



STARTEAM

Exceeding Manufacturing

EN

www.starteam.global

ABOUT STARTEAM

Founded in 1988 in Germany, STARTEAM GLOBAL is a PCB manufacturer with over 35 years of expertise, serving automotive, industrial, power solutions, energy and lighting, consumer, and medical industries with high safety and reliability standards. With our PCB factories and main offices in Europe and Asia across both regions, we support every stage of the product lifecycle – from prototypes to mass production – through a customer-focused approach, a broad portfolio of PCB technologies and services, and a team of industry specialists.

GLOBAL PRESENCE



1,000+
employees globally



Forecast 2026
US\$178M



3 production facilities:
Jiangyou, China
Prachinburi, Thailand
Flero, Italy



29
locations worldwide



Factories



Main offices



Sales representatives



Prototype & quick turn facilities



Main offices:
Hong Kong SAR
Karlsruhe, Germany
Shenzhen, China
Worthing, UK

YOUR END-TO-END PCB PARTNER

Secure, Scale, & Sustain

- Secure supply continuity (reduced geopolitical risk)
- Scalable multi-site manufacturing (3-tier model)
- Sustainable operations (EcoVadis Silver Rating)

Traceable, Trusted, & Timely

- Traceable sourcing with end-to-end transparency
- Trusted logistics coordination
- Timely deliveries aligned with customers' production schedules

German, Global, & Grounded

- Germany-grade engineering standards
- Global network with grounded, local expertise
- German-owned, 35+ years of PCB experience

FROM PROTOTYPING TO MASS PRODUCTION: OUR FACTORIES

From prototyping to mass production, we offer a specialised manufacturing journey. Flero STARTEAM (FST), our factory in Italy, focuses on prototyping, sample production, and High Mix Low Volume (HMLV) manufacturing.

As projects scale, we support a seamless transition to mass production through our facilities in Thailand and China. At the same time, depending on project needs, our global network allows customers to engage directly with any of our factories at any stage, ensuring flexibility, continuity, and optimal results.

Industries We Power



Automotive



Industrial



Medical



Power Solutions



Energy & Lighting



Consumer



JIANGYOU STARTEAM (JST) FACTORY CHINA



Jiangyou, Sichuan, China



Current Production Capacity:
70,000 m²/month
After Extension: 170,000 m²/month



800+ employees



Smart Manufacturing with PAILOT
(AI based planning and scheduling),
to drive efficiency, quality, traceability,
and sustainability



HDI Technology (2+N+2),
1-20 layers, aluminium,
special materials, heavy copper
up to 210µm, z-axis depth routing



Current Production Area:
30,000 m²
After Extension: 70,000 m²



All material parts are inspected
automatically (AVI)



International Expert Management

JST Extension: Optimised Production, Smarter Manufacturing

JST is our first PCB manufacturing site and a key part of our company's history. In 2024, we began a major expansion with a new adjacent building that integrates seamlessly with the original facility. This extension is now under construction and will be completed in Q4 2026. Once finished, the combined facilities will support a total production area of 70,000 m²/month and total capacity of 170,000 m²/month. With higher automation, advanced technologies, and enhanced traceability, we are strengthening our ability to deliver reliable and innovative PCB solutions.



HDI for High Growth Applications

To support smarter, smaller, and more reliable electronics, our High Density Interconnect (HDI) technology is fully qualified for both prototyping and volume production, including 1+N+1 and 2+N+2 stack-ups.

As part of our continuous development roadmap, we are advancing toward 3+N+3 constructions and future any-layer HDI capabilities.

Key Focus Areas:



Communications (5G
infrastructure, networking,
and wireless systems)



Control Units



Internet of Things
(IoT) Devices



Medical
Devices



Programmable Logic
Controllers (PLC)



Sensors



PRACHINBURI STARTEAM (PST) FACTORY THAILAND

Building a Stronger, Safer, and Smarter PCB Supply Chain

Our second factory, strengthens our global footprint and enhances supply chain resilience through the 'China + 1' strategy. As the only European PCB manufacturer operating in Thailand, PST brings German engineering quality into one of the region's fastest growing electronics manufacturing environments.



Prachinburi, Thailand



Total Production Capacity:
25,000 m²/month



200 employees



Smart factory with high-tech machines from Schmoll, Bürkle, and Universal

Strategic Positioning for Greater Resilience

With multiple manufacturing sites working together, we enhance capacity stability, improve delivery performance, and reinforce our technological capabilities — even in uncertain global conditions. PST adds flexibility and resilience alongside JST to support long term customer needs.



