



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

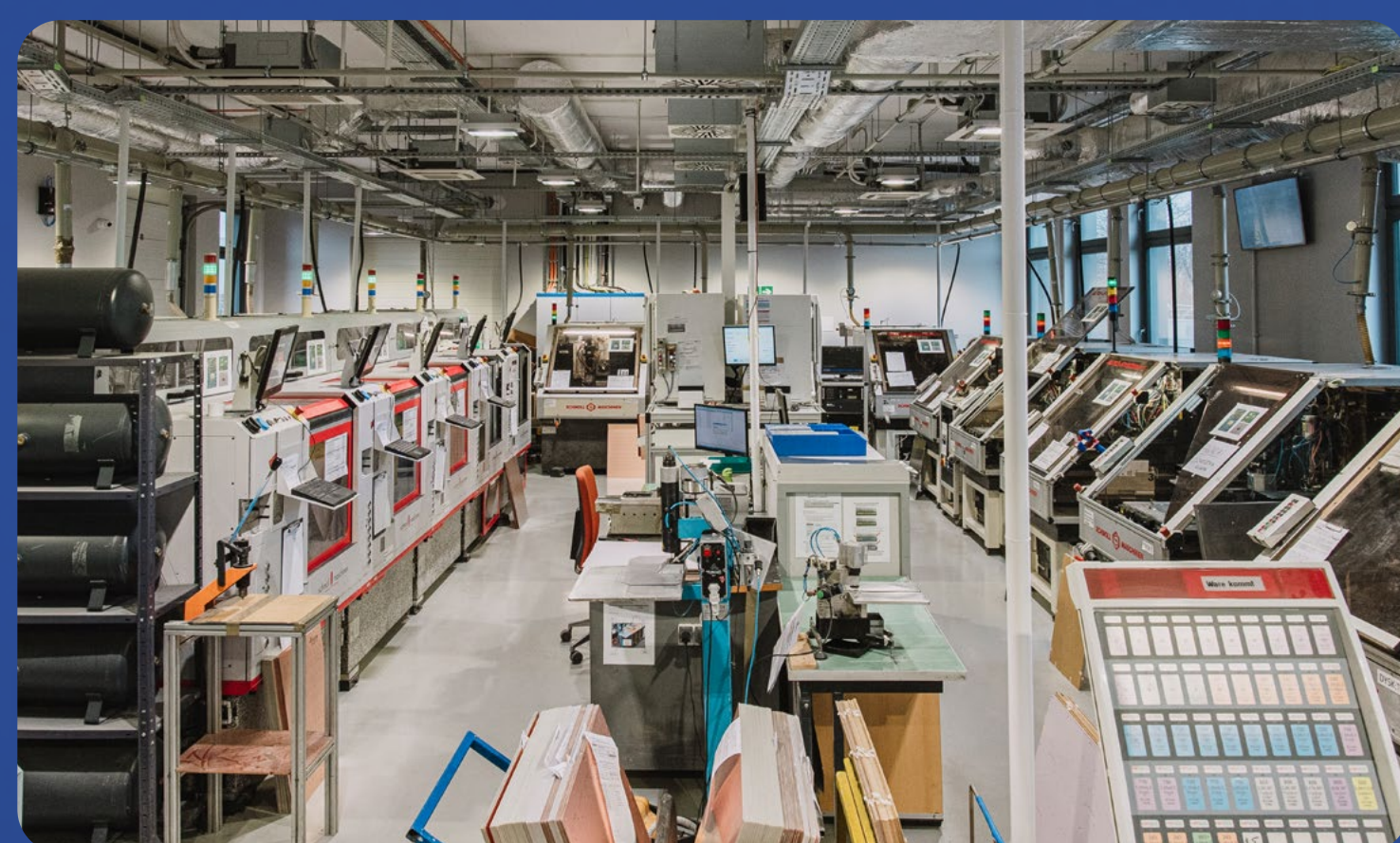
We value time and money.
Our aim is to deliver products as soon as our Clients need them. We have achieved success by regular optimisation of operational costs.



GENERAL INFORMATION



OUR LOCATION



Production area

approx. 3750 m²



Office area

approx. 727,44 m²



TS PCB

Benzynowa St. 21
83-011 Gdańsk





TS PCB TEAM

- Quality management  **4 people**
- Customer Service Office  **6 people**
- CAM Support  **4 people**
- CAM engineers  **7 people**
- Production plant  **74 people**

→  **Our team**
102
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



GENERAL INFORMATION



SHIPPING
TIME



Distance from the airport:
approx. 30 km

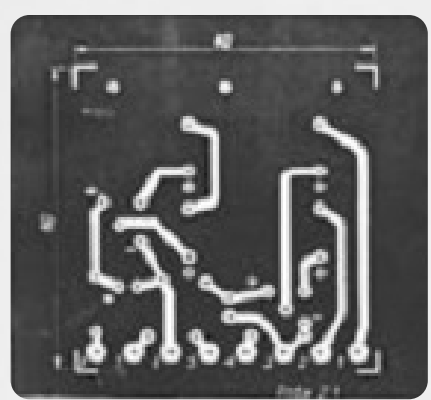


Distance from the DHL terminal:
approx. 20 km





OVER 40 YEARS OF MARKET EXPERIENCE



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

16.03.1984

Establishment of PCB manufacturing service (now TS PCB).

1984



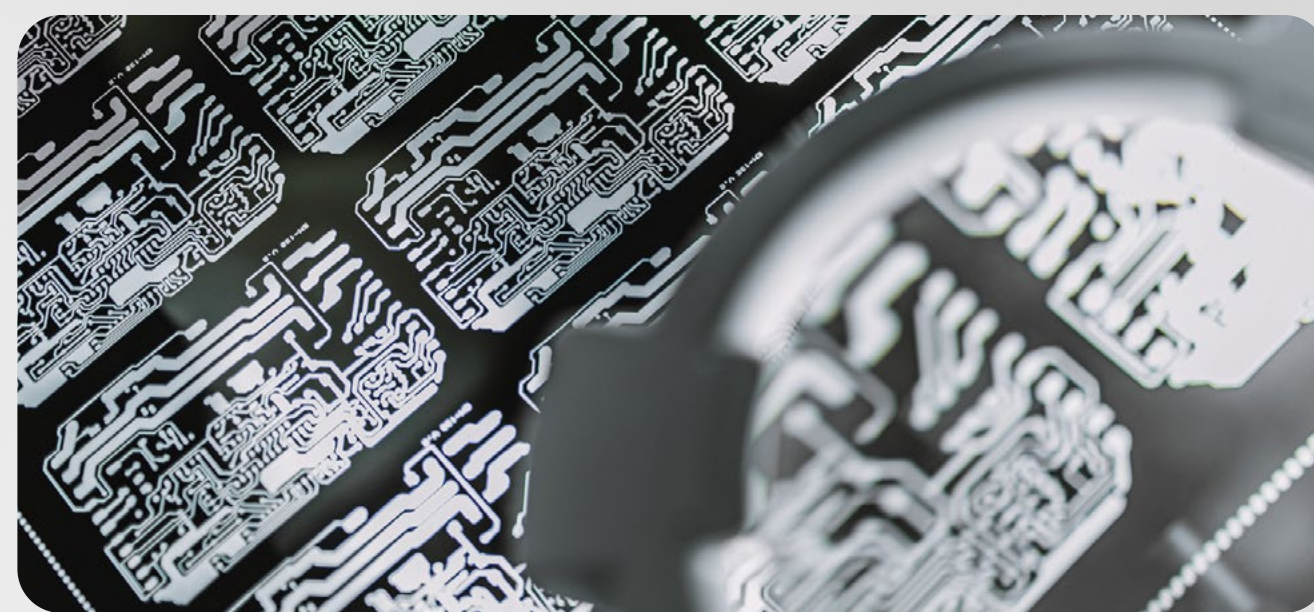
Manufacturing plant moves to new buildings at Benzynowa Street in Gdańsk.

1998



Opening of the new part of the plant.

2019



Expansion of the production offering to include multilayer PCBs with 10 and 12 conductive layers.

2026

1956

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



1992

Techno-Service becomes joint-stock company.



2014 – 2018

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



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 12-layers).

Base materials:

- **FR-4**
 - material thickness: 0.2 to 3.2 mm,
 - TG values: TG 135°C (standard), TG 150°C (IS400, H 150 (LF)), TG 170°C (IS410, H 170),
 - 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.



