

MV-DP2120-01P

3D Laser Profiler



Introduction

With built-in high-accuracy algorithm, image process algorithm of wide dynamic range, and data integration algorithm, MV-DP2120-01P can output high accurate 3D point cloud data in real-time by combining high frame rate chip and accurate laser control. With compact structure, high integration, and easy operation, it is widely applied into 3C industry, electronics manufacturing, automobile, etc.

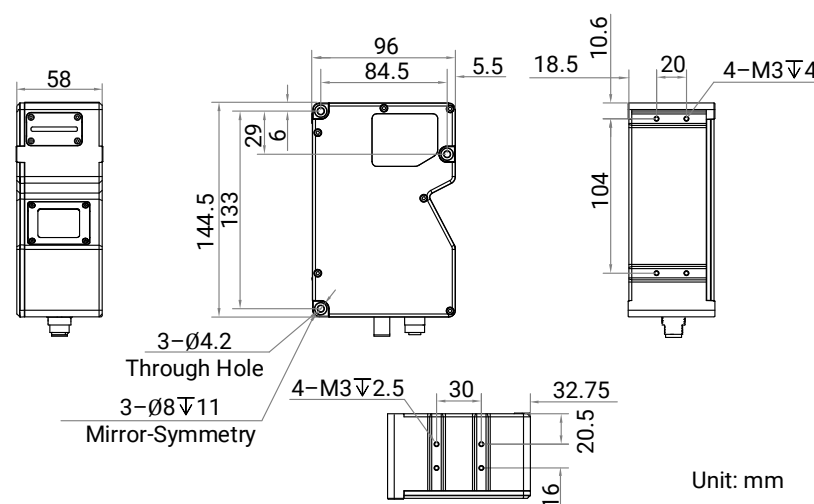
Available Model

MV-DP2120-01P

Applicable Industry

3C industry, electronics manufacturing, automobile, etc.

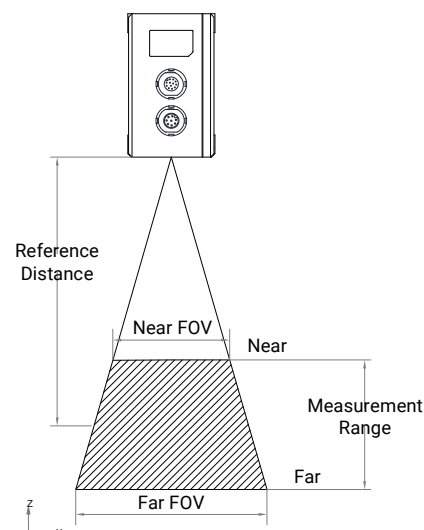
Dimension



Key Feature

- Built-in high-accuracy algorithm and accuracy is up to submicron level.
- Adopts high frame rate chip with 10 KHz scan frame rate.
- Supports multiple exposure modes with good robustness.
- Adopts multiple-frame integration technology to provide complete profiles.
- Provides multiple filter modes with stable data.
- Supports ROI selection and auto setting for easier operation.

Measurement Range Diagram



Specification

Parameter	Model	MV-DP2120-01P
	3D Laser Profiler	
Performance		
Data points/profile	2048	
Reference distance	120 mm	
Measurement range (Z-axis)	80 mm	
Measurement range (X-axis)	58 mm @ near field of view 77.4 mm @ reference distance 95 mm @ far field of view	
Z-axis resolution	1.54 μm to 3.24 μm	
Z-axis repeatability*	0.6 μm @ data that sensor tests gauge block on optical platform	
Z-axis linearity (±% of MR)	0.01	
Profile data interval	28.3 μm to 46.3 μm	
Scan frame rate	700 Hz (within max. measurement range), max. 10 KHz (in ROI mode)	
Data output type	Original image, profile data, depth image, brightness image	
Trigger mode	Software trigger, external trigger (differential encoder)	
Laser wavelength	405 nm	
Laser safety class	Class 3R	
Electrical feature		
Data interface	Gigabit Ethernet (1000 Mbit/s), compatible with Fast Ethernet (100 Mbit/s)	
Digital I/O	12-pin M12 interface provides power and I/O, including differential input × 3 (Line 0/3/6), differential output × 1 (Line 1), and RS-232 × 1	
Power supply	24 VDC	
Power consumption	15 W @ 24 VDC	
Mechanical		
Dimension	144.5 cm × 96 cm × 58 cm (5.7" × 3.8" × 2.3")	
Weight	Approx. 950 g (2.1 lb.)	
Ingress protection	IP67	
Temperature	Working temperature: 0 °C to 45 °C (32 °F to 113 °F) Storage temperature: −30 °C to 80 °C (−22 °F to 176 °F)	
Humidity	20% RH to 85% RH (no condensation)	
General		
Client software	3DMVS, VM3D, or third-party software	
Operating system	32/64-bit Windows 7/10 (8 GB memory and i5 CPU)	

*This data is obtained via testing gauge blocks in a laboratory, and it is an average from 4096 tests.