EN

DTEC-PRO

Camera system for process optimization and quality assurance

Simp
Preci

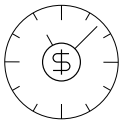
Effective, safe and flexible

Visual process control for your production

A simple, modular system lets you focus on what matters – your production processes. DTEC-PRO is a camera system that provides effective assistance in manual product steps like composite layup as well as in quality assurance. DTEC-PRO consists of an industrial camera with infrared flash, and is the ideal add-on for CAD-PRO laser projection systems from LAP.

- → *Save valuable time with the automatic calibration and intuitive operation of the DTEC-PRO camera system.*
- → *Improve your production quality with camera-based process monitoring and regular quality assurance.*

Scan here for video!



90 % time savings

With DTEC-PRO manual calibration is unnecessary. Calibration time is reduced to a minimum. Depending on the configuration and workflow, you can achieve up to 90 % time savings.

Process reliability

DTEC-PRO continuously checks the position of your workpieces in real time. This prevents positioning errors and boosts process reliability.

Intuitive operation

The functions of DTEC-PRO are simple and intuitive to use with the PRO-SOFT software. The camera assistance eliminates manual work steps. This makes for productive work.

Modular and multitasking-capable

The flexibility your production processes need

DTEC-PRO offers ideal process support, especially in highly variable production environments where many different workpieces of small to medium size are processed on mobile tables at the production stations. You get higher process reliability – without having to change your processes. Thanks to the modularity of the system, DTEC-PRO flexibly and fully adapts to the requirements of your production cell.

Safe

At a rate of five individual images per second, DTEC-PRO continuously checks the position of the workpiece and sends it to the PRO-SOFT software. Target constellations are reliably detected regardless of the number, size and shape of the workpieces.

Intelligent

If there is a position deviation, a calibration of the CAD-PRO laser projector is automatically initiated and the projection adjusted if necessary.

Eye-friendly

The infrared flash is invisible to the human eye, so that operators can work without disturbance or interruption at any time.

Modular

DTEC-PRO can be freely positioned independently of the CAD-PRO laser projector. The camera system can cover the work areas of multiple laser projectors.

Multitasking

With the PRO-SOFT MT multitasking software for simultaneous work processes, one camera system can cover up to eight different workpieces. That means that you can work on eight different work units at the same time, independently of each other.

Our system components for process optimization:
DTEC-PRO camera system, CAD-PRO laser projector and PRO-SOFT software

Top flexibility

Combine DTEC-PRO cameras with CAD-PRO laser projectors to fit your needs. The modularity gives you maximum flexibility in laying out your system.

Easy upgrading

One or more DTEC-PRO camera systems can easily be added to new or existing CAD-PRO laser projection systems.

A software update is enough

DTEC-PRO is supported by all current PRO-SOFT 5.2 software variants and future versions. For existing installations with CAD-PRO laser projectors, a software update is enough.

Fast: ready in 6 seconds

Minimum calibration time, maximum productivity

Opening calibration files, assigning and calibrating – DTEC-PRO does it almost automatically in just a few seconds. As soon as a workpiece is placed in the camera's field of view, the system detects the target positions in real time.

1. Scan QR code

Once the operator places the workpiece, the calibration file can be activated very easily, for example by QR code. The camera captures the QR code on the order document. After confirmation by the operator, the software opens the calibration file assigned to the tool, and calibration starts automatically.

2. Calibration

With the "unit calibration" function one or more DTEC-PROs can be calibrated as a unit with one or more CAD-PRO laser projectors. Tools and their targets in the area of the unit are detected together. There is no longer a need for basic calibration for each individual tool by the administrator.