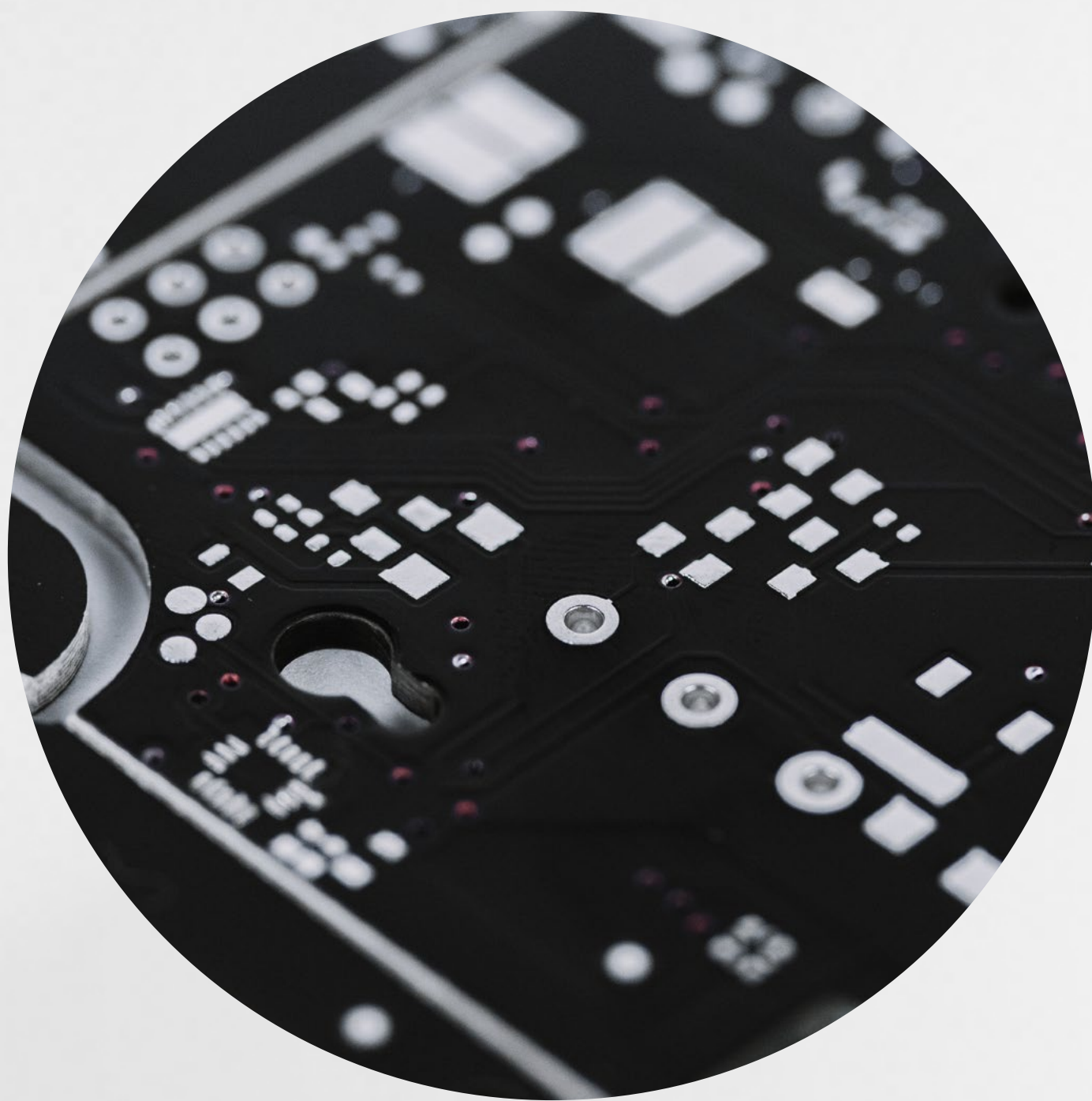
PARAMETER	DESCRIPTION	
Number of layers	1÷12	
Max. PCB dimensions	433.0 × 576.0 mm for single- and double-sided PCBs	421,0 x 573,4 mm for multilayer PCB
Min. PCB dimensions	5 x 5 mm (up to 30 x 30 mm PCB must be panelised)	
Base materials	ALU MCPCB; FR4 TG135, TG150 and TG170, CTI PLC0÷PLC3, Isola 370HR; Rogers 4000, 3000	
Base material thickness: single and double-sided	0,2÷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) 0,075 mm / 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 * } + selected finished hole size	

* advanced technology



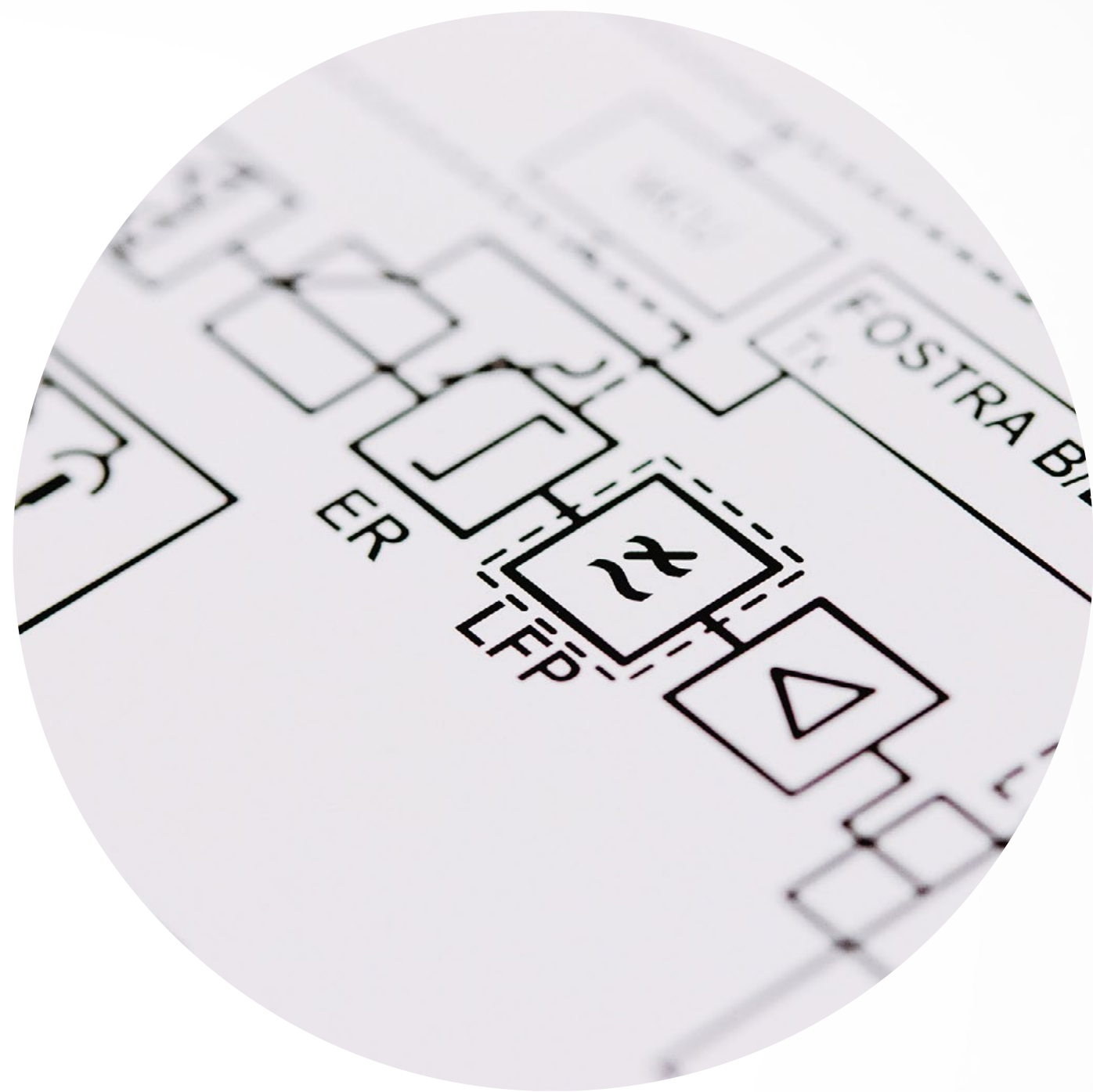
PARAMETER	DESCRIPTION		
Min. annular ring inner layer	4 layer PCB	6 layer PCB	8-12 layer PCB
	0,125 mm / 5 mils 0,100 mm / 4 mils *	0,150 mm / 6 mils 0,125 mm / 5 mils *	0,175 mm / 7 mils 0,125 mm / 5 mils *
Min. inner layer pad diameter	0,25 mm / 10 mils 0,20 mm / 8 mils *	0,30 mm / 12 mils 0,25 mm / 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 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



