University of Nebraska Engineering and Computer Sciences is offering the following item available for interdepartmental transfer.

Name and details: LPKF ProtoPlace BGA placement system.

Make: LPKF

Model: Protoplace BGA

Serial Number: 0Z2600J081

Year: 2016

University inventory tag number: 34354900

Contact for questions or to initiate interdepartmental transfers:
Paul Marxhausen
pmarxhausen@unl.edu
402-472-1969

Asking Price: $995.00 obo

Address of item (pick up location): Room C308 Scott Engineering Center

Pick up instructions: Small footprint, but granite base = heavy (132 lbs)
BGA and Fine-Pitch Placer

LPKF ProtoPlace BGA
Semi-automatic placement of complex components to assemble highly integrated circuit boards.

**Product description**
The placing of components with pins hidden from the top and sides requires reliable and precise alignment to avoid expensive and difficult rework.

LPKF ProtoPlace BGA placer is designed for the accurate placing of different types of BGA, CSP and flip chip components, as well as fine-pitch and ultra-fine-pitch components.

The system is suitable for R&D labs as well as production facilities focusing on custom designs and small batches.

**Product features**
- Semi-automatic placement of BGA, µBGA, PLCC and QFP components from 5 mm x 5 mm (0.2” x 0.2”) up to 40 mm x 40 mm (1.6” x 1.6”)
- Granite base plate
- Air-bearing positioning table
- Optical placement verification
Special optics and adjustable two-colour illumination help to simultaneously view and align the PCB leads and the component pins.

As soon as the component is aligned, it is automatically placed at a single push of a button.

Coarse and fine adjustment is achieved using an air-bearing table with micrometer screw adjustment.
Vacuum table
Vacuum table for easy clamping of flex or rigid PCBs. The vacuum table is compatible with LPKF ProtoPrint S and LPKF ProtoPlace S.

MicroBGA
This special option is available for placement of the smallest components with pitch 0.25 mm / 0.50 mm and size of approximately 2 mm x 2 mm. Set includes micropipette and optical converter. This option can be retrofitted by customer also later on.

**Technical Data: LPKF ProtoPlace BGA**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Max. PCB size</td>
<td>229 mm x 305 mm (9” x 12”)</td>
</tr>
<tr>
<td>Max. size of components</td>
<td>40 mm x 40 mm (1.6” x 1.6”)</td>
</tr>
<tr>
<td>Min. size of components</td>
<td>5 mm x 5 mm (0.2” x 0.2”)</td>
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<tr>
<td>Pitch</td>
<td>0,3 mm (12 mil)</td>
</tr>
<tr>
<td>Placement accuracy</td>
<td>± 0,05 mm (0.00197&quot;)</td>
</tr>
<tr>
<td>Power supply</td>
<td>90-250 V, 50-60 Hz, 20 W</td>
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<tr>
<td>Compressed air</td>
<td>6 bar (87 psi), min. 5 l/min. (0.18 cfm), oil-free</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>600 mm x 520 mm x 435 mm (23.6” x 20.5” x 17.1”)</td>
</tr>
<tr>
<td>Weight</td>
<td>60 kg (132 lbs)</td>
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