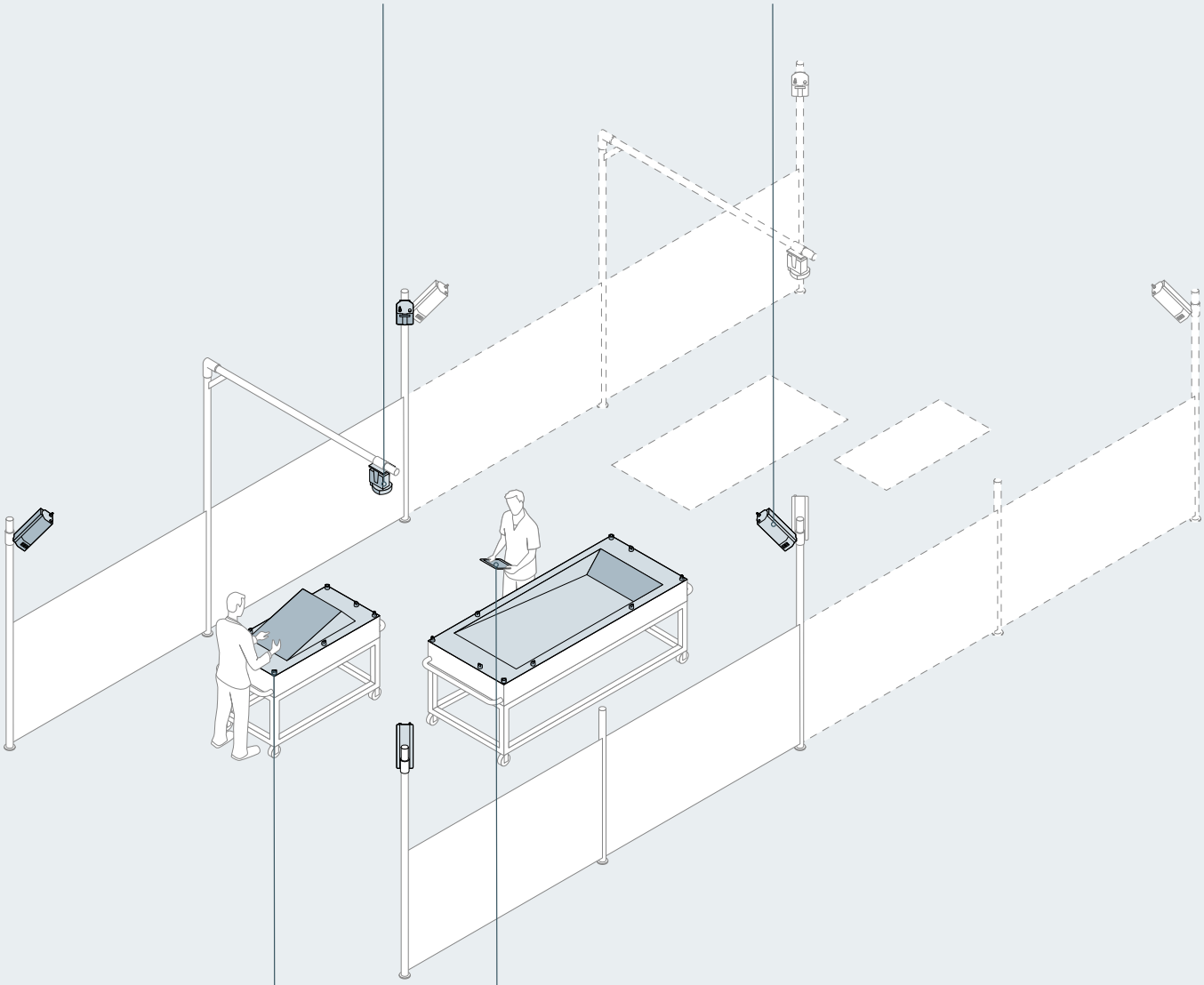
3. Start of production

Production can start immediately – even with workpieces the system doesn't "know" yet. This ensures fast tool change without loss of time. The time expenditure in the product process is reduced immensely.

If tools are used in parallel at multiple workstations, several times a day, the automatic calibration can mean a time savings of 90 %.