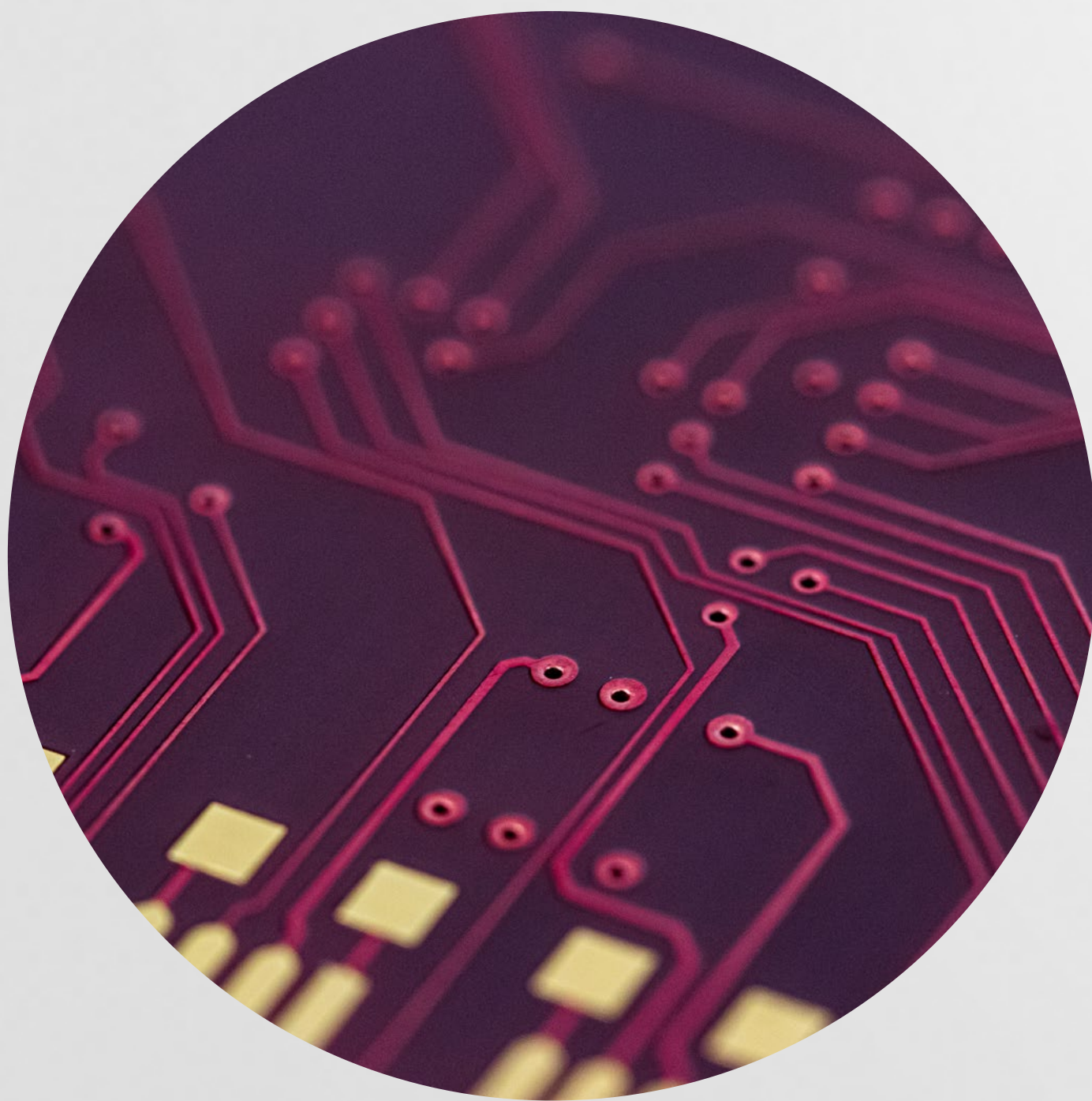
TSka Prototype

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



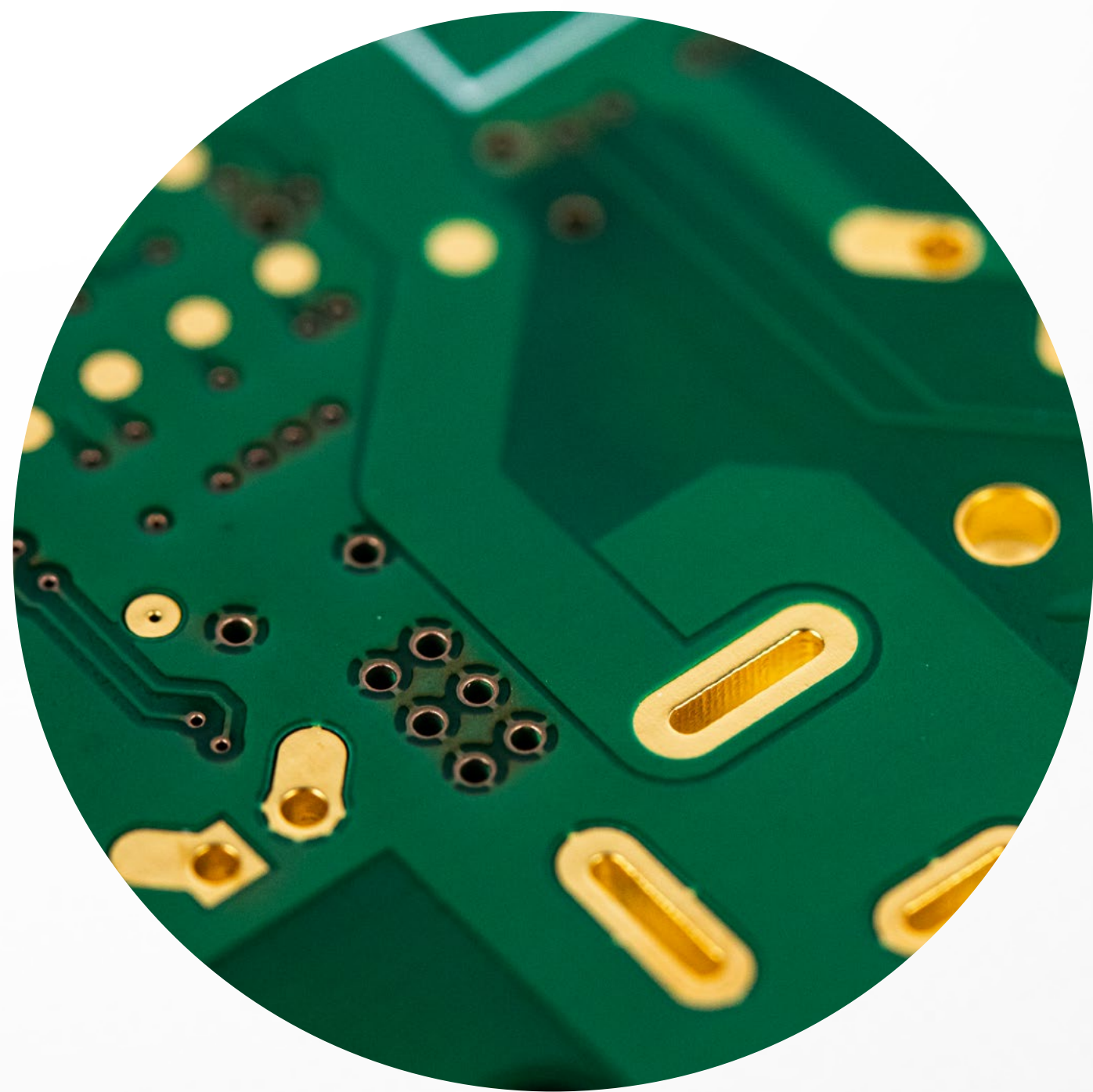
TSprint

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



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.

MACHINERY PARK



Machinery park of: **~3750 m²**

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

Direct Imaging System exposure unit	2 pcs.	PENTA HAL	1 pcs.	ULTIM8 probe machine	1 pcs.	OLEC automatic exposure machine	2 pcs.
Milling machines LM2	3 pcs.	Electroplating line	2 pcs.	SCHMID stripping machine	1 pcs.	MODUL drilling machines	7 pcs.
EVOLUTION probe machine	1 pcs.	LOC8 probe machine	1 pcs.	HML vacuum press	2 pcs.	X-RAY RTX112	1 pcs.
Plotter Silver Writer	1 pcs.	SPRINT description printer	1 pcs.	ENIG plating line	1 pcs.	Film developing machine Colenta 66 PCB NG	1 pcs.
SCHMID etching machine	1 pcs.	ATG A5 NEO probe machine 5	3 pcs.	ARGOS automatic optical inspection machine	1 pcs.	POLA-MASSA brushing machine	1 pcs.
Pumice scrubbing machine IS Pumiflex SHD/A-A24	1 pcs.	Screen printing machine Grundig G-Coat 404 plug&coat	1 pcs.	CIMS Galaxy AOI Systems optical tester	1 pcs.	Optical microsection microscope VHX7000 Keyence	1 pcs.



