



AEMTEC WELCOMES

<CUSTOMER>

TO THE

BERLIN, DATE





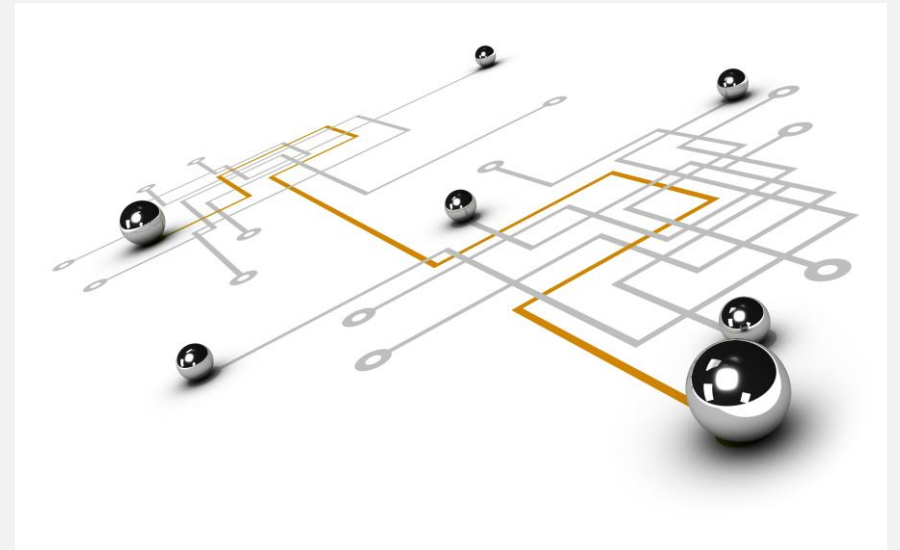
LEADING FULL-SERVICE PROVIDER
OF CUTTING-EDGE MICRO AND
OPTOELECTRONIC SYSTEMS

AEMtec Company Presentation



- AEMTEC AT A GLANCE
- STRATEGIC PARTNER
- MARKETS
- TECHNOLOGIES
- ENGINEERING
- FACILITY

High Precision Assembly

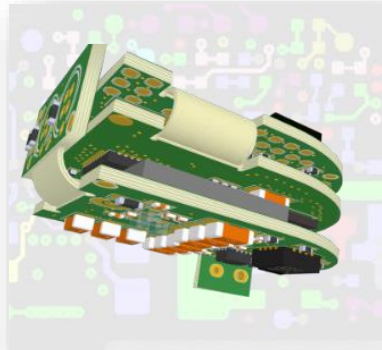


Excellence in (opto) electronics and sensor systems offering high-end chip level technology services from product / process development to packaging

