NANOTECH
ELEKTRONIK

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PCB Assembly and turnkey services

Nanotech Elektronik is an EMS company specializing in the design and contract manufacturing of electronics.

We offer one-stop manufacturing services:

- Full PCB design flow (analog, digital and mixed signal technology)
- Quick turn PCB manufacturing services (on materials ranging from standard FR4 to microwave laminates and polyimide)
- PCB assembly both SMD and THT (from prototypes up to series)
- Turnkey manufacturing of electronic modules, including functional testing, conformal coating and packaging
- Component sourcing, including hard-to-find parts
- BOM optimization services (cost reduction, substitutes for obsolete parts or parts with a very long delivery time)

The assembly services we carry out on a brand new automated SMT line equipped with loaders/unloaders, solder paste printer, AOI (Automated Optical Inspection) with a focus on high accuracy and the shortest delivery time.

We operate in accordance with the IPC-A-610H (Acceptability of Electronic Assemblies). It is also possible to make an outgoing inspection based on specific customer's requirements.

Assembly capabilities	
Parameter	Specification
Board Handling (Printing)	
Maximum Board Size (X x Y)	609,6 mm x 508 mm (24" x 20")
Minimum Board Size (X x Y)	50,8 mm x 50,8 mm (2" x 2")
Board Thickness	0,2 mm to 3,8 mm (0.008" to 0.15") up to 6,0 mm (0.236")
Assembling SMT (Population)	
Component range	0,4 mm x 0,2 mm (01005) up to 45 mm x 100 mm
Component height (max)	15 mm
Component type	Chips: 01005, 0201, 0402, 0603, 0805, 1206, 1210, 1812, 2010, 2225, 2512
	IC: PLCC18- PLCC84, LCC20-LCC84, SO, HSOP, SOJ18-SOJ44, MSOP8-MSOP10, SSOP8-SSOP64, HSOP20-HSOP44, TSSOP8-TSSOP80, TSOP28-TSOP56, TQFP32-

	TQFP176, LQFP32-LQFP256, QFP44-QFP304, CSP40-CSP56 (0,5), BGA46-BGA100 (0,75-0,8), LBGA48-LBGA280 (0,75-0,8), BGA81-BGA324 (1,0) up to LBGA1936 (1,0), BGA208 (1,27) up to LBGA1225 (1,27), BGA169 (1,5) up to LBGA 400, CBGA121 - CBGA1089
Mounting accuracy (X, Y)	50 µm for chips 01005, 0201, 0402
	75 µm for chips >0402, SOIC
	30 µm for QFPs
Additional	
Press-Fit technology	yes
Flex PCB assembly	yes
Nitrogen reflow soldering	yes (on demand)

How to get a quote and place an order

The cost of assembled electronic modules includes the cost of a bare printed circuit board, the cost of electronic components and the cost of assembly work. Therefore to prepare a quote for you we will require:

1. PCB files (Gerber or CAD files)
2. BOM (Bill of Material) files
3. Assembly drawing files
4. Your notes

When you send us this data, it will first be analyzed in our technical department to accurately understand all your requirements. Then our purchasing department will calculate the cost of all materials and components needed to complete the order. Next, when all the necessary information is available, the price offer will be calculated, which will be sent to you along with the delivery time and our notes.

Since the most time-consuming stage is the BOM evaluation, we use an API-based system developed by us, which has access to the stocks of many global suppliers around the world and which is able to automatically send and process requests for electronic parts. This helps us to make quotes for our clients quickly and accurately.

When you place and order for assembly we will require the following:

1. PCB files (Gerber or CAD files)
2. BOM (Bill of Material) files
3. Assembly drawing files
4. P&P (Pick and Place) files
5. Your notes

If you are uncertain about any of this, please do not hesitate to contact us to discuss any issue.

Requests for quote or orders, please send to our email address: office@nanotech-elektronik.com

Quality assurance

Our 14-step quality control system for all stages of the manufacturing cycle includes:

1. Renaming project files and client data according to the formal coding scheme before adding them to our system (to secure any confidential or sensitive information in the client's project)
2. Pre-production analysis of project documentation with an emphasis on DFM, DFA and cost-effectiveness

③ Continuously evolving vendor and supplier approval program
④ Detailed input inspection of all materials and components
⑤ Printed circuit board in-factory quality control and reporting to the database
⑥ Solder paste application quality control on the assembly line
⑦ Components inspection before reflow process
⑧ Solder reflow oven profiling using sampling PCB
⑨ AOI after reflow process and reporting to the database
⑩ X-ray inspection (on demand)
⑪ Visual inspection of electronic modules after completion the THT assembly
⑫ Visual inspection after rinse washing
⑬ Labelling with unique serial number and reporting to the database for traceability (on demand)
⑭ Functional testing (on demand)
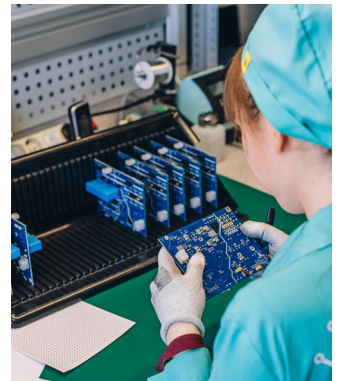

Packing and shipping

After the final inspection is completed, the finished products are packed in antistatic packaging and sent to the customer via express delivery service (DHL, DPD, UPS or other).

We use reliable and environmentally safe packaging materials to protect the assembled printed circuit boards and to secure the delivery to our customers.

Do not hesitate to contact us if you need additional special packaging options for your products.
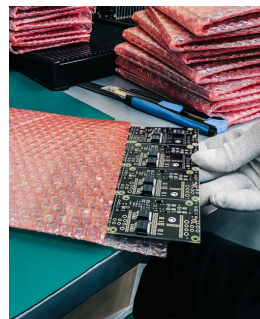
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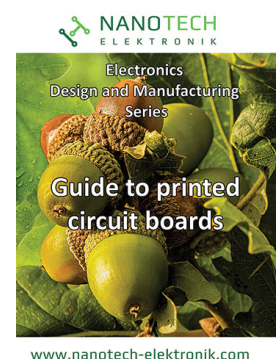
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