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

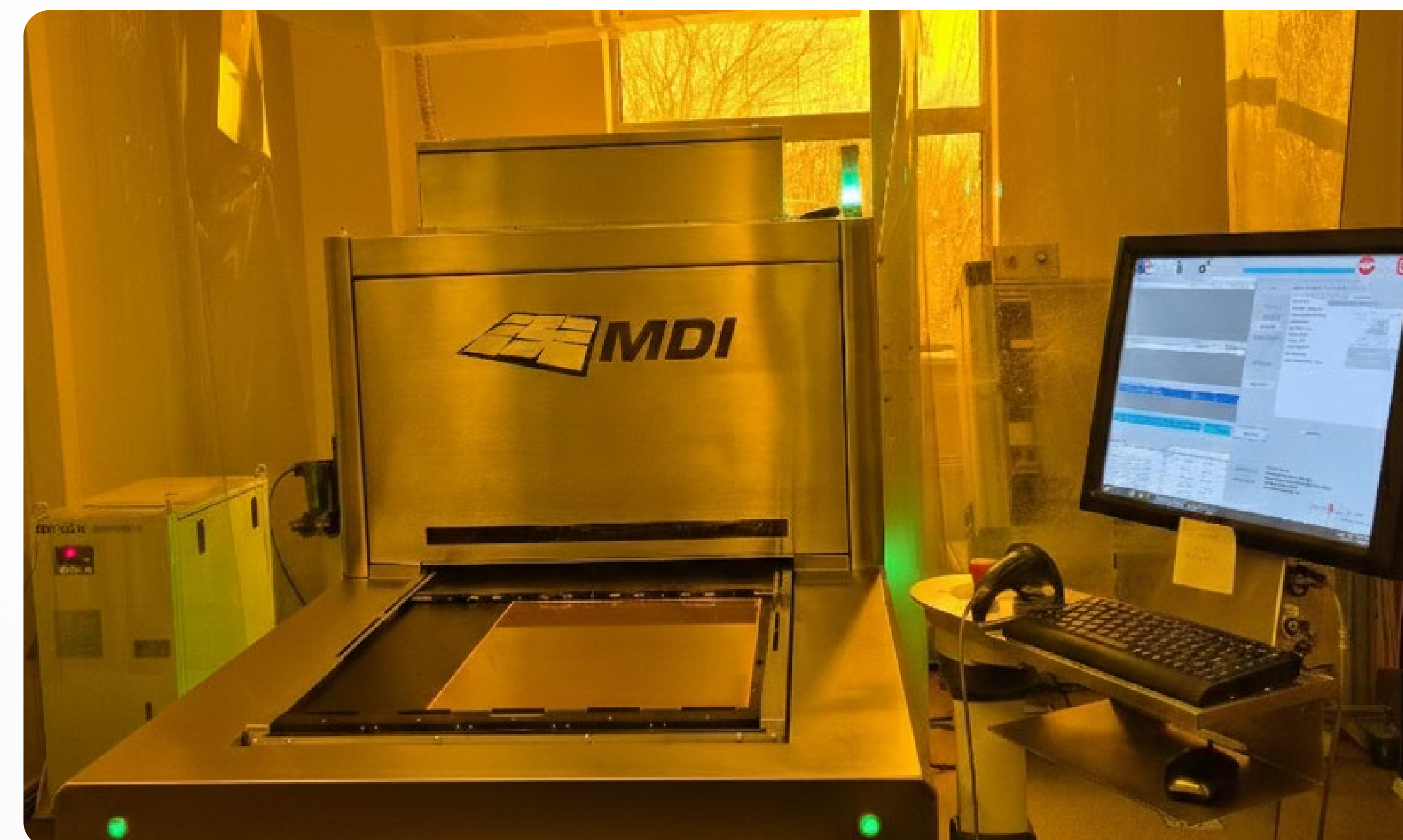
- 2 moving cutters for linear cutting of the printed circuits surface,
- measuring system that uses integrated camera, which enables automatic reference positioning of the mechanical system for circuit diagrams.



OUR LATEST INVESTMENTS

The most important investments in recent years are:

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.



YEAR 2025

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



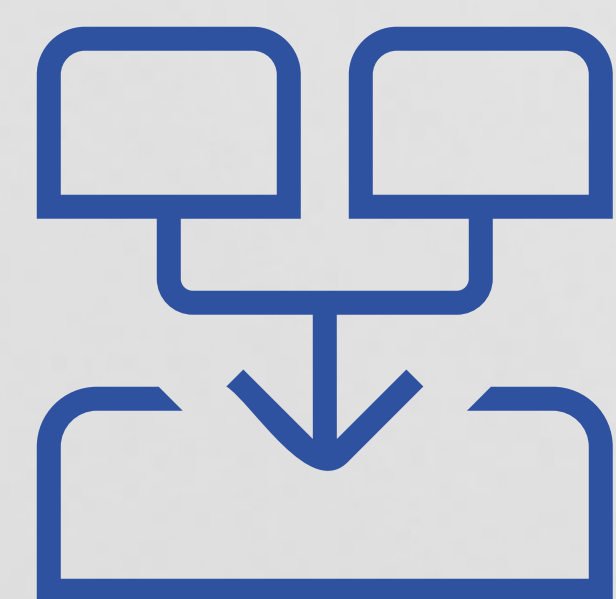
YEAR 2026

Another modern, highly precise MODUL drilling machine (manufacturer: SCHMOLL), increasing drilling capacity in the Mechanical Treatment Section.

PLANNED AND ONGOING INVESTMENTS

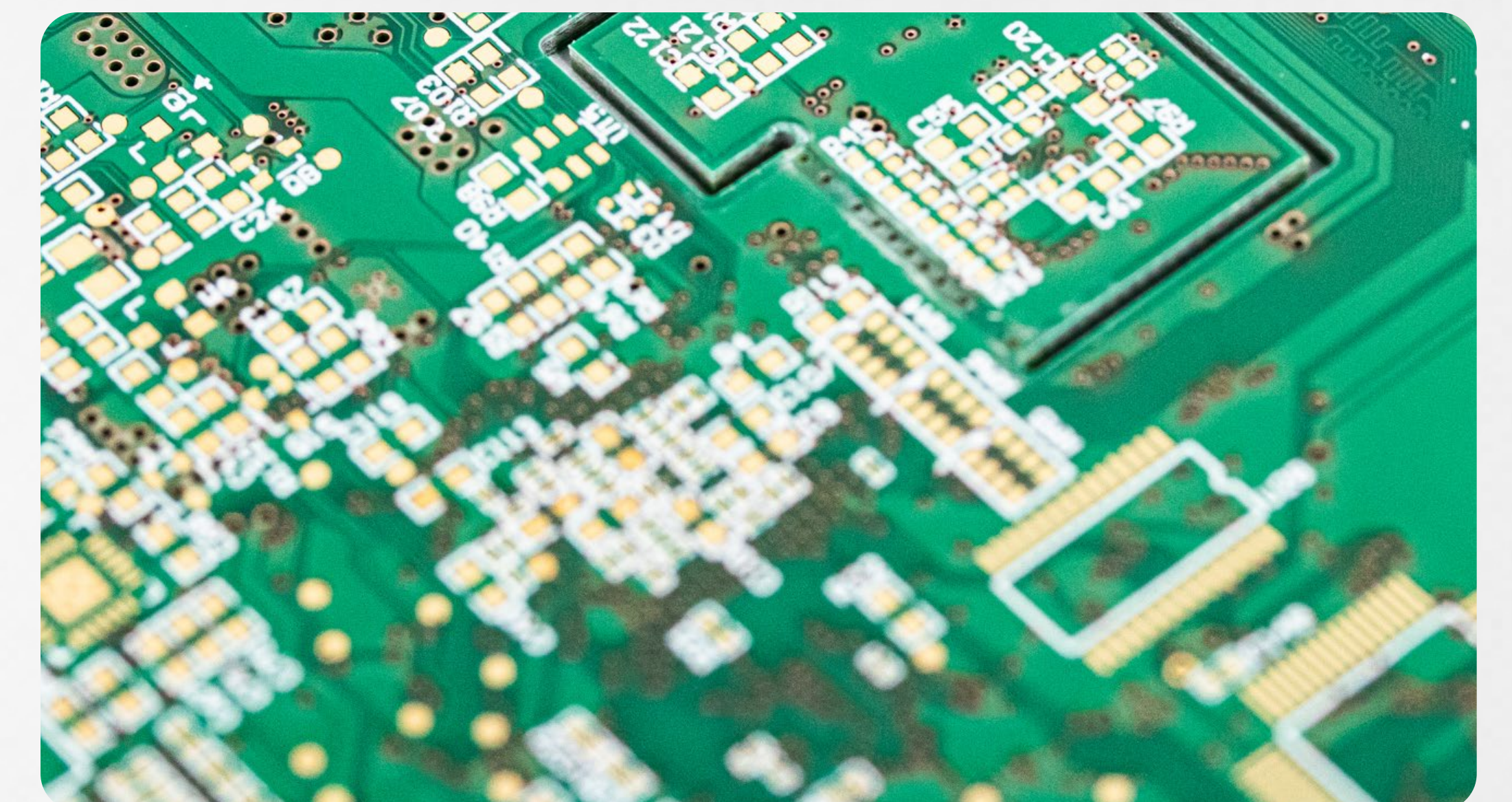
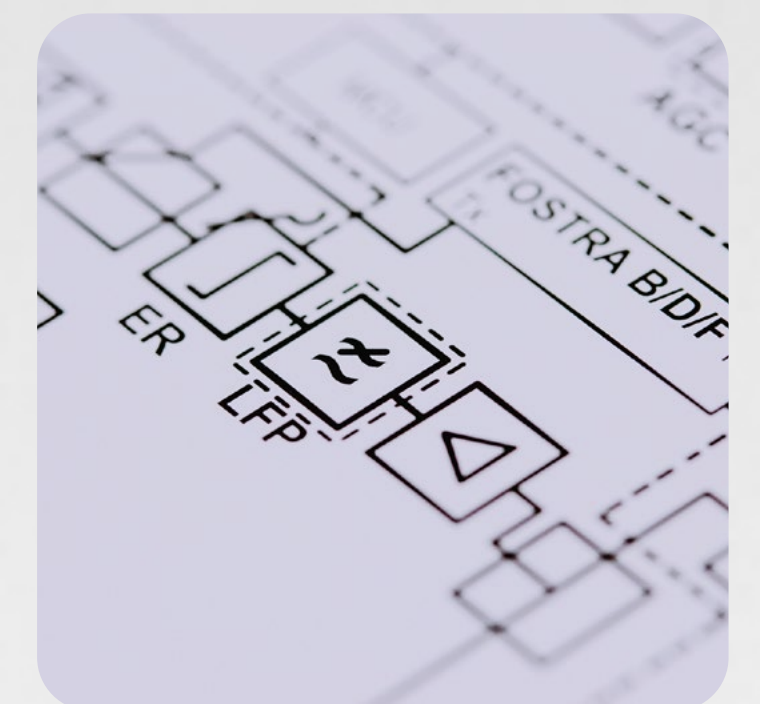
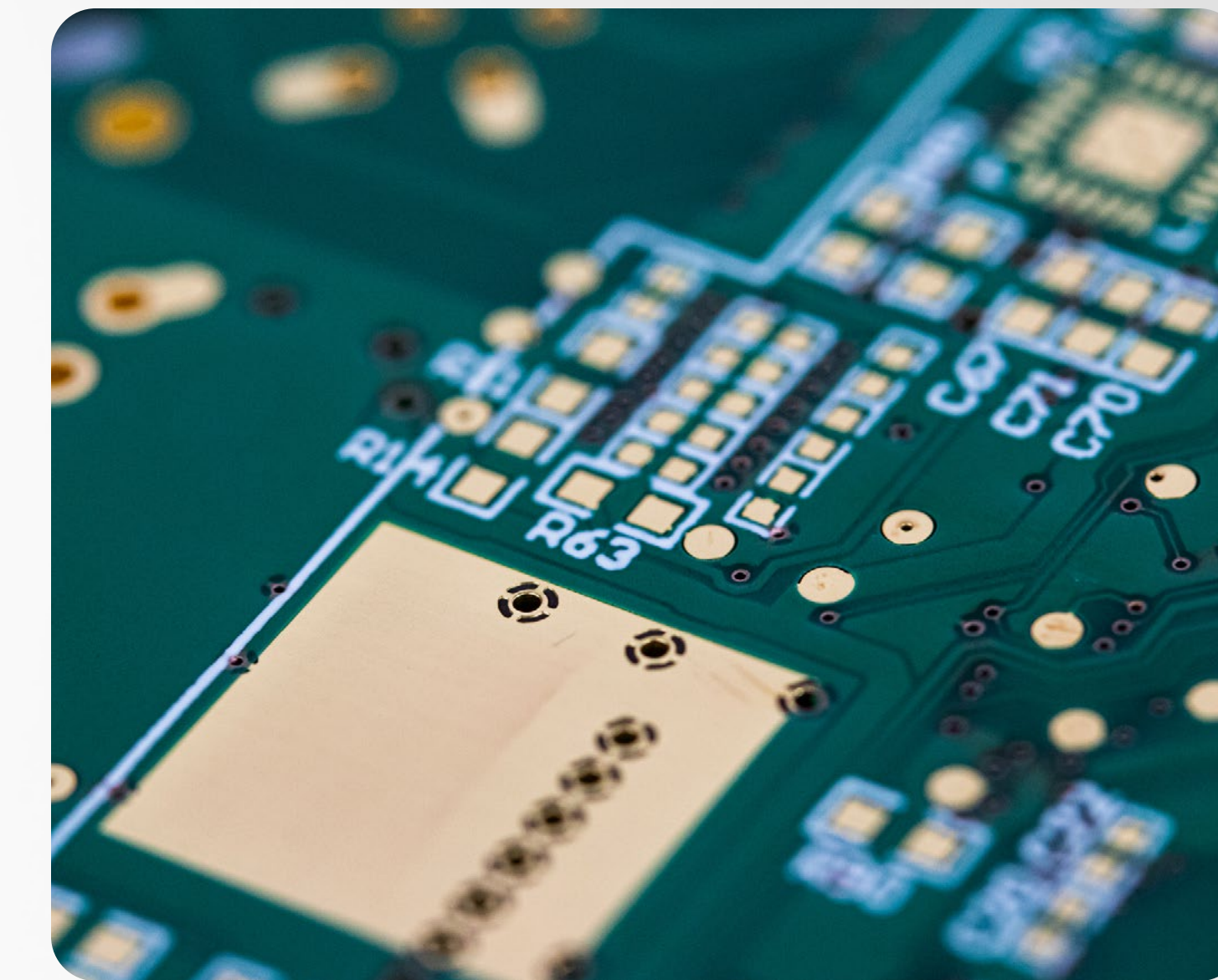
Ongoing investments:

