

API

RapidScan2

RapidScan Hybrid Optical Sensor 2

Capable of measuring highly reflective and composite surfaces RapidScan2 completely eliminates the need for impractical production part spraying. API's RapidScan2 has a new dual 3.2 mega-pixels camera and a 12 bits image sensor. In addition, the RapidScan2 features innovative hybrid projection and new and enhanced image processing algorithms.

FEATURES & BENEFITS

Higher Resolution

- Camera with higher resolution and enhanced focal length (Point cloud spacing reduced to 0.1 mm and depth uncertainty minimized up to 0.025mm)
- High signal sensitivity in low light conditions

Hybrid Pattern

- Precise and accurate point cloud on highly complex surfaces
- Allows very high flexibility for scanning smooth surface and inspecting gap, flush, studs, and deep features

Improved Stereo Camera Distance and Angle

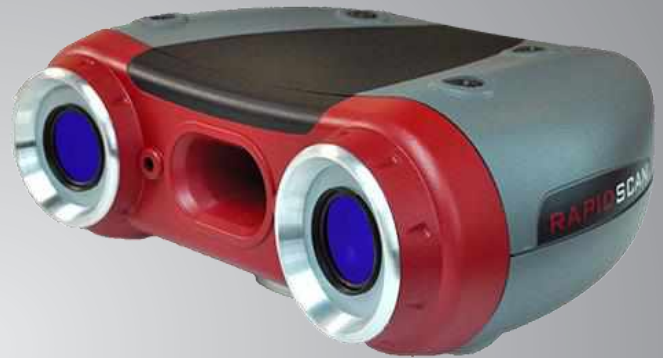
- Deep feature extraction improved

New Integrated Graphical User Interface (GUI)

- Instrument control, point cloud visualization and typical fitting functions

Hardware Connection

- Significantly improved and revised connections
- Easy-to-use on a robotic application due to the right angle connector design



New Structure and Design

The RapidScan2 has a reduced stereo camera distance to assist scanning challenging features like nut holes, and improved scan result repeatability. The better connectivity and no moving part gives a better thermal management.



TECHNICAL SPECIFICATIONS

Measurement Specifications

Acquisition Time	1.5 ~ 2.5 secs
Scanning Speed	1,500,000 measurements / sec
Depth of View	310 mm – 390 mm
Optimal Working Distance	350 mm
Field of View	150 x 120 mm (At closest working distance) 200 x 150 mm (At farthest working distance)
Point Cloud Spacing	0.09 mm (At closest working distance) 0.11 mm (At farthest working distance)

Metrology Performance

Accuracy ¹	Spacing Error: 0.090 mm Flatness Error: 0.025 mm
Volumetric Accuracy (With API Radian Pro) ²	Spacing Error: 0.060 mm + 0.005 mm/m

Dimensions & Weights

Dimension	220 x 210 x 100 mm
Weight	2.5 kg

Electrical Compatibility

Voltage	100 – 240 VAC, 50 -60 Hz
Maximum Power	0.1 kW

Computer & Software

Computing Platform	Laptop or PC
Software	API SFIS software
Integrated 3rd Party Software	PolyWorks, Metrolog

Working Environment

Operating Lighting Conditions	Not sensitive to industrial lighting source
Operating Temperature	20 - 25 °C

¹ Based on VDI/VDE 2634 part 2. Performance is assessed with calibrated sphere artifact and cube artifact.

² Based on VDI/VDE2634 part 3. performance is assessed with traceable scale ar by measuring at different locations and orientations within the working volume of the API Radian Pro.