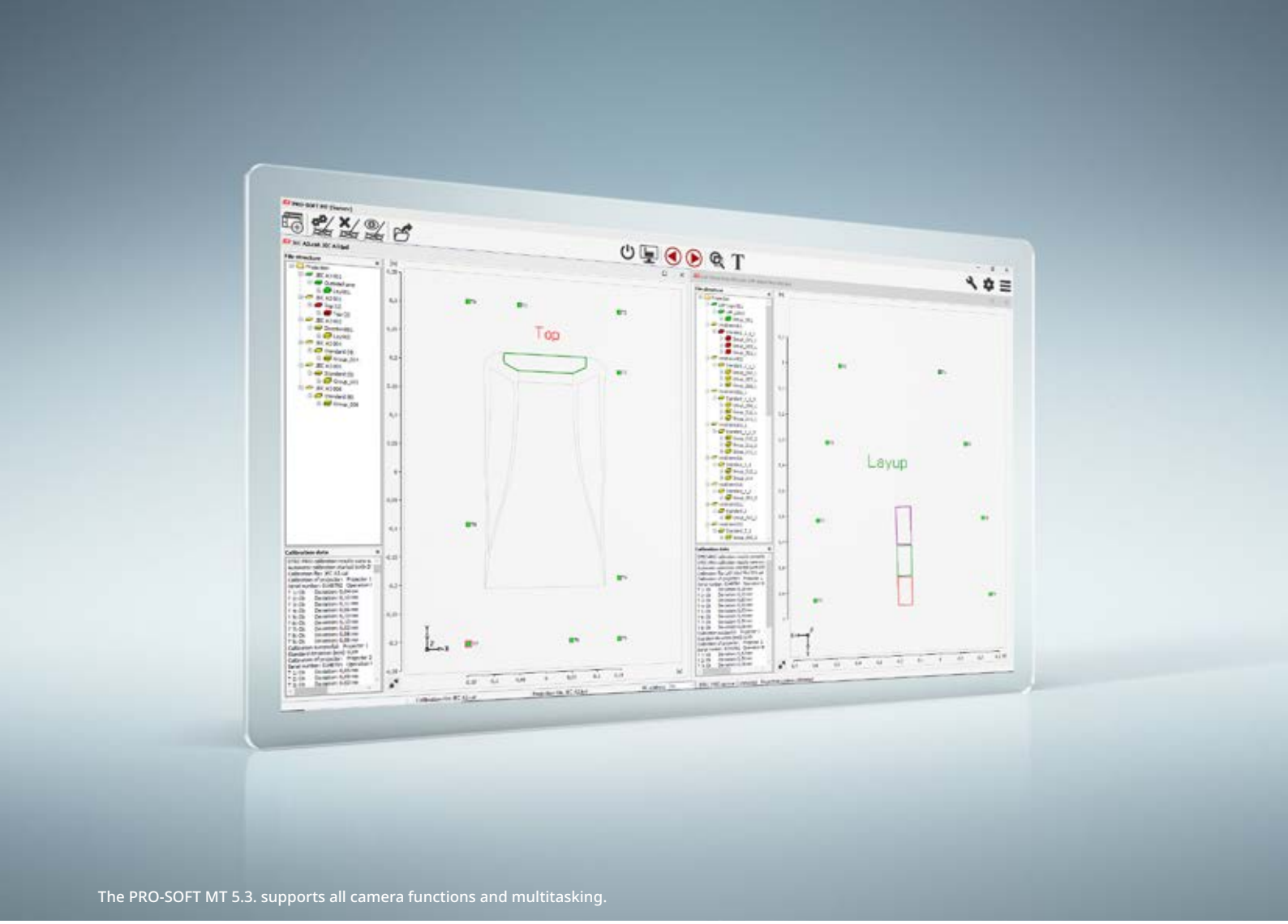
DTEC-PRO
DTEC-PRO automatically recognizes workpieces in the camera's field of view.

CAD-PRO
The laser projector automatically adjusts the projection to the right position.



Target Marker
The target marker simplifies the calibration routine. Applied to existing targets, the retroreflector enables detection of symmetrical target constellations by the DTEC-PRO system.

PRO-SOFT
Open calibration files, control camera functions, manage projection steps – the PRO-SOFT software intuitively takes the user through the production process.



The PRO-SOFT MT 5.3. supports all camera functions and multitasking.

Everything in view

Realtime process control and camera-based quality assurance

PRO-SOFT software supports all camera functions, intuitively and user-friendly, from work preparation to visual process control, to storage of camera images for regular quality assurance.