Implementation of impedance control – planned completion date: 2026



Investment planned for 2027:

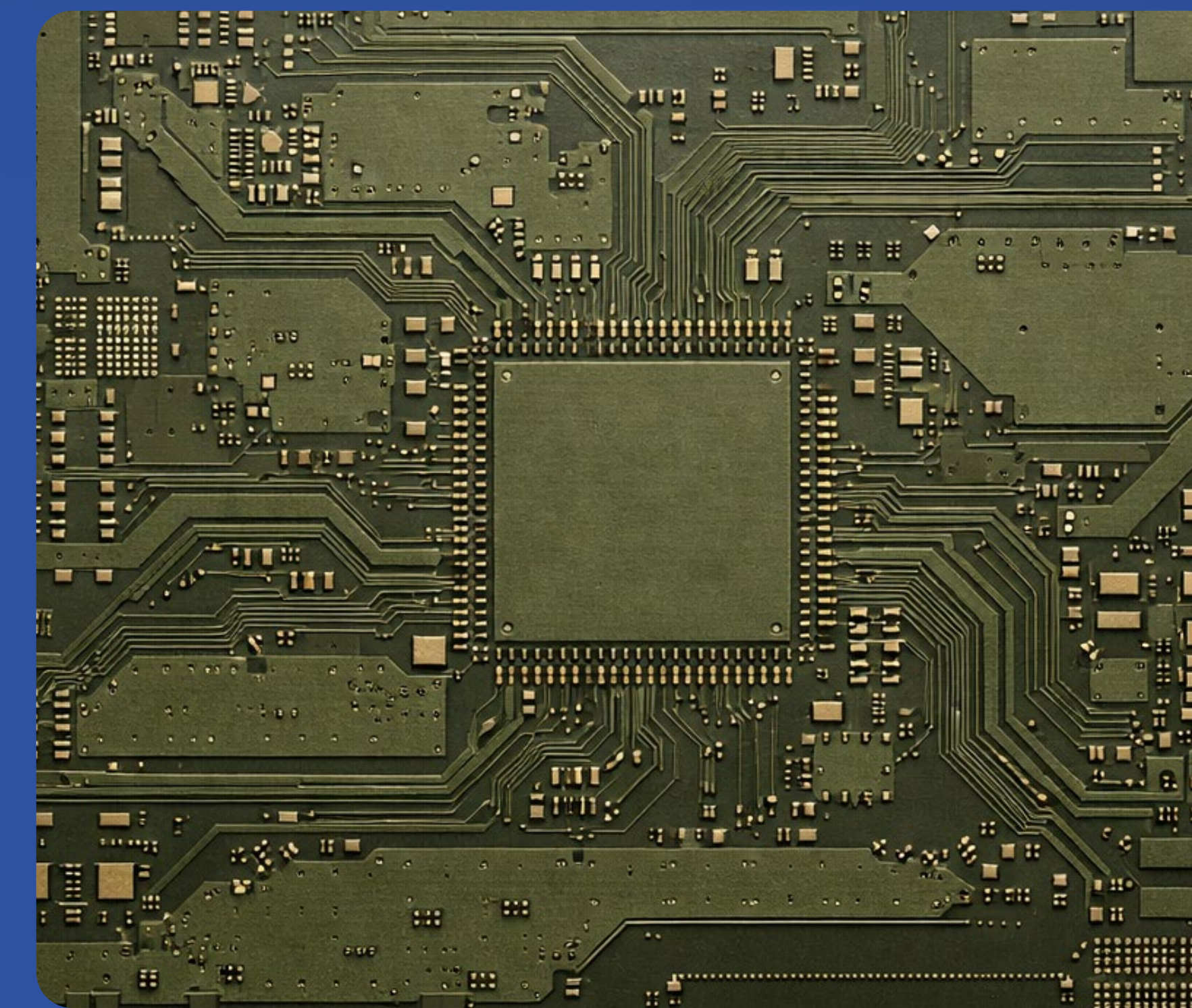
Implementation of a new vias plugging process: introduction of plugged type VII vias according to IPC 4761 - vias that are filled all over with dielectric material and then plated with copper (so-called plated covers of filled holes)



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.

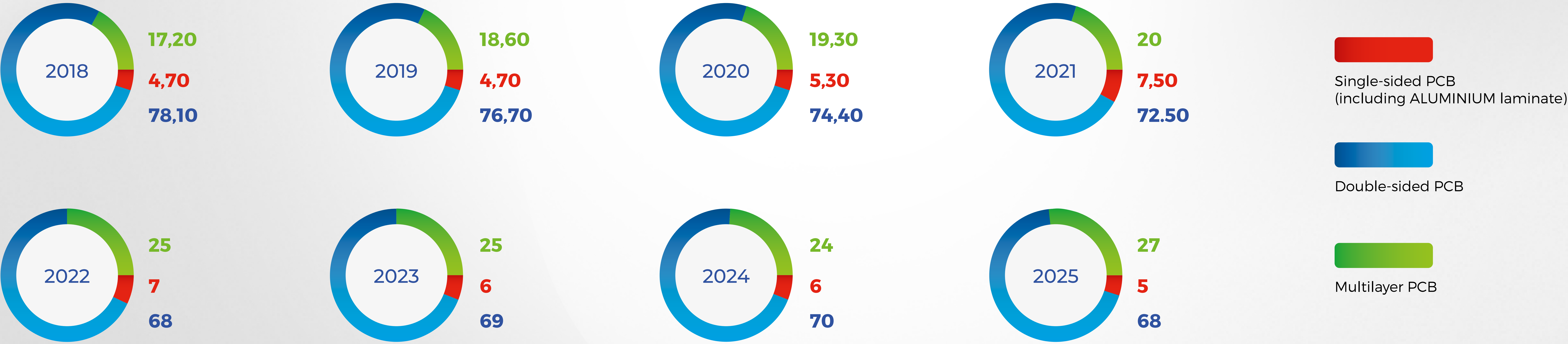


Security of supply: we guarantee full control over the process and data confidentiality.



