



SmartSight[®] MV100



GLOBAL SHUTTER



POWER OVER ETHERNET



TRIGGERING AND SYNCHRONIZATION



HIGHLY CONFIGURABLE



MACHINE VISION READY



AVAILABLE SDK

Transforming Vision into Insight

Precision imaging for subsea and autonomous applications

The SmartSight[®] MV100 camera combines best-in-class Sony Pregius global shutter sensors with GigE Vision modules, making it ideal for subsea machine vision. Its low power consumption and flexible integration make it a perfect fit for autonomous vehicles, while the compact design allows installation virtually anywhere. With multiple sensor and lens options, the SmartSight[®] MV100 can be tailored to suit nearly any imaging application.

SDK Available

The SmartSight MV100 utilizes a GUI (Graphical User Interface) application which serves as the primary interface for interacting with the SmartSight MV100 system. To utilize this GUI, users will need to have the [Spinnaker Full SDK](#) downloaded.



For further information, email sales@deepsea.com



DEEPSEA.COM

Specifications

| MV100- | D-T-BFS | | F-T-BFS | |
|-------------------------------------|--|-------------|------------------------|-------------|
| Optical Specifications | | | | |
| Lens Options | 2.3mm F/2.8 | 2.7mm F/2.9 | 2.7mm F/2.9 | 6.0mm F/5.6 |
| Sensor Options | 0.4MP, 1.6MP, 2.3MP, 3.2MP Global Shutter | | | |
| Environmental Specifications | | | | |
| Max Depth | 6,000 m (11,000 m option*) | | 6,000 m | |
| Operating Temp | -10 to 40°C [14°F to 104°F] | | | |
| Storage Temp | -30 to 60°C [-22°F to 140°F] | | | |
| Mechanical Specifications | | | | |
| Housing | Titanium housing | | Titanium housing | |
| Optical Port | Borosilicate Dome Port | | Borosilicate Flat Port | |
| Mounting Bracket | Saddle bracket with either metric M6 or 1/4-20 imperial titanium inserts | | | |
| Weight in Air | 0.65 kg [1.4 lbs.] | | 0.65 kg [1.4 lbs.] | |
| Weight in Water | 0.37 kg [0.84 lbs.] | | 0.44 kg [1.0 lbs.] | |
| Electrical Specifications | | | | |
| Interface | 10/100/1000 BaseT Ethernet, GigE Vision v1.2 Compliant | | | |
| Inputs/Outputs | Isolated: 1 IN, 1 OUT | | | |
| Power | 2.7W maximum | | | |
| Voltage | 10-48VDC, PoE IEEE802.3af-2003 | | | |
| Standard Connector | SubConn DBH13M Stainless Steel | | | |

*Please contact Sales for applications requiring 11,000 m rating

Sensor Options

| Sensor Option | Sony IMX287 | Sony IMX273 | Sony IMX392 | Sony IMX265 |
|-----------------------------|-------------------|---------------------|-------------------|-------------------|
| Sensor Resolution | 0.4MP | 1.6MP | 2.3MP | 3.2MP |
| Pixel Array | 720 x 540 | 1440 x 1080 | 1920 x 1200 | 2048 x 1536 |
| Pixel Size | 6.9 µm x 6.9 µm | 3.45 µm x 3.45 µm | 3.45 µm x 3.45 µm | 3.45 µm x 3.45 µm |
| Frame Rate | 286 FPS (291 FPS) | 71.6 FPS (75.8 FPS) | 48.3 FPS (52 FPS) | 35.4 FPS (38 FPS) |
| LLC Frame Rate ¹ | 350 | 111 | 80 | 51 |
| Sensor Type | Color, Mono | Color, Mono | Color, Mono | Color, Mono |
| Shutter | Global | Global | Global | Global |

