Focus Swift: The First Integrated Mobile High-Accuracy Laser Scanner

FARO® Focus Swift Techsheet

Features

Sensor Range[1]

90% Reflectivity (white)	0.6 m up to 350 m
10% Reflectivity (dark-gray)	0.6 m up to 150 m
2% Reflectivity (black)	0.6 m up to 50 m

Sensor Information

Laser Class	1
Wavelength	1550 nm Focus[S] / 905 nm ScanPlan

Sensor Distance Accuracy[2]

Range Noise	Down to 0.1 mm @10 m 90% (white)
Ranging Accuracy	1 mm

System Performance

Local Accuracy	2 mm @ 10 m
Global Accuracy[3]	10 mm
Area/Volume[4]	Up to 500 m²/5000 m³ per minute

Data Acquisition Rate

Max. Measurement Speed	1 mil. pts/sec (mobile scans) Up to 2 mil. pts/sec (stationary scans)

Deflection Unit

Field of View (horizontal)	360°
Field of View (vertical)	300°

Data Handling and Control

Data Storage	SDHC™, SDXC™; 32GB; max. 512GB
System Control	Access by mobile devices with HTML5

Color Unit

Color Resolution	Up to 165-megapixel color
HDR Camera	Exposure bracketing 2x, 3x, 5x
Parallax	Minimized due to co-axial design

Sensors

IMU	Yes
Dual Axis Compensator	Yes

Additional Features

Digital Hash Function	Scans are cryptographically hashed and signed by the scanner

General Specifications

Trolley

Trolley Weight	8.8 kg
Size Closed (H x W x L)	340 x 450 x 700 mm
Size Open (H x W x L)	1080 x 770 x 1370 mm

System[5]

System Weight (incl. Batteries)	17.5 kg
Max. Size (H x W x L)	1080 x 770 x 2010 mm
Min. Size (H x W x L)	1080 x 770 x 1580 mm
Power Supply Voltages - external	19 V
Power Supply Voltages - internal	14.4 V and 15 V (battery)
Battery Service Life	2 hours
Operating Temperature (ambient)	+5 °C to +40 °C
Extended Operating (ambient)[6]	-10 °C to +40 °C
Storage Temperature (ambient)	Recommended -10 °C to 25 °C Maximum[7] -10 °C to 60 °C
Humidity Resistance	Non-condensing

Interface Connection

WLAN	802.11n (150Mbit/s), as access point or client in existing networks

Output[8]

Scene Export Scan Points	FARO Scan, FARO Cloud, ASTM E57, .dxf, .igs, .txt, .xyz, .xyb, .pts, .ptz, .pod

[1] For a Lambertian scatterer, using Focus[S] 350 or Focus[S] Plus 350
[2] For stationary scans; ranging noise is defined as a standard deviation of values about the best-fit plane for measurement speed of 122,000 points/sec.
[3] In a controlled indoor environment
[4] Dependent on scanned environment
[5] Including Swift trolley, tripod, mounts, Focus[S] scanner and ScanPlan
[6] Low temperature operation: Devices have to be powered on while internal temperature is at or above 15°C
[7] Extended storage at temperatures greater than 40°C may degrade battery life and performance
[8] Using FARO Scene

Accuracy depends on the effectiveness of the SLAM registration algorithm, which can be influenced by the geometry of the captured environment. Long paths in absence of loop closures, cross passes (and different conditions like narrow corridors or presence of windows/glass walls) can degrade the accuracy. For additional information see tech sheet of Focus[S] / Focus[S] Plus scanners and ScanPlan. All accuracy specifications are one sigma, after warm-up and within operating temperature range; unless otherwise noted. Subject to change without prior notice. Swift is only available for Focus[S] and Focus[S] Plus scanners, requires ScanPlan, accessories and additional FW/SW licenses, requires SCENE version 2020 or higher and Focus firmware 6.6 or higher.

SFDC _04MKT_0530 Revised: 07/01/2020