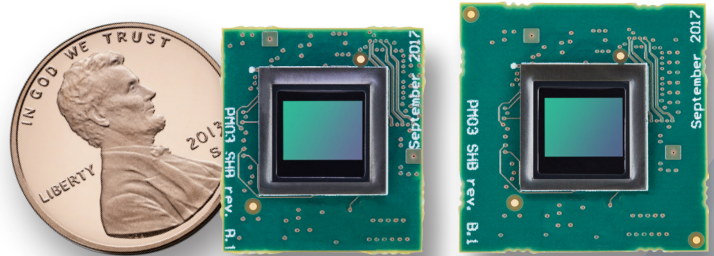


# EMBEDDED IMAGING GOES SMALL.



**Unlock the potential of your embedded imaging application with the PM-1820HD 18MP compact high definition image sensor headboard.**

The Pegasus PM-1820HD is a highly compact imaging sensor headboard delivering superior image quality in a compact form factor.

Built around the OnSemi AR1820HS 1/2.3" rolling shutter sensor, the PM-1820HD offers high image quality in all lighting conditions, delivering streaming 1080p60 video and high resolution still images.

The PM-1820HD integrates an onboard programmable logic based image processor providing automatic image adjustment and sensor processing to deliver a clear image.

The external triggering capability allows precise synchronization of multiple sensors for use in AR/VR or other stereo imaging applications.

The sensor headboard uses a parallel pixel interface and is configurable via I2C, allowing easy programming and integration. It is compatible to a variety of existing interfacing solutions including ready solutions for USB 3.0 and SDI interfacing from Pegasus.

The sensor headboard is available in two compact form factors, a 20x20 mm standard footprint or the ultra-compact 16x18mm. Lens mounts and optics are available in each form.

## Applications

Professional video and broadcast; Surveillance; Machine vision; Inspection; Medical imaging; Unmanned Aerial Vehicles (UAVs); Remotely Operated Underwater Vehicles (ROVs)

## Features

- ◇ AR1820HS 1/2.3" Imager
  - 18 MP
  - Rolling shutter
- ◇ Intel 10M08 FPGA
  - Imaging sensor pipeline
- ◇ Control over I2C
- ◇ Parallel output
  - YCbCr 4:2:2
  - RAW Bayer 12-bit
- ◇ External triggering support

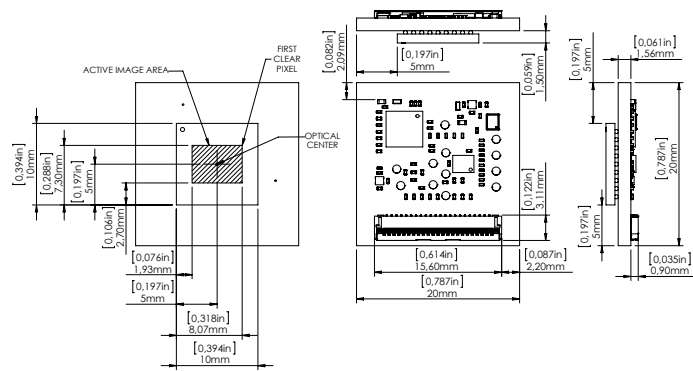
## Advantages

- ◇ Small footprint
- ◇ Robust design
- ◇ Lightweight
- ◇ High image quality
- ◇ Ready interface solutions

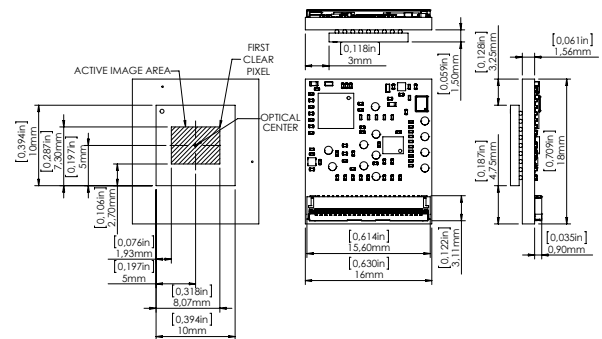
## Specifications

<b>Sensor</b>	On Semiconductor AR1820HS 1/2.3" CMOS Rolling shutter	<b>Connectivity (output)</b>	16-bit 3.3VCMOS Parallel 45-pin 0.35mm pitch FPC/FFC Cable Matching p/n (Molex): 15015-0245
<b>Output modes (Video / YCbCr)</b>	1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 960x540, 800x480, 640x480	<b>Camera control</b>	I2C
<b>Output modes (Still / RAW12)</b>	4192x3684, 4192x2764, 3840x2160, 2448x2576, 1920x1080, 1224x922, 306x229	<b>Dimensions (standard form)</b>	20.00 x 20.00 x 3.96 mm (0.787" x 0.787" x 0.155')
<b>Gain</b>	Auto/Manual (0dB-48dB), 1/3 EV steps	<b>Dimensions (ultra-compact form)</b>	16.00 x 18.00 x 3.96 mm (0.630" x 0.709" x 0.155')
<b>Shutter speed</b>	Auto/Manual (1s-1/8000s), 1/3 EV steps	<b>Power Requirements</b>	3.3V, 1.8V, 1.2V DC
<b>White balance</b>	Auto, Daylight, Shade, Cloudy, Incandescent, Fluorescent	<b>Power Consumption</b>	TBD mW
<b>Metering</b>	Evaluative, Center-weighted, Spot	<b>Operating temperature</b>	-20 °C - 50 °C
<b>Picture effect</b>	Horizontal flip Vertical flip	<b>Storage temperature</b>	-40 °C - 85 °C
<b>Synchronization</b>	Internal, External trigger, Strobe output	<b>Mounting</b>	Free board
<b>Frame rate</b>	60fps@1920x1080, 12fps@4192x3684		

STANDARD 20x20mm



ULTRA COMPACT 16x18mm



## Ordering information

Please refer to the ordering code for your required version in the table below.

DEVICE VERSION	20x20mm STANDARD	16x18MM ULTRA COMPACT
Bare board	PM-1820HD-SDBB	PM-1820HD-UCBB
Board with M12 optics holder	PM-1820HD-SDOH	PM-1820HD-UCOH
Board with M12 holder and lens	PM-1820HD-SDHL	PM-1820HD-UCHL



6200 Stoneridge Mall Road  
Suite 300  
Pleasanton, CA 94588  
USA

+1 (925) 399-6225

info@pegasusmicro.com

http://www.pegasusmicro.com