



**CUSTOM SHAPED
SERVICE**

Our Mission

Printed circuit boards which we offer are the core of our Clients production. We gain satisfaction from developing custom-made, high quality products.

Our Vision

We value time and money. Our aim is to deliver products as soon as our Clients need them. We have achieved success by regular optimisation of operational costs.



TS PCB

GENERAL INFORMATION



Our localisation



**Production
area**

approx. 3750 m²



**Office
area**

approx. 727.44 m²



TS PCB

**Benzynowa St. 21
83-011 Gdańsk**

TS PCB

GENERAL INFORMATION

TS PCB team



4 people

Quality
management



6 people

Customer
Service Office



4 people

CAM
support



7 people

CAM
engineers



72 people

Manufacturing
Plant

Our team

100 people

Export sales



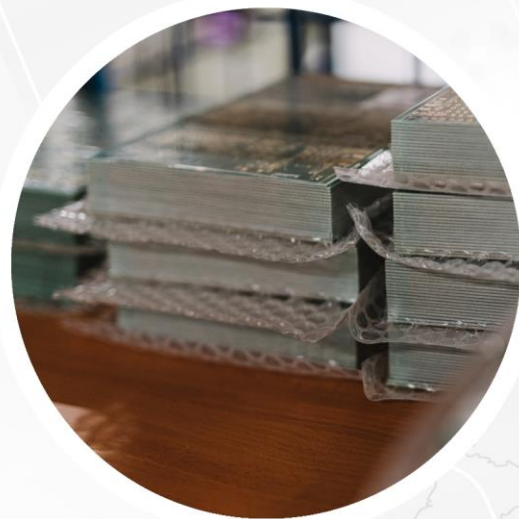
Export

Important part of company's strategy that includes clients from main European countries. The level of export volume constitutes **60% of the total sales value**.

TS PCB

GENERAL INFORMATION

Shipping time



TS PCB

Benzynowa St. 21
83-011 Gdańsk

  Distance from the airport: **approx. 30 km**
  Distance from the DHL terminal: **approx. 20 km**



Over 40 years of market experience



1956

Beginnings as student activities (such as production of hula- hoop wheels, elastic ties, management of students' dinners).

1984

Establishment of PCB manufacturing service (now TS PCB).



16.03.1984

Production of the very first PCB called „voltage regulator”.

1992

Techno-Service becomes joint-stock company.

1998

Manufacturing plant moves to new buildings at Benzynowa Street in Gdańsk.



2014-2018

Machine park expansion and new machines purchase, for e.g. LEDIA Direct Imaging System, two ATG A5 Neo testers.



2019

Opening of the new part of the plant.



2025

Launch of a new website and introduction of TSprint to the offer

**PCB types:**

- **Single-sided PCB**
 - FR-4,
 - ALU MCPCB,
 - Rogers.
- **Double-sided PCB**
 - FR-4,
 - Rogers.
- **Multilayer PCB**
 - FR-4 (up to 8-layers).

Base materials:

- **FR-4**
 - material thickness: 0.2 to 3.2 mm,
 - TG values: 135 (standard), 150 (IS400), 180 (IS410),
 - copper thickness: 18 (single-sided) to 240 µm,
 - CTI: PLC0 to PLC3 (standard),
 - IPC class: 2 (standard), 3.
- **ALU MCPCB**
 - single-sided PCBs without vias plating,
 - material thickness: 0.8 to 3.2 mm,
 - thermal conductivity: 1.3 to 5 W/mK,
 - copper thickness: 35 to 105 µm.
- **Rogers**
 - single-sided PCB for RO3000 series,
 - single- and double-sided PCB for RO4000 series.

Technical highlights:

- surface finish: ENIG, LF HASL,
- blind and buried vias,
- plugged vias,
- colored soldermasks and silkscreen layers,
- depth routing, plated edges and sinkholes, castellated holes, peelable mask,
- certificates: UL ZPMV2 94V-0, research report IK Polish Railway Institute,
- advanced technology:
 - minimal clearance: 3 mils,
 - minimal annular ring: 4 mils,
 - minimal finished plated hole size: 0.15 mm.

