



EN



CAD-PRO Xpert

Industrial laser projector with a powerful technology platform

NEW

Simply
Precise



CAD-PRO Xpert

Elevate quality to a new level

The CAD-PRO Xpert laser projector is built on a powerful technology platform and offers innovative laser engineering and cutting-edge network capabilities in an unparalleled compact design. Enjoy more colors,

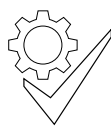
speed, and precision while increasing the accuracy, efficiency, and reliability of your production processes. Thanks to the advanced ergonomics of the laser system, production employees benefit from modern workspaces in

composite manufacturing, wind rotor blades production, yacht building, woodworking, precast concrete parts production, and many more industries.



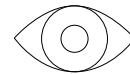
Increase efficiency

Modernize your work processes thanks to improved work ergonomics and laser projections of remarkable quality.



Avoid downtime

Experience peace of mind with the CAD-PRO Xpert advanced laser system with an individually selectable redundancy function.



See things differently

Benefit from the optional boost function and a new level of displaying information on your production lines' workpieces.

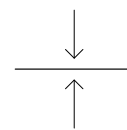
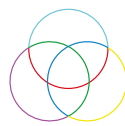
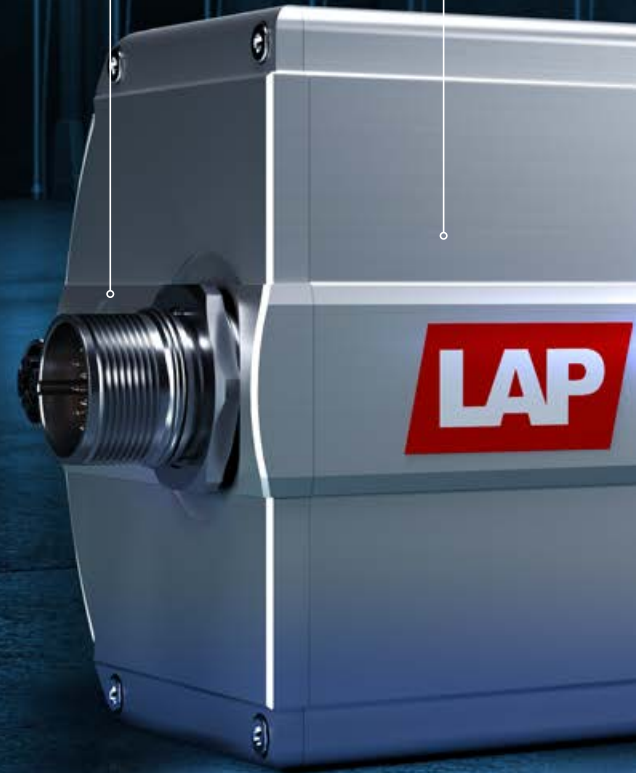
CAD-PRO Xpert

**More power.
More colors.
More precision.**

CAD-PRO Xpert
measures only
34 × 11 × 11 cm
and weighs just 3 kg.

