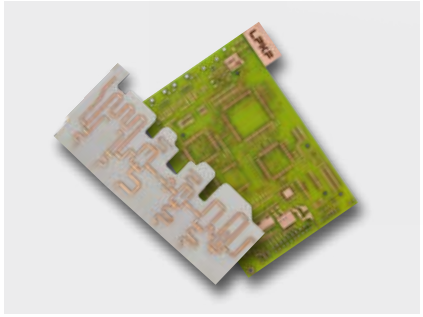
Enhanced Tabletop System for Fast PCB Processing

LPKF ProtoLaser H4

- Quick surface processing on all common circuit board materials
- Exact geometries thanks to contactless, scanner-based process
- Precise drilling of even thick substrates with spiral drills as small as 0.2 mm in diameter
- Compact and safe tabletop system: lab-ready, class 1 laser
- Easy operation using intelligent, intuitive system software LPKF CircuitPro RP





Enhanced Tabletop System for Fast PCB Processing

Take your lab to the next level: Combine the advantages of mechanical drilling of thick substrates including multilayers with extremely fast, contactless, laser surface processing in one tabletop system. This compact and economical solution is based on the proven concept of the LPKF ProtoLaser and LPKF ProtoMat systems. In combination with LPKF CircuitPro software, it guarantees smooth and seamless operation based on your CAD data.

Plug & play, all-in-one, desktop entry level laser system, comes with built-in computer and software. Only power supply, compressed air and dust extraction need to be connected to process standard single and double-sided FR4 materials, some single-sided RF, PTFE or ceramic filled materials as well as certain flex substrates like Al on PET with 100 µm/30 µm line/space. Flexible materials and foils can be freely positioned and fixed precisely on a vacuum table.

The vision alignment, 14 tool positions, the MTM (Material Thickness Measurement) as well as numerous software-defined laser tools and a broad library of predefined materials enable the LPKF ProtoLaser H4 to be operated with almost no user intervention.

LPKF ProtoLaser H4	
Max. layout area and material size (X/Y/Z)	310 mm x 230 mm x 8 mm (12.2” x 9.1” x 0.3”)
Laser wavelength, frequency, max. laser power	1064 nm, 25 – 400 kHz, 20 W
Diameter of focused laser beam	25 ± 2 µm (1 ± 0.08 mil)
Structuring speed	14 cm^2/min (2.17 in^2/min)[a] on laminated substrates 18 µm (0.5 oz) Cu
Minimum line/space	100 µm / 30 µm (3.94 mil / 1.18 mil)[a] on FR4 18 µm (0.5 oz) Cu
Scanner resolution, repeatability in the scan field	1 µm (0.04 mil), ± 1.8 µm (± 0.07 mil)
Positioning accuracy in the scan field	± 10 µm (± 0.39 mil)
Milling spindle max speed, tool positions	100 000 RPM, 14
Tool sensor accuracy	± 5 µm
Dimensions (W x H x D), weight	725 mm x 665 mm x 840 mm (28.6” x 26.2” x 33.1”), 125 kg (275 lbs)
Power supply	115 – 230 V, 50 – 60 Hz, 500 W
Compressed air supply	Min. 5 bar; 50 l/min (min. 73 PSI; 50 l/min)
Ambient temperature; humidity	22 °C ± 2 °C (71.6 °F ± 4 °F); < 60 %
Software	LPKF CircuitPro RP Basic
Laser safety	Laser Class 1
Options and accessories	LPKF CircuitPro RP Advanced, LPKF CircuitPro RP Premium, dust extraction unit, compressor, starter set

[a] Depending on material and laser beam parameters

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Specifications and other product information are matter of change without prior announcement. Photos may show optional accessories.

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