**PRODUCT & PROCESS
DEVELOPMENT**

**VOLUME
PRODUCTION**

**SUPPLY CHAIN
MANAGEMENT**

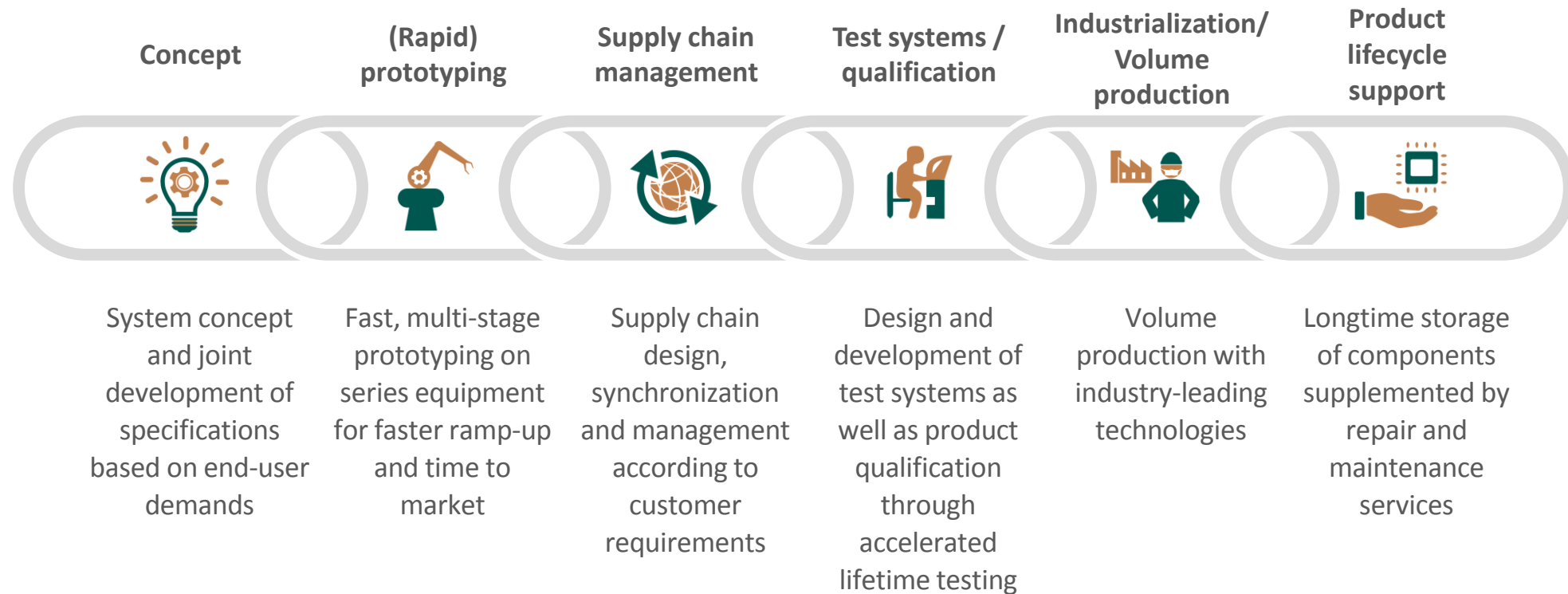


Areas of Excellence

Strategic partner for customized advanced electronic packaging



Key services

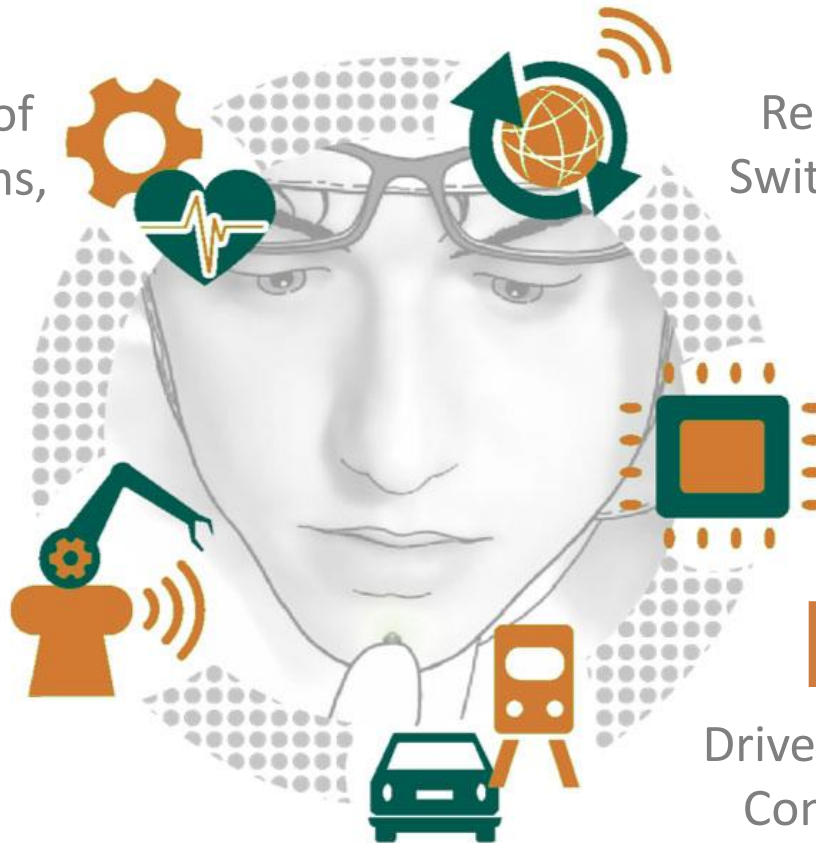


Medical

Wearables, Handhelds for Point of Care Diagnostics, Imaging Systems, Acoustic Systems, Laboratory Diagnostic Equipment

