YOUR INNOVATIVE TECHNOLOGY PARTNER

CHIP ON BOARD
FLIP CHIP
SMT
SUPPLY CHAIN MANAGEMENT
PROTOTYPES
PROCESS DEVELOPMENT
CONCEPT
ENGINEERING
PRODUCTION
TESTING
The trend toward miniaturization demands smaller and smarter electronics with increased complexity and reliability. AEMtec has been building up a high level of expertise in the development and production of miniaturized (opto)electronics for sophisticated applications.

All our production facilities are certified by official organizations: ISO 9001, ISO 13485 (Medical), TS 16949 (Automotive) and ISO 14001 (Environmental). The entire production process takes place in special clean room facilities up to ISO 5. We guarantee the highest level of quality from prototype to high volume production.
Using the most modern packaging and assembly technologies on multilayer and complex substrates, we can turn new product ideas into functional and safe solutions.

AEMtec offers a unique spectrum of high-end chip-level technologies. In our cleanroom facilities (ISO 5, ISO 7 and ISO 8) we apply a broad technological range of chip-on-board, flip chip, opto-packaging procedures, SMT and 3D integration.

**DIE- AND WIRE BONDING**

- Substrates: Rigid PCB, Flex, Rigid-Flex, ceramics and glass wafers
- High accuracy die placement up to +/- 1 µm
- Die attach, COB
- Aluminium and gold wire bonding
- Automatic ball-wedge-/wedge-wedge bonding
- Stud bumping & 3D Packaging
- Wafer mapping to single device on wafer
- Traceability down to die-position on wafer
- Sonoscan for void inspection
- Post bond inspection

**FLIP-CHIP**

- Au-stud bumping
- Different versions of flip chip attach
- Package design support
- ICA, ACA, NCA
- Thermo compression/Thermo sonic
- Thermode soldering
- Reflow soldering (flux and flux-free)
- Post bond inspection
SMT

> Offline set-up and programming to reduce down time
> RoHS compliant processes
> AOI
> Rigid, rigid-flex
> LCP/ ceramic/ polyimide/ epoxy glass fiber
> Leaded and lead-free solders of a wide range of alloys
> Low-temperature solders

OPTO-PACKAGING

> High-precision automatic bonders
> Active and passive optical alignment
> Lens array alignment
> Variety of procedures for automated encapsulation
> Optical and tolerance simulation within a network of highly experienced partners
> Development of product-specific (optical) test equipment
> Cleanroom conditions of ISO Class 5

WAFFER PROCESSING SERVICES

> Under Bump Metalization (UBM) on Al & Cu pads, electroless nickel plating
> Micro solder ball attach (min. solder ball size 60µm, common and special alloys)
> Au-stud bumping
> Wafer cleaning and inspection
> Wafer dicing (single and dual cut)
> Wafer size: 100-300mm (standard and MEMS wafer)
WE FOCUS ON OPTIMIZED KEY PRINCIPLES.

AEMtec’s portfolio is based on the Q-L-T-C principles: Quality-Logistics-Technology-Commercial. These are the cornerstones of successful projects and how we turn innovative ideas into marketable products.

QUALITY
Controlled processes in accordance to international requirements, standards and regulations

LOGISTICS
Best practice SCM at all stages of product / process development and production

COMMERCIAL
Project handling focus on TCO approach and based on fair/cooperative collaboration

TECHNOLOGIES
Wide technological range (Wafer Processes, SMT, CoB, FC, Opto-Packaging, X-Ray)

WE HELP YOU MAKE THE RIGHT DECISIONS AT EARLY STAGE.

Before specific modules can be developed, concrete expectations in terms of product functionality are decisive steps in the successful implementation. Which technologies should be used? Which test concept is best to ensure the required objectives? What important steps should be taken next? A solutions-oriented dialogue—listening, understanding and advising—is the basis for all project phases at AEMtec. Early supplier involvement (ESI) is part of our professional supply chain management. Our customers value our approach and together we develop technologies for tomorrow.

PROCESS & PRODUCT DEVELOPMENT
› Definition and feasibility
› Test System Concept
› DTC, DFO
› Design of experiments & simulation
› Product engineering (DFM)

(RAPID) PROTOTYPING
› Fast prototyping techniques
› Prototypes on Production Equipment
› Testing and measuring
› Documentation

QUALIFICATION & INDUSTRIALIZATION
› Manufacturing concept implementation
› All volume production
› Lifetime and reliability testing
› Quality monitoring
› Traceability
MEMBER OF A STRONG GROUP

In 2008 AEMtec became member of exceet Group S.E., an international technology group with strong presence in three business segments: Electronic Components, Modules & Systems (ECMS), Embedded Security Solutions (ESS) and ID Management & Systems (IDMS).

AEMtec belongs to the ECMS business unit which is characterized by a wide variety of innovative embedded electronic solutions tailored to sector- and customer-specific requirements and sold to customers from a broad range of industries worldwide. Integrating the different core competencies within the Group helps customers optimize their individual process steps along the value chain.

exceet is also considered to be one of the leading full-service providers for high-tech smart cards and readers in Europe. exceet offers mobile services, identity safeguards, secure payment solutions, authentication of online services, and cloud computing access.

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