PARAMETER	DESCRIPTION	
Number of layers	1 to 8	
Max. PCB dimensions	463.0 x 576.0 mm for 1- and 2-layer PCB	421.0 x 573.4 mm for multilayer PCB
Min. PCB dimensions	5 x 5 mm (up to 30 x 30 mm PCB must be panelised)	
Base materials	ALU MCPCB; FR4 TG135°C to 180°C, CTI PLC0 to PLC3, Isola 370HR; Rogers RO3000 and RO4000 series	
Base material thickness: single and double-sided	0.2 to 3.2 mm	
Copper thickness	12 µm / 1/3 oz * 18 µm / 1/2 oz 35 µm / 1 oz 70 µm / 2 oz	105 µm / 3 oz 140 µm / 4 oz 175 µm / 5 oz 210 µm / 6 oz
Prepregs	106; 1080; 2116; 7628	
Blind and buried vias limits	blind via min Ø=0.15 mm, Aspect Ratio 1:1.2 (drilled), buried via min Ø=0.15 mm	
Min. track width outer layer	0.100 mm / 4 mils (max 18 µm base Cu) 0.075 mm / 3 mils (max 12 µm base Cu) *	
Min. spacing outer layer	0.100 mm / 4 mils (max 18 µm base Cu) 0.075 mm / 3 mils (max 12 µm base Cu) *	
Min. annular ring outer layer	0.125 mm / 5 mils 0.100 mm / 4 mils *	
Min. track width inner layer	0.100 mm / 4 mils (max 18 µm base Cu) 0.075 mm / 3 mils (max 12 µm base Cu) *	
Min. spacing inner layer	0.100 mm / 4 mils (max 18 µm base Cu) 0.075mm / 3 mils (max 12 µm base Cu) *	
Min. finished plated hole size	0.15 mm / 6 mils	
Min. outer layer pad diameter	0.25 mm / 10 mils 0.20 mm / 8 mils *	

* advanced technology

PARAMETER	DESCRIPTION		
Min. annular ring inner layer	4-layer PCB	6-layer PCB	8-layer PCB
	0.125 mm / 5 mils 0.100 mm / 4 mils *	0.150 mm / 6 mils 0.125 mm / 5 mils *	0.175 mm / 7 mils 0.125 mm / 5 mils *
Min. inner layer pad diameter	0.25 mm / 10 mils 0.20 mm / 8 mils *	0.30 mm / 12 mils 0.25 mm / 10 mils *	0.35 mm / 14 mils 0.25 mm / 10 mils *
	+ selected finished hole size		
Min. Cu to board edge clearance (for 1.55 mm FR4 material)	Routing: 0.2 mm, V-cut: 0.4 mm		
Surface finish	ENIG, LF HASL		
Soldermask color	green (standard), black, blue, red, white, yellow		
Soldermask clearance	0.05 mm / 2.0 mils 0.01 mm / 0.5 mils *		
Solder bridge	0.075 mm / 3 mils		
Milling tolerance	± 0.10 mm ± 0.05 mm *		
Legend color	white (standard), black, blue, green, red, yellow		
Extra options	blind vias; buried vias; peelable mask; via filling IPC 4761 type III and IV; depth routing; plated edges and sinkholes; castellated holes		
Min. slots and cut-outs	0.5 mm		

* advanced technology



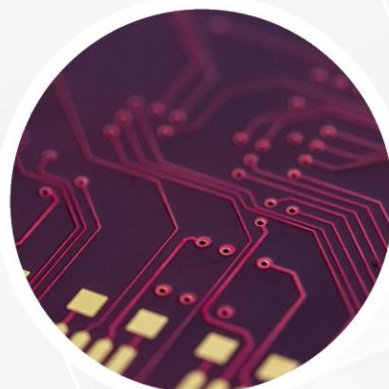
TSka Prototype

Fast production and low-cost prototypes on 1 mm and 1.55 mm FR4 laminates.



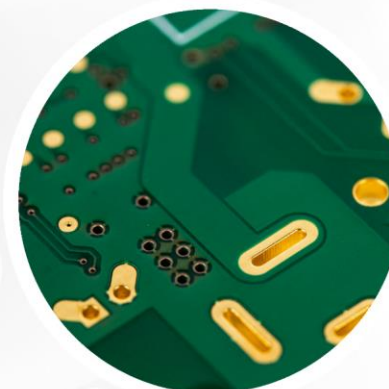
Production batch

Advanced technology, fast delivery.



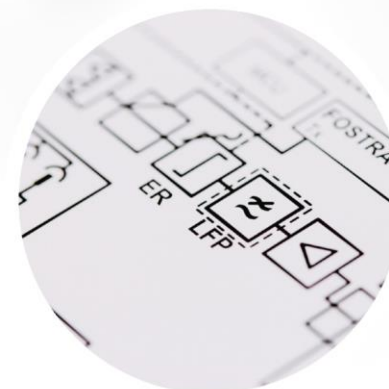
5LT

Possibility of online ordering with the surface between 1 and 5 m² with the lead time of 5 WD.



TSprint

Advanced prototypes with a wide range of technological parameters and very short lead times.