Network capability

Industrial
housing



Laser redundancy

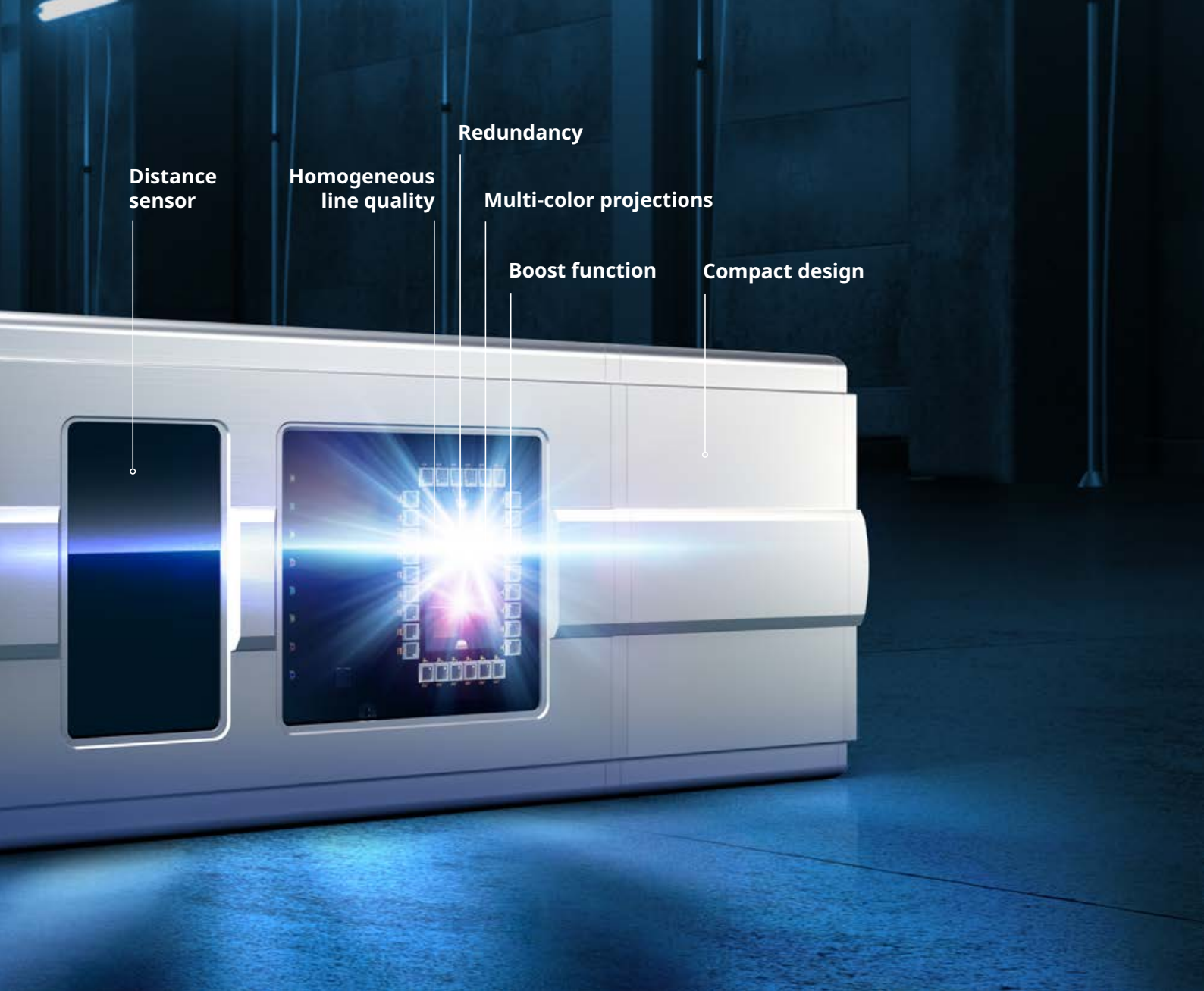
CAD-PRO Xpert can be configured with a second laser source. A second laser diode in the same color provides optional redundancy, eliminating the risk of downtime due to replacing laser diodes and, thus, reducing costly repair and shipping.

Multi-color projections

Thanks to the dual laser sources, the CAD-PRO Xpert can project CAD data in up to six colors: red, green, blue, yellow, cyan, and magenta. In this way, you optimize work ergonomics and increase process reliability.

Homogeneous line quality

Experience laser projections of unparalleled quality. The CAD-PRO Xpert impresses with remarkably homogeneous line quality in all projection directions and an even brightness distribution over the entire projection surface.



Distance sensor

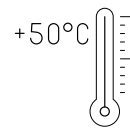
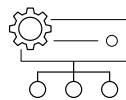
Homogeneous line quality

Redundancy

Multi-color projections

Boost function

Compact design



Boost function

The optional boost function allows you to increase the intensity of laser lines, making it easier to see projections on workpieces, especially over long distances. Brilliant laser projections can be achieved even in challenging ambient conditions.

Network capability

The wired Ethernet interface ensures fast, reliable data transmission following high security standards. You benefit from fast projection changes thanks to Gigabit Ethernet and easy integration into your network via LAN cable.

Industrial housing

The industrial enclosure with a high IP rating ensures operation in demanding environments. The integrated cooling unit allows use in ambient conditions even up to +50 degrees Celsius. At the same time, the device is lightweight and compact in design, making it easy to install.

Experience laser projection in a new dimension

Two laser sources, six colors, and various options – multi-color projections provide a more detailed display of information directly on the workpiece surface. The optional boost function increases the brightness of the laser pro-

jections in unparalleled line quality. With precise and bright laser projections, your production staff can complete assembly and positioning tasks quickly, safely, and accurately. This ensures efficient and error-free work.

■ Precise

Experience accurate projection outcomes with exceptionally sharp and homogeneous laser lines, regardless of whether you want to display round or square corners, single lines, or intricate outlines. The CAD-PRO Xpert can project onto 2D and complex 3D surfaces, always in the correct position.

■ Simple

For multi-color projections, use two laser sources of different colors. You can highlight individual lines, mark specific areas in different colors, or select predefined colors for the final inspection.

■ Strong

Combining two laser sources of the same wavelength doubles the output power, resulting in better visibility even at long projection distances.

■ Flexible

Switching from a single source to a dual source is possible anytime during production. This ensures uninterrupted work.

