



PRECISION ENGINEERING
Your partner in automation

PHOTOMATIQ®

PHOTONICS PACKAGING EQUIPMENT



FLEXIBLE PRECISE AND PRODUCTIVE AUTOMATION PLATFORM

FIELD OF APPLICATION

From process development to mass manufacturing



YOUR PRODUCT HERE

Please feel free to contact us for a pre-feasibility study

Photomatiq® is ideally suited for the **automated micro-assembly** of the following products:

- Laser DPSS
- Laser diode
- Lidar
- Fiber optical connector
- Fiber to PIC coupling
- Fast Axis Colimator
- ...

PHOTOMATIQ is a customizable **assembly platform** which aim at fully- and semi-automated **ultra-precise** micro assembly based on **high-precision alignment**. The platform especially suits the requirements of demanding **photonics** systems



- Scale up your **production**
- Improve your **time to market**
- Increase your **ROI**
- Improve the **quality** of your products
- **Proof of concept** testing session in ISP's HQ
- **Limit** the risk

ACTIVE AND PASSIVE ALIGNMENT CAPABILITIES



Passive alignment

In a passive alignment process, the relative position and orientation between two components is evaluated and adjusted based on the camera measurements.



Active alignment

The major advantage of active alignment is achieving very high product performance, while individual components do not need to be extremely geometrically accurate

GLUING WITH IN SITU UV CURING



- Integrated **time/pressure dispenser**
- Customized **pattern**
- **Autocalibration**
- **Repeatable** dispensing
- <300µm cordon width
- **45° needle** orientation to dispense under the components
- Alternative technologies such as **jetting** and **dipping** are also available as an option

PROOF OF CONCEPT

Please feel free to **contact us** using the following form to know more about Photomatiq®.

ISP can propose **proof of concept** as well as testing session to make sure of the compatibility with your assembly process.



isp-system.fr/en/contact

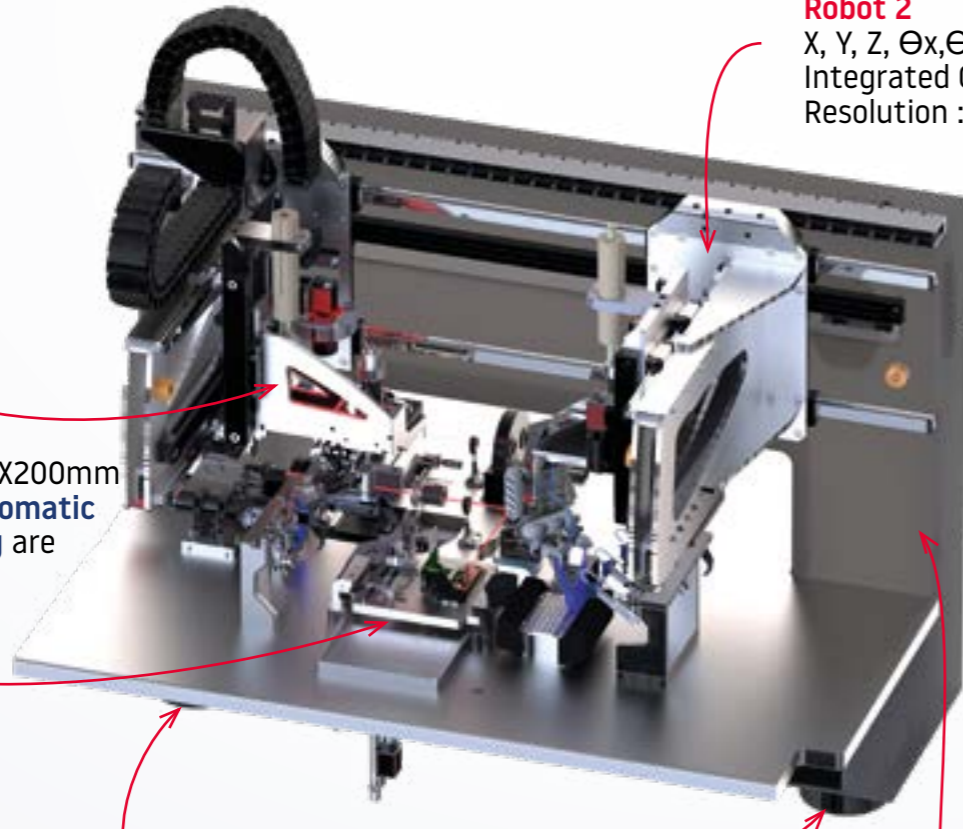


ACCURACY: 2 HIGH PRECISION ROBOTS WORKING SIMULTANEOUSLY

Robot 1
X, Y, Z, $\Theta_x, \Theta_y, \Theta_z$
Integrated Goniometer
Resolution : +/- 0,1 μ m

Robot 2
X, Y, Z, $\Theta_x, \Theta_y, \Theta_z$
Integrated Goniometer
Resolution : +/- 0,1 μ m

Large **working area** 300X200mm
Magazine as well as **automatic parts loading/unloading** are available as an option.