Machinery park of: ~3750 m²

Direct Imaging System exposure unit 2 pcs.	PENTA HAL 1 pcs.	ULTIM8 probe machine 1 pcs.	POLA-MASSA brushing machine 1 pcs.
Milling machines LM2 3 pcs.	LOC8 probe machine 1 pcs.	SCHMID stripping machine 1 pcs.	CIMS Galaxy AOI Systems optical tester 1 pcs.
EVOLUTION probe machine 1 pcs.	SPRINT description printer 1 pcs.	Screen printing machine Grundig G-Coat 404 plug&coat 1 pcs.	Optical microsection microscope VHX7000 Keyence 1 pcs.
Plotter Silver Writer 1 pcs.	ATG A5 NEO probe machine 5 pcs.	ENIG plating line 1 pcs.	Film developing machine Colenta 66 PCB NG 1 pcs.
SCHMID etching machine 1 pcs.	Punching machine MIE with a vision system 1 pcs.	ARGOS automatic optical inspection machine 1 pcs.	X-RAY RTX112 1 pcs.
Pumice scrubbing machine IS Pumiflex SHD/A-A24 1 pcs.	Electroplating line 2 pcs.	OLEC automatic exposure machine 2 pcs.	MODUL drilling machines 5 pcs.

Our machine park already has over 200 machines and is still growing



Ledia 5S

- machine for direct copper and soldermask layers exposure with UV-LED,
- direct print of copper and soldermask images without use of film.



Drills Modul

- maintenance-free linear motors XY with 80 m/min – guarantees high productivity,
- high speed drilling spindles up to 250 krpm,
- toolchain for 2200 tools and intelligent tool management.



OLEC exposure lamp

- process include: inner layer, outer layer, soldermask,
- data collection and real time registration feedback,
- process tolerance control,
- dual trays for optimized production.



Sprint 200 printer

- cost-effective, top quality industrial inkjet printing for a consistently accurate production of even the most advanced legend designs in DotStream Pro Technology,
- advanced LED-based UV for a perfect ink drop pinning on-the-fly.



Tester A5 Neo

- tester has 8 fast moving measuring probes (flying probes) for testing printed circuits with use of the resistance, capacitance and mixed method,
- the production format is located in the draw and tested in the horizontal orientation.



SCM 411 scoring machine

- 2 moving cutters for linear cutting of the printed circuits surface,
- measuring system that uses integrated camera, which enables automatic reference positioning of the mechanical system for circuit diagrams.

Our latest investments

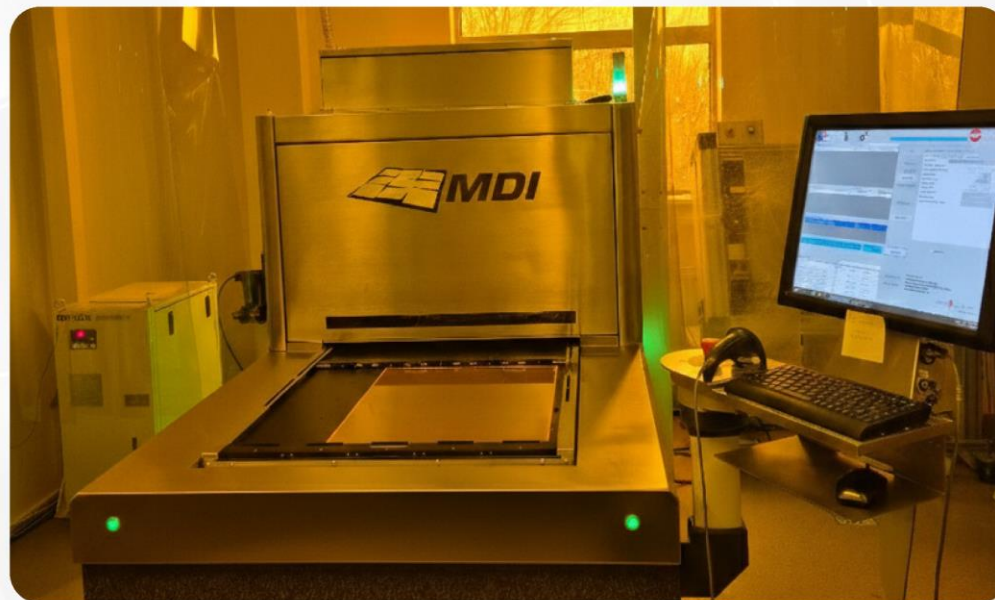
One of the most important elements of our business strategy is to continuously improve our processes and enhance the quality of our products through regular investments in machinery.

