

Leading the Way to Excellence.

JOPP



JOPP

Electronics GmbH

Range of Services EMS/E²MS

Electronic Engineering & Manufacturing Services at a glance

Villingen-Schwenningen, 2020

www.jopp.com

E²MS Electronic Engineering and Manufacturing Services

Jopp Electronics GmbH | Range of services at a glance



Company Orientation | As a full-service E²MS provider, the midsize company Jopp Electronics GmbH develops and produces electronic assemblies through to complex mechatronic complete systems (box-build) in end-customer-specific product packaging. As a globally active direct supplier based in Baden-Württemberg Germany, we are active in the market as a 1st or 2nd tier for our customers and serve all relevant customer segments from small to automated medium-sized quantities (low/mid-volume/high-mix). JOPP operates according to industrial standards such as Lean Management, KANBAN, 5S and One-Piece-Flow.

Embedded in the globally active medium-sized JOPP Group with around 1,700 employees in twelve locations worldwide, our group-wide competencies lie in metal and plastics processing, electronics and special machine construction, feeding and automation solutions and testing technology. In addition to our sites in Germany, we also have production facilities in Eastern Europe, China, Mexico and India for complex manual assembly processes, including small and medium-sized lots.

Services E²MS | Software/Hardware development, Project Management, IMDS (International Material Data System), procurement and logistics, Prototype production on series processes, SMD/THT assembly, press fit, component protection, assembly, packaging, AOI/ MOI, ICT/ISP, EOL, End-of-Life Management (PCN), Obsolescence Management, global delivery.

Target Markets | automotive and commercial vehicle electronics, LED applications, electromobility, sensor technology, actuators, charging management, medical technology, industrial electronics, building services engineering / smart home, MSR technology.

Quality Management | ISO 9001:2015, IATF 16949:2016, TISAX Level AL2



Jopp Electronics GmbH

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Electronic Engineering Services

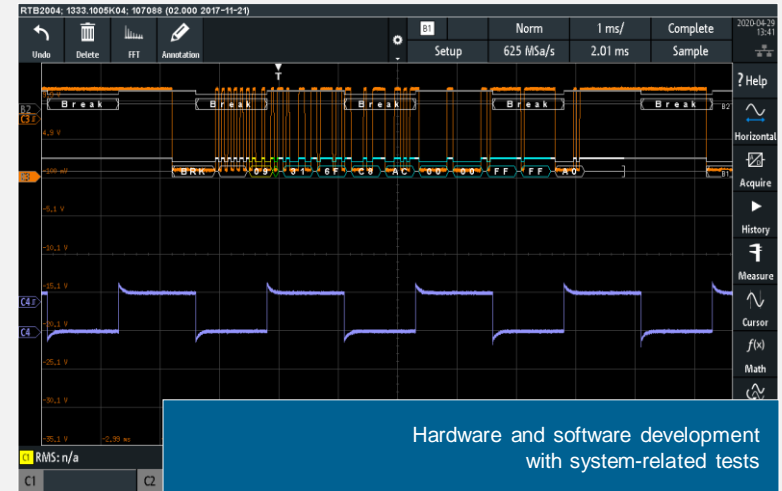
- ❖ Concept consulting and creation
- ❖ Project Management
- ❖ System design with consideration of functional safety
- ❖ Tool requirements supported with engineering and complete documentation
- ❖ Testing concepts, verification and validation in hardware and software

Electronic Development | Hardware

- ❖ Tool-supported creation of circuit diagrams and PCB layout
- ❖ Analogue and digital circuits
- ❖ Sensors, actuators and communication interfaces [CAN(-FD), LIN, BT, LAN etc.]

Electronics Development | Software

- ❖ Software for a wide variety microcontrollers
- ❖ Embedded Operating Systems (Real Time and Non Real Time)
- ❖ Peripherals, wired and wireless interfaces
- ❖ Human Machine Interfaces, sensor evaluation and actuator control
- ❖ Standard software components, for example AUTOSAR



Electronic Manufacturing Services | SMD-Technology

- ❖ Traceability via lasered barcode / QR Code
 - ❖ ERP system (SAP) based planning and control processes
 - ❖ Bonding / Dispensing
 - ❖ Nitrogen-based re-flow soldering
 - ❖ Fully automated integrated solder paste inspection (SPI)
 - ❖ Fully automated Automatic Optical Inspection (AOI)
-
- ❖ Capacities: > 150,000 BT/h
 - ❖ Processing chip design: up to 0201
 - ❖ Fine pitch assembly: up to 0.4 mm pitch (in series production)
 - ❖ μ BGA up to grid dimension: 0.35 mm
 - ❖ Component spacing: 0.3 mm min.
 - ❖ Print image size: 80 x 50 mm² - 508 x 508 mm²
 - ❖ Technology: Pin-In-Paste