Camera live image

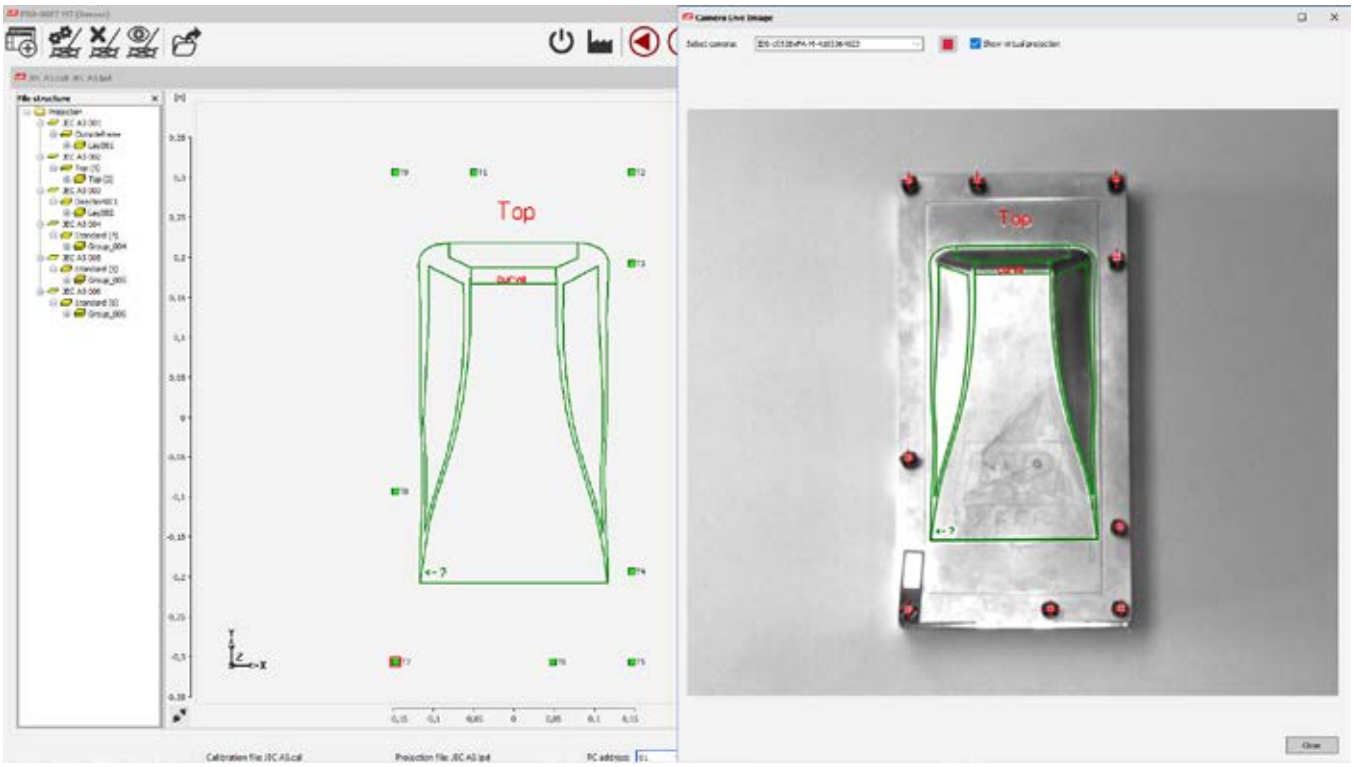
The “Camera Live Image” function shows the PRO-SOFT user the field of view from the camera’s perspective. At the start of production, this ensures that the tool is properly positioned in the field of view and the targets are visible to the camera. The correct position can also be checked during production. You always have your processes in view.

Virtual projection

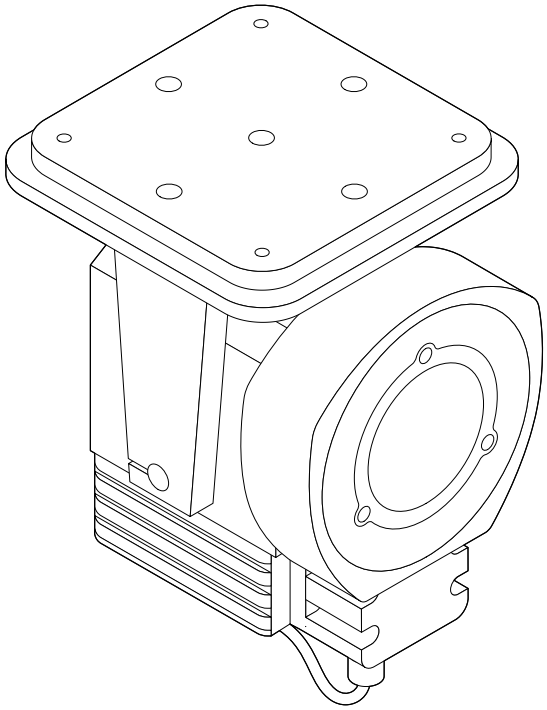
In addition, the system delivers a virtual image of the real projection contour in real time. The projection contour currently displayed by the CAD-PRO laser projector is automatically shown in the picture as a colored contour line. This enables permanent control of each projection step.

Saving images

Save high-contrast camera images optionally with the virtual projection in the database for your quality assurance. Image capture happens automatically when the projection is switched (in layer change). Operators can also manually capture images, by mouse click in the PRO-SOFT or by remote control.



Create and save camera live images optionally with virtual projection.



Technical Data

Weight With infrared flash and mounting	2.5 kg
Dimensions [W × L × H] With infrared flash and mounting	140 mm × 167 mm × 200 mm
Input voltage	18–48 V DC
Max. input current	3A
Communication	Gigabit Ethernet
International protection rating	IP 65
Lens focal length	6 mm
Vertical image angle	60.8°
Horizontal image angle	70.1°

Ambient conditions in operation

Humidity Relative humidity, non-condensing	35–80 %
Air pressure	800–1100 hPa
Temperature	0–40 °C

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

made in Germany

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