The most important investments in recent years are:



Year 2024:

HML two vacuum press system for production of multilayer boards
Multibond line for surface preparation of conductive layers in multilayer boards



Year 2025:

New, high-speed direct exposure machine from Schmolz company, intended for exposing copper layers and solder mask

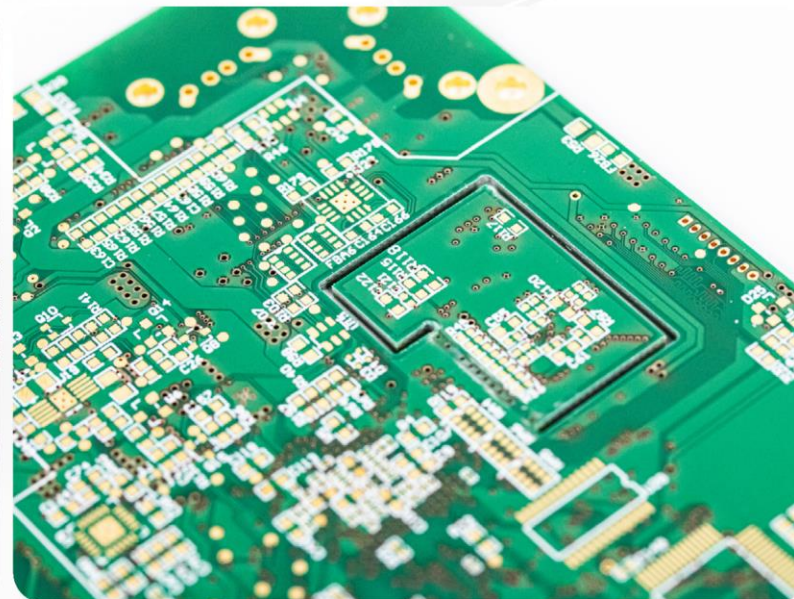
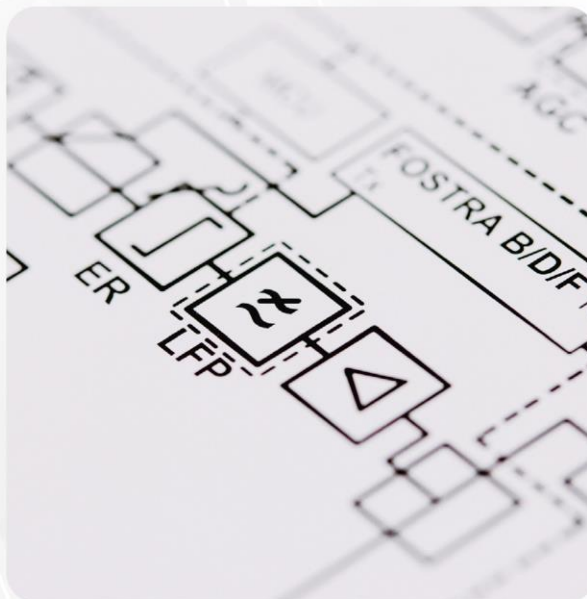
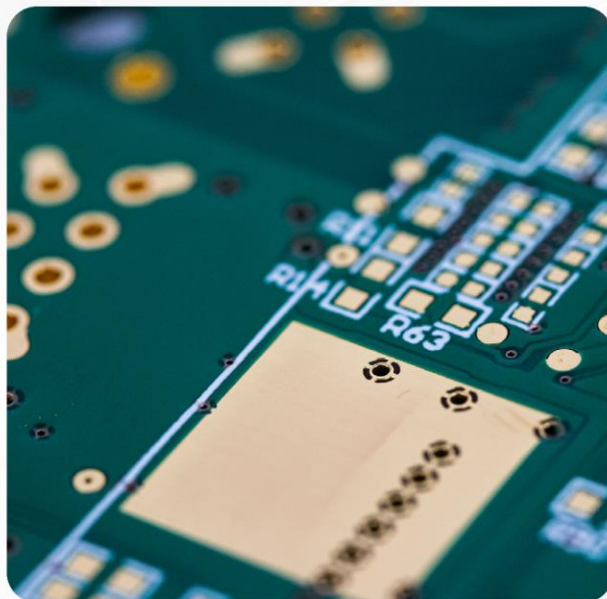
Planned and ongoing investments

Ongoing investments:

1. Implementation of impedance control
– planned completion date: 2026
2. Expansion of multilayer circuit offerings to include PCBs with 10 and 12 conductive layers
– planned completion date: 2026

Investment planned for 2026-2027:

