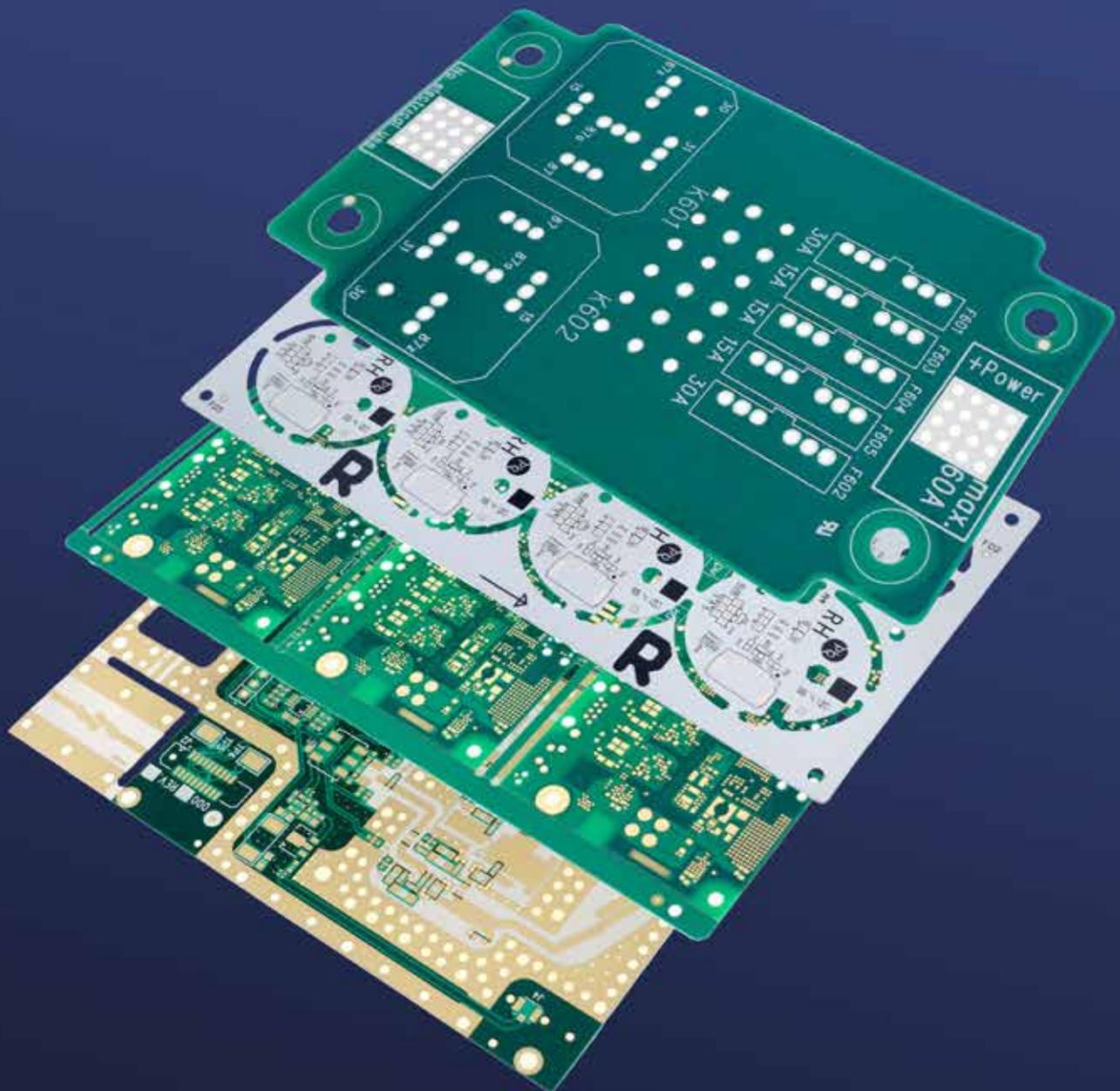


**SGCircuits**  
PCB Group  
for excellent customer solutions

**The basis for your product.  
Printed circuit boards directly  
from the manufacturer.**

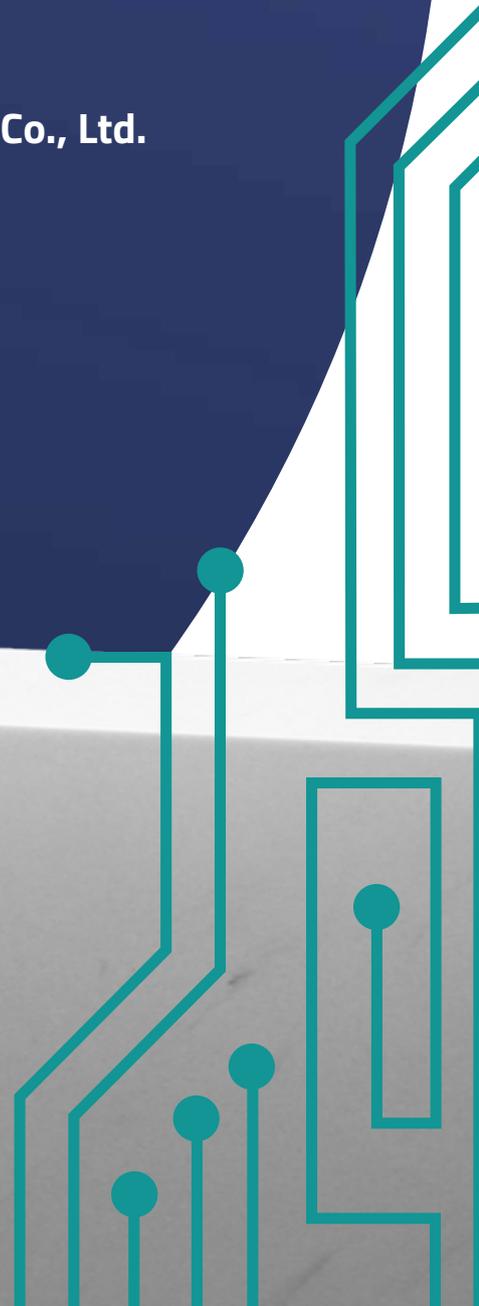


[www.sunshinepcb.de](http://www.sunshinepcb.de)

## **Our Vision:**

**„To be a leader in the sustainable production of high technology PCBs.“**

**Mark Zhang**  
**Chairman and Founder**  
**Sunshine Global Circuits Co., Ltd.**



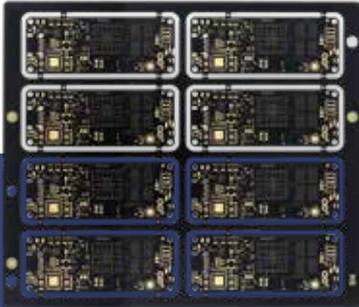


# Relax, we will take care of your concerns

**We can't get all of your  
problems out of the way,  
but when it comes to PCBs,  
we can.**

- Printed circuit boards from simple to highly complex
- Complete service from a single source - all technologies, from prototype to series production
- Quick Turn Around Service for prototypes with a turnaround time of less than 10 working days
- Extensive design support, even in the design for manufacturing phase
- European direct supplier
- Ordering according to German commercial law
- Reduction of communicative- and logistic challenges through direct access to production facilities in China
- Flexibility and reliability through 4 production sites
- Most modern production facilities worldwide

# The range of our products



## HDI

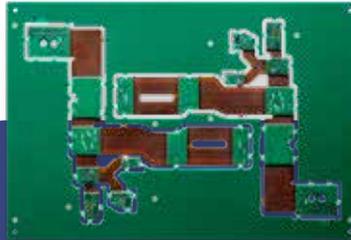
**PCBs for demanding applications such as data networks, communication devices, and compact electronics**