■ User-friendly

Each laser source can be easily controlled separately by a remote control or the intuitive PRO-SOFT operating software. For example, it is possible to focus the laser beam or enlarge the line width to highlight specific areas.

■ Fast

The projection speed is infinitely adjustable. This enables you to control the quality of the laser projection and optimize it according to your production needs.

■ Safe

The projector features a distance sensor that ensures laser safety when projecting from long distances with high output power. If someone comes within two meters of the projector, it will automatically switch off. This safety feature reflects the motto "Safety First."



Learn more about
CAD-PRO Xpert at
www.lap-laser.com

CAD-PRO Xpert quickly and reliably projects CAD data in up to six colors with high quality.



**Brilliant
multicolor
projections**



Upgrades workplaces

LAP Plus Ecosystem

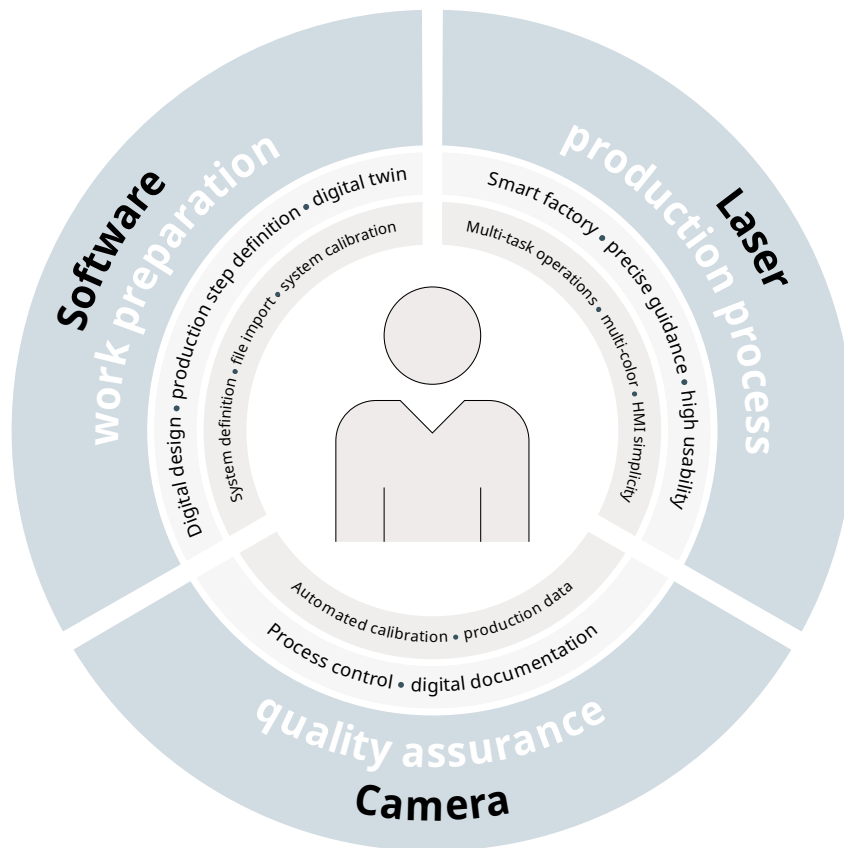
Modular by design

CAD-PRO Xpert laser projection systems allow you to create human-centric workspaces for digital worker guidance, using the most advanced laser technology, easy-to-use software, and camera-guided quality assurance.

LAP's value-adding ecosystem comprises innovative technologies such as AI and open interfaces to integrate seamlessly into modern production environments.

The ecosystem's components are modular by design and perfectly harmonized. Customize your laser projection system to meet your specific needs. We offer scalable solutions ranging from stand-alone systems for small workspaces to complex multi-head systems for large production facilities.

We aim to provide forward-thinking solutions that cater to the evolving demands of manufacturing processes, ensuring optimal quality and efficiency.



CAD-PRO Xpert –
part of the LAP Plus Ecosystem

Software

- LAP system facilitates work preparation with a user-friendly plug-in for Rhinoceros 3D and is compatible with industry-leading design tools such as Autodesk®, CATIA®, and Siemens Fibersim™.
- LAP offers a comprehensive API to integrate laser projectors into 3rd party software solutions and to control them directly from these systems, such as implemented in Spatial Analyzer® from New River Kinematics®.

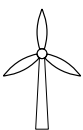
Camera

- LAP supports the integration of camera systems for quality assurance and seamless documentation.

Laser

- A client-server architecture allows operation on a distributed computer system, including tablets and hand-helds, and supports integration into production process databases.
- LAP's laser systems can be directly integrated into the control level of the Smart Factory via Programmable Logic Controllers (PLCs) and digital/analog IOs, with the production worker retaining control of the system.
- Barcode and QR scanners can be used to control laser systems, improving the user experience and optimizing processes.

