Focus i.1

Terrestrial Laser Scanner Series

Build on Data You Can Trust

The Focus i.1 Terrestrial Laser Scanner Series delivers fast, accurate reality capture and connected workflows, helping teams create reliable digital representations and turn field data into project insight.

VALUE

Build on Trusted Data

Capture reliable measurement data for planning, investigation, documentation, and decision-making. With up to 0.9 mm object scanning accuracy, Focus i.1 and Focus i.1 X help teams build confidence in the data behind each result.

Richer Deliverables, Faster Data Capture

Capture colorized scan data in around 20 seconds per scan position with the included Insta360 X6, supporting up to 120 MP color information for richer visual context and broader site documentation use cases.

Place Data in Real-World Context

Focus i.1 supports LiDAR-based tracking through an attachable localizer, while Focus i.1 X includes a GNSS/RTK receiver for georeferencing, helping teams place data in real-world context faster and streamline integration with GIS, Esri, and other mapping environments.

Keep Projects Moving

In-field pre-registration and real-time position tracking provides greater control during capture, helping users validate data completeness, reduce rework, and move more efficiently from scanning to deliverables through integration with FARO Sphere® XG for cloud-based processing.

Focus i.1 and Focus i.1 X help teams capture reliable data, add real-world context, and move from field capture to connected project insight with confidence.

Speak with a FARO INSIGHT expert to find the right scanner for your requirements.

FARO INSIGHT AMETEK®

PERFORMANCE	FOCUS i.1	FOCUS i.1 X
Range – White, 90% Reflectivity	0.5 – 200 m	0.5 – 400 m
Range – Dark-grey, 10% Reflectivity	0.5 – 150 m	0.5 – 150 m
Range – Black, 2% Reflectivity	0.5 – 50 m	0.5 – 50 m
Range Noise – White, 90%[1,2]	0.1 mm @ 10 m, 0.2 mm @ 25 m	0.1 mm @ 10 m, 0.2 mm @ 25 m
Range Noise – Dark-grey, 10%	0.3 mm @ 10 m, 0.4 mm @ 25 m	0.3 mm @ 10 m, 0.4 mm @ 25 m
Range Noise – Black, 2%	0.5 mm @ 10 m, 0.8 mm @ 25 m	0.5 mm @ 10 m, 0.8 mm @ 25 m
Max Speed	Up to 2 MPts/sec	Up to 2 MPts/sec
3D Accuracy[3]	2 mm @ 10 m, 3.5 mm @ 25 m	2 mm @ 10 m, 3.5 mm @ 25 m
Object Scanning Accuracy[4] NEW	0.9 mm @ 20 m and 90°x90° FOV	0.9 mm @ 20 m and 90°x90° FOV
Ranging Error[5]	±1 mm	±1 mm
Angular Accuracy[6]	19 arcsec	19 arcsec
LaserHDR	Yes	Yes
Unambiguity Interval	614 m	614 m
Temperature Range[7]	Operating: -10° to +40° C, Extended -10° to +55° C, Storage: -10° to +60° C	Operating: -10° to +40° C, Extended -10° to +55° C, Storage: -10° to +60° C

ADDITIONAL PERFORMANCE	
Color Unit	
Internal Color Resolution	Up to 266 MP color
Raw Color Resolution	867 MP
External PanoCam	Up to 120 MP
Parallax	Minimized due to co-axial design
Field of View	300° vertical[8] / 360° horizontal
Step Size	0.009° (40,960 pts on 360°) vertical / 0.009° (40,960 pts on 360°) horizontal
Scan Speed	Up to 120 Hz (vertical)
Laser (Optical Transmitter)	
Laser Class	Laser Class 1
Wavelength	1553.5 nm
Beam Divergence	0.3 mrad (1/e)
Beam Diameter at Exit	2.12 mm (1/e)
Data Handling and Control	
Data Storage	SATA 3.0 SSD 128 GB and SDXC™ V30 64 GB SD card; SD3.0, UHS-I / SDXC™ / SDHC™, max. 512 GB
Scanner Control	Via touch screen display and WLAN connection; control by FARO Stream™ App (iOS & Android) or mobile devices with HTML5
Interface Connection	
WLAN	IEEE 802.11 ac/a/b/g/n 2x2 MIMO, as access point or client in existing networks (2.4 and 5 GHz)

1. Ranging noise is defined as the variation of distance samples from repeated measurements of a single point at 122k pts/sec. | 2. Some surfaces can lead to additional noise. | 3. For distances larger than 25 m, add 0.1 mm/m of uncertainty. | 4. Scanning in reduced field of view. The sensor is supplied with an ISO/IEC 17025-accredited calibration certificate, all stated values with 1 Σ. | 5. Ranging error is defined as a systematic measurement error at around 10 m and 25 m. | 6. Recommended to perform on-site compensation if the unit is exposed to exceptional temperature or mechanical stress. | 7. High temperature operation: additional Thermal Cover accessory required. | 8. Ferromagnetic objects can disturb the earth's magnetic field and lead to inaccurate measurements. | 9. Accelerated Profile with included PanoCam.

ADDITIONAL FEATURES	
Localizer & Scanner Status Indicator	Preposition scans with 360 Lidar tracking and live trajectory in Stream™. Scanner status indicator highlights hardware status.
GNSS/RTK*	The GNSS/RTK receiver provides greater functionality on outdoor positioning and georeferences data in r eal time. *Only applicable with Focus i.1 X
Dual Axis Compensator	Performs a leveling of each scan with an accuracy of 19 arcsec valid within ±2°
Height Sensor	Via an electronic barometer, the height relative to a fixed point can be detected and added to a scan
Compass[8]	The electronic compass gives the scan an orientation
GNSS	Integrated GPS & GLONASS
On-Site Compensation	Creates current quality report and improves compensation automatically
Accessory Bay	The accessory bay connects versatile accessories to the scanner
Inverse Mounting	Yes
Real-time, On-site Registration	Stream™ App real-time position tracking, registration, overview map, 3D viewing, and FARO Sphere XG cloud upload
Electronic Automation Interface	Available as option, only at point of sale
Digital Hash Function	Scans are cryptographically hashed and signed by the scanner
Rescanning of Distant Targets	Defined areas recaptured in higher resolution at a greater distance
Retake Photos	Select individual photographs with unwanted objects and retake them
GENERAL SPECIFICATIONS	
Power Supply	19 V (external supply), 14.4 V (internal battery)
Typical Power Consumption	19 W idle, 32 W scanning, 72 W charging
Typical Battery Operation Time	About 4 hours
Typical Scan Time[9] (start until scanner can be moved)	Approx. 20 seconds
Ingress Protection (IP) Rating Class	IP 54
Humidity	Non-condensing
Weight	4.4 kg (including battery)
Size/Dimensions	230 x 183 x 103 mm
Calibration	Recommended annually
Manufacturer Warranty	2 year

Local operations around the world.
Go to FARO.com to learn more.

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