

Lucid Vision Helios2 Specifications

INTERFACE AND POWER INFORMATION

Digital Interface	1000BASE-T GigE, M12 X-coded, PoE
GPIO Interface	8 pin M8 connector
Opto-Isolated I/O Ports	1 input (2.5V-24V and 10.5V-24V), 1 output
Non-Isolated I/O Ports	2 bi-directional
Power Requirement	PoE+ (IEEE 802.3at) or 18-24 V through GPIO
Power Consumption	12-24Vdc, $P_{avg} < 12W$, $< 30W$ peak power

SENSOR PROPERTIES

Sensor Model	Sony DepthSense IMX556PLR CMOS
Shutter Type	Global

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Sensor Size	8 mm (Type 1/2")
Resolution	640 x 480 px, 0.3 MP
Pixel Size	10.0 μm (H) x 10.0 μm (V)
Framerate	30 FPS @ 0.3 MP (for all operating modes)

PHYSICAL PROPERTIES

Dimensions	60 x 60 x 77.5 mm
Weight	398 g
Ingress Protection	IP67 (For IP67 protection Helios2 must be used with IP67 cables)
Ambient Light Filter	Yes, integrated on-camera
Lens Field of View	69° x 51° (nominal)
Illumination	4 x VCSEL laser diodes, Class 1, @ 850nm

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STANDARD AND CERTIFICATIONS

Standard	GigE Vision v2.0, GenICam 3D
Compliance	CE, FCC, RoHS, REACH, WEEE, Eye Safety Class 1 IEC/EN 60825-1:2014
Operating Temperature	-20° to 50°C (Case Temperature)
Shock and Vibration	DIN EN 60068-2-27, DIN EN 60068-2-64*
Industrial EMC Immunity	DIN EN 61000-6-2
OS Support	Windows and Linux
Software Support	Arena SDK, C++, C, C#, Python

*Listed specification testing in progress and is subject to change

PIXEL FORMATS

Range Data

Coord3D_ABCY16	4-ch point cloud XYZ + Intensity, 16 bits per channel, unsigned
Coord3D_ABC16	3-ch point cloud XYZ, 16 bits per channel, unsigned

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Coord3D_C16	Depth map Z plane, 16 bits, unsigned
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Intensity Image

Mono8	8 bit per pixel monochrome raw image
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Mono12Packed	12 bit per pixel monochrome raw image
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Mono12p	12 bit per pixel in bit stream, monochrome raw image
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Mono16	16 bit per pixel monochrome raw image
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Confidence Data

Confidence16	Confidence map, 16 bits
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IMAGING PROPERTIES

Exposure Control	Manual, 3 settings: 62.5 μ s, 250 μ s or 1000 μ s
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Gain Control	Manual, 2 settings: High or Low
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Synchronization	Software trigger, hardware trigger, PTP (IEEE 1588)
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Output Format	Binary .PLY file (via Arena SDK)
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CAMERA FEATURES

User Sets	1 default and 2 custom user set
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Working Distance	0.3 m to 8.33 m
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Operating Distance Modes	6 Modes: (1) 1250 mm, (2) 3000 mm, (3) 4000 mm, (4) 5000 mm, (5) 6000 mm, (6) 8333 mm
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Accuracy	See Performance Tab
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Precision (Depth Noise)	See Performance Tab
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Communication Channels	5 Channels. Allows users to operate up to 5 Helios2 cameras without interference between cameras.
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Flying Pixel Filter	Yes
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Intrinsic parameters available

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