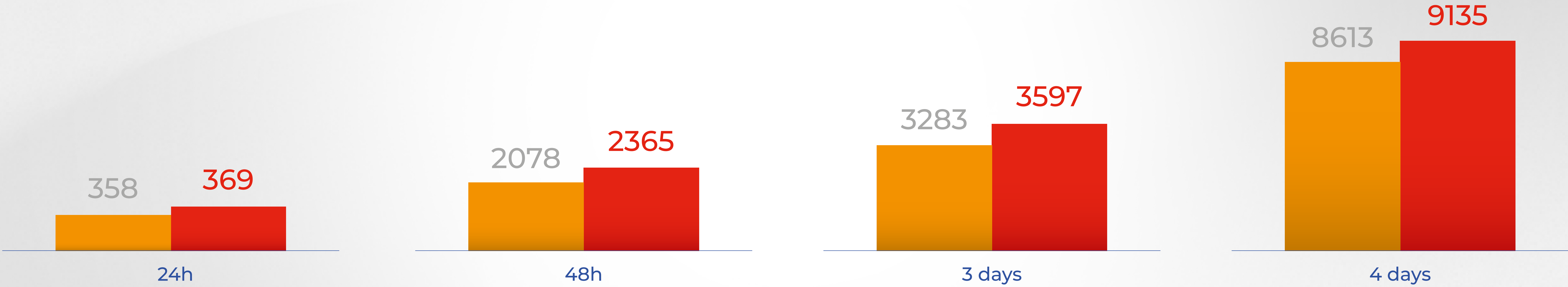
SINGLE-SIDED, DOUBLE-SIDED
AND MULTILAYER PCB
PRODUCTION IN 2018-2025

(% of total sale)





NUMBER OF EXPRESS DELIVERIES
2024-2025



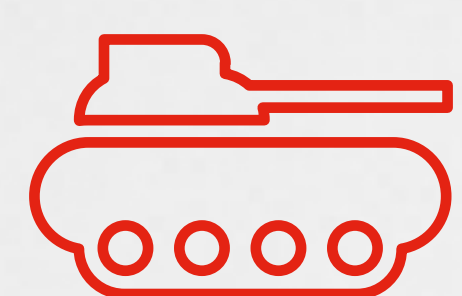
Standard delivery:

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.

2024
2025

SOLID CLIENT BASE



army



medical
equipment



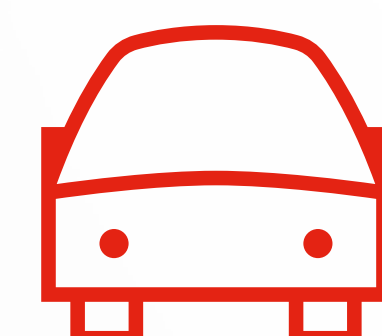
EMS



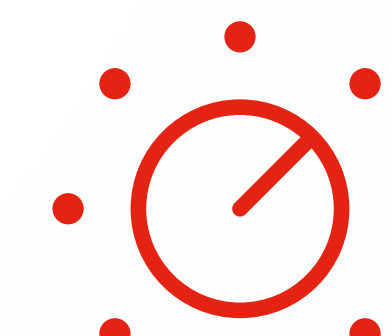
PCB
distributors



rail



automotive



test & measurement

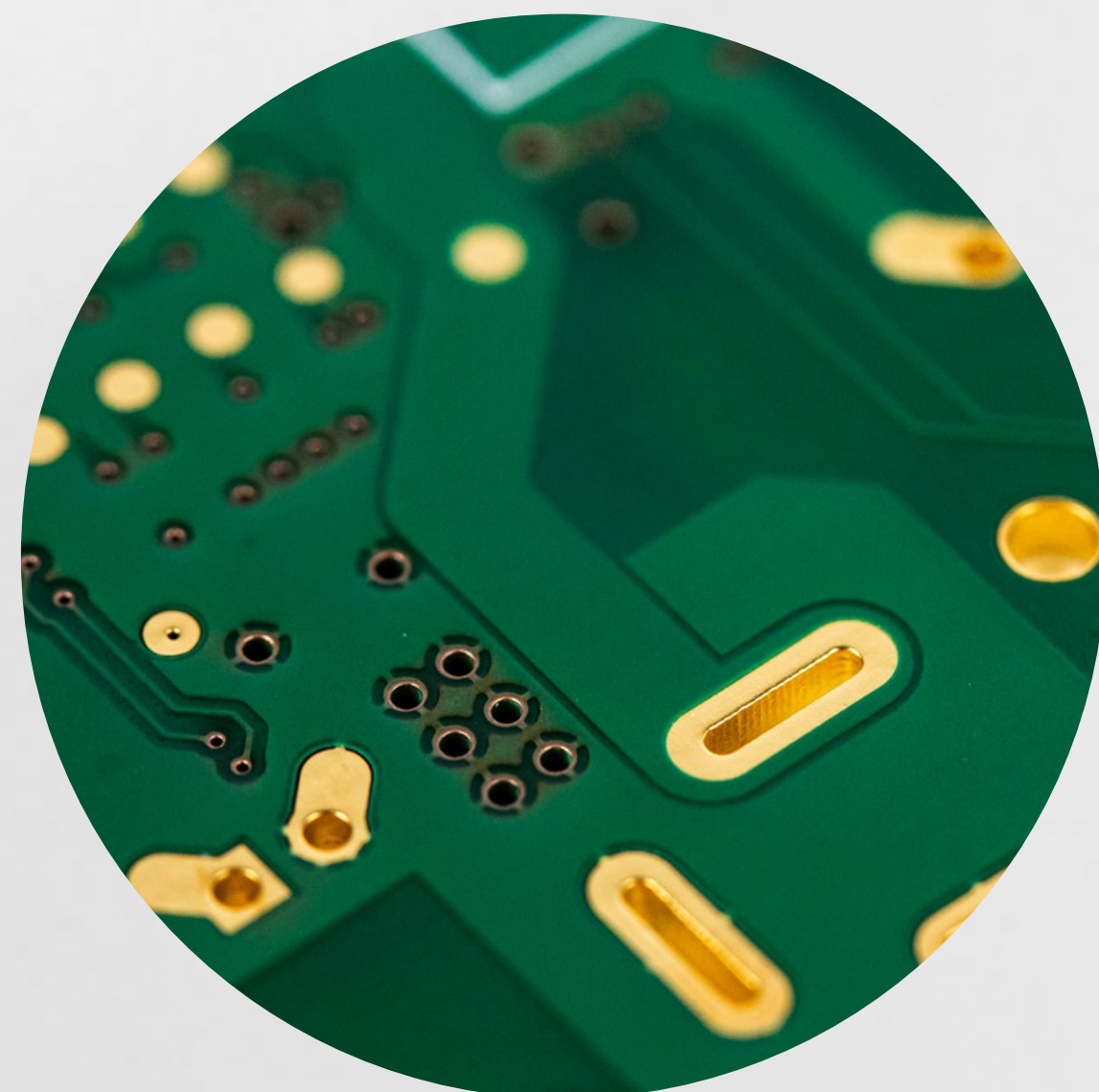


telecommunication
and data transmission

We cooperate with **over 500** business partners.