4 to 30+ layers  
with 1+, 2+, 3+ microvia layers

Copper-filled microvias,  
stacked or staggered

Deep microvias and ELIC  
technology are possible

Vias with high aspect ratio,  
Via-in-Pad, Any Layer Internal  
Via Hole (ALIVH) for through-  
hole plating



## Rigid-Flex

**Flexible solutions for 3D applications in medical devices, handhelds, and industrial sector**

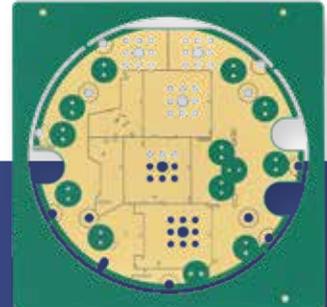
symmetrical and asymmetrical  
structures up to 20 layers

final thicknesses from 0.8 mm  
up to 3.0 mm

HDI and multiple flex layers  
possible

Copper thicknesses for outer  
layers from 35 to 70  $\mu\text{m}$  and  
for inner layers from 18 to 70  
 $\mu\text{m}$

Combination with HDI printed  
circuit board possible



## Heavy copper

**PCBs with high current or high-power requirements, for devices in energy management.**

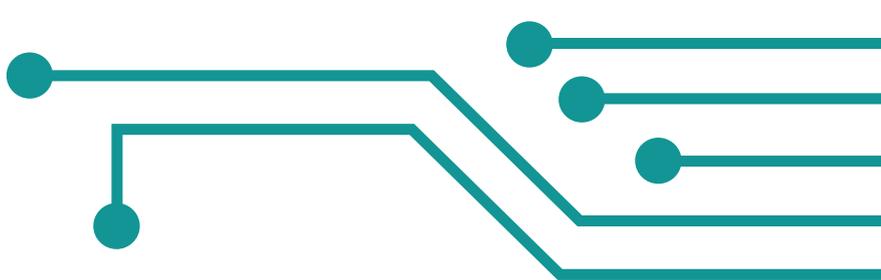
3 to 10 ounces copper on 2 to  
26 layers

Multiple lamination cycles for  
blind and buried vias

Dedicated manufacturing area  
with special process controls

UL approval up to 6 oz. for  
inner and outer layers





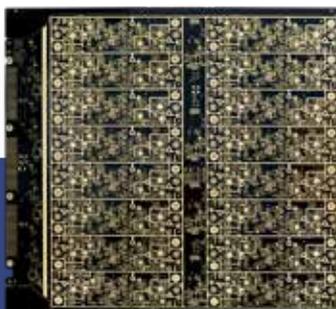
## Thermal Management Solutions

PCBs for high performance electronics where heat dissipation is an issue

Metal printed circuit boards (IMS) / metal core printed circuit boards

Thermally conductive dielectrics possible

Incorporated copper coins and copper inlays possible



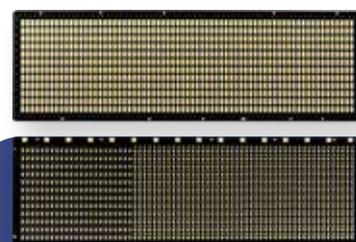
## Radio Frequency and Microwave

PCBs used in antennas and radars in telecommunications, 5G, automotive, and wireless applications

RF materials: PTFE, Rogers, Arlon, Neltec, Taconic, Shengyi

Hybrid design (UL for Rogers + FR4)

Cavities with plated edges, ENEPIG, wire bonded gold



## Mini-LED / IC substrates

PCBs or substrates for use in high resolution displays and automotive lighting

HDI design with extremely high packing density

Line/Spacing to 40 - 70  $\mu\text{m}$

20K to 30K microvias

**We apply our capabilities and experience to make your special requests come to reality. Contact us to find the right solutions for your application.**