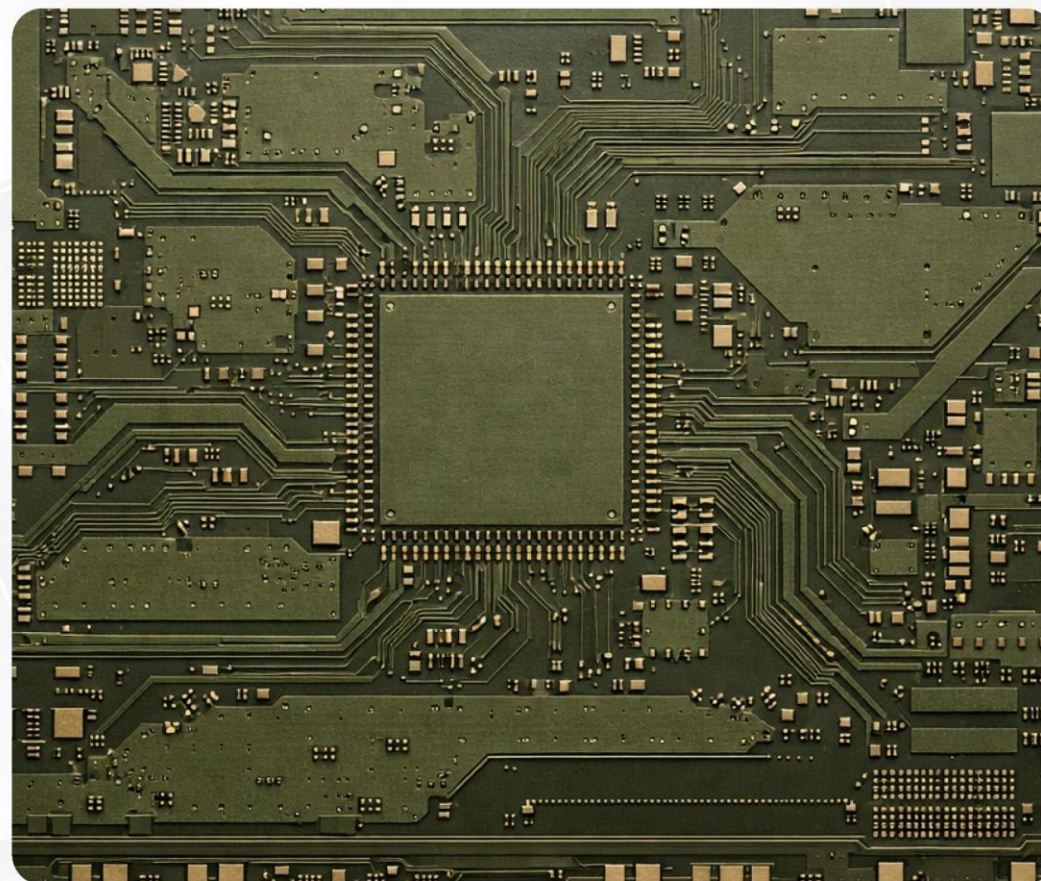
1. Implementation of a new vias plugging process: introduction of plugged type VII vias according to IPC 4761 - vias that are filled all over with dielectric material and then plated with copper (so-called plated covers of filled holes)
2. Increase the efficiency of the mechanical treatment section by purchasing new drilling machines



Our offer for the military sector

TS PCB is a long-standing and trusted supplier of PCBs to the military sector.

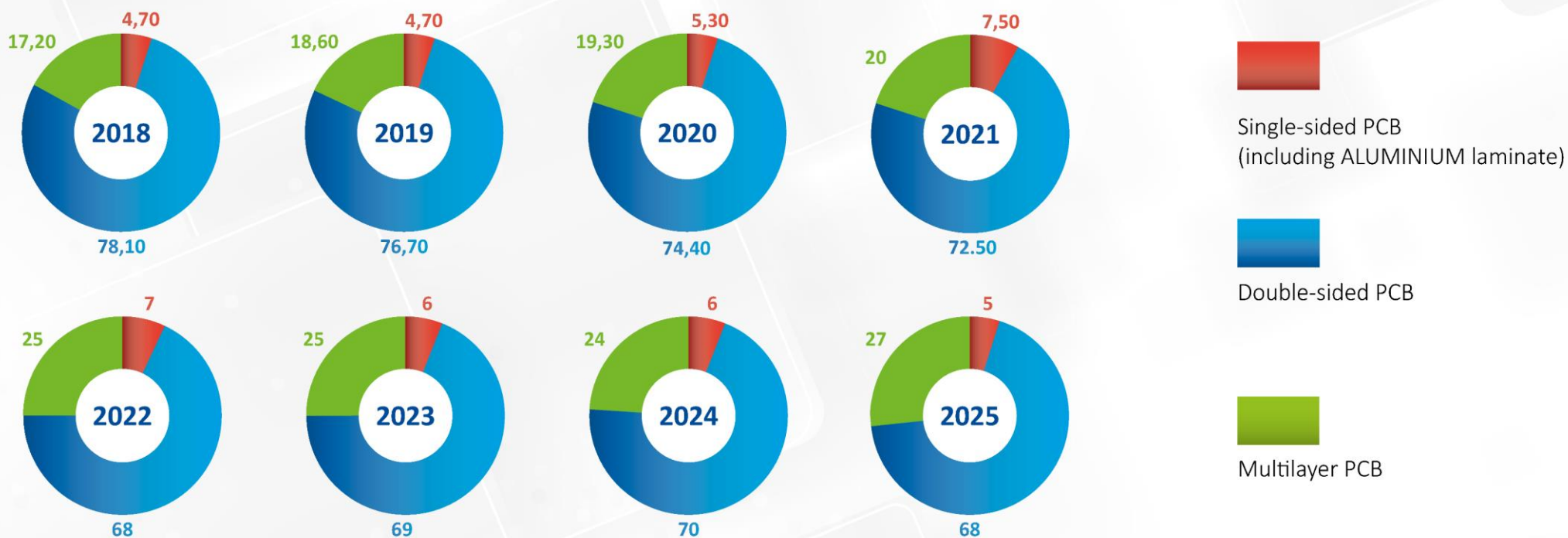
- Highest reliability: we supply advanced printed circuit boards in accordance with the IPC Class 3 standard, dedicated to communication and control systems, among others.
- NATO standards: in January 2026, we implemented the AQAP 2110:2016 standard, confirming our full readiness to handle defense orders.
- Security of supply: we guarantee full control over the process and data confidentiality.





