LP500

The LP500 Laser Platform is designed to provide a flexible CDRH Class 1 laser platform for many of your laser processing needs. It is easily configurable to accommodate your specific application(s) with customizable product fixturing. The simple drag-and-drop programming interface provides a no-code development platform that allows users to quickly and confidently develop infinite recipes. The LP500 is manufactured with proven industrial-grade components to deliver a robust and reliable solution.
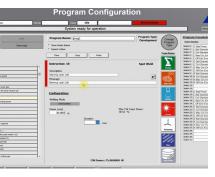
BENEFITS OF LP500

- Configurable with 1-5 axes of motion
- LP500 can implement your recommended laser or we can help you select the right laser: we have experience with many top laser manufacturers for welding, cutting, ablating, marking, hole drilling, or other applications
- Optics can be fixed or galvo scanhead mounted
- Optional through-the-torch vision with vision guided click-to-move feature

- Graphical interface allows users to easily develop custom sequences for their process
- 28 configurable commands define product fixturing, manage motion profiles, prompt users for input, access vision tools, control laser output, and more
- Pulse Shaper allows the development of customized laser pulse profiles and emission sequences

PAR SYSTEMS | **OAKRIVER TECHNOLOGY**

TECHNICAL INFORMATION

Safety Features

- Laser window for safe process viewing with option of sliding, swing-out, or vertical front access door
- CDRH Class 1 rated
- Front-mounted E-stop
- Keyed access to main electrical enclosure and system side doors
- Safety interlock sensors on front door and in-set vertical door (optional), and left, right, and rear removable panels

Physical Features

- Application-specific laser-filtered and tinted-acrylic window
  for safe process viewing
- Removable base plate – allows for fixturing and other customizations
- 22" Touchscreen monitor
- Configurable axis orientations
- Optional fume extraction
- USB and Ethernet grace ports on machine front for programming and networking
- Barcode reader capability for recipe selection
- Delivered with calibration kit of power meter and NIST traceable glass calibration slide

Software Features

- EasyCode™ simple, drag-and-drop sequence and recipe editor
- Teach function for simple recipe creation
- Multiple operating modes for production and R&D environments: automatic, maintenance, engineering
- Explicit error messages and prompts
- Sensing of all actuation positions
- Access to historical data, with the ability to create, view, print and save logs
- Allen-Bradley PLC and Industrial PC controls; alternate motion controllers optional

Optional Vision Features

- Automated pre-inspection and location
- Operator click-to-move location
- Automated post-inspection
- Operator inspection

INDUSTRIES SERVED

- Research, prototyping & development
- Medical Device
- Consumer Goods
- Aerospace
- Automotive

Program Configuration

LP500

PROCESS CAPABILITIES

- Metal Welding
- Polymer Welding
- Cutting
- Ablating
- Marking
- Hole drilling

PROCESSED MATERIALS

- Alumina/Ceramic
- Biological
- ETFE
- Iridium
- Nickel alloys
- Nitinol
- PEEK
- PFA
- Palladium
- Platinum
- Polyethylene
- Polyimide
- Polypropylene
- Polyurethane
- PTFE/ePTFE
- Silicone
- Stainless Steel
- Steel alloys

COMPONENTS PROCESSED

- Cables
- Coils
- Connectors
- Insulator films
- Metallic films
- Pressure seals
- Tubes
- Wires

MOTION CONTROL WORKING ENVELOPE

• X Axis	Up to 300mm
• Y Axis	Up to 300mm
• Z Axis	Up to 200mm
• A Axis	>360°

LASER

- Fixed optics
- Fiber-delivery
- Galvo scanhead
- Laser Types
  - Excimer
  - DPSS UV
  - Nd:YVO$_4$
  - Nd:YAG
  - Fiber
  - Femto
  - CO$_2$
  - TEA-CO$_2$

ELECTRICAL/PNEUMATICS

• Voltage	200-240VAC
• Frequency	50/60 Hz
• Phases	1
• Wires	3
• Full-load current	30A
• Air pressure	75psi
• Cover gas pressure	>30psi

OPTIONS

- Adjustable motion axis count and configuration
- Automated vision
- Front door: swing, sliding, or vertical open
- Exhaust fan and filter
- Laser and beam delivery
- Side-car loading for long product
- Custom product fixture
- Alternate motion controllers

DIMENSIONS

• Height, Width, Depth	87"x 48" x 39"
• Weight	1500 lbs

PAR SYSTEMS | **OAKRIVER TECHNOLOGY**

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