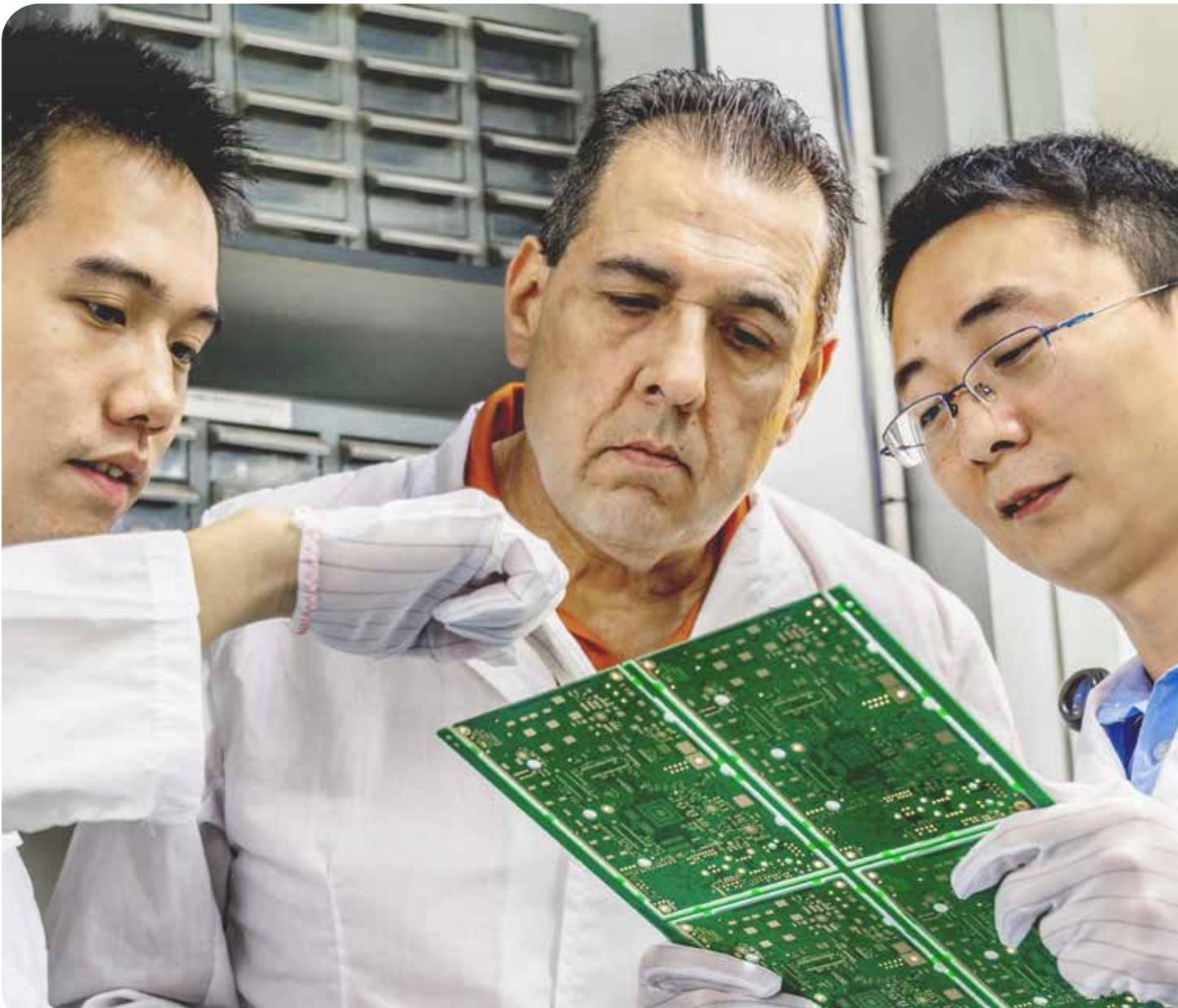
# Our products are used in these applications



# Knowledge and research in your interest

We understand the significance of continuously investing in technology and equipment. Our production facilities feature advanced equipment such as direct imaging, vertical continuous plating, inline AOI, vacuum assist via fill, spray coating of solder mask, and automated handling systems.