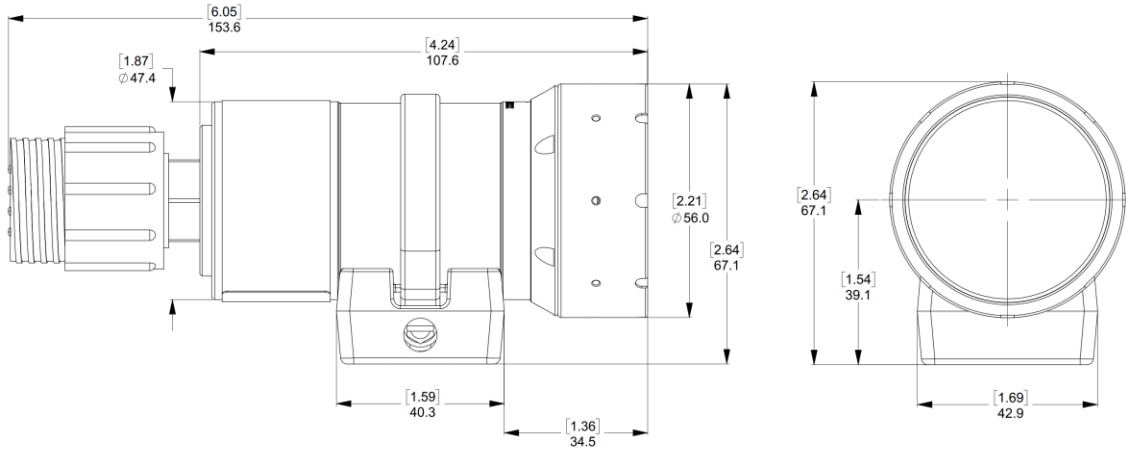
Field of View Reference (Horizontal)

| Sensor Option | 6mm/Flat | 2.7mm/Flat | 2.7/Dome | 2.3mm/Dome |
|---------------|----------|------------|----------|------------|
| 0.4 MP | 32° | 67° | 101° | 117° |
| 1.6 MP | 32° | 67° | 101° | 117° |
| 2.3 MP | 40° | 80° | 105° | 125° |
| 3.2 MP | 43° | 83° | 120° | N/A |

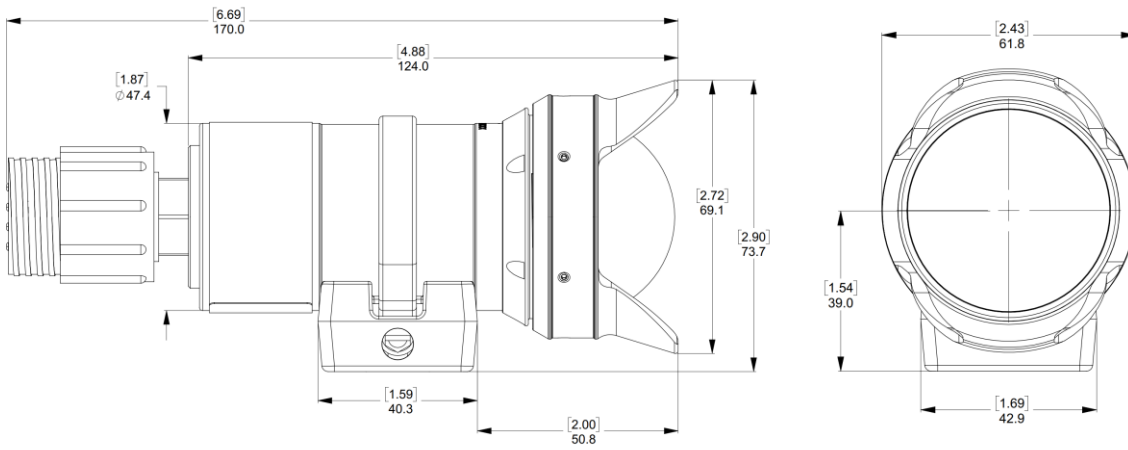
¹ LLC = Lossless Compression. Option only available on select BFS type modules.

