DEEPSEA

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.

Specifications

MV100-	D-T-BFS		F-T-BFS	
Optical Specifications				
Lens Options	2.3mm F/2.8	2.7mm F/2.9	2.8mm 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

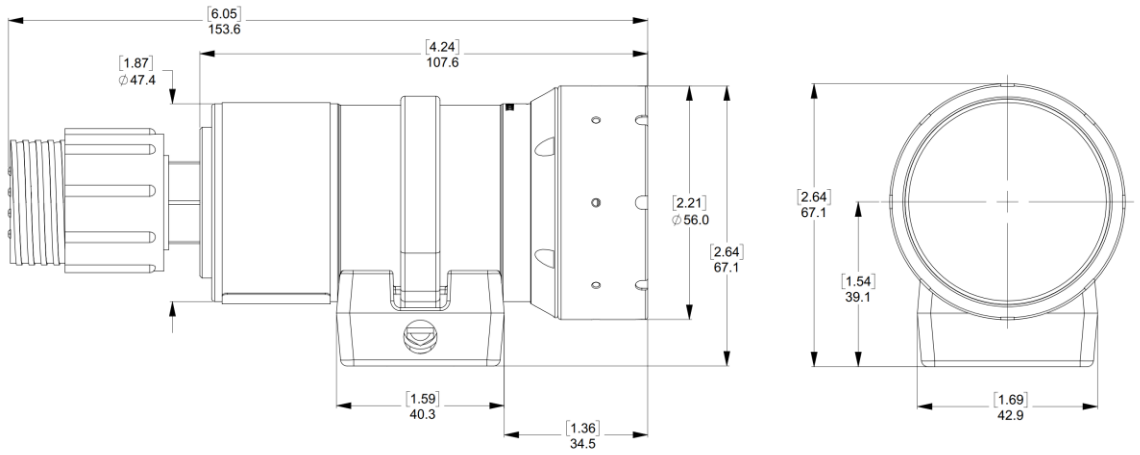
Field of View Reference (Horizontal)

Sensor Option	6mm/Flat	2.8mm/Flat	2.7/Dome	2.3mm/Dome
0.4 MP	32°	61.5°	101°	117°
1.6 MP	32°	61.5°	101°	117°
2.3 MP	40°	73.7°	105°	125°
3.2 MP	43°	76.3°	120°	N/A

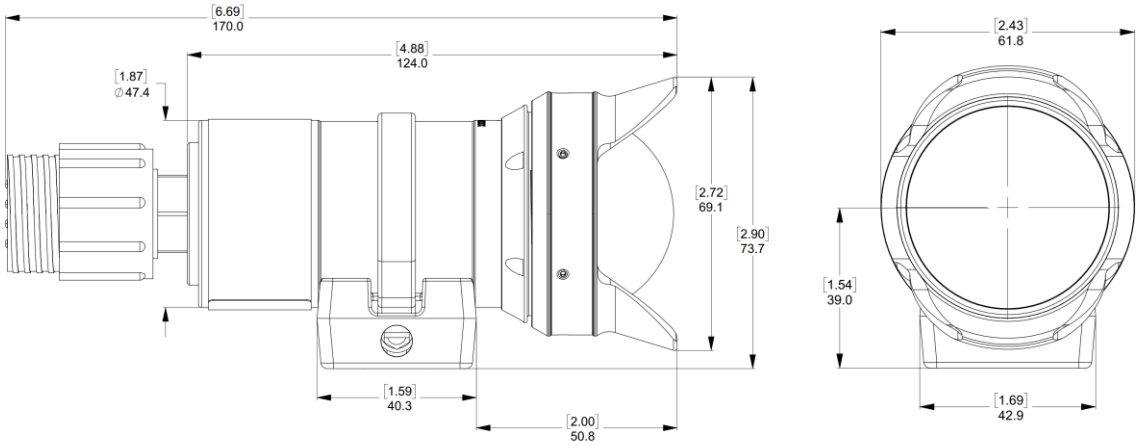
[1] LLC = Lossless Compression. Option only available on select BFS type modules.

Dimensions

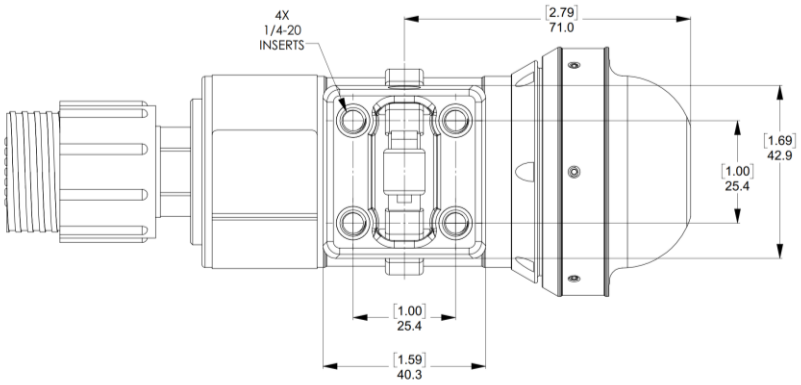
Flat Port



Dome Port With Cowl

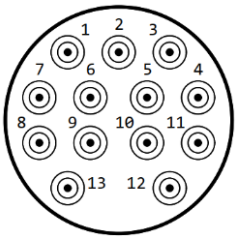
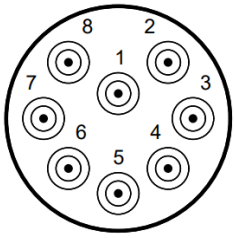


Mounting Bracket



Standard Pinouts

HD-SDI Coax and FleXlink Configurations

	SubConn DBH13M	SubConn DBH8M		Schilling Robotics SEANET
	 *MALE PIN VIEW*	 *MALE PIN VIEW*		
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**