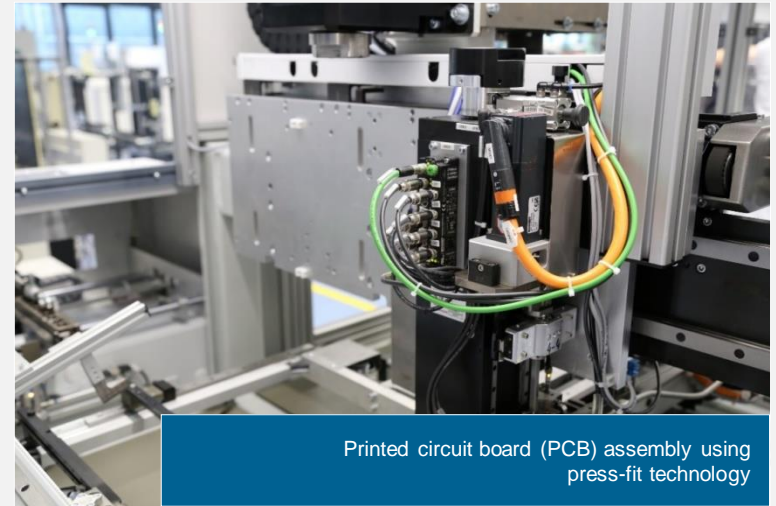
Latest SMD PCB Assembly with integrated
3D paste print inspection and 3D AOI inspection

Electronic Manufacturing Services | Through-Hole-Technology (THT)

- ❖ Component preparation
- ❖ Manual assembly
- ❖ Manual soldering
- ❖ Nitrogen wave soldering
- ❖ Selective soldering

Electronic Manufacturing Services | Special Processes

- ❖ Press-Fit PCB Assembly with force / stroke monitoring
- ❖ Component protection through casting / bonding
- ❖ Component protection through painting (external)
- ❖ Depanelization roll / mill / punch
- ❖ Repair services



Printed circuit board (PCB) assembly using
press-fit technology

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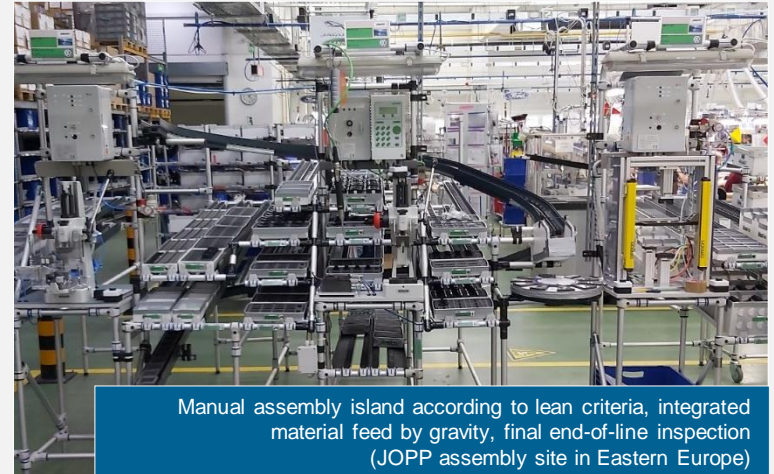


Electronic Manufacturing Services | Product / Customised Assembly

- ❖ Manual assembly in DEU / CEE incl. testing technology
- ❖ Semi-automated assembly incl. testing technology
- ❖ Fully automated assembly incl. testing technology

Electronic Manufacturing Services | Test Engineering

- ❖ Solder Paste Inspection (SPI) / Automatic Optical Inspection (AOI)
- ❖ Manual Optical Inspection (MOI) / Microscopic analytical methods
- ❖ X-ray inspection (AXI) of components (external)
- ❖ In-Circuit-Test (ICT) / In-System Programming (ISP)
- ❖ Functional test / End-of-line tests (EOL)
- ❖ Poka-Yoke solutions



Manual assembly island according to lean criteria, integrated material feed by gravity, final end-of-line inspection (JOPP assembly site in Eastern Europe)