SCAPE

SCAPE

SCAPE 3D SCANNER RECOGNITION

SCAPE TECHNOLOGIES A/S

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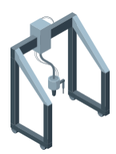
SCAPE 3D SCANNER RECOGNITION

Application Scenarios

BIN-PICKING

LOAD/UPLOAD OF MACHINE



TRAJECTORY CORRECTION

CASE DEPALLETIZING

ASSEMBLY

PACKAGE

SCAPE GRID SCANNER

Multiple frames can be used within the robot's reach

scanned from multiple angles

Very smooth surfaces can be recognized

Easy to install

Technical performance

The SCAPE Grid Scanner Recognition™ Compact can work in different ranges without re-calibration.
Below are shown three examples. Any range in between can also be used.
There is a linear relation between the data below and the ranges in between.

	Near Range	Far Range	Extended Range
Expected Distance to Object	340mm	445mm	TBAmm
Working Range at Expected Distance	280-480²(mm)	325-565²(mm)	TBA²(mm)
Field of View at Expected Distance	205*205mm	271*271mm	TBAmm
Lateral Resolution (XY-plane)	1.05mm	1.37mm	TBAmm
Min Surface Area for Scanning at Expected Distance	4.9*4.9mm	5.8*5.8mm	TBAmm
Depth Uncertainty RMS at Expected Distance	0.25mm	0.44mm	TBAmm

The SCAPE Grid Scanner Recognition™ Standard can work in different ranges without re-calibration.
Below are shown three examples. Any range in between can also be used.
There is a linear relation between the data below and the ranges in between.

	Near Range	Far Range	Extended Range
Expected Distance to Object	460mm	600mm	730²(mm)
Working Range at Expected Distance	400-630²(mm)	450-750²(mm)	480-860²(mm)
Field of View at Expected Distance	275*275mm	395*395mm	434*434mm
Lateral Resolution (XY-plane)	1.42mm	1.85mm	2.25mm
Min Surface Area for Scanning at Expected Distance	5.8*5.8mm	7.8*7.8mm	11.3*11.3mm
Depth Uncertainty RMS at Expected Distance	0.30mm	0.50mm	0.80mm

SCAPE MINI

MINI Industrial 3D Scanners

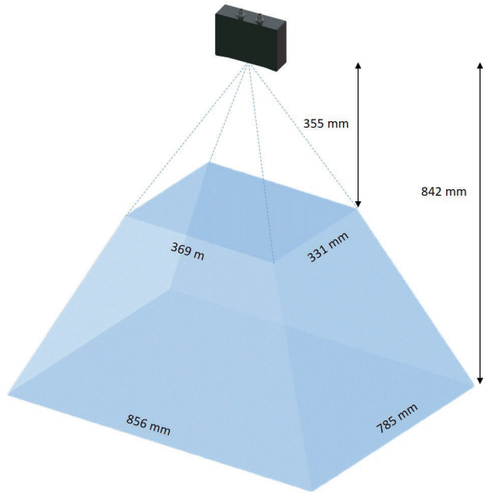
Light weight design | High precision | Easy to install

High reliability and stability | Hard Condition Resistant Fiber

It can be used for medium and close range high-precision guidance, grasping, weld positioning and other application scenarios.

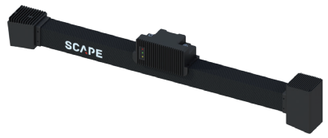
Parameter table

Model		SCAPE Mini OP13-21
Basic parameters	Dimensions (L*W*H)	165*115*47 (mm)
	Weight	0.98kg
	Base line	130mm
FOV	Working range	355-842mm
	Near FOV	369*331mm@355mm
	Far FOV	856*785mm@842mm
	RGB	NA
Exposure mode	IR	Global shutter
	RGB	NA
Accuracy	Z	< 0.1%
	X/Y	< 0.5%
	Point Z-value	0.46mm@500mm
Resolution	Depth	1280*1024
	RGB	NA
FPS	Depth	1~2fps
	RGB	NA
RGB-D	Alignment	NA
Data Output	Depth	√
	Point Cloud	wrl、obj、pcd、ply
	IR	√
	RGB	NA
API	C++，C#	C++、C#、Python、Halcon
Operation system	WINDOWS	Windows10/11
	LINUX	Ubuntu 16.04/18.04/20.04
Hardware interface	Hirose 8pin	12~30VDC
	Ethernet	M12 X-CODE, GigE, IEEE1588
Indicator	3LED	√
Working environment	Operation	0~40℃
	Storage	-20~70℃
	Relative Humidity	20%~80% RH
	IP	IP65
Power Supply	Power interface	√
	Power input	24V DC, ≥2A
	Power consumption	18W



