The Standard for Rapid PCB Prototyping
LPKF ProtoMat S64 Circuit Board Plotter

- Fully automatic operation incl. automatic tool change
- Low-maintenance high-speed milling spindle
- Intuitive, integrated system software
- Camera controlled fiducial recognition and milling depth/width control
- Granite base for highest accuracy results
LPKF ProtoMat S64 – The Standard for PCB Prototyping

The system that sets the standard for almost all in-house PCB prototyping applications: The ProtoMat S64 convinces with speed and reliability. The highspeed of the low-maintenance milling motor guarantees the production of fine structures as small as 100 μm and allows the production of multilayer boards when used in conjunction with a lamination press. Additional standard features, including dispenser and vacuum table, make the ProtoMat S64 the perfect addition to any development environment.

60 000 RPM Spindle Motor
The milling spindle with 60 000 RPM guarantees the shortest machining times and highest geometric accuracy. It is low-maintenance due to the new pneumatic self-cleaning function for the motor and milling depth sensor. The granite machine base also ensures consistently accurate results.

Automatic: Tool Change, Milling Depth/Width Adjustment, Dispensing
Up to 15 tools – more if required – can be changed automatically during the production process. Depending on the depth, the conical milling cutters generate different insulation channels. The automatic milling width adjustment ensures that the milling contour has a constant width. This shortens the setup time and enables operator-free performance.

Sensors in the ProtoMat S64 ensure optimally controlled, exact milling depth and also monitor the tool change process.

Housing parts can be machined in up to 2.5 dimensions. If required, the integrated dispenser can automatically apply solder paste to solder pads. Additional data calculation is not necessary.

Integrated, Intuitive Operating Software
The ProtoMat system software is highly flexible and easy to use. A parameter library for different materials supports the easy machine operation. If required, the integrated process guide leads the user step by step through the machining process.

### Specifications of the LPKF ProtoMat S64

- **Max. layout area (X/Y/Z):** 229 mm x 305 mm x 8 mm (9” x 12” x 0.3”)
- **Max. material size (X/Y/Z):** 250 mm x 330 mm x 26 mm (9.8” x 13” x 1”)
- **Mechanical resolution (X/Y):** 0.5 μm (0.02 mil)
- **Repeatability:** ±0.001 mm (±0.04 mil)
- **Milling spindle:** Max. 60 000 RPM, software-controlled
- **Tool change:** Automatic, 15 positions
- **Milling width adjustment:** Automatic, micro switch ±1 μm (0.04 mil)
- **Tool holder:** 3.175 mm (1/8”)
- **Drilling speed:** 100 strokes/min
- **Travel speed (X/Y):** 150 mm/s (6”/s)
- **X/Y-drive, Z-drive, tool feed:** 3-phase stepper motor, 2-phase stepper motor, 2-phase stepper motor
- **Solder paste dispense rate:** ≥0.3 mm (≥0.011”) (solder point), ≥0.4 mm (≥0.015”) (pad)
- **Dimensions (W x H x D), weight:** 680 mm x 560 mm x 800 mm (26.8” x 22.0” x 31.5”), 95 kg (210 lbs)
- **Power supply:** 90 – 240 V, 50 – 60 Hz, 450 W
- **Compressed air supply:** Pressure min. 6 bar; consumption 751/min @ 6 bar

Specifications and other product information are matter of change without prior announcement.