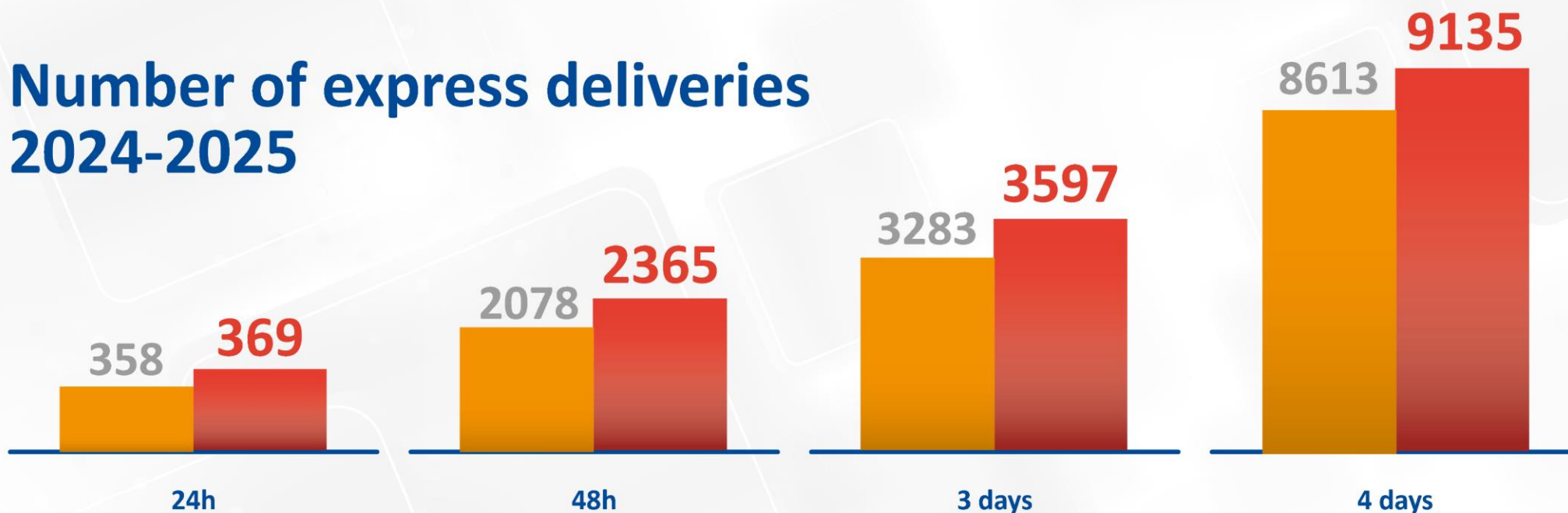
Single-sided, double-sided and multilayer PCB production in 2018-2025

(% of total sale)





Number of express deliveries 2024-2025



Standard delivery:

Production batch

- 9 days** - single- and double-sided PCB,
- 10 days** - multilayer PCB.

TSprint prototypes

- 4 days** - single- and double-sided PCB,
- 5 days** - 4-layer PCB,
- 6 days** - 6- and 8-layer PCB.



Solid Client Base



Test & Measurement



Medical equipment



EMS



PCB distributors



Rail



Automotive



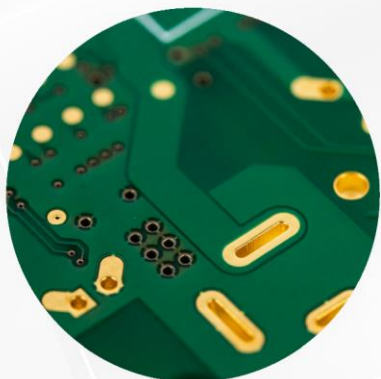
Army



Telecommunication
and data transmission

We cooperate

with over **500** business partners.



