



ProVia™ Series

- Integrated laser drilling / cutting tool for high volume production
- High performance beam positioning for rapid, accurate panel processing
- CO₂, UV, and hybrid (UV+CO₂) processing
- Zoom telescope provides continuously variable spot sizes
- Optional automatic load/unload and slip sheet handling
- Optional beam homogenizer for flat-top CO₂ spots

Designed for Next-Generation High Volume Via Drilling Requirements

- Hybrid laser process for broadest process capability
- Auto-calibration functions ensure repeatable quality
- Optional networking software with automatic file retrieval and job creation
- Optional panel automation with slipsheet handling



Configured for all applications

- Blind and through-hole via drilling
- Cutting, routing and circuit excising
- Skiving / cavity formation
- Defect repair

Advanced ProSys™ Control Software

- Automated drill file conversion and job generation
- Visual display of job features and job process status
- Advanced tool creation and assignment
- Built-in cutting, routing, skiving and marking functions



The ProVia systems provide the ultimate processing workstation for rigid, rigid-flex or flex panels, with high performance beam positioning for rapid point-to-point drilling and routing complex features. Choose a UV-only model, a CO₂-only model, or the hybrid version with both laser sources. The CO₂ laser is appropriate for high speed drilling, cutting and skiving of dielectrics, while the UV laser is able to machine copper and provide higher process quality in many dielectrics. Whether your application is with glass- and aramid-reinforced epoxies or non-reinforced materials (e.g. resin-coated foil or polyimide), there is a ProVia model to meet your requirements.

ProVia Specifications*

System Hardware

- High peak power RF-excited CO₂ laser and diode-pumped solid state UV laser (20W model)
- Configured with high performance beam positioning for high speed via drilling, skiving, and cutting
- Three drilling modes: hybrid, conformal mask CO₂, direct CO₂
- Galvanometer scanning field: 50 x50 mm (approx. 2" x 2")
- Maximum process area: 610mm x 660mm (24"x26")
- Vacuum platen for panel hold-down
- Integrated power meter for accurate process control
- Precision linear motor XY stages with linear encoder feedback
- High performance motion and laser control
- CDRH Class 1 enclosure
- Large process viewing window
- Automated vision system for precision alignment, and scaling, offset, trapezoidal and rotation compensation
- Beam placement accuracy: 15µm (3 sigma) for UV, and 20µm for CO₂, over panel process area
- Ultrastable steel weldment frame with resonance dampening
- Compliant with CE and North American regulations
- Optional panel thickness probe
- Optional integrated microvia inspection microscope
- Optional panel automation (full size or compact), with slipsheet

Utilities

- Electrical: 208VAC, 3φ, 50A, 60Hz, or 400VAC, 3φ, 30A, 50Hz
- Exhaust: ablation debris removal through 75mm diameter duct
- Dimensions (HxWxD): 2620 x 1626 x 2372 mm (103"x64"x93") central unit, service door open
- Weight: 3200 kg (7000 lbs) net; 3740 kg (8230 lbs) shipping, without autoloader
- Water: 8 l/min, or optional closed cycle water chiller

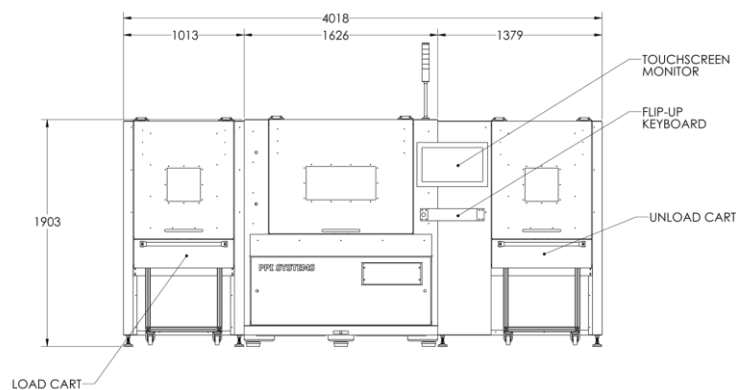
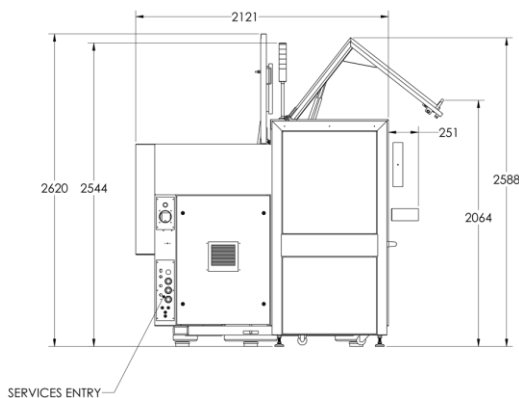
System Control

- Windows7® based user interface
- User friendly operator screens
- Compatible with industry standard file formats
- Rapid drill file conversion and path optimization utility
- Full system diagnostics, available remotely through internet port
- Password protection for access to configuration, set-up, and operating screens
- Real-time system monitoring for process integrity
- Optional networking software with automatic file retrieval and job creation
- Optional barcode reader software

Process Parameters

- High peak power laser sources to minimize heat affected zone and produce clean edges with little process residue
 - Point-to-point moves, continuous line and area scanning, and circuit excising
 - Programmable laser energy, pulse rate, pulse overlap, and scanning area
 - Advanced tool and job editing functions
 - Automatically process stepped vias and buried fiducials
 - Via sizes and cut widths down to 25µm using the UV beam and 50µm using the CO₂ beam
 - Zoom telescope provides continuously variable spot sizes for the CO₂ beam
 - Optional beam homogenizer for flat-top CO₂ spots
- Consult PPI for processing rates in your material.

*specifications are subject to revision



Shown complete with full autoloader option.