Dimensions

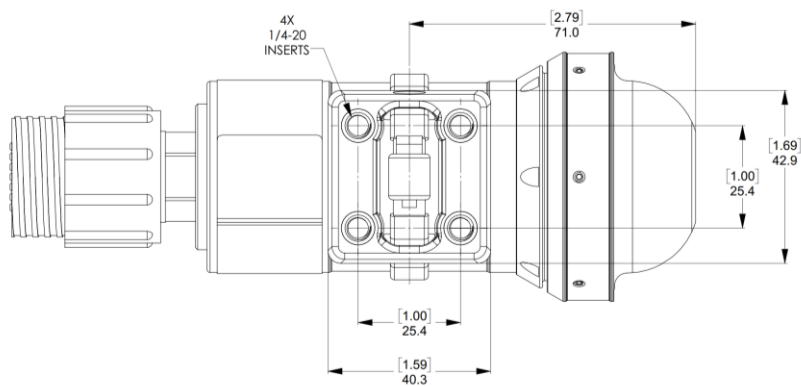
Flat Port



Dome Port With Cowl

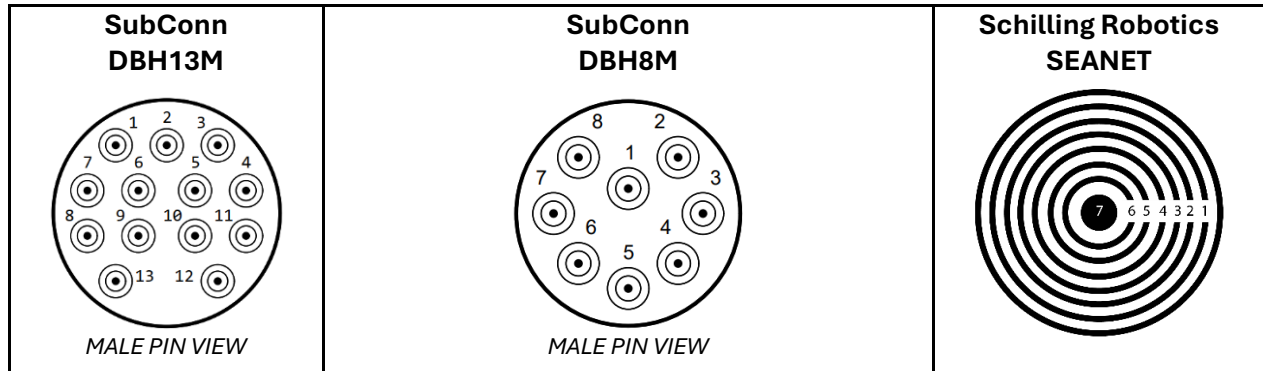


Mounting Bracket



Standard Pinouts

HD-SDI Coax and FleXlink Configurations



| PIN | Ethernet Camera Discrete Power 10/100/1000 Mbps | Ethernet Camera Discrete Power 10/100Mbps | Ethernet Camera PoE 10/100/1000 Mbps | IP Camera NIM |
|-----|---|---|--|------------------|
| 1 | DC- | DC- | TxRx D- 0V PoE | DC+ |
| 2 | SCREEN | DC- | TxRx D+ 0V PoE | DC- |
| 3 | DC+ | DC+ | TxRx C+ 48V PoE | CHASSIS |
| 4 | TxRx D- | DC+ | TxRx C- 48V PoE | RD- |
| 5 | TxRx D+ | TD- | TxRx A- TD- | RD+ |
| 6 | TxRx C+ | TD+ | TxRx A+ TD+ | TD- |
| 7 | TxRx C- | RD- | TxRx B- RD- | TD+ |
| 8 | TxRx A- | RD+ | TxRx B+ RD+ | |
| 9 | TxRx A+ | | | |
| 10 | TxRx B- | | | |
| 11 | TxRx B+ | | | |
| 12 | OPTO OUT | | | |
| 13 | OPTO IN | | | |
| ID | 13C009 | 08E021 | 08E025 | 07E004 |