AEMtec

WAFER BACK-END

TESTING

CONCEPT

ENGINEERING

SMT

PROCESS DEVELOPMENT

OPTO PACKAGING

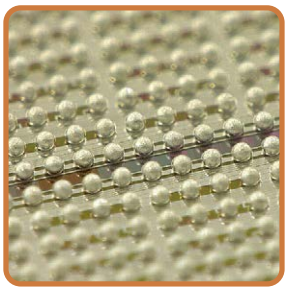
FLIP CHIP

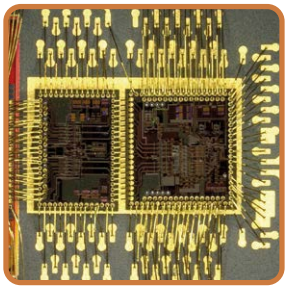
PRODUCTION

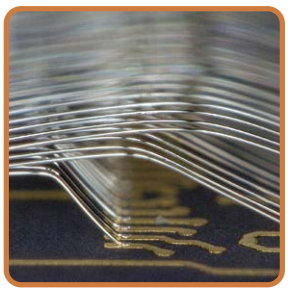
PROTOTYPING

CHIP ON BOARD

SUPPLY CHAIN MANAGEMENT

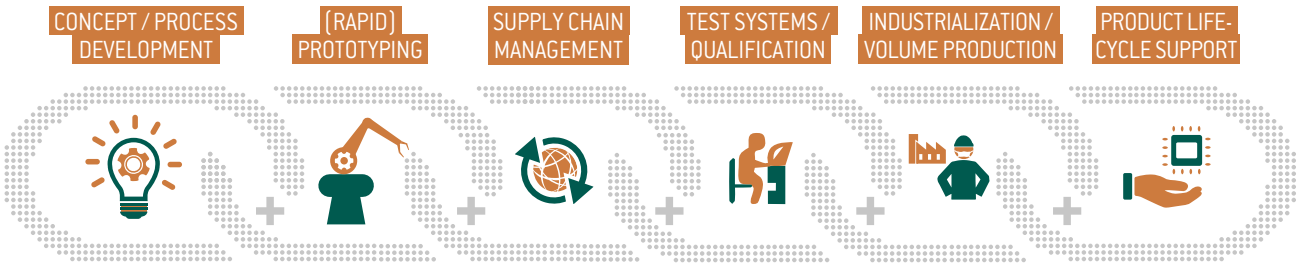






NEXT LEVEL OF ADVANCED MICROSYSTEMS, OPTO-ELECTRONICS & PACKAGING SERVICES

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 complex micro and optoelectronic modules through to complete systems for sophisticated applications. Customers also benefit from comprehensive packaging technologies, from wafer to assemblies . This enables AEMtec a significant optimization of lead times and quality.



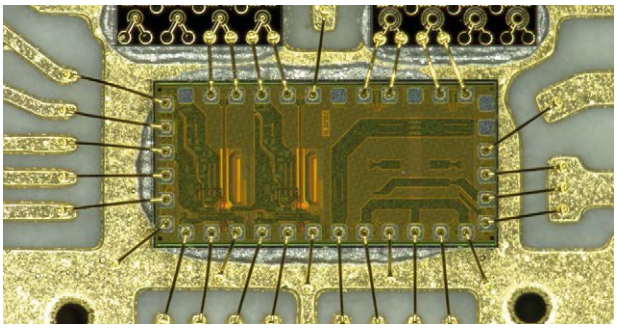
AEMtec´s relevant areas of activities are certified by official organizations: ISO 9001, ISO 13485 (Medical) and ISO 14001 (Environmental). The entire production process takes place in special clean room facilities up to ISO 5 / class 100. **We guarantee the highest level of quality from prototype to high volume production.**

AEMTEC TECHNOLOGY SOLUTIONS

Using the most modern packaging and assembly technologies on multilayer and complex substrates, we can turn new product ideas into functional and safe customer-specific 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 wafer back-end processes, chip-on-board, flip chip, opto-packaging procedures, SMT, 3D integration and box-build.

In cooperation with our Romanian partner we provide cost-efficient manual assembly services. State-of-the-art semi-automated assembly lines and a highly skilled workforce ensure high quality in manual assembly steps. AEMtec manages the entire manual production process from material sourcing through final product testing.

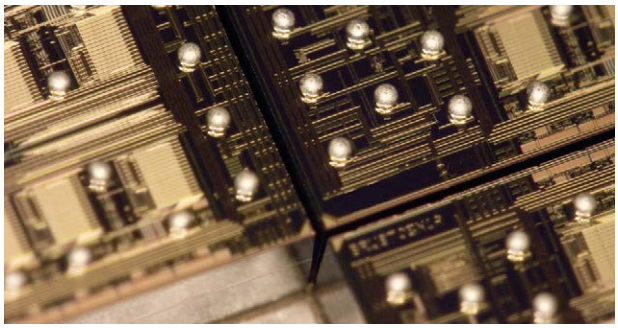


DIE- AND WIRE BONDING

- 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

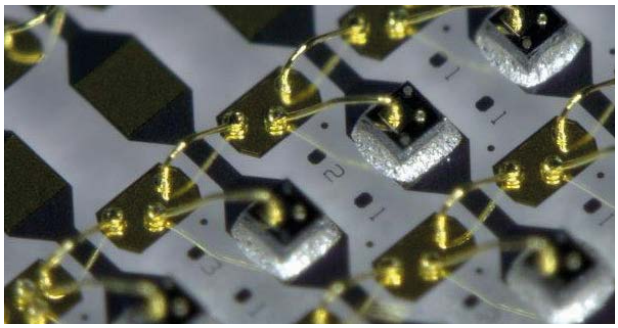
FLIP-CHIP

- 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



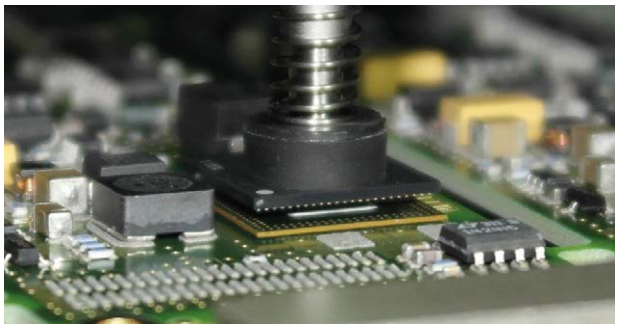
WAFER PROCESSING SERVICES

- Under Bump Metallization (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)



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



SMT

- Offline set-up and programming to reduce down time
- RoHS compliant processes
- SPI, AOI, XI
- Rigid, rigid-flex
- LCP/ ceramic/ polyimide/ epoxy glass fiber
- Wide range of solder alloys (lead-free, leaded, low temperature, high temperature)
- 01005 and 03015 (metric)

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.

TECHNOLOGY

Wide Technology Range: Wafer Back-End Services, Bare Die Technologies, High Precision Placement, Opto-Packaging.

COMMERCIAL

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

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

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TO OUR FOLDERS