Industry and Automation

Rotary angle sensors, Pressure sensors, Optical sensors, MEMS systems



Data and Telecommunication

Receiver, Transponder, Router, Plugs, Switches, Language- and conferencing technologies, Access Points

Semiconductor

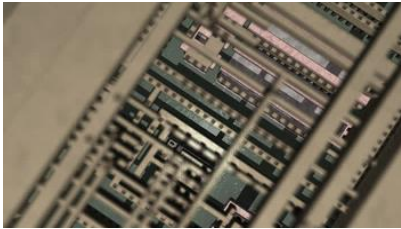
Lithography systems, Mask writers, MOEMS

Automotive and Transportation

Driver-assist systems, Comfort systems, Control devices, Automotive test rigs, Sensor systems

Wafer back-end

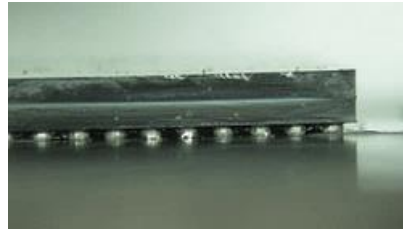
UBM, balling, dicing



- Under bump metallization (UBM)
- Solder balling
- Fully automatic: Dicing, cleaning and UV-exposure
- Au-stud bumping

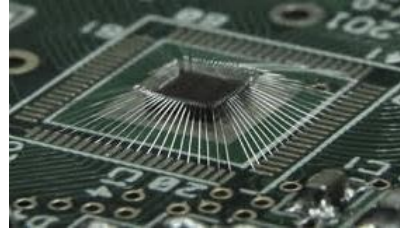
High-precision packaging & testing

Flip chip



- Soldering
- Gluing (ACA, ICA, NCA)¹⁾
- Copper pillar
- Thermocompression / thermosonic bonding
- Underfill

Chip on board



- Die bonding
- Al and Au wedge and ball bonding
- Encapsulation
- 2.5D / 3D packaging
- System in package

Positioning, soldering, testing

Surface-mount technology



- 01005 (mils) / 0.25mm x 0.125mm
- Selective soldering
- Restriction of hazardous substances (RoHS)-compliant processes

Module & product assembly

Box-build



- Product co-development
- Prototyping + industrialization
- Serial production including repair service
- Worldwide supply

