

 Roland

3D LASER SCANNER 

PICZA
model:

LPX-250

**World's First Dual Mode 3D Laser Scanner to Deliver Polygon
And NURBs Surface Conversion at a Very Affordable Price**



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LPX-250

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model:

The Newest Dimension in 3D Desktop Laser Scanning

Now, engineers, artists, animators, and game developers have the ability to scan objects and convert the digitized models to STL or DXF (polygons) and IGES (NURBs surfaces) formatted files economically and easily right from their desktops.

Powerful. Space efficient. Extremely easy to use.

The newest addition to Roland's innovative 3D-scanner line, the LPX-250, offers maximum scanning capability in a desktop footprint:

- Non-contact, 3D laser scanning
- Converts scanned data into polygon and NURBs surfaces
- Exports in STL, DXF and IGES file formats for industry standard 3D CAD and solid modeling software
- Large scanning area — up to 406.4mm (16") high x 254mm (10") in diameter
- Dual modes — offers both rotary and plane scanning for optimum performance



3D Laser Scanner
PICZA model : LPX-250

Easy Scanning

The LPX-250 requires no complicated settings or technical expertise. With just a single mouse click, the LPX-250 scans a 3D object. All digitizing operations are controlled from Dr. PICZA 3 software. Among Dr. PICZA's many features are the abilities to adjust the scanning pitch, area, or mode, providing advanced users with more options and control over the scanning process.

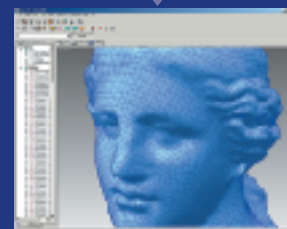
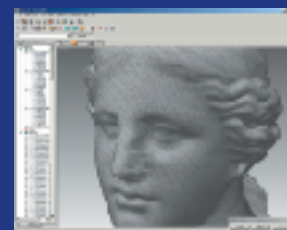


Dr. PICZA 3

A Complete Solution: from 3D Scanning to Data Conversion

3D scanners produce scanned data in point cloud format. In order for your 3D CAD or solid modeling software to use the data, however, you must first edit and optimize it.

With Pixform, its powerful editing software, the LPX-250 allows you to decimate, stitch, heal, and automatically generate NURBS surfaces. It's as easy as clicking a mouse! The data can then be exported as an STL or IGES file to industry standard 3D CAD and solid modeling software.



Conversion to NURBS surface

Main Features of *Pixform*

Easily converts data into polygon or NURBS surfaces

Pixform allows you to generate a watertight solid that can be exported as an STL file or NURBS surface automatically without tedious curve drawing. With Pixform, you can speed through your surfacing work and move on to the design process in your 3D CAD or solid modeling software.

Combines scanned data for best results

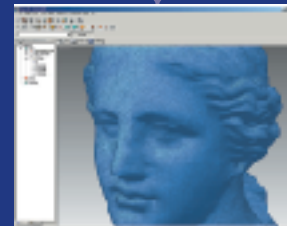
Pixform can merge multiple scans of alternative views to achieve more accurate results.

Cleans, edits and optimizes polygons

With Pixform, you can edit or optimize polygonal surfaces using various tools like decimation, smoothing or remeshing.

IGES file exporting for 3D CAD solid modeling software

Pixform data can be exported in IGES, STL, and DXF compatible with Rhinoceros®, SolidWorks® and other popular 3D CAD and solid modeling software.



Combining multiple scans to generate an accurate representation

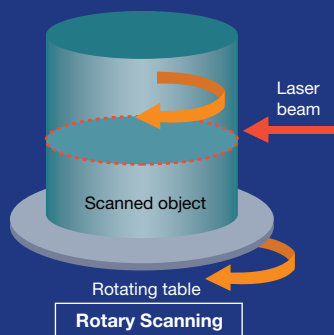
* Pixform is compatible with Windows® 95/98/Me and Windows NT® 4.0/2000/XP.

