Rate	40 MHz per channel
Frame Straddling Time	200 ns
CCD Mask	Integral protective mask
Lens Mount	F-mount
Camera Output	Dual output parallel LVDS
Operation Mode	Free Run, Triggered and Frame Straddling
Camera Control	RS-232 via frame grabber cable
Camera Display	LED displays for Power and Output
Camera Head Dimension	45 × 68 × 66 mm
Camera Head Weight	0.8 kg
Camera Interface	64-bit CameraLink
Frame Grabber Cable	5m standard with RS-232 communication
Power Cable	5m standard with universal power supply
Power	12 VDC @ 3.9 W
Camera Lens	Nikon F-mount lens standard

Specifications subject to change without notice.



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