

Designed for high performance: The FARO Laser Scanner LS

Designed with user friendliness in mind the high performance of the scanner can be used with minimal training to capture 3D point cloud data. Whether documenting a 50,000 square foot building or accurately capturing the scene of a crime the possible applications are almost unlimited. The scanner offers:

Photorealistic 3D images

The FARO Laser Scanner LS produces three dimensional black and white images where every pixel has an X,Y,Z coordinate. For enhanced realism colour, through an upgrade option, can be added to the pixels. Measurements can be made directly in the point cloud and 3D objects can be generated, these can be used to create dimensionally accurate CAD models

High speed

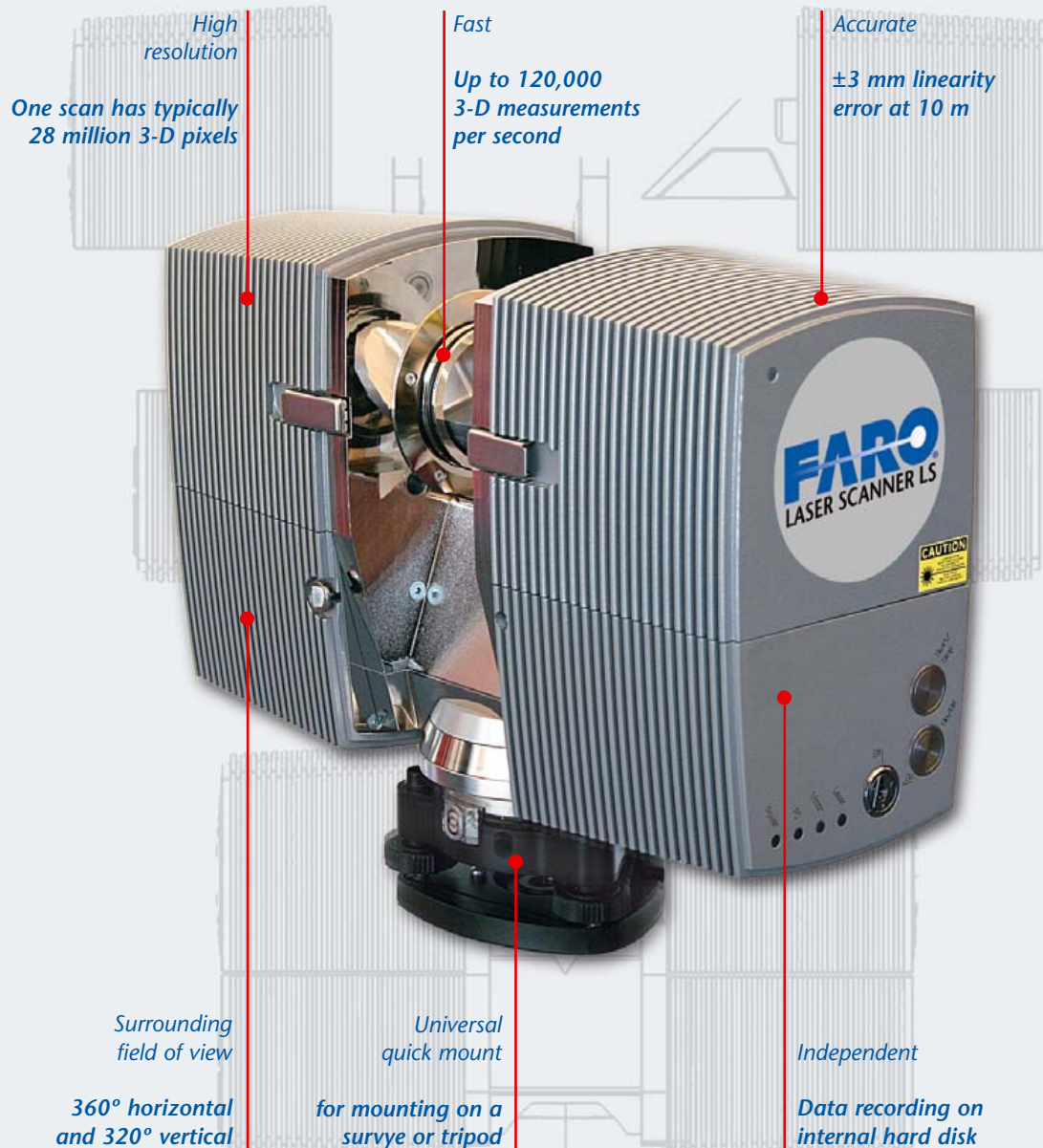
In less than a minute the FARO Laser Scanner LS can take an 8 Mega pixel scan of the surrounding area. This is over 100 times faster than conventional scanners – this reduces the time needed for capturing data on site increasing the efficiency and profitability of the data capture.

Modularity

The FARO Laser Scanner LS is constructed of exchangeable modules, the distance sensor, mirror module and PC module. Making the unit easy to maintain and adding the advantage that additional modules can be purchased to take the benefit of future developments such as a long range module or a high accuracy module. This secures the investment and ensures that cutting edge technology remains affordable.

Proven technology

Many years of experience in the practical application of the technology can be seen in the design: The scanner is compact with sealed units, button push operation and can be geo-referenced making it suitable for daily operation in difficult environments.



Ranging Unit

Distance: 35m¹⁾ (HE40), 70m¹⁾ (HE80)
Resolution: 17 Bit Range / 9 Bit Intensity
Measurement Range: 120 kHz
Linearity Error: ±3 mm at 10 m¹⁾

Deflection Unit

Vertical Field of View: 320°
Horizontal Field of View: 360°
Vertical Resolution: 0.009° (40.000 3D-Pixel on 360°)
Horizontal Resolution: 0.00076° (470.000 3D-Pixel on 360°)
Max. vertical scanning speed: 3000 rpm
Scanning Time at 4450x2500
measurement points: ca. 104 sec.

1) measured on a non moving orthogonal Kodak 84% reflectivity reference paper in averging mode in 1 cm steps. More details upon request.

Laser (Optical Transmitter)

Laserpower (CW, average): (HE 40) 10.5 mW, (HE 80) 22 mW
Wavelength: 785 nm
Beam Divergence: 0.25 mrad (0.014°)
Beam Diameter (at exit) 3 mm, circular

Handling of Data

Internal PC: Pentium III with 700 MHz, 256 MB RAM
 40GB Harddisk; Windows 2000, Windows XP
Data Storage local: on internal hard disc drive (for most resolutions)
 remote: via Ethernet on external PC or laptop
Data Transfer: online during scanning via Fast-Ethernet

General

Power Supply Voltage: 24 V DC (Battery Pack or AC converter)
Power Consumption: ~60 W
Ambient Temperature: 5 - 40° C
Humidity: non condensing
Inclination Sensor: optional (accuracy 0.01°; resolution 0.001°; range ± 15°)
Weight: 14.5 kg (35lb)

Size (LxWxH): 400 mm x 160 mm x 280 mm (15.7" x 6.3" x 11")
Maintenance Calibration: once a year
Exchange Modules: distance sensor / mirror axis / PC
Georeferencing: yes
Cable Connector: located in the non rotating foot of the scanner
Control Panel: yes operation without external PC / Laptop

From design to production, large scale to detail, more companies choose FARO — the global standard for portable computer-aided measurement.



Guide 25 Approved



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