Dual Modes for Optimum Performance

The combination of rotary and plane scanning modes allows the LPX-250 to provide unmatched versatility. You can scan an expansive array of objects, from smooth contours to highly intricate models. Resolution is user definable to 0.2mm.

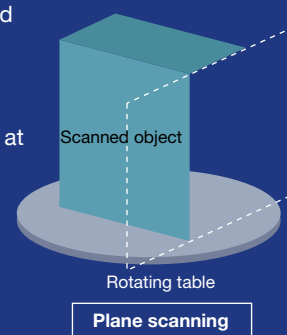
Rotary Scanning Mode

Rotary Scanning Mode is ideal for quickly scanning spherical and smooth-surfaced objects. Once the object is placed on the LPX-250's rotating table, the laser beam travels vertically up the rotating object to generate a digital file. Should you require a specific area in greater detail, the LPX-250's rescanning function also allows you to rescan only the required area.



Plane Scanning Mode

Plane scanning is especially suited for capturing flat areas, hollow objects, oblique angles and fine details. The LPX-250 laser beam scans a maximum of six surfaces at right angles in plane scanning mode.



3D Laser Scanner **LPX-250 SPECIFICATIONS**

Table size	Diameter 254 mm (10 in.)
Maximun scanning area	Rotary scanning: Diameter 254 mm (10 in.), height 406.4 mm (16 in.) Plane scanning: Width 230 mm (9 in.), height 406.4 mm (16 in.)
Scanning pitch	Rotary scanning: circumference 0.2 to 60 degrees, height direction 0.2 to 406.4 mm Plane scanning: width direction 0.2 to 230 mm, height direction 0.2 to 406.4 mm
Maximun table load weight	5 kg (11 lb.) (not including optional vise)
Laser	Wavelength: 600 to 700nm, maximun output: less than 1.0 mW (maximum output discharged outside housing is 0.39 μ W), pulse width: 350 μ s, pulse frequency: 2,857 Hz
Sensor	Noncontact laser sensor
Scanning method	Spot-beam triangulation
Operating speed	Table rotation speed: 15 rpm, head rotation speed: 7.5 rpm, head movement speed: 50 mm/sec.
Interface	Serial (RS-232C standard, D-Sub25 pin), Transfer method: Asynchronous/full duplex data communication, 9,600/115,200 bps transfer speed, 8 data bits, 1 stop bit, no parity, hardware flow control
Control keys and LEDs	Standby key, Standby LED, and Movement LEDs
Power consumption	Dedicated AC adapter (DC 19V, 2.1 A)
External dimensions	528 (W) x 431 (D) x 742 (H) mm (20-13/16 (W) x 16-15/16 (D) x 29-3/16 (H) in.)
Weight	32 kg (70.5 lb.) (main unit only)
Operating temperature	10 to 40 °C (50 to 104 °F)
Operating humidity	35 to 80 % (no condensation)
Included items and accessories	AC adapter: 1, power cord: 1, 2.5-mm hexagonal wrench: 1, 3-mm hexagonal wrench: 1, caps: 3, Roland Software Package CD-ROM: 1, user's manual: 1, Roland Pixform CD-ROM: 1

The LPX-250, including safety enclosure, is classified as a Class 1 laser product. However, the laser light emitted internally is Class 2.



About objects to be scanned:

LPX-250 scans objects using a laser light beam. Scan quality may vary depending on the materials or colors of the objects. The LPX-250 cannot scan around the top of an object where the laser beam either hits at too shallow an angle or cannot hit the object at all.

Objects that are transparent, translucent, or have surfaces which are fuzzy, glossy, or highly reflective, made of fabric, or of dark colors such as black, blue or green, may not produce good results. In these instances, using a matte-finish white overcoat or other temporary surfacing agent is required.

■ OPTIONS

Model number	Description
ZV-L250	Vise (Chuck range: 0-118mm, height: 48mm and weight: 1.25kg)
XY-RS-34	3m RS-232C cable (D-sub 9 pin female--D-sub 25 pin male)

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