Vibration absorbers

Reference marble made of granite to ensure a high level of stability

MODULAR MACHINE ARCHITECTURE



Common base

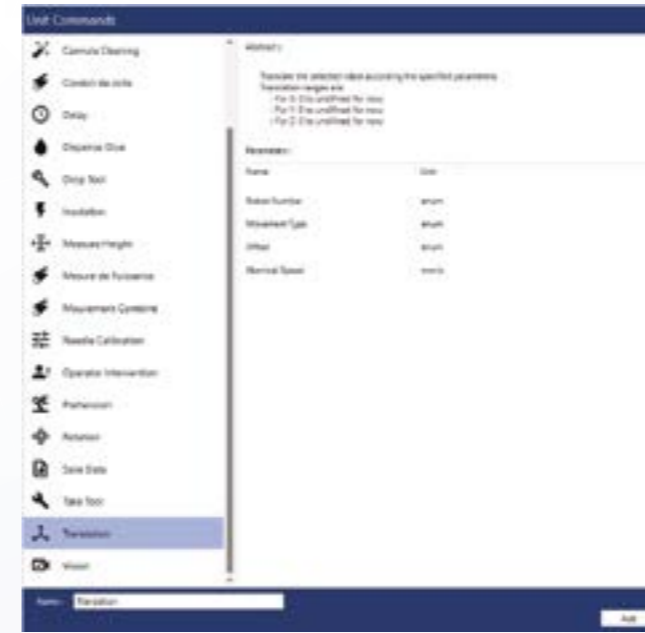


Customization to fit your application



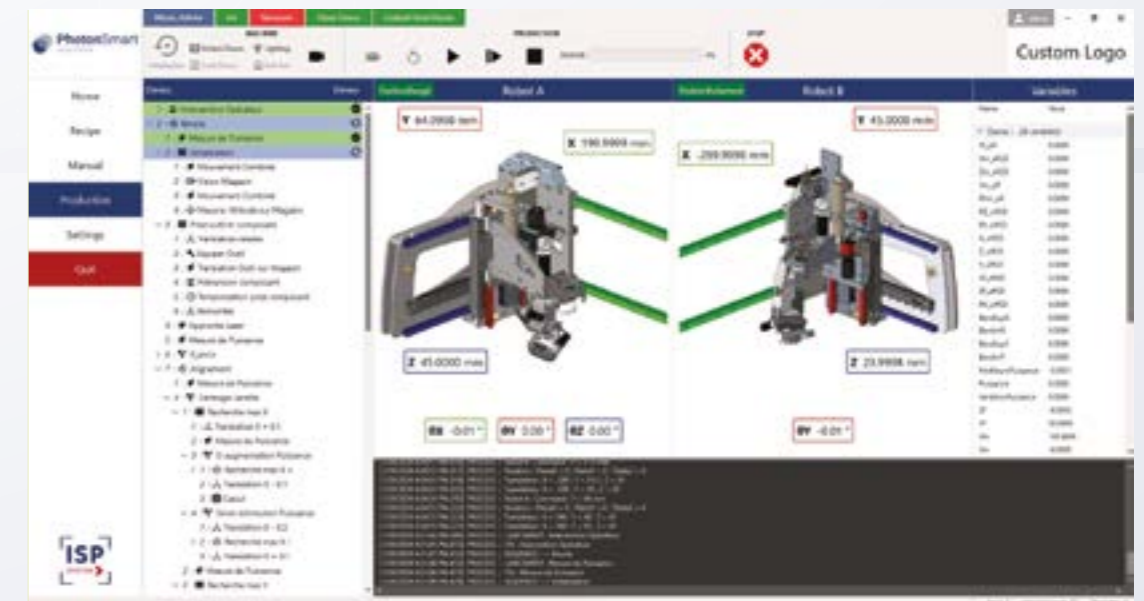
PhotonSmart
by ISP SYSTEM

The **open control** PhotonSmart software allows non-automation experts to operate the machine, edit new recipes, and supervise the production.



Just **pick and drop** the pre-developped function blocks into an assembly sequence to **create your own** manufacturing process

- Fine tune your process through the **development mode**
- **Supervise** your production and manage the **traceability**




Discover PhotonSmart functionalities in this short video:



OUR REFERENCES

ACTEMIUM • AIRBUS • AIRBUS HELICOPTER • ALSTOM TRANSPORT • ALSYOM • AMPLITUDE LASER • ARIANE GROUP • ARQUUS • ASML • BERTIN TECHNOLOGIES • CEGELEC • CEA • CEA-DAM • CNES • CNIM • CNRS • DASSAULT AVIATION • DGA • ECA ROBOTICS • ESA • ESSILORLUXOTTICA • ESRF • ETIENNE LACROIX • FIVES MACHINING • GE MEDICAL SYSTEM • HORIBA SCIENTIFIC • IMV TECHNOLOGIES • IXBLUE • JOHNSON CONTROLS • LABORATORY FOR LASER • ENERGETICS • LECTRA • LIEBHERR AEROSPACE • MBDA • NAVAL GROUP • NEW TL • NEXANS • NEXTER • ONERA • OPTSYS • OXXIUS • RADIALL • RATP • REOSC • RUAG • SAFRAN REOSC • SAFT • SAINT-GOBAIN • SAVOYE • SIEMENS HEALTHCARE • SODERN • SPIE • TECHNETICS GROUP • THALES • THALES ALENIA SPACE • TIFLEX • TRESICAL • TRIKELL • VALEO • XEROX



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