1-12 layers,
IMS (Insulated Metal Substrate)



Production Area:
10,000 m²



'China + 1' strategy for supply risk management



International Expert Management

- Multi-region production and sourcing
- Greater flexibility and capacity resilience
- Reduced dependency on a single manufacturing location

Following the global shift toward diversification in Europe and the United States, we help you future proof your PCB sourcing—reducing risk without compromising on quality, process stability, or sustainability.

FLERO STARTEAM (FST) FACTORY ITALY



Flero, Brescia, Italy



Total Production Capacity:
1,000 m²/month



Additive Solder Mask Printing and Laser Direct Imaging (LDI) for inner and outer layer



1-12 layers, dedicated setup for Prototypes, Quick-turn, and High-mix, Low-Volume



Production Area:
1,000 m²



Seamless transition to mass production in Thailand or China

Bringing Precision PCB Manufacturing, Closer to Europe

Our third and newest Flero factory marks our expansion beyond Asia into Europe, delivering faster, more flexible PCB manufacturing and stronger local support. FST also hosts hands-on Customer Workshops, offering insight into processes, technologies, cost engineering, and additive solder mask inkjet innovation.

Exclusive Technology for Greater Precision & Sustainability

FST features a precision engineered Additive Solder Mask Printing, integrating Notion Systems' n.jet solder mask system and Peters Group's Elpejet® IJ 2467 inkjet ink. This digital inkjet enhances precision, reduces waste, and improves sustainability, delivering smarter, cleaner PCB manufacturing.



LEADING WITH SUSTAINABILITY

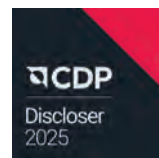
Sustainability is a core pillar of our long-term strategy. We continue to advance transparency, reduce emissions, innovate with greener materials and strengthen governance across all our operations.

Recognitions & Global Commitments



EcoVadis Silver:

Earned our second consecutive **Silver Medal** for responsible and ethical business practices.



CDP Recognition:

Scored **"A" rating** in the Supplier Engagement Assessment (SEA) and **"B"** in both Climate Change and Water Security, demonstrating meaningful progress across our value chain.



HKMA Merit Award:

Achieved a **Merit Award** at the Hong Kong Management Association Sustainability Award 2025, recognising our collective sustainability efforts.



Science Based Targets:

Committed to SBTi aligned reductions: **42% by 2030 and 90% by 2050**, supporting our long-term decarbonisation pathway.

Climate Transparency & Emissions Management

Carbon Footprint Calculator:

Every quotation now includes our Carbon Footprint Calculator, giving customers clear insight into emissions from PCB production and transport at JST.

Verified GHG Reporting:

Our 2024 and 2025 greenhouse gas emissions report was independently verified, and we are committed to maintaining external assurance and improving data accuracy each year.

Governance, Safety & Data Protection

We continue to strengthen our governance and safety framework with key certifications:



Environmental Management



Greenhouse Gases



Energy Management



Occupational Health & Safety



Enhanced Data Protection & Cybersecurity



Carbon Footprint Calculator

Innovating for Sustainable PCB Production



Recyclad1G Recyclable Laminate:

Collaborated with SYTECH, Recyclad1G delivers FR-4 reliability, meets UL, ISO, and IPC standards, and enables circularity through chemically degradable, halogen-free, low-CFP materials.



Additive Solder Mask Printing:

Developed with Notion Systems and Peters Group, this digital inkjet continues to gain visibility through customer visits, exhibitions and roadshows.



ENABLING BETTER DECISIONS THROUGH DIGITAL INTEGRATION

We continue to strengthen our operations through digital platforms that enhance transparency, efficiency and collaboration across the entire value chain. These tools support smarter decision-making, higher quality and a more connected organisation.



Enterprise ERP & Business AI Platform

SAP streamlines operations with automated processes, real time data visibility, and built in AI insights. It ensures global compliance, scales with business growth, and connects all systems end to end for a unified, efficient value chain.



Software for the Electronics Supply Chain

Luminovo accelerates the BOM-to-RFQ process, enabling transparent, real-time collaboration with suppliers. Its AI-driven tools reduce errors, automate routine work, and boost overall product quality, reliability, and customer responsiveness.



