



Corporate Fact Sheet v8/18

Penang, Malaysia
Johor Bahru, Malaysia
Heerbrugg, Switzerland
www.escatec.com

ESCATEC

ESCATEC designs and manufactures high-grade industrial electronics and box build solutions. We create and deliver reliable solutions supported by highly ethical and sustainable business practices, making us the partner of choice for industry leading OEMs worldwide.

We make sure we understand the solutions that our customers require and flexibly align to their needs.

Our committed employees ensure that customers receive exactly what they expect. Through this commitment and our focus on quality we build and maintain trust with our customers. Their product is delivered as promised, on time, with best-in-class quality and at a competitive price.

At ESCATEC, Our People Deliver the Best for Your Products

Our teams are dedicated to our customers' success and the reputation of their brands. That means we start by understanding the needs of our customers, which is essential to enabling the success of our customers' products. For each and every service we offer, whether for a product's entire lifecycle or just a part of it, ESCATEC reaches out, communicates and aligns perfectly to customer needs.

Our Company

Profitable and well managed, our corporate headquarters is located in Penang, Malaysia, with plants in Penang & Johor Bahru, Malaysia, and Heerbrugg, Switzerland.

The size of our company enables us to offer cutting edge production capabilities and also to react quickly and flexibly to new opportunities. We continually nurture long-term relationships with our customers and contribute to their success and growth.

Originally founded in 1974, ESCATEC has more than 1700 committed employees worldwide, many of whom have been with us for over 10 years. This means we retain many years of experience which is systematically applied to our customers' projects and production.

Our services focus on overcoming the challenges of today's manufacturing complexities by offering the precise electronics and box build solutions needed by our customers.

Certifications

ISO 9001, ISO 14001, IATF 16949 (Automotive), ISO 13485, ISO/IEC 80079-34, FDA registration (no. 3010354240)

Market Concentrations

Industrial, high-end consumer, LED & lighting, medical, beverages & food, building automation and smart metering.

Our Leadership Team

Founder and Executive Chairman: **Christophe Albin**
Group Managing Director: **Markus Walther**
Chief Operating Officer: **Juha Arola**

Business Development

Richard Eberhard +41 71 727 4236
richard.eberhard@escatec.com
(Director, Business Development)

Thomas Klausner +41 71 727 3594
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(Business Development Manager)

Customer Service

David Taylor +60 12 428 2552
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(Director, Customer Service)

Board of Directors

Christophe Albin – Founder and Executive Chairman
Markus Walther – Board member and Group MD
Christian Risch – Board member
Charles-Alexandre Albin – Board member
Dr. Xavier Arreguit – Board member
Joe Lahra – Board member

ESCATEC Service Sheet

System Design

- Requirements engineering
- System architecture
- Conceptual design (PoP/PoC (Proof of Principle/ Proof of Concept))
- Risk management (according to ISO 14971, xFMEA and Hazard Analysis and Critical Control Points (HACCP))
- VA/VE (Value Analysis/Value Engineering)
- System verification and validation
- EMC prequalification capabilities
- Product certification including accredited environmental testing
- Siemens Teamcenter® (PLM/PDM), Aligned elements®

Electronic Design

- Ultra low power design and miniaturisation
- Design for Cost
- RF, digital, analogue and mixed signal designs

Simulation

- PSpice®, Mathcad®, MATLAB®
- Agilent Advanced Design Studio (RF)®
- Altium Designer® and Cadence Allegro®

Component Engineering

- SiliconExpert™
- Global component evaluation and sourcing
- Component Obsolescence management
- Shared component catalogue (accessible for our customers at www.escatec.com)

Embedded Software Design

- 8-bit, 16-bit and 32-bit microcontrollers or DSPs
- Designs with and without Real Time Operating Systems (RTOS)
- Communication technologies such as WLAN, LAN, Bluetooth, GSM/UMTS, GPS, PLC, LoRaWAN and others
- Implementation of Man-Machine-Interfaces (MMI) and Graphical User Interfaces (GUI)
- Board Support Packages (BSP)
- Built-In-System Test (BIST)

Operating Systems

- Embedded Linux, FreeRTOS, ThreadX

Design Methods and Tools

- Enterprise Architect UML
- SCRUM methodology
- SVN subversion
- Doxygen

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Mechanical Design

- Collaboration with industrial designers
- Material evaluation and selection
- Miniaturisation/ packaging
- Long-term experience in plastic design and moulding technologies
- Rapid prototyping technologies
- FEM simulation
- 3D mechanical design (Solid Edge®)
- DFM, tool technology evaluation
- Functional verification testing
- Environmental testing
- Management of toolmakers

Design and Simulation Tools

- Solid Edge®, ANSYS®, Autodesk® Moldflow®

PCB Design/ PCB Simulation

- Digital, analogue and mixed signal board designs
- Miniaturisation
- Design for Test (DfT)
- RF design
- EMC compliant PCB design
- Layout simulation (signal integrity)
- Thermal simulation

Design Tools

- OrCAD® schematic entry
- Cadence Allegro®
- Altium Designer®

MOEMS Design and Assembly (ESCATEC Switzerland only)

Miniaturisation, optimisation of product cost, LED design and packaging, sensor packaging, COB design, encapsulating and design of micro optical elements

- Cleanroom ISO class 7 (class 10,000)
- Laminar flow box ISO class 5 (class 100)
- Die bonding (down to 0.18 mm edge length)
- Wire bonding (17 µm-50 µm, gold and aluminum wire)
- Precision encapsulation
- Precision alignment of optical components
- Micro assembly of optical modules and functional testing
- Thermal simulation

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Project Management

Flexible portfolio and project planning for all design and manufacturing products

- Lean approach to create added value for customer products
- Make best use of all involved resources, (customer resources as well as ESCATEC's)
- Keep cost and timeline under control
- Project status communication
- Managing the transfer of engineering project to series production, enabling the fastest time-to market
- Coordinating regulatory affairs with external partners (e.g. Medical, or ATEX)
- Project Management Institute (PMI) certified project management professionals

New Product Introduction (NPI)

Including project planning, implementation & prototyping and full production

Design Phase

- Reviewing design regarding manufacturability, testability and cost
- Prototyping for PCBAs, mechanical assemblies

Production Setup

- Production concepts following LEAN principles
- Process FMEA and risk management
- Process validation (medical)
- Jigs & fixtures, process documentation, training
- Quality control process
- Transfer of existing products

Test Engineering

- Integrated test strategy
- Test hardware and software development
- Production support during lifecycle
- Functional test, ICT, MDA, Boundary scan, Burn in Testing, AOI and X-Ray inspection

Process Automation

- Tailored level of process automation
- Semi automated to fully automated assembly lines

Design for EXcellence (DfX)

- Design for Quality
- Design to Cost
- Design for Test
- Design for Manufacturing
- Design for Environment

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Manufacturing Capabilities

- Fully RoHS/REACH-compliant processes
- PCB assembly (SMT, BGA, PoP, COB, THT)
- Automated 3D and 2D optical inspection (AOI)
- X-ray inspection (3D & 2.5D)
- Wave & reflow soldering
- In-circuit test
- Functional test
- Full board and batch level traceability
- Complex box-build assembly
- Coil & transformer winding
- Turnkey supply chain services

Plastic Injection Moulding (ESCATEC Penang and Johor Bahru only)

- More than 60 units of Engel, Arburg and Nissei machines (15-ton to 460-ton)
- Secondary operations: ultrasonic welding, hot stamping, tampo and silk screen printing
- ZEISS 3D CMMs & OGP Smart Scopes
- Robotic and conveyor automation systems



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