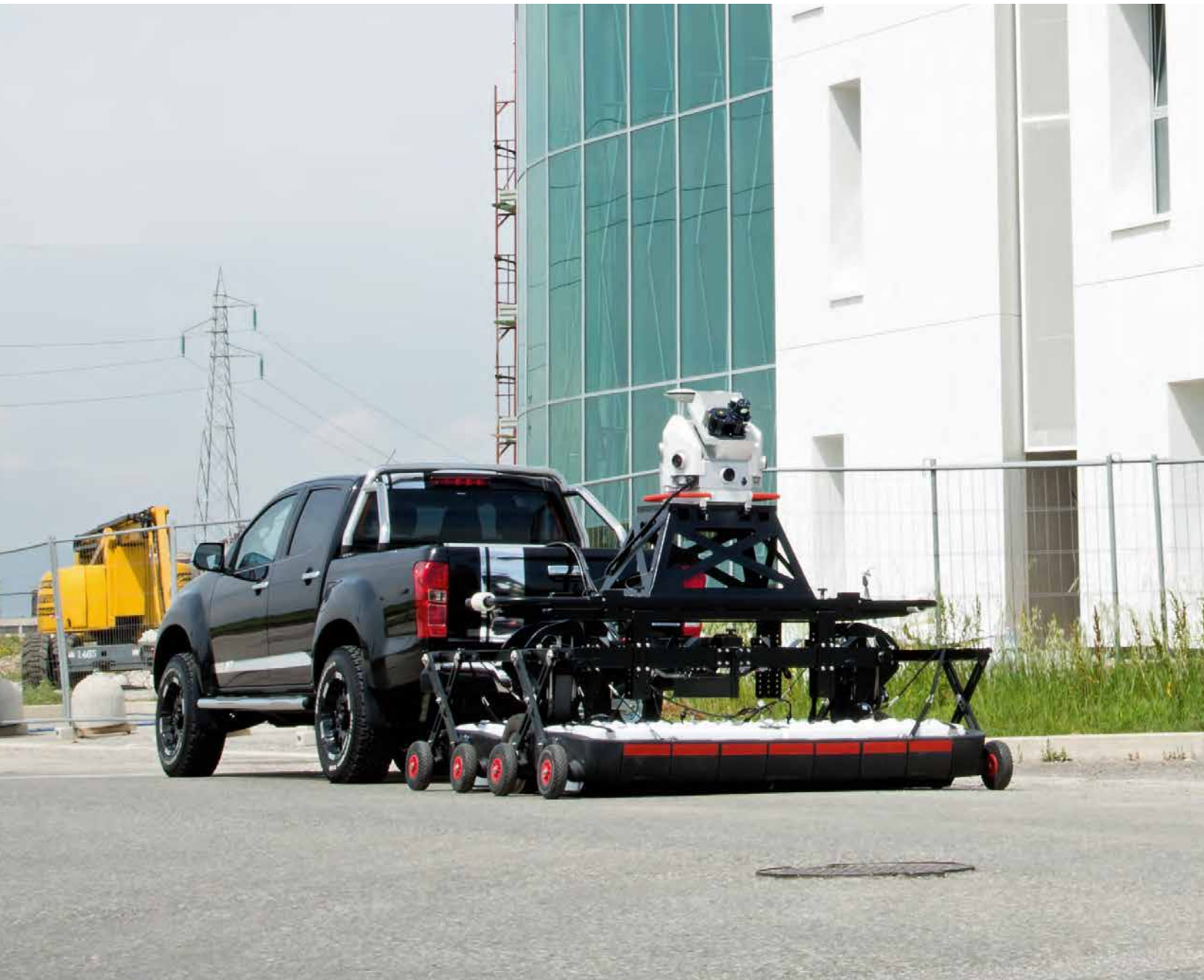


# Leica Pegasus:Stream

Above and below ground mapping in a single integrated vehicle-towed solution



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# Leica Pegasus:Two Product Specifications

## Camera Sensor

Number of cameras	8
CCD size	2000 x 2000
Pixel size	5.5 x 5.5 microns
Maximum frame rate	8 fps x camera, equal to 256 M pixels x second (collected, compressed, stored)
Lens	8.0mm focal, ruggedised; 2.7mm focal, top
Coverage	360° x 270° excluding rear down facing camera

## Scanner

Please refer to scanner manufacturer datasheet.

## Control Unit

Multi-core industrial PC, low power consumption, 1TB SSD hard disk with USB3 interface. USB, Ethernet, and wireless connections available through the battery system. Service support available through remote interface.