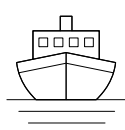
Applications



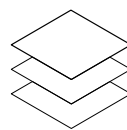
Wind



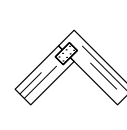
Aerospace



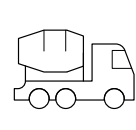
Shipbuilding



Composites



Wood



Concrete

Technical data CAD-PRO Xpert

Dimensions [L × W × H]	340 × 110 × 110 mm
Weight	approx. 3 kg
Power supply	48 V DC, 1,5–3 A
Repeatability*/**	±0,025 mm/m
Line width*	0,5 mm FWHM
Precision	±0.1 mm/m (S – Standard) or ±0.05 mm/m (HP – High Precision)
Projection angle	60–80° (adjustable)
Ambient conditions	0–50 °C, 35–85 % rel. moisture, non-condensing
International protection rating	IP 55
Interfaces	Wired Ethernet interface; Gigabit LAN; Data security according to TLS 1.2

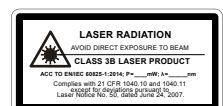
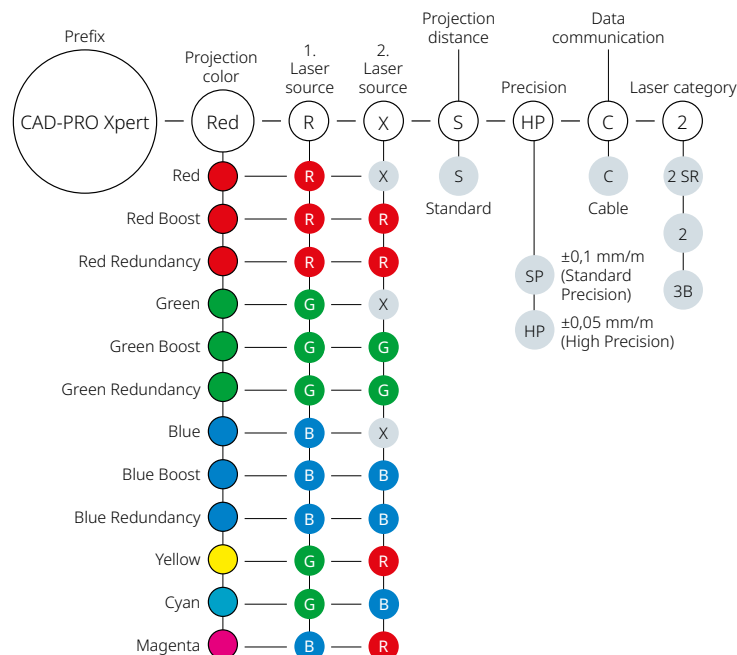
* within ±30° projection area at a distance of up to 4 m, beam strikes surface vertically, unit is correctly focused and calibrated, at least 30 min. warm-up time

** Millimetres per meter distance from projector to surface

Variants

Laser color and wavelength	Max. output power of laser source	Max. power out per laser source	Laser class
red (diode, 638 nm)	120 mW	30 mW, boost up to 60 mW	2 or 3B
green (diode, 520 nm)	100 mW	30 mW, boost up to 60 mW	2 or 3B
blue (diode, 450 nm)	100 mW	30 mW, boost up to 60 mW	2 or 3B

Product code:

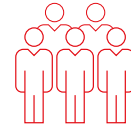


About us

LAP is one of the world's leading suppliers of systems that increase quality and efficiency through laser projection, laser measurement, and other processes. Every year, LAP supplies 15,000 units to customers in industries as diverse as radiation therapy, steel production, and composite processing. LAP employs 300 people at locations in Europe, America, and Asia.



90+
Partners



300
Employees



7
Locations



Quality

We work to uniform standards and with certified processes. For us, "Made in Germany" means the highest precision in manufacturing and quality inspection of each device. For our customers, this means planning and process certainty.

All our worldwide locations use a quality management system according to EN ISO 13485 or EN ISO 9001. Our products have all the necessary approvals and registrations almost everywhere in the world.



Service

We ensure the maximum availability of your equipment so you can concentrate on your core process. Wherever you need us, our certified service technicians are quickly on site in any time zone. We support you from installation and commissioning, through user training, up to maintenance, repair, or unit replacement.

Our efficient logistics ensure the fast availability of spare parts worldwide. For technical questions and support, our helpdesk is at your disposal by telephone, via e-mail, or remote diagnosis.



More about our
global QM system



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www.lap-laser.com/cad-pro-xpert