On all common substrates

Selected use cases



Computer tomography



Hearing aids and components



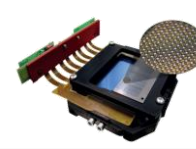
Professional lighting



Multi-channel optical transceivers



Medical-grade wearables



Optical reference modules



Optical sensors



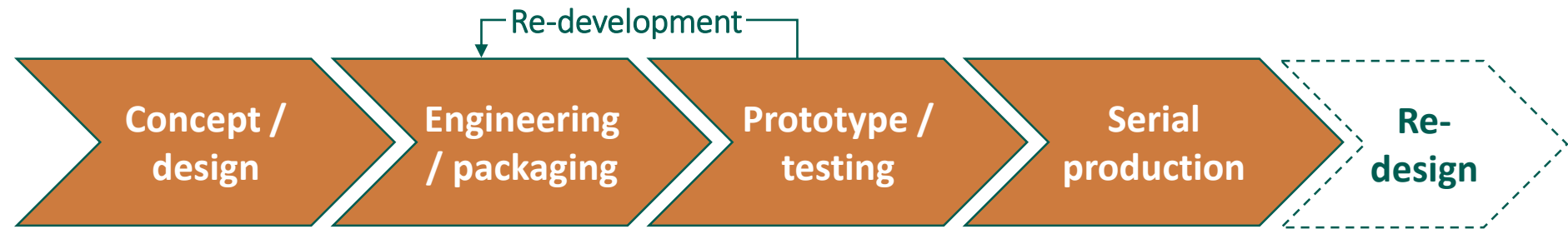
Pressure sensors



Automotive development systems

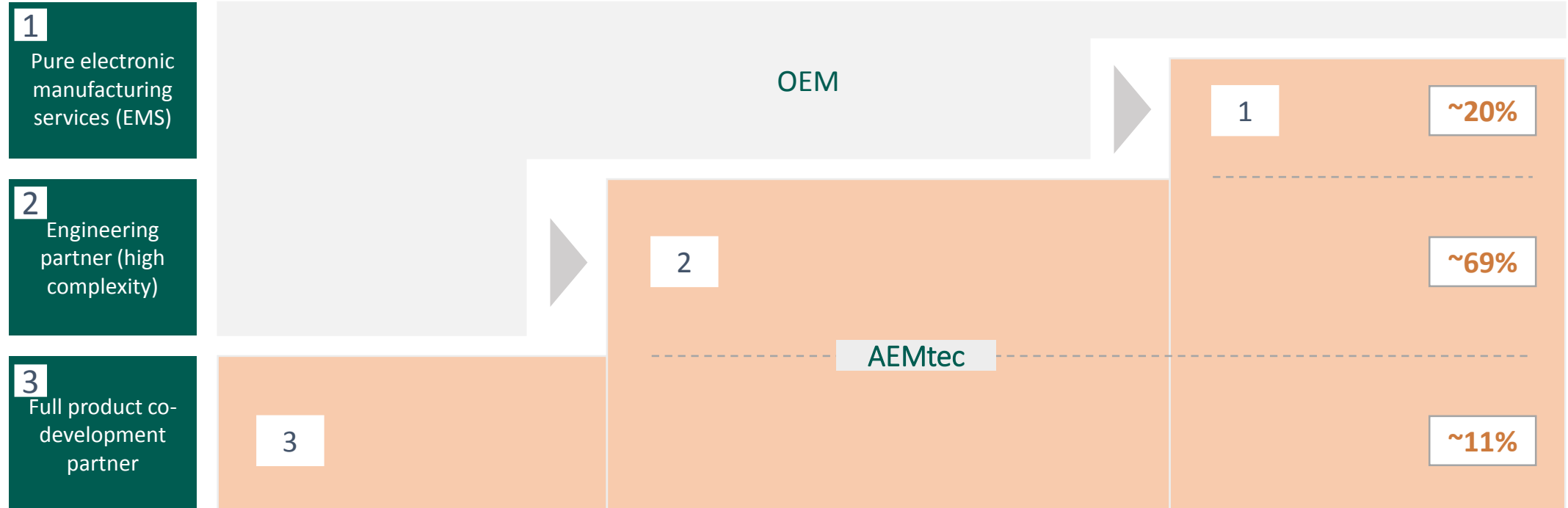


We focus on engineering and product co-development partnerships



AEMTEC'S INVOLVEMENT

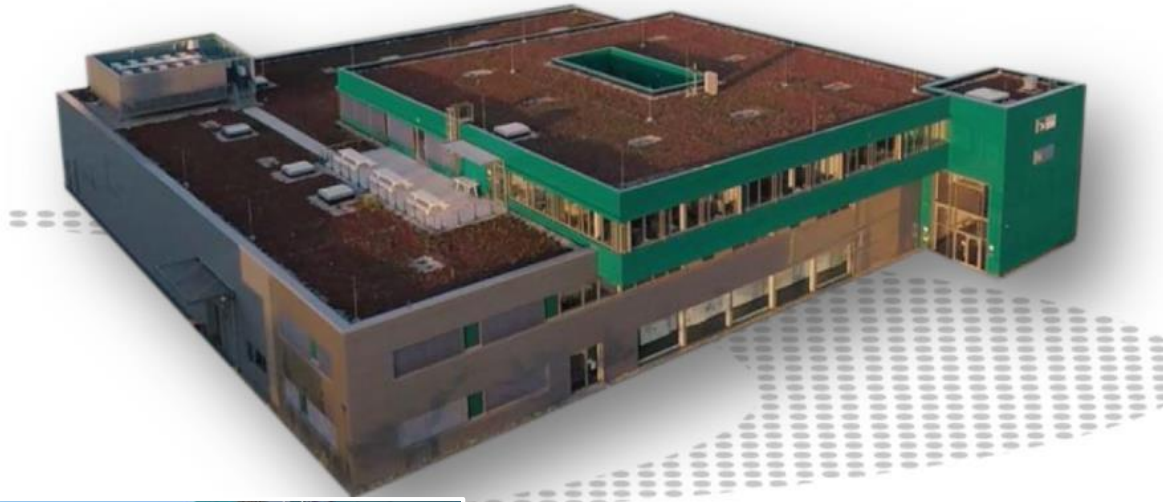
Project type



%

Percentage of sales in 2017

State-of-the-art facility with unique set of high-tech equipment



Facility in technology hub Berlin-Adlershof