SCAPE ULTRA-L/XL

Ultra Industrial 3D Scanners

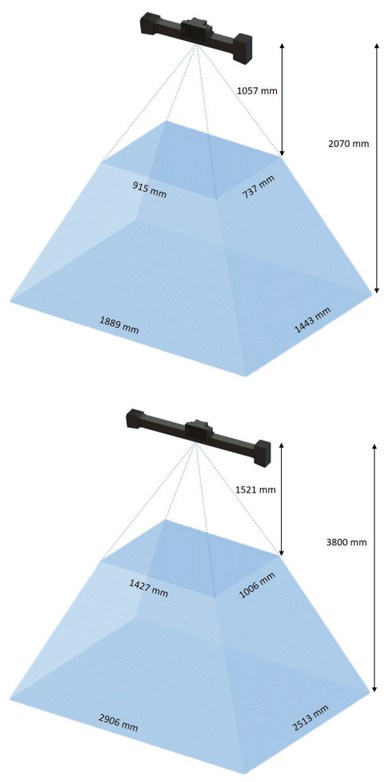


Large Fov | High reliability and stability

High Accuracy Resolution 3D Images | Hard Condition Resistant Fiber

The SCAPE 3D scanner can be widely utilized to application scenarios including objects depth information acquisitions, industrial inspection, machine guidance, etc..

Parameter table



Model		SCAPE Ultra-L OP18-35	SCAPE Ultra-XL OP18-36
Basic parameters	Dimensions (L*W*H)	627*154*80 (mm)	943*154*80(mm)
	Weight	2.49Kg	2.59Kg
	Base line	550mm	860mm
FOV	Working range	1057-2070mm	1521-3800mm
	Near FOV	915*737mm@1057mm	1427*1006@1521mm
	Far FOV	1889*1443mm@2070mm	2906*2513@3800mm
	RGB	NA	NA
Exposure mode	IR	Global shutter	Global shutter
	RGB	NA	NA
Accuracy	Z	< 0.1%	< 0.1%
	X/Y	< 0.5%	< 0.5%
	Point Z-value	0.788mm@1400mm	0.992mm@2300mm
Resolution	Depth	1624×1240	2048*1536
	RGB	NA	NA
FPS	Depth	1~2fps	1~2fps
	RGB	NA	NA
RGB-D	Alignment	NA	NA
Data Output	Depth	√	√
	Point Cloud	wrl、obj、pcd、ply	wrl、obj、pcd、ply
	IR	√	√
	RGB	NA	NA
API	C++，C#	C++、C#、Python、Halcon	C++、C#、Python、Halcon
Operation system	WINDOWS	Windows10/11	Windows10/11
	LINUX	Ubuntu 16.04/18.04/20.04	Ubuntu 16.04/18.04/20.04
Hardware interface	Hirose 8pin	12~30VDC	12~30VDC
	Ethernet	M12 X-CODE, GigE, IEEE1588	M12 X-CODE, GigE, IEEE1588
Indicator	3LED	√	√
Working environment	Operation	0~40℃	0~40℃
	Storage	-20~70℃	-20~70℃
	Relative Humidity	20%~80% RH	20%~80% RH
	IP	IP65	IP65
Power Supply	Power interface	√	√
	Power input	24V DC, ≥2A	24V DC, ≥2A
	Power consumption	35W	35W

SCAPE PRO-M/L/XL

PRO Industrial 3D Scanners

Advantage

The M-type 3D scanner can be used to visually guide the selection of goods, which is suitable for the application needs of goods selection in logistics, e-commerce, manufacturing and other industries.

- High Accuracy
- Comes with RGB module
- Powerful Algorithm

Advantage

Depth scanner Pro-L for visually guided disassembling and palletizing scenes with built-in AI+3D SOC and integrated self-developed 3D algorithms.
It can be used for disassembling and palletizing large objects such as boxes and sacks.

