Accuracy
The Focus® now captures environments with increased accuracy and distance with dual-axis compensator and angular measurement.

Temperature
Extended temperature range allows scanning in challenging environments. The Focus® can operate in temperatures as low as -4°F (-20°C) and up to 131°F (55°C).

On-site Compensation
With the on-site compensation functionality users can verify and adjust the Focus® compensation on-site, ensuring high quality scan data.

IP Rating - Class 54
With the sealed design and certified with the industry standard Ingress Protection (IP) Rating, IP54, the Focus® can be used in high particulate and wet weather conditions.

HDR Photo Overlay
The HDR camera easily captures detailed imagery while providing a natural color overlay to the scan data captured under extreme brightness gradients.

Accessory Bay
The accessory bay allows users to connect additional 3D laser scanning accessories to support a variety of projects.

Value-Added Laser Scanners for Mid-to-Long Range Applications

Compact, lightweight and intuitive, the FARO® Focus® Laser Scanner is the latest advancement in 3D scanning. The Focus® is available in two versions depending on your scanning range requirement: a long-range version (350m scanning radius) and a mid-range version (150m scanning radius).

The Focus® is the next-generation of laser scanners. It combines the hallmark features of the FARO® Focus3D product line with significant technological innovations such as Ingress Protection Rating (IP54), increased scanning accuracy, an internal accessory bay and a built-in compensation on-site routine.

The Focus® provides users with a truly mobile, intuitive, and reliable laser scanning solution for both indoor and outdoor environments, across a wide range of industries such as Construction BIM-CIM and Public Safety - Forensics.

Benefits
• Scan in challenging environments while providing protection from dust, debris and water splashes
• Be confident in data quality with the on-site compensation functionality
• Close the gap between digital documentation and reality with improved scan data from increased distance and angular accuracy improvements
• Customize the scanner with the internal accessory bay
• Handle the scanner control with ease through its large and luminous touch-screen
Performance Specifications

**Ranging Unit**
Unambiguity interval: 614m for 122 to 488 kpts/s
307m for 976 kpts/s

<table>
<thead>
<tr>
<th>Reflectivity</th>
<th>90% (white)</th>
<th>10% (dark-gray)</th>
<th>2% (black)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range¹ (150 m)</td>
<td>0.6-150 m</td>
<td>0.6-150 m</td>
<td>0.6-50 m</td>
</tr>
<tr>
<td>Range¹ (350 m)</td>
<td>0.6-350 m</td>
<td>0.6-150 m</td>
<td>0.6 m-50 m</td>
</tr>
</tbody>
</table>

**Ranging Noise²**
<table>
<thead>
<tr>
<th>@10m</th>
<th>@10m - noise reduction²</th>
<th>@25m</th>
<th>@25m - noise reduction²</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% reflectivity</td>
<td>0.3mm</td>
<td>0.15mm</td>
<td>0.3mm</td>
</tr>
<tr>
<td>10% reflectivity</td>
<td>0.4mm</td>
<td>0.2mm</td>
<td>0.5mm</td>
</tr>
<tr>
<td>2% reflectivity</td>
<td>1.3mm</td>
<td>0.65mm</td>
<td>2mm</td>
</tr>
</tbody>
</table>

Measurement speed (pts/sec): 122,000 / 244,000 / 488,000 / 976,000

Ranging error⁴: ±1mm
Angular accuracy⁵: 19 arcsec for vertical/horizontal angles
3D position accuracy⁶: 10m: 2mm / 25m: 3.5mm

**Color Unit**
Resolution: Up to 165 megapixel color
High Dynamic Range (HDR): Exposure Bracketing 2x, 3x, 5x
Parallax: Minimized due to co-axial design

**Deflection Unit**
Field of view (vertical/horizontal): 300° / 360°
Step size (vertical/horizontal): 0.009° (40,960 3D-Pixel on 360°) / 0.009° (40,960 3D-Pixel on 360°)
Max. vertical scan speed: 97Hz

**Laser (Optical Transmitter)**
Laser class: Laser class 1
Wavelength: 1550nm
Beam divergence: 0.3mrad (1/e)
Beam diameter at exit: 2.12mm (1/e)

**Data Handling and Control**
Data storage: SD™, SDHC™, SDXC™; 32GB card
Scanner control: Via touchscreen display and WLAN connection. Access by mobile devices with HTML5

**Interface Connection**
WLAN: 802.11n (150Mbit/s), as Access Point or client in existing networks

**Integrated Sensors**
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.
Compass⁸: The electronic compass gives the scan an orientation.
GNSS: Integrated GPS & GLONASS

**On-site Compensation**
Creates a current quality report and provides the option to improve the device’s compensation automatically.

**Accessory Bay**
The accessory bay is located on top of the laser scanner and is used to connect versatile accessories to the scanner.

**General**

<table>
<thead>
<tr>
<th>Power supply voltage:</th>
<th>19V (external supply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption:</td>
<td>14.4V (internal battery)</td>
</tr>
<tr>
<td>Battery service life:</td>
<td>15W idle, 25W scanning, 80W charging</td>
</tr>
<tr>
<td>Operating temperature:</td>
<td>5° - 40°C</td>
</tr>
<tr>
<td>Extended operating temperature⁹:</td>
<td>-20° - 55°C</td>
</tr>
<tr>
<td>Storage temperature:</td>
<td>-10° - 60°C</td>
</tr>
<tr>
<td>Ingress Protection:</td>
<td>IP54</td>
</tr>
</tbody>
</table>

Humidity: Non-condensing
Weight incl. battery: 4.2kg
Size: 230 x 183 x 103mm
Maintenance / calibration: Annual

¹ For a Lambertian scatterer. ² Ranging noise is defined as a standard deviation of values about the best-fit plane for measurement speed of 122,000 points/sec. ³ A noise-reduction algorithm may be activated by averaging raw data. ⁴ Ranging error is defined as a systematic measurement error at around 10m and 25m. ⁵ On-site compensation required. ⁶ For distances larger 25m add 0.1mm/m of uncertainty. ⁷ For distances larger 25m add 0.1mm/m of uncertainty. ⁸ Ferromagnetic objects can disturb the earth magnetic field and lead to inaccurate measurements. ⁹ Low temperature operation: scanner has to be powered on while internal temperature is at or above 15°C, high temperature operation: additional accessory required, further information on request | All accuracy specifications are one sigma, after warm-up and within operating temperature range; unless otherwise noted. Subject to change without prior notice.

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