Experience



Over 40 years
of market experience

Quality



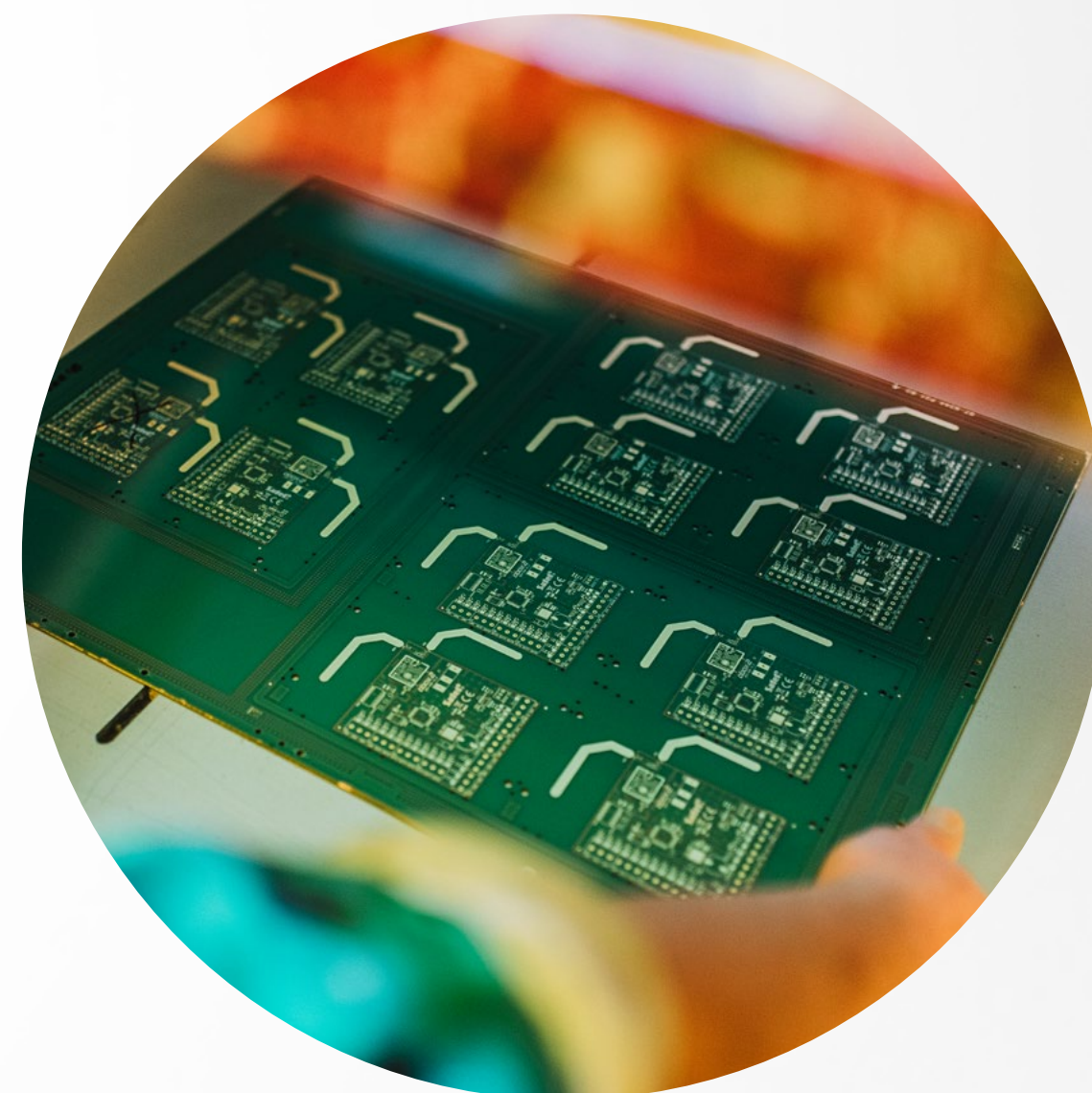
Advanced
Technology

**Customer-oriented
approach**



Flexibility in customer
service

Production

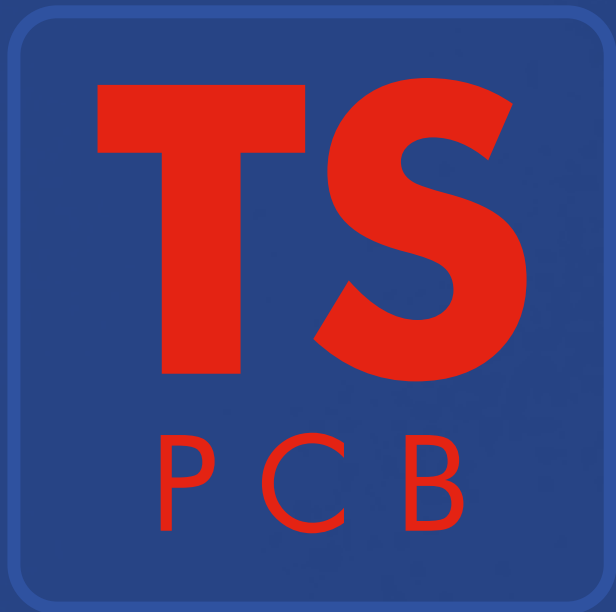


Constant investments
in machinery park

**Expert
knowledge**



Technical client
support



PRO CLIENT
VALUES



Support during end-to-end
production process



Fast offers



Express delivery terms



- On-line service:
- prototypes calculator,
 - client account on website,
 - client order tracking.

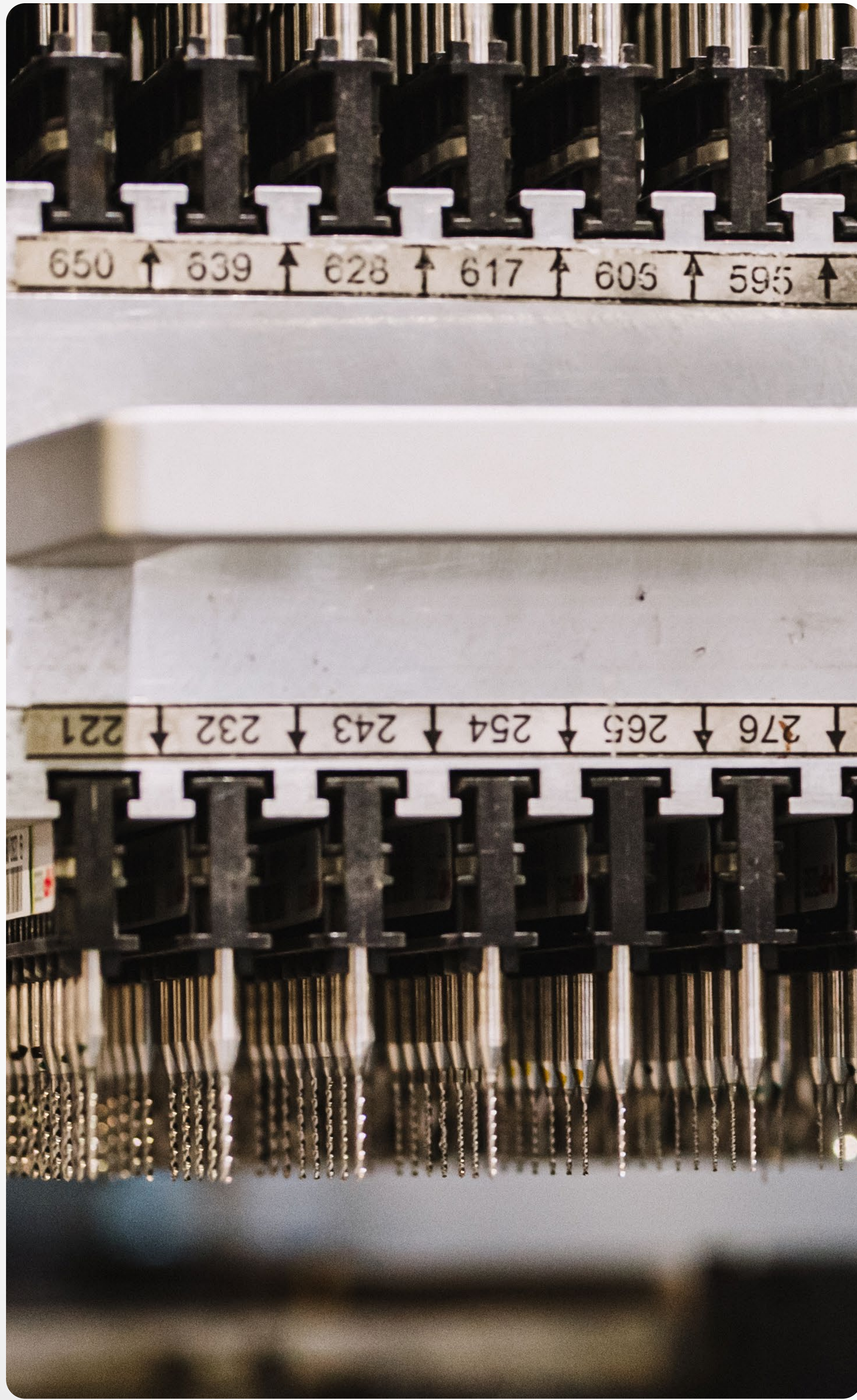




PRODUCTION
VALUES

✓ 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.



ZPMV2.E203339
Wiring, Printed - Component

Flammability certificate UL
- Underwriters Laboratories Inc.,
USA.

 ul. J. Chłopickiego 50 04-275 Warszawa tel. +48 22 473 13 70 fax. +48 22 610 75 97	INSTYTUT KOLEJNICTWA	 PCA POLSKIE CENTRUM AKREDYTACJI BADAŃ AB 369
	Laboratorium Badań Materiałów i Elementów Konstrukcji LK Pracownia Materiałów Niemetalowych	
	Sprawozdanie nr IK.LKA57.A161/15 Strona 1/2	

Flammability IK Polish
Railway Institute Report.

