Sizector®3D Camera

S Series

MEGA PHASE TECHNOLOGY

Sizector®3D Camera S Series
Redefine 3D Cameras

S Series , which represents the world-leading level of structured light 3D cameras , is the latest member of Sizector®3D Camera family. Applying S Series as 3D imaging unit , users will have more options to obtain proper 3D imaging results in accordance with applications. Users can also benefit more from S Series , of which outstanding characteristics are as follows:

Powerful Performance

Fast Speed

The maximum framerate of S Series 3D Camera is up to 20.3 FPS, which is nearly two times of other similar products.

High Precision

Compared with HD Series, the single-pixel repeatable precision of S Series has increased approximately 20 times , and the area repeatable precision has increased over 2 times.

Real-time Automatic HDR (Patented)

S Series 3D Camera has high sensitivity and wide dynamic range , which is able to capture the reflectance difference of object and automatically adjust the camera parameters in single frame imaging.

With HDR function , no manual parameters setting is required while imaging different objects. In this way , project progress can be quickly pushed forward , thus the implementation of 3D imaging projects are redefined!

Varied Hardware Functions

S Series 3D Camera integrates hardware algorithm circuit in order to realize some post-processing function , such as noise reduction , mending and flying-spots removal ; New added hardware RT matrix transformation function is useful on image mosaic ; New-added area inspection function can filter unnecessary part of the point cloud , as well as consume less computing resource.

Stable, Safe, Reliable

S Series 3D Camera meets the EMC requirements both in the laboratory and production line. It also has reliable communication protocol , and lose no frame data after every reconnection.

Sizector ®3D Camera S Series

	S028040	S028060	S028120	S028240	S028360	S028800
Framerate of whole cycle time	⩽20.3FPS(@0.7M)	⩽20.3FPS(@0.7M)	⩽20.3FPS(@0.7M)	⩽20.3FPS(@0.7M)	⩽20.3FPS(@0.7M)	⩽20.3FPS(@0.7M)
	⩽8.7FPS(@2.8M)	⩽8.7FPS(@2.8M)	⩽8.7FPS(@2.8M)	⩽8.7FPS(@2.8M)	⩽8.7FPS(@2.8M)	⩽8.7FPS(@2.8M)
Resolution (Mega Pixels)	2.8M/0.7M	2.8M/0.7M	2.8M/0.7M	2.8M/0.7M	2.8M/0.7M	2.8M/0.7M
Clearance Distance (mm)	95	160	200	423	1050	1500
Standard FOV (mm)	40*30.3	60*45.4	120*90.8	240*181.7	360*272.8	800*605.8
Measurement Range Z (mm)	±8	±10	±30	±60	±90	+600, -1400
Repeatability Z *1*2 (um)	0.5	0.6	1.2	2.3	5.6	58.2
Repeatability Z *1*3 (um)	0.05	0.05	0.11	0.21	0.41	9.54
Dimensions (mm)	146*180*53.5	146*210*53.5	146*225*53.5	146*275*53.5	146*404*53.5	146*412*53.5
Weight (kg)	1.9	2.1	2.1	2.4	2.9	3.1
Light Source	Blue LED					
Data interface	USB3.0					
Conformity	CE, GenICam					
Input / Output Signal	Two-channel Nonpolar Level Signal Input /Switchable Signal Output (12/24V Compatible)					
Operating Voltage/Current	24V / 5A					
Operating Systems	Linux / Windows 7、8、10					
Platform	C / C++ / C#					
Operating Temperature	0~40°C					
Storage Temperature	0~60°C					
Operating Humidity	20%~80% (No Consendation)					
Standard Accessories	3m High-Felxible USB Cable , Power Adapter , 3m Power Cable and 3m I/O Cable					

*1 The worst result of repeatability in full FOV & Measure Range, of which the target is a ceramics plate.

*2 Single-Pixel repeatability: $\sigma = \sqrt{\frac{1}{100}\sum_{i=1}^{100}(\overline{Z_i} - \overline{Z_A})^2}$, Z_i is the height of point P, point P is at the center of area A. The size of area A is equal to 1/100 of FOV, and is the average height value of all the pixels in area A.

*3 Area repeatability: $\sigma = \sqrt{\frac{1}{100}\sum_{i=1}^{100}(\overline{Z_{Ai}} - \overline{Z_{Bi}})^2}$, $\overline{Z_A}$ & $\overline{Z_B}$ are the average height values of all the pixels in area A and area B. The size of area A and area B is equal to 1/100 of FOV, and they are next to each other.

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