

## The first mobile laser beam profiler



### Technical specification

- Huaris Five laser beam profiler
- 7 inch tablet with the software installed, pre-configured and calibrated
- The tablet secures the communication with the Lasers Cloud
- Product up and ready for the operation

V1.0b

Beam width parameters	FWHM, $1/e^2$ , $1/e$ , $4\sigma$ statistical moments up to 4th for X and Y directions independently	Visualization	2D & 3D
Beam pointing stability	Customizable in Cartesian and Polar coordinates	Calculation frequency	Up to 4Hz
Auto centering	Center of the beam is found automatically	FPS	1-25 range with 1 fps increment
Manual measurement tools	Cursors: horizontal, vertical, free hand; spot probe; zoom-in lens	Exposure time	0.12- 24.62 ms with 0.03 ms increment
Automatic detection of beam artefacts and trends*	Yes, with cloud backed with artificial intelligence	Gain	0-100
Long term data storage*	Yes. Via cloud system in the web browser	Parameters setup mode	Auto & manual
Remote preview*	Yes. Via cloud system in the web browser	Operation mode	Free run or hardware triggering
Fitting	Gauss and Lorentz fit for X and Y direction independently; Returning distribution parameters	Noise correction	DNC technology (c.f. User Manual for description)
Beam geometry	Astigmatic and elliptical	ISO standards reference	ISO 11146-1, ISO 11146-2, and ISO 11146-3
Metrology	3 types of cursors for manual measurement	Software language	English, Polish

\* Option available in subscription model. 3 months of free testing period.

## Tablet specification

7" touchscreen with resolution of 800x480px

Processor: Broadcom BCM2711, quad-core Cortex-A72 (ARM v8)  
64-bit SoC @ 1.5GHz

Memory: 2GB LPDDR4

Connectivity: 2.4 GHz and 5.0 GHz IEEE 802.11 b/g/n/ac wireless LAN,  
Bluetooth 5.0, BLEGigabit Ethernet2 x USB 3.0 ports2 x USB 2.0 ports.

Video & sound: 2 x micro HDMI ports (up to 4Kp60 supported)

Multimedia: H.265 (4Kp60 decode);H.264 (1080p60 decode,  
1080p30 encode); OpenGL ES, 3.0 graphics

Input power: 5V DC via USB-C connector (minimum 3A1) 5V DC  
via GPIO header (minimum 3A1)

Power over Ethernet (PoE)-enabled (requires separate PoE HAT)

Environment: Operating temperature 0-50 °C

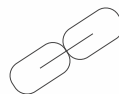


## Features



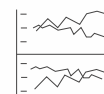
### ACCURACY

The essential objective of every measuring device is the measurement accuracy. The high quality of our devices has been confirmed in the validation tests at external, world acknowledged laser R&D center in benchmarking experiments proving the ultimate level of measurement precision.



### DUAL MODE

We have implemented two modes of operation in our profile meter: automatic and manual. Automatic mode is perfect for the quick adjustment of the camera parameters at start or long-run measurement. Manual mode lets you fine-tune the parameters according to your specific needs.



### DNC TECHNOLOGY

We have developed our own methods and algorithms of noise correction in real-time to maximize the measurement accuracy. DNC is highly convenient. You do not need to re-calibrate the profiler every time you start your measurement which makes the measurement going smoothly.



### 2D & 3D VIEW

In our software you will be able to view the beam in 2D and 3D. Additionally, you can see sections of the beam and apply color palette at your convenience. 3D view is interactive. You can change the view angle. Cursors on the views will let you measure the specific, non-standard features of the beam.



### REPORTING TOOLS

Reporting works like a charm! You can save the measurement report as a PDF file for later use. Additionally, you can save the movie or image files presenting your beam footprint.



### STANDARDIZED BEAM PARAMETERS

The measurement results are standardized beam characteristics as defined in ISO 11146. These include: FWHM,  $1/e^2$ ,  $1/e$ ,  $4\sigma$  for both horizontal and vertical directions for Gaussian and elliptical beams. Additionally, the parameters of Lorentz distribution as well as statistical momenta are delivered.



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