AI-powered CRM Platform

HubSpot's AI powered CRM platform unifies our tools, data, and teams—integrating seamlessly to deliver a complete customer view and streamlined workflows. It aligns marketing, sales, and service on one platform to drive faster, more impactful results.



AI Production Scheduling Software

Our partnership with PAILOT's cloud based software brings AI driven production scheduling, fully integrated with our MES and ERP systems and operational on our JST machines. It enhances accuracy, transparency, and resource efficiency, reducing delays, setup time, and energy use.



Quality Assurance & Analytics Software

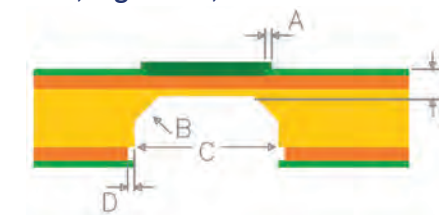
Babtec delivers essential CAQ tools and integrates smoothly with ERP and MES systems for real-time quality insights. It centralises quality data, supports continuous improvement, and provides complete documentation such as PPAP and APQP.

TECHNICAL CAPABILITIES

Rigid PCBs

Attribute	Standard Technology Capabilities	Advanced Technology Capabilities
Layer-count	1-24 Layers	26 – 50+ (restricted by ML thickness)
PCB Thickness	0.20 mm – 3.20 mm +/- 10 %	3.20 mm – 6.40 mm +/- 10 %
Min. Core Thickness	0.10 mm (4mil)	0.05 mm (2mil)
Max. PCB Size	590 x 490 mm (24x18" WP)	1170 x 660 mm (48x28" WP)
Copper Thickness Inner-layers	Up to 5 oz (175 µm)	Up to 13 oz (455 µm)
Copper Thickness Outer-layers	Up to 3 oz (105 µm)	Up to 13 - 15 oz (455 - 525 µm)
Min. Track/Gap Inner-layers (0.5 oz)	0.10 / 0.10 mm (4/4 mil)	0.05 / 0.05 mm (2/2 mil)
Min. Mechanical Drilled Hole Size	0.25 mm +/- 50 µm	0.15 mm +/- 50 µm
Max. PTH Aspect-Ratio	10: 1	25: 1
Min track/Gap Outer-layers (0.5 oz)	0.125 / 0.125 mm (5/5 mil)	0.076 / 0.076 mm (3/3 mil)
Via-plugging	By Soldermask	By Resin (epoxy) / Copper
Surface Finishes	HASL (LF) / ENIG / OSP / Electrolytic Au / Immersion Tin / Immersion Silver	ENIG
Impedance Control	+/- 10 %	+/- 7 %
Special Technologies	Press-Fit / Countersink / Depth-Routing	Back-drilling / Copper-Inlays/coins / Pedestal
Materials	CEM-1 & -3 / FR4 (mid-high Tg) / High-Speed & High-Frequency	Low Loss & High-Speed / Hybrid constructions

Flex, Rigid-Flex, & Bendable PCBs



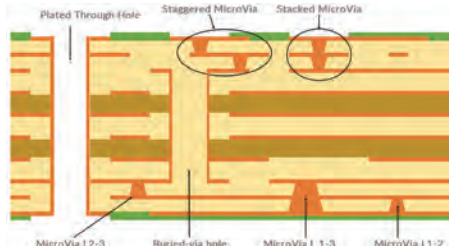
Attribute	Flexible PCB Capabilities	Rigid-Flex PCB Capabilities
Layer-count	1-14 Layers	2-24 Layers
PCB Thickness	0.06 – 0.70 mm	0.40 – 3.20 mm
Min Track/Gap (0.5 oz)	0.075 / 0.075 mm (3/3 mil)	0.075 / 0.075 mm (3/3 mil)
Flexible Material	Polyimide (PI) thickness min. 13 µm - Adhesive-less available	
Rigid / Stiffener Material	FR4 / PI / PET (Polyester) / SUS	FR4 / Polyimide High-Speed/Low-Loss Hybrid constructions
Surface Finish	OSP / ENIG / Immersion Tin / Immersion Silver / Electrolytic Au	
Outline	Routing / Laser-cutting / Punching	Routing / Laser-cutting
Specials	Attached to Aluminium Substrate EMI shield film	Non-Symmetrical structure MicroVias / HDI

Bendable PCB Capabilities

Overlap Flexible Coating	0.10 mm
Bending Cycles	1 x bend in shape
Bending Angle	Depends on dept slot width

