

## PRODUCT SPECIFICATION SHEET



# HS-4000 ULTRA-HIGH SPEED 10GigE 4 MEGAPIXEL CAMERA



The **HS-4000** is the new standard in **Ultra Fast** high speed imaging for industrial vision applications. Capable of 179fps at 4 megapixels, the HS-4000 is a breakthrough for the industry. With a global shutter and 10GigE interface—a world first for the vision industry—the HS-4000 sets unparalleled benchmark performance.

The 10GigE interface is GenICam and GiGE Vision compatible with the added benefit of a single connection using either SFP+ direct attach or fiber optic for additional length. In addition, **Emergent Vision Technologies** has developed a unique solution offering onboard algorithms, capable of providing regular imaging tools on board the camera at a high data rate, thus minimizing additional host CPU cost, making the HS-4000 **Ultra-Smart**.

The HS-4000 is available in either monochrome or color utilizing a 1" image format allowing for an extensive selection of optics, making the HS-4000 **Ultra-Flexible** to meet challenging industrial imaging applications.

## APPLICATIONS

- Diagnostic Analysis
- Intelligent Traffic Systems
- Semiconductor
- Food and Beverage
- Automotive

## ONBOARD ALGORITHM CAPABILITIES

- Erosion
- Edge Detection
- Correlation
- Dilation
- Luminance
- Bayer



FEATURE	BENEFITS
Ultra Fast, High Resolution	Increase production while maximizing resolution. Great for discerning defects at a very high throughput rate.
10 GigE interface	Increased bandwidth, capable of high resolution and high frame rate or more than one camera through a single connection. Reduced power consumption and more cost efficient than GigE.
On-board algorithms	Reduces host CPU requirements.
Global Shutter	High resolution CMOS sensor with global shutter to ensure zero smearing at ultra-high speeds.
High Sensitivity	Perfect for low light imaging applications such as ITS.
Flexible Exposure/Integration Control	Optimize integration of a wide range of lighting conditions; Match integration time with lighting control for maximum benefit.
External Sync and Trigger	Tight synchronization with I/O control, external PLCs, lighting and shutters
Industry Compliant	GigE Vision and GenICam compliant to minimize development time for existing SW application



# HS-4000

## PRODUCT SPECIFICATION SHEET—P2

### CAMERA DETAILS

Light Sensitive Pixels	2048 x 2048
Exposure/Integration	10us—1s
Sensor	1" CMOSIS CMV4000
Pixel Size	5.5um (square)
Frame Rate	179fps
Dynamic Range	60 dB
Optical Format	1" C-mount (adjustable)
Triggering	Software, External (Pulse or Edge)
Digital Output	8, 10 bit
Interface	10GigE/SFP+ (Direct Attach, Fiber Optic)
Monochrome Modes	Mono8, Mono10, Mono10Packed
Color Modes	RGB8, RGB10, YUV411, YUV422, YUV444 BGR8, BGR10
Raw Modes	BayerGB8, BayerGB10
Frame Buffer	60 frames (8bpp, Full Frame)
Onboard Algorithm Support	On Request
Memory	500MB DDR2, 125MB NOR FLASH
Operating System	Windows 7, Linux (eCapture, eSDK)
Dimensions	138 x 58 x 40 mm
Weight	300g
Power Requirements	9W, 12V
Operating Temperature	0 — 45C
Storage Temperature	-30 to +60C
Compliance	CE, FCC, RoHS, WEEE, GigE Vision, GenICam
Testing	HALT, HASS, EMVA1288
Warranty	2 Years

### MODELS

includes: HS-4000, eCapture Software, and eSDK.

#### Monochrome

Part #: HS-4000-M

#### Color

Part #: HS-4000-C

#### NIR

Part #: HS-4000-N

### SOFTWARE

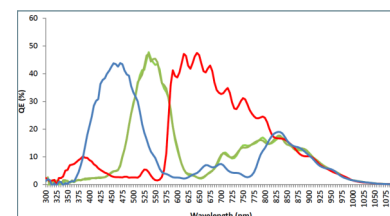
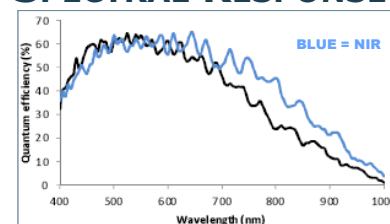
#### eCapture

Capture Viewer Software with new features being added all the time.

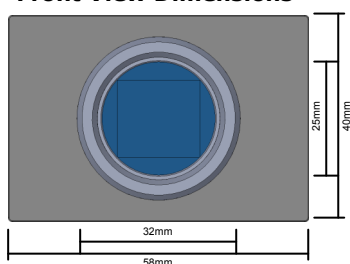
#### eSDK

Software Developers Kit for easy integration into your application.

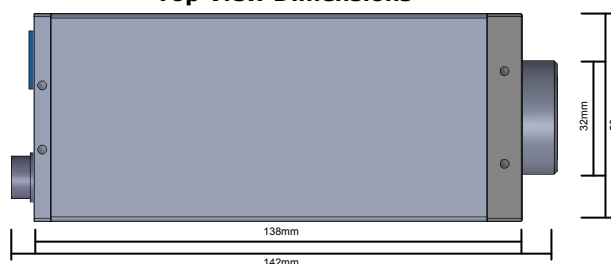
### SPECTRAL RESPONSE



Front View Dimensions



Top View Dimensions



**CONTACT US  
TODAY**  
To discover the  
power of the  
HS-4000