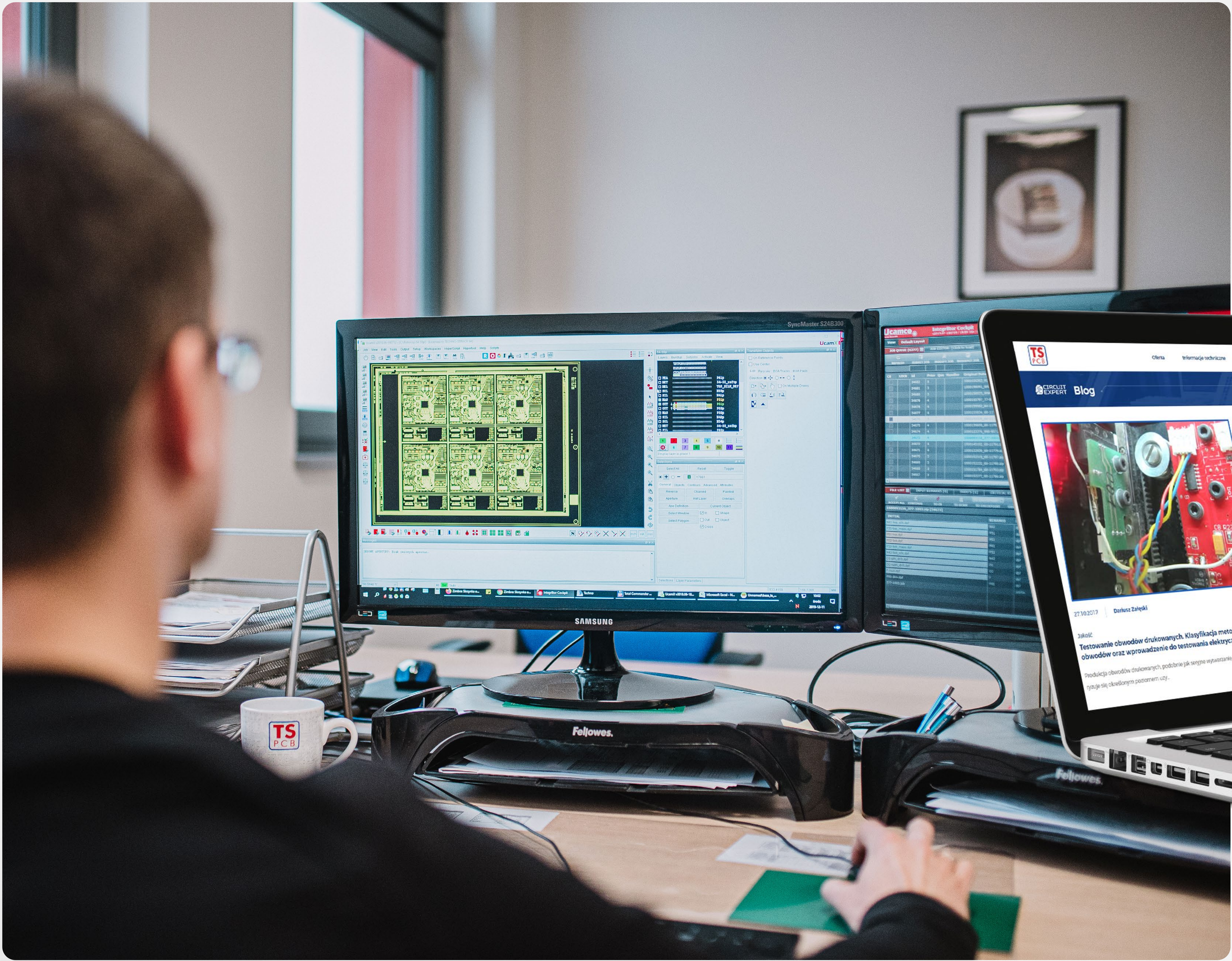
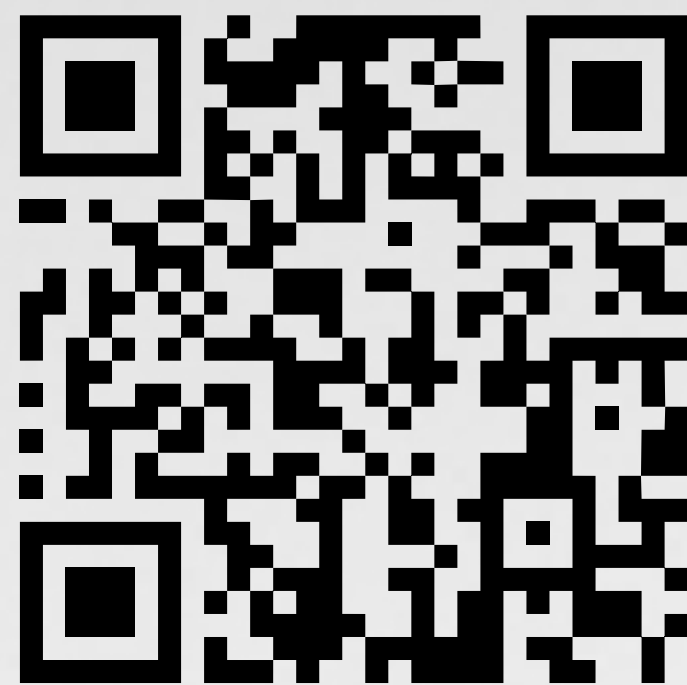


We organise trainings

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

We support our clients at each and every stage of order realisation
(Customer Service Office and CAM Support).

Sharing our expertise



<https://tspcb.pl/en/knowledge-centre/compendium/>



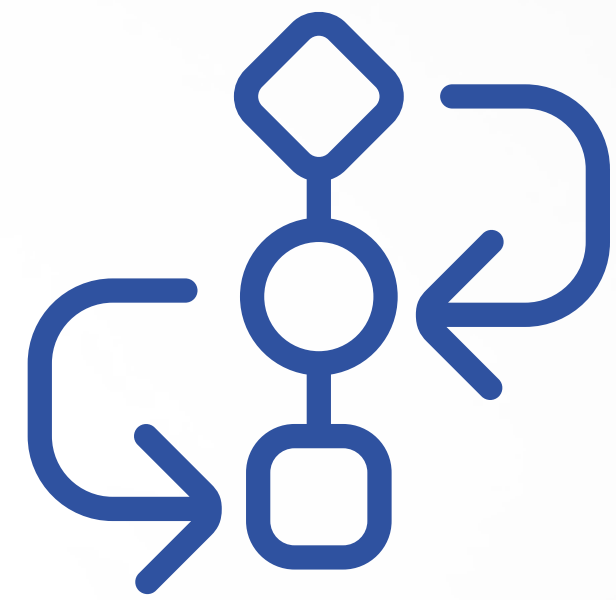
102
people

Our team



~3750
m²

Machinery park



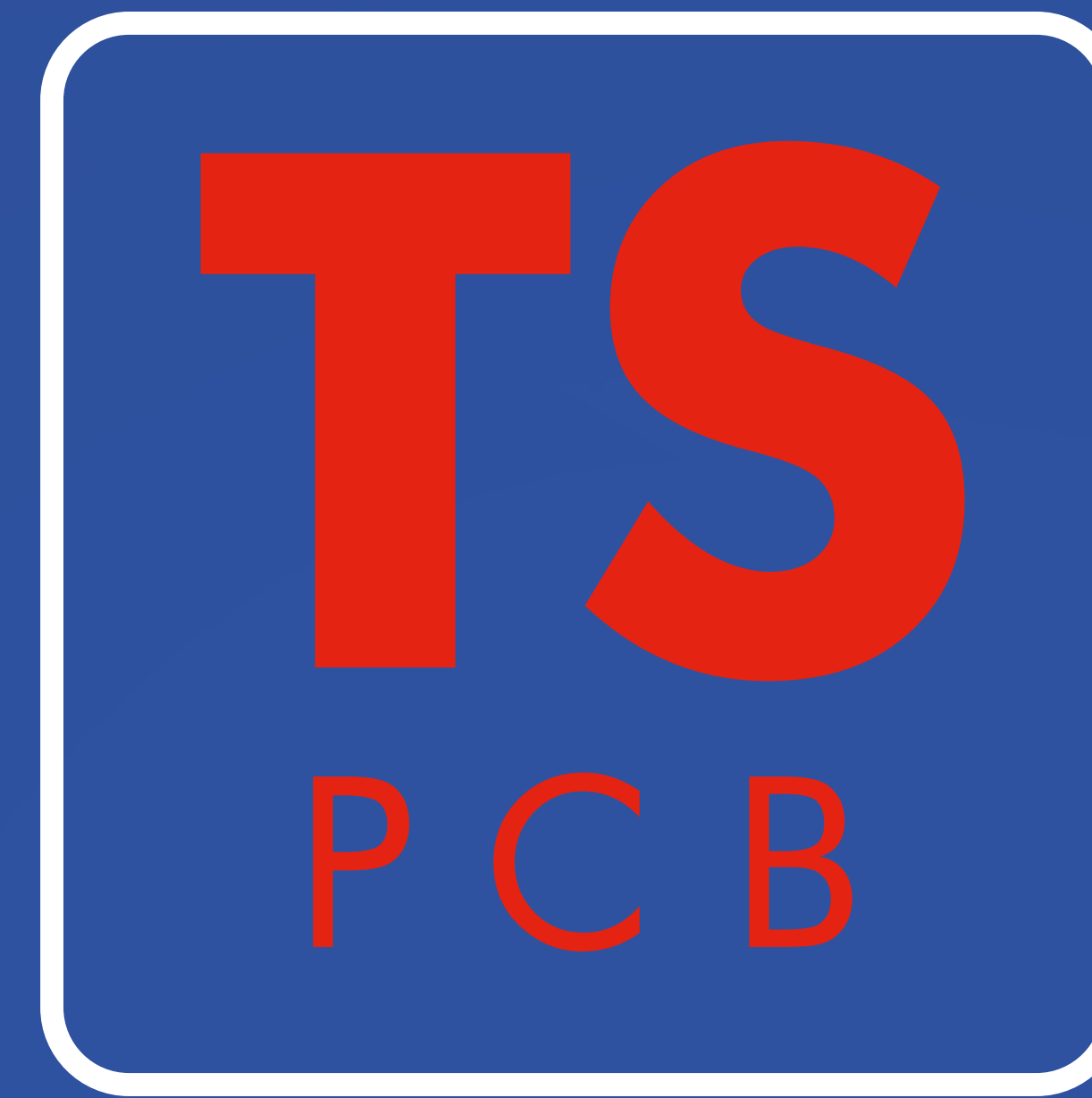
3000
m²

Production capacity
in 1 month



24 700

Number of express
deliveries in 2025



Thank you!



www.tspcb.pl/en