In addition, our employees conduct continuous research in modern and well-equipped laboratories in Sunshine's R&D department to develop new processes, materials, and technologies for or with customers. Our priority is innovation; the key to meeting your customer needs. These research projects currently include, e.g. projects in the area of extremely thin or extremely layered multilayers (layer count over 40), advanced imaging and etching methods for ultra-fine lines, and solutions for thermal management. Research is also being conducted into new printed circuit board materials, e.g. for the application of HDI in the field of 5G.



# Comprehensive Quality Management

Our ultimate goal is your satisfaction. Therefore, we start with the topic of quality at an early stage by ensuring that we have understood your requirements in detail and implement them in the best way possible in terms of quality. To us, quality management is not limited to ensuring product quality.

Our quality assurance system includes:

- Document control and specification check
- Supplier quality- and incoming goods inspection (IQC)
- In-process quality control (IPQC)
- Final quality control of PCBs (FQC)
- Final Quality Audit of PCBs against customer requirements (FQA)
- Internal quality audits

**ISO 9001:2015**

**ISO 14001:2015**

**ISO 50001:2018**

**IATF 16949:2016**

**ISO 13485:2016**

**ISO 45001:2018**

**ISO 14067:2018**

**ISO 27001:2022**

**AS9100D**





Measures used to ensure your product quality include:

- 100% innerlayer and outerlayer AOI
- 100% electrical tests (bareboard netlist tests)
- 100% visual final inspection
- Laboratory testing per IPC test methods to ensure conformance and reliability.
- Impedance measurements by TDR or Network Analyzer (coupon or inboard).
- Continuous monitoring of process chemistries and first item checks at each process.
- Failure analysis laboratory equipped with SEM/EDX, Temp/RH chamber, Thermal Shock, CAF, and Ion Chromatography.

On request, we can provide you with an individual audit so that you can convince yourself of our high quality and process reliability. We will be glad to provide you with insights into the entire process chain - from data preparation to production and shipping

# The future of the green circuit board

Environmental sustainability is one of the biggest challenges facing the PCB industry worldwide. With increasing awareness of environmental protection and stricter government measures, we need to act. How can we use technology to reduce the environmental impact of PCB manufacturing?

Sunshine has been advocating sustainable manufacturing for years. Back in 2007, the Shenzhen manufacturing facility received certification for its environmental management system (ISO 14001). Over the following years, a variety of measures were added to make processes and production more sustainable:

- Comprehensive material recycling, such as copper recycling of etching solutions
- Early introduction of energy-saving technologies
- Emission reductions
- 2019 : Establishment of the Green Manufacturing Technology Center (GMTC) in Shenzhen to develop and implement new environmentally friendly processes and materials.

Meanwhile, 20 employees are conducting research on 350 square meters of laboratory space for the development of green technologies. Among the projects of the GMTC include 3D printing, additive processes, high-precision screening, and novel pastes for conductive and dielectric applications