Experience

Over 40 years
of market experience



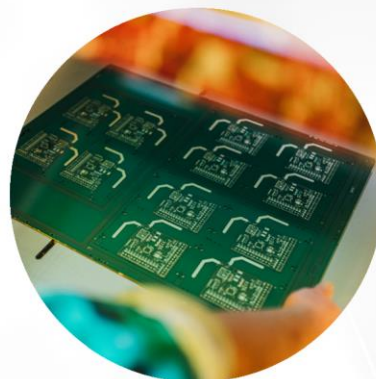
Quality

Advanced
Technology



Customer-oriented approach

Flexibility in customer
service



Production

Constant investments
in machinery park

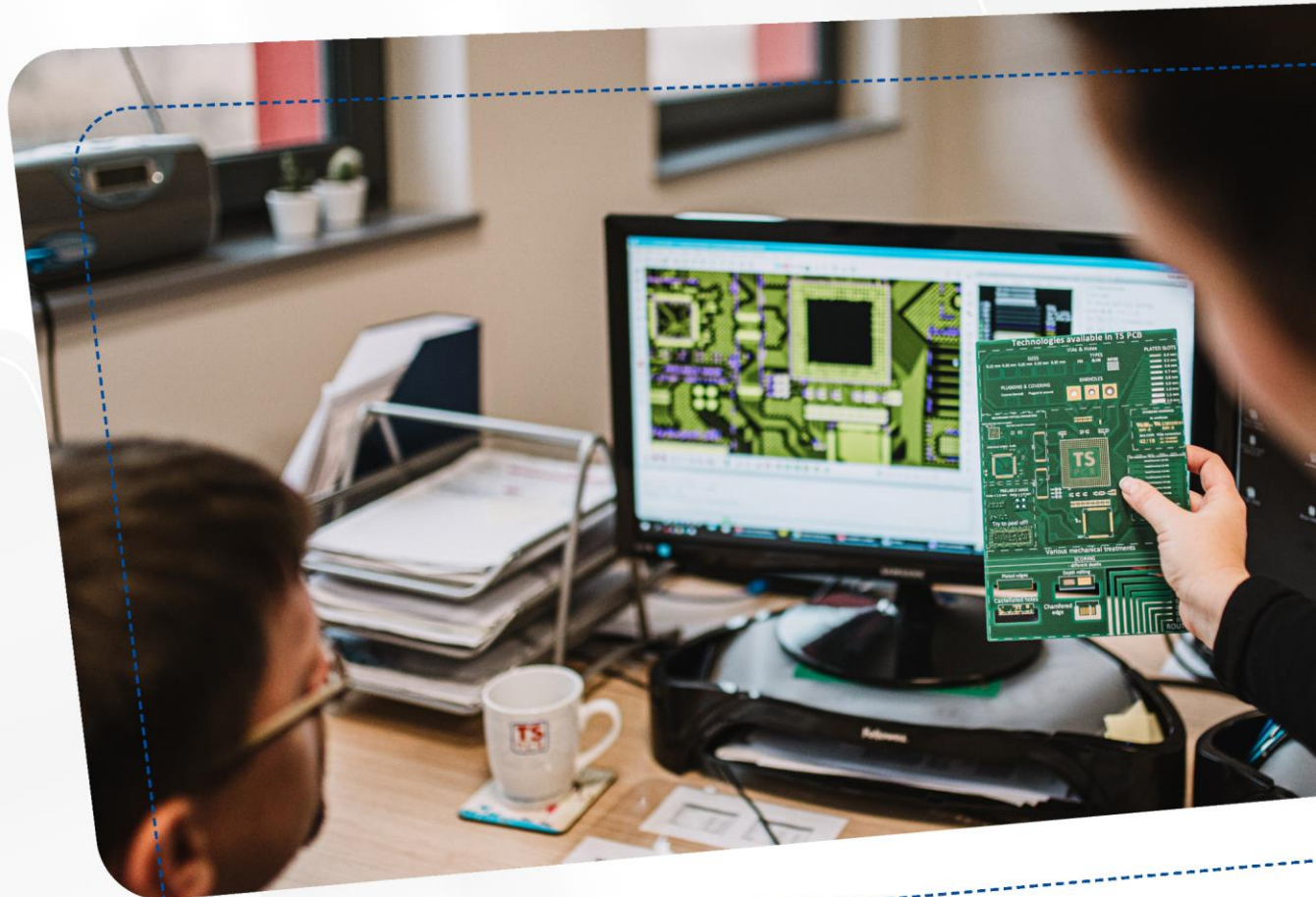


Expert knowledge

Technical client
support

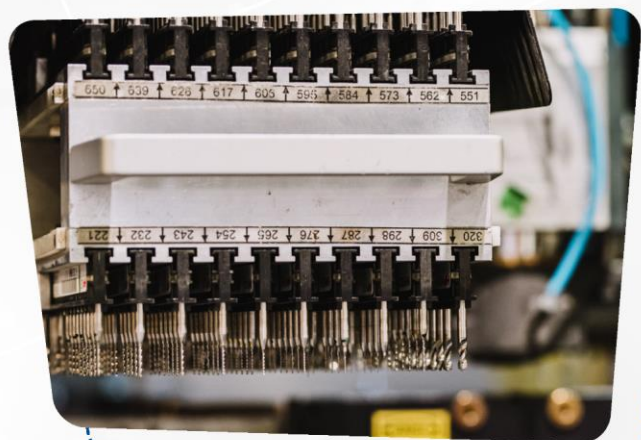
Pro Client values

- Support during end-to-end production process,
- fast offers,
- express delivery terms,
- complex services based on cooperation with EMS companies,
- on-line service:
 - prototypes calculator,
 - client account on website,
 - client order tracking.



Production values

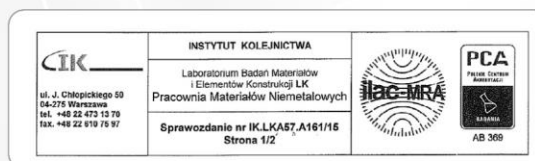
- Constant production optimisation (processes and products quality supervision),
- Quality management system ISO 9001:2015, ISO 14001:2015, AQAP 2110:2016.