- Wide Measuring Range
- Light weight
- Hard Condition Resistant Fiber

Advantage

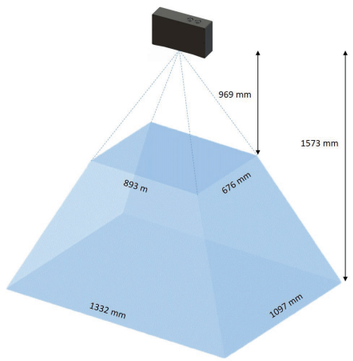
By utilizing the embedded computing chip, the scape scanner can perform 3D imaging reconstruction, output depth map/point cloud, and achieve submilimeter precision without a separate host computer.
It is widely used in industrial grabbing, logistics dismantling and palletizing.

- Hypervisual field
- High Accuracy
- Hard Condition Resistant Fiber

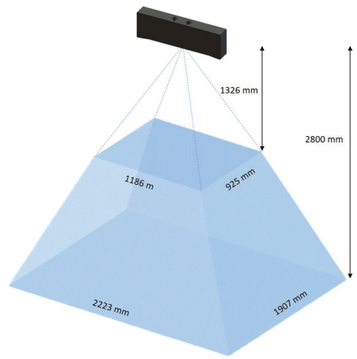
Parameter table

Model		SCAPE Pro-M OP18-12	SCAPE Pro-L OP18-13	SCAPE Pro-XL OP18-14
Basic parameters	Dimensions (L*W*H)	280*165*74（mm）	480*148*65（mm）	480*148*68（mm）
	Weight	2.6Kg	3.7Kg	3.74Kg
	Base line	200mm	400mm	400mm
FOV	Working range	969~1573mm	1326~2800mm	1100~3500mm
			2800-4000mm	3500-4900mm
	Near FOV	893mm*676mm@969mm	1186*925mm@1326mm	1145*1023mm@1100mm
	Far FOV	1332mm*1097mm@1573mm	2223*1907mm@2800mm	3643*3249mm@3500mm
	RGB	H:65.6/V:51.6	H:65.6/V:51.6	H:75/V:60
Exposure mode	IR	Global shutter	Global shutter	Global shutter
	RGB	Rolling Shutter	Rolling Shutter	Rolling Shutter
Accuracy	Z	< 0.1%	< 0.1%	< 0.1%
	X/Y	< 0.5%	< 0.5%	< 0.5%
	Point Z-value	0.67mm@1200mm	1.01mm@1800mm	1.35mm@1800mm
Resolution	Depth	1624×1240	1624×1240	1624×1240
	RGB	3264*2464	3264*2464	4032*3040(MAX)
				3248*2480
FPS	Depth	1~2fps	1~2fps	1~2fps
	RGB	10fps	10fps	10fps
RGB-D	Alignment	√	√	√
Data Output	Depth	√	√	√
	Point Cloud	wrl、obj、pcd、ply	wrl、obj、pcd、ply	wrl、obj、pcd、ply
	IR	√	√	√
	RGB	√	√	√
API	C++，C#	C++、C#、Python、Halcon	C++、C#、Python、Halcon	C++、C#、Python、Halcon
Operation system	WINDOWS	Windows10/11	Windows10/11	Windows10/11
	LINUX	Ubuntu 16.04/18.04/20.04	Ubuntu 16.04/18.04/20.04	Ubuntu 16.04/18.04/20.04
Hardware interface	Hirose 8pin	12~30VDC	12~30VDC	12~30VDC
	Ethernet	M12 X-CODE, GigE, IEEE1588	M12 X-CODE, GigE, IEEE1588	M12 X-CODE, GigE, IEEE1588
Indicator	3LED	√	√	√
Working environment	Operation	0~40℃	0~40℃	0~40℃
	Storage	-20~70℃	-20~70℃	-20~70℃
	Relative Humidity	20%~80%	20%~80%	20%~80%
	IP	IP65	IP65	IP65
Power Supply	Power interface	√	√	√
	Power input	24V DC, ≥2A	24V DC, ≥2A	24V DC, ≥2A
	Power consumption	48W	48W	48W

SCAPE Pro-M



SCAPE Pro-L



SCAPE Pro-XL