## Battery System Performance

Typical operating time	9 hrs, profiler version; 13 hrs, scanner version
VAC input voltage	100 min to 240 max VAC autoranging
AC input power (charge cycle)	350W Max
AC input frequency	50/60 Hz
Time to full charge	11.0 max h starting 0%
DC output	21 - 29 volts
Watt/Amp hours	2685 Watts hours/104 Amp hours

## GNSS/IMU/SPAN Sensor

Includes triple band – L-Band, SBAS, and QZSS for GPS, GLONASS, Galileo, and BeiDou constellations, single and dual antenna support, wheel sensor input, tactical grade – no ITAR restrictions, low noise FOG IMU.

Frequency	200 Hz
MTBF	35,000 hour
Gyro bias in-run stability (±deg/hr)	0.75
Gyro bias offset (deg/hr)	0.75
Gyro angular rand. walk (deg/√hr)	0.1
Gyro scale factor (ppm)	300
Gyro range (±deg/s)	450
Accelerometer bias (mg)	1
Accelerometer scale factor (ppm)	300
Accelerometer range (±g)	5
Position accuracy after 10 sec of outage duration	0.020 m RMS horizontal, 0.020 m RMS vertical, 0.008 degrees RMS pitch/roll, 0.013 degrees RMS heading.

## Sensor Platform

Weight	51 kg (without case), 86 kg (with case)
Size	60 x 76 x 68 cm, profiler version
Size with case	60 x 79 x 76 cm, Leica ScanStation P20
	68 x 68 x 65 cm

## Battery

Weight	34.8 kg
Size	65 x 32 x 37 cm

## Environmental

Operating temperature	0° C to +40° C, non-condensing
IP protection level	IP52, excluding the scanner. Please refer to scanner documentation.
Storage temperature	-20° C to +50° C, non-condensing

## Typical Accuracy\*

Horizontal accuracy	0.020 m RMS
Vertical accuracy	0.015 m RMS
Conditions	Without control points, open sky conditions

## Productivity\*

Data produced per project (compressed)	43 GB/h or 1.1 GB/km
Data produced after post processing (images and point cloud)	60 GB/h or 1.5 GB/km
Post processing time	1 hr of data collection equals 1 hr post-processing without colourising, 1 hr of data collection equals 5 hrs of post-processing with colourising.

## Export Options

Images	JPEG and ASCII for photogrammetric parameters
Point cloud	Binary LAS 1.2. X,Y,Z, intensity, RGB values Colourisation by camera pictures Hexagon Point Format

## Accuracy Test Conditions\*

Scanner frequency	1,000,000 points per second
Image distance	3 m
Driving speed	40 km/h
System configuration	No wheel sensor, no dual antenna
Laser scanner	ZF 9012
Max baseline length	3.2 km

## Repeatability\*

Based on open sky, GPS+GLONASS processing, and phase differential. Points were measured manually from within the point cloud. A ring with 26 check points were collected 4 times, for a total of 104 observations. Check points were measured with TPS and levelling.

Resulting mean error for X,Y,Z was -0.004,-0.004,0.001 meters, and the resulting standard deviation for X,Y,Z was 0.011,0.012,0.008 meters.

\* If not specified, datasheet refers to a Leica Pegasus:Two with a ZF9012 profiler and an iMAR FSAS IMU. Datasheet is subject to change without notice.

# IDS Stream EM Specifications

## System Specifications

Overall weight (PC not included)	228 kg (500 lbs)
Max. acquisition speed (@ std. Scan interval)	18 kph (12mph)
Power consumption	72W
Positioning	Survey wheel and/or GPS or Total station
Number of control unit	3 synchronized DAD MCH FW
Scan rate per channel: (@512 samples/scan)	87 scans/sec
Scan Interval	17 scans/m@200 MHz - 33 scan/m @ 600 MHz
Power Supply	SLA Battery 12VDC 100 Ah

## Antenna Specifications

Environmental	IP65
Antenna FootPrint	1.84 m Width
Number of channels	38
Antennas Central Frequencies	200MHz (34 channels) and 600 MHz (4 channels)
Antenna Polarization	Horizontal (HH) and Vertical (VV)
Antenna spacing	6 cm
Certification	EC, FCC, IC

## Accuracy

X,Y	±5 cm (up to 1 m in depth)
Z	±5 % of the depth (up to 1 m in depth)

## Software Specifications

Output formats	SHP, DWG, DXF
Control	Leica Pegasus MDA control stop/start

## Software Features

- GREG HD 3D CAD
- Tomographic map view (c-Scan) including radar scan fusion
- 3D data visualization
- Advanced targeting using radarscan and tomographic view
- Radarscan viewer, filter and advanced filtering macros, multiple radar scan viewer
- Layer picking for automatic analysis of sub-layers

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