

## HUARIS cloud system for remote laser monitoring



### Technical specification:

- Long-term monitoring of beam width parameters:

Beam width parameters	FWHM, $1/e^2$ , $1/e$ , $4\sigma$
Distribution parameters	$\mu$ (mean), $\mu$ (median), $\sigma$ (standard deviation), $\sigma^2$ (variance)
Statistical moments (Gauss distribution only)	1, 2, 3, 4
Lorentz beam width parameters	$x_0$ (location), $y$ (scale), $x_0$ (median), FWHM
Beam pointing stability	In local application and in the cloud for long term measurements
Automatic detection of beam artefacts and trends*	Yes, with cloud backed with artificial intelligence
Long term data storage*	Yes. Via cloud system in the web browser
Remote preview*	Yes. Via cloud system in the web browser

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



- Powered by artificial intelligence
- Remote beam monitoring
- Long term monitoring of the laser beam parameters
- Automatic alarms
- Suggestions for preventive maintenance actions
- Remote support of experienced engineers
- Centralized source of technical information
- For laser owners and maintenance staff



## Huaris AI Cloud is predictive maintenance for laser systems

HUARIS AI is a comprehensive metrology system which allows remote and **fully automatic diagnostics** of your laser systems. Our system is the first on the market, universal and automatic solution that allows integration with a vast majority of lasers to **predict their failures** and thus increase their availability.

## Your laser beam profiler available in the cloud

The infrastructure of the product has been designed to be **highly scalable**, available 24/7 and implements solutions for processing of big quantities of data. Artificial intelligence algorithms **perform real-time beam assessment** and deliver suggestions to the user about the need and potential scope of preventive maintenance work to be done.

## Huaris AI Cloud System AI-powered Huaris Cloud

### Business benefits of remote monitoring

#### Suggestions for preventive maintenance actions

Artificial intelligence recognizes type of laser misbehavior and suggests source of issue and preventive actions.

#### Remote beam monitoring

Laser producers are present all over the world. Their clients require support to increase the profitability. Remote monitoring of laser beam quality is a must, and Huaris can provide this.

#### Centralized source of technical information

All technical information is centralized in one place: a forum within our web-based application



#### Category Finalist **Innovation Award**

The Huaris system has become a finalist in the Innovation Award at the Laser World of Photonics in Munich 2022.



#### Powered by artificial intelligence

Using machine learning allows automatic detection of laser malfunction. Now it does not matter if you have 1 or 10 000 lasers to manage once you are supported by very smart and automatic algorithms.

#### Automatic alarms

Alarms and suggestions of actions are sent to you via web application, e-mail or SMS - as you wish.

#### Long term monitoring of the laser beam parameters

The parameters of the laser beam are now checked occasionally. The Huaris system can monitor your laser over a long period of time, analyze trends and predict its failure.



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