- One of most modern and best equipped high-end precision manufacturing facilities for low- and mid-size volumes in Europe
- Workshop production with flexible layout
- Three cleanroom sections (ISO 5, 7, 8)
- Precision placement equipment down to 0.5µm accuracy
- 4,300 sqm building area (2,800 sqm cleanroom area)



Planned facility extension will allow AEMtec to double our capacity

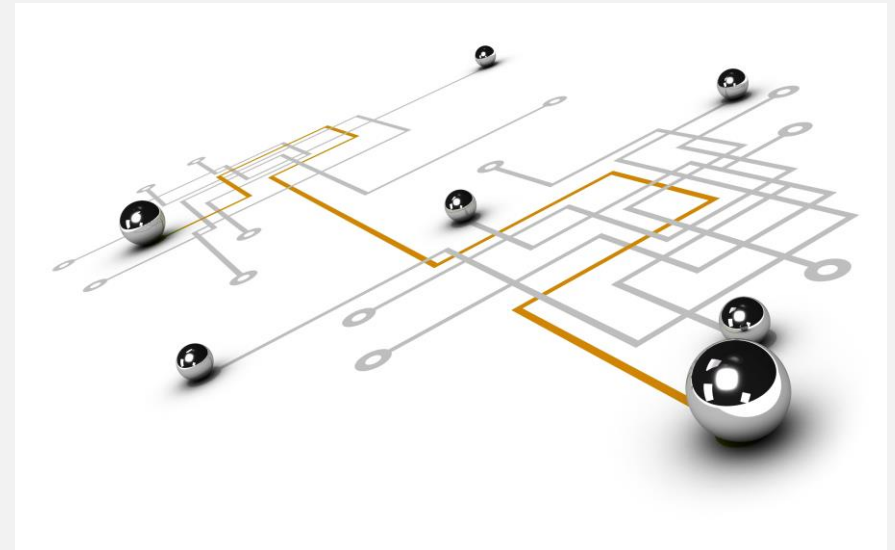


- Doubling of usable floor and ISO 5 cleanroom space
- In-housing of wafer back-end UBM processes
- Extension of cleaning and soldering wafer-back end processes
- Further optimization of flow of materials
- Automated warehouse



- BUSINESS PRINCIPLES
- SUPPLY CHAIN MANAGEMENT
- QUALITY
- PROJECT PHASE MODEL
- MANUAL ASSEMBLY
- CASE STUDIES
- TECHNOLOGIES

