



GEMAC

Electronics Manufacturing Services

Customized PCB assembly
Range of services / Technologies

Range of services / Technologies EMS

4 SMD assembly (Surface-mounted device)

- From prototyping to series production
- **SMD Line Fuji NXT III with 6 assembly modules**
- Processing up to 83,400 components per hour
- High placement density of smallest components (0201 mm (008004"))
- min. PCB size: LxW 80 × 80 mm (in panel), smaller dimensions can be realized individually
- max. PCB size: LxW 460 × 450 mm
- max. PCB thickness: 4.5 mm
- max. PCB weight: 1.5 kg
- max. component height: 25.4 mm top / 23 mm bottom
- Mechanical soldering: **Full convection reflow soldering system SMT R360**



2 Solder paste printer EKRA SERIO 4000 Compact

- Dynamic scalability - all settings can be adapted flexibly to individual needs at any time
- Live view of the entire substrate for visual support during program creation
- Remote maintenance

- 1 Loading module
- 2 Solder paste printer
- 3 SPI
- 4 Pick and Place Machine
- 5 Reflow oven
- 6 Unloader module

3 3D-Solder paste inspection system Göpel electronic SPI Line-3D

- Exact three-dimensional measurement of the applied solder paste: Form | Area | Volume | Coplanarity | Height | Bridges | X/Y Offset
- Speed-optimized camera head
- 180 frames per second at a resolution of 4 megapixels
- High precision 3D image capture using fringe projection technology

5 Full convection reflow soldering system SMT R360

- With patented Quattro Peak Plus concept for extremely complex assemblies in high-volume production
- Reliable transport system from single to multiple track concepts
- Tool-free maintenance for all SMT systems | Remote maintenance
- Sustainable electricity and nitrogen saving concept
- Stable cooling performance, no loss of power over the operating time due to the use of smooth cooling plates

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THT assembly (Through Hole Technology)

- Manual assembly of wired components
- Machine soldering: wave soldering system SEHO GOWAVE | selective soldering system SEHO SELECTLINE

Manual assembly

- Assembly of THT and SMD components
- Prototype production

Depaneling

- Low stress cutting of panels in any contours
- Consistently high quality due to high repeatability of milling operations combined with the use of a high-frequency spindle with high concentricity (up to 40,000 1 / min)
- Equipment with two tables ensures high throughput
- Programming is done by CCD camera during the teach-in process
- Deviations are detected and corrected by means of visual positioning system independently
- Mechanical depaneling: BJC CNC milling cutter Type HS-5700N-DSV

Coating

- Machine coating of the PCBs
- Coating machine: MYCRONIC MYC10

Mounting

- Assembly work of electronic components
- Pre- and final mounting of complete assemblies

Testing

- of SMD components: Automatic optical inspection (AOI): Göpel electronic Vario Line-3D
 - Flexible AOI system with maximum defect detection through combined 3D and 2D technologies
 - Maximum failure detection / 360° oblique view inspection with adapted focal plane
- of THD components: Quins (Quality Inspection Systems) or manual visual inspection
- Electrical test by means of needle adapter
- Conception and execution of complete functional tests (incl. software, hardware and creation of test protocols)
- Conception and execution of customer specific tests
- ICT | Flying Probe: testing of components and electrical connections
- X-ray: testing of solder joints under BGA or QFN
- Boundary Scan

Quality Management / Certifications

- DIN EN ISO 9001
- DIN EN ISO 13485
- RoHS and REACH compliant manufacturing
- Manufacturing of PCBs according to IPC-A-610 class 2 / on customer request according to IPC-A-610 class 3