Certificate
ISO 9001:2015,
ISO 14001:2015,
AQAP 2110:2016.



Flammability certificate UL
- Underwriters Laboratories Inc., USA.

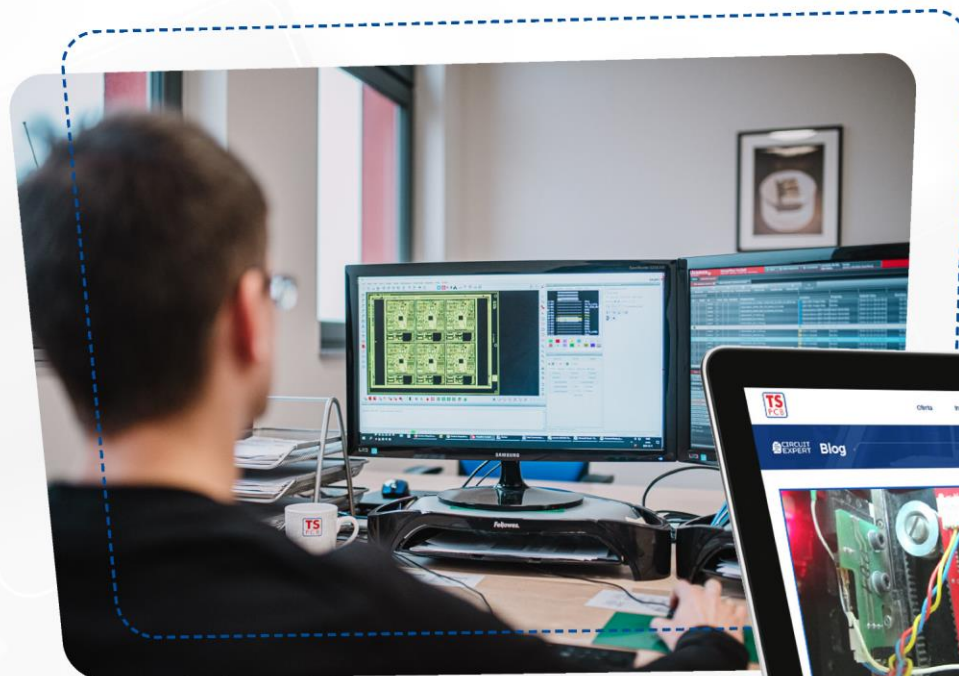


Flammability IK Polish Railway
Institute Report.

We are members of:



IPC - Association Connecting Electronics Industries



Sharing our expertise
<https://tspcb.pl/blog>



We organise trainings

on the optimisation of the printed circuit boards design and their production process with elements of IPC-A-600H standard.

We support our clients at each and every stage of order realisation

(Customer Service Office and CAM support).



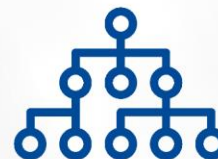
100 people

Our team



~3750 m²

Machinery park



3000 m²

Production capacity
in 1 month



24700

Number of express
deliveries in 2025



Thank you!

www.tspcb.pl/en