Highly Efficient & Flexible





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

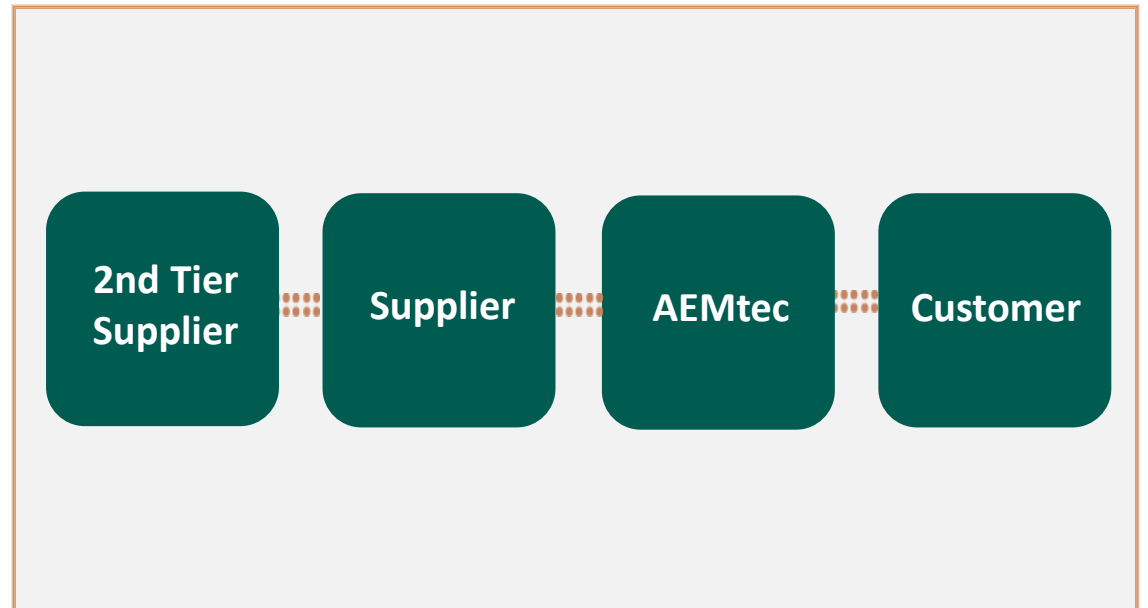
Wafer Back-End Services, Bare Die Technologies, High Precision Placement, Opto-Packaging.

Commercial

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

We manage your worldwide complex supply chain

- Supply Chain Analysis [SCA]
- Supply Chain Design [SCD]
- Supply Chain Controlling [SCC]
- Synchronized logistics model
- Cycle time management
- Supplier agreement



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High quality standards down to the last details



Certified Quality

- ISO 9001
- ISO 13485
- ISO 14001



Professionalism

- Yield management
- Traceability to individual component level
- Business oriented Quality Management





Manual Assembly

in cooperation with our manufacturing partner in Romania
For modules and complete devices



Semi-automated modern lines ensure high quality in manual assembly steps

Assembly



- Clean Room (ISO Class 7/8)
- Subsystem Integration
- Pre-Assembly and Precision Assembly
- Semi-Automated Miniature Assembly
- THT-Assembly and Box-Build

Processes



- Optical Inspection
- Functional Test
- Glob Top Dispensing
- Soldering
- Glueing
- Quality Inspection

Processes



- ESD Packing and Labeling
- Customized Packaging
- Order picking and packing
- Worldwide Shipping

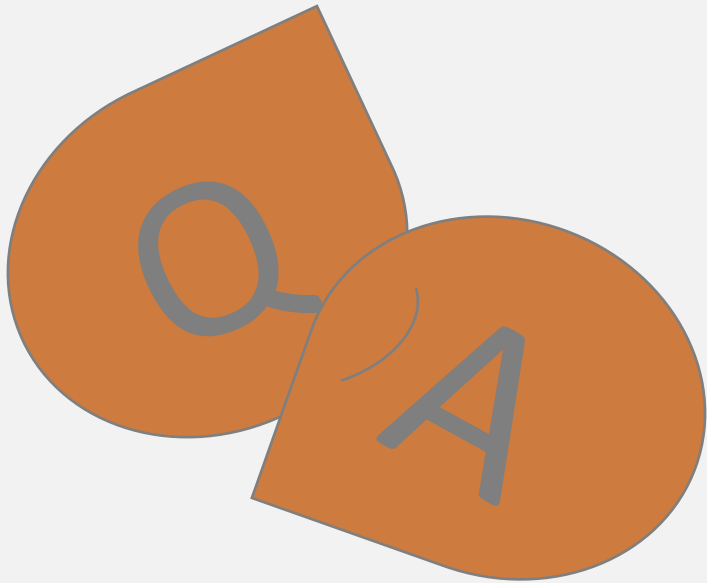


How you benefit



- Customer centric approach
- From concept to manufacture, all under one roof
- Accompanied by a well experienced team from different disciplines
- Access to superior production capabilities
- Supply chain optimization
- Flexibility in short-term needs
- Relief of customer organization
- Fast time to market

Customized – Efficient – Innovative – Reliable – Worldwide



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THANK YOU !