TECHNICAL CAPABILITIES

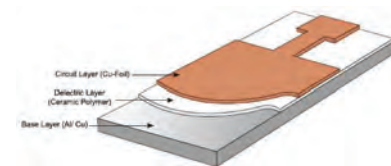
High Density Interconnect (HDI)



Attribute	Standard HDI Capabilities	Advanced HDI Capabilities
HDI Structure	1+N+1 – 2+N+2 3+N+3 – 4+N+4	ELIC (Every Layer InterConnect)
Layer-count	4-16 Layers	> 16 Layers
Min. Laser-Drill Diameter	0.10 mm (4 mil)	0.05 mm (2 mil)
Max. Laser-Drill Diameter	0.15 mm (6 mil)	0.25 mm (10 mil)
MicroVia type	Staggered MicroVia	Stacked MicroVia
Max. MicroVia Aspect-Ratio	0.8: 1	1.2: 1
Specials	Copper filled MicroVia Impedance	Mechanical drilled Blind-Vias (Controlled depth drilling)
Copper in Blind-Via / MicroVia	Min. 10 µm	Min. 20 µm
Surface Finishes	OSP – ENIG – Immersion Tin – Immersion Silver – ENEPIG	

Thermal Management Insulated Metal Substrates (IMS)

Attribute	Aluminium Substrate	Copper Substrate
Layer-count	1 Layer	1 or 2 layers
Copper thickness	18 – 105 µm	18 – 105 µm
Substrate thickness	Aluminium: 0.5 – 3.0 mm	Copper: 0.5 – 3.0 mm
Thermal conductivity	1 – 2 – 3 – 5 – 7 – W/m-K	
Surface finishes	HASL (LF) / OSP / ENIG / Imm. Tin	No Restrictions
Specials	Anodized or Brushed Alu surface	Copper filled MicroVias



Copper-inlay Technology (Coins)

Copper-Inlays are full copper objects/coins embedded inside the PCB

Solving the thermal conductivity of specific components with high power

Different copper shapes available (T-shape, round, rectangular)

Review our design guidelines for different structures and applications



Heavy Copper Technology

Defined as heavy copper when copper thickness is ≥ 3 oz (105 µm)

Increases the carrying capacity and temperature resistance

Copper thickness available up to 15 oz (525 µm)

Optimise your designs with DFM and our PCB Design Guidelines eBook. Scan the QR code or visit www.starteam.global/pcb-design-guidelines to download your free copy.



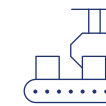
CUSTOM PRODUCTS

Our range of custom products is designed, manufactured, and produced with sustainability in mind. We aim to meet our customers' needs by offering a variety of strategic, standard, and custom-made products and provide:



End-to-End Support

Design consultation, optimisation, manufacturing, testing, and after sales support



Expert Engineering

In-house team managing material selection, design, and mass production with qualified partners



On-site Quality Control

15+ years experience ensuring quality across materials, production, and shipment

Main Product Categories



Power Solutions

Custom power systems for electronic applications

Rechargeable Batteries

Ni MH, Li Ion, Li Polymer, LiFePO₄ battery packs and power banks with protection circuits

Primary Batteries

LiMnO₂, LiSOCl₂, button cells

Chargers & Adaptors

USB chargers, QC3.0 / PD car chargers, AC/DC and DC/DC adaptors

Applications

Solar power, medical devices, robotics, telematics, emergency backup



Transmission Solutions

High performance signal and audio components

Antennas

GPS, GSM, PCB mounted, patch, SMT chip antennas

Audio Devices

Buzzers, speakers, MEMS microphones

Filters

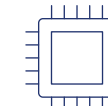
Chokes, ferrite coils, high frequency inductors

Key Finder Devices

Bluetooth communication, mobile app integration, GPS positioning

Applications

Automotive, navigation, tracking, wireless communication



Interconnection Solutions

Reliable connectivity for complex electronic systems

Connectors

Custom PCB connectors, specialised for EV charging

Cable Assemblies

Connector co-molding for waterproofing and strain relief

Coaxial Cables

RG174, RG58, RTK31, GSM, CDMA and communication systems

Keypads & Touch Panels

Membrane switches, silicone keypads, automotive touch panels

Sensors

Piezo pressure, seat occupancy, temperature, magnetic, infrared sensors

Applications

Automotive, industrial, and consumer electronics



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