- 2020: Installation of a geothermal plant at the Jiujiang site



**sustainable materials**



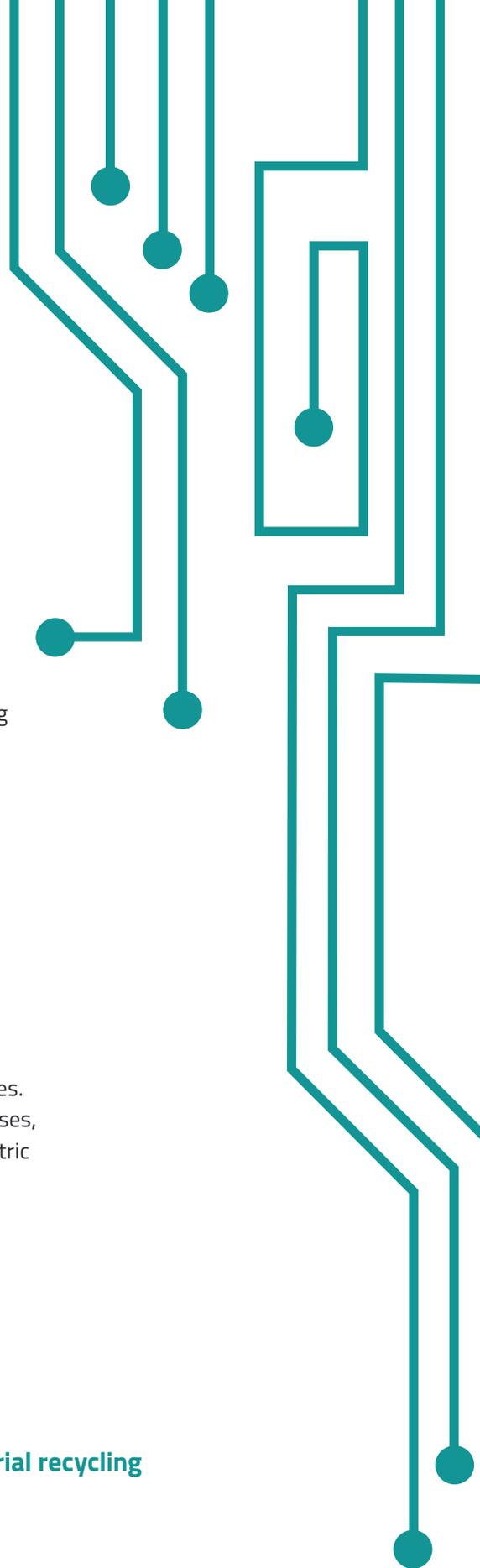
**material recycling**



**optimized production facilities**

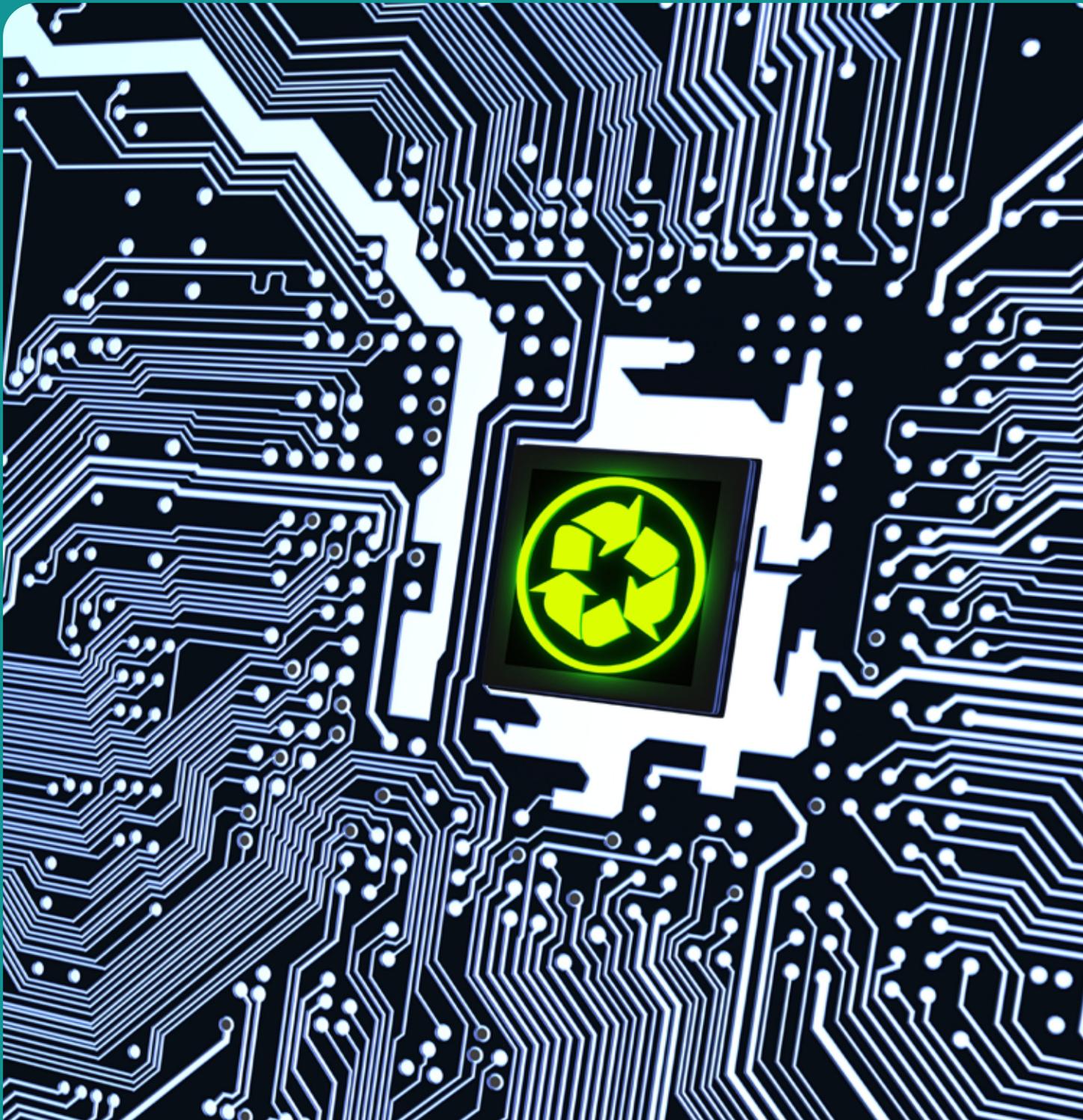


**environmentally friendly processes**



# Climate-neutral carbon footprint as a goal

In addition, the manufacturing facilities in Shenzhen and Jiujiang are certified according to ISO14067. ISO 14067 defines requirements and guidelines for quantifying the carbon footprint of products. The aim is to quantify the amount of greenhouse gases emitted in connection with the life cycle stages of a product, starting with resource extraction and raw material procurement, through the phases of production and use, to the end of the product's life.



# Modern productions facilities



**Jiujiang** 33-hectare campus with three production sites since 2024; expansion in 2021

**Jiujiang I + III** since 2014

46,000 m<sup>2</sup> production area

75,000 m<sup>2</sup> monthly capacity

Product focus Jiujiang I:  
2-16 L Multilayer, HDI

Product focus Jiujiang III:  
2-14 L rigid-flex and flex circuits,  
High frequency RF and microwave PCB

Quick-turn, prototypes to large series production

**Jiujiang II** since 2021

64,000 m<sup>2</sup> production area

25,000 m<sup>2</sup> monthly capacity

Highly automated, intelligent, digital manufacturing.

Product focus: 2-26 L multilayer; heavy copper  
(3-10 oz); high-speed digital printed circuit boards  
and back panels; HDI

Quick-turn, prototypes to large series production



**Zhuhai** Start of production in 2025

Total area 30 hectares

Planned development: around 210,000 m<sup>2</sup>

Production area under construction: 92,900 m<sup>2</sup>

**Shenzhen** since 2001

20,000 m<sup>2</sup> production area

18,000 m<sup>2</sup> monthly capacity

Product focus:  
2-40 L multilayer, HDI/BBV,  
low Dk/Df material, High speed PCBs.

Production lines for substrates and optical modules

Quick turn, prototypes to large series production

Wide range of materials with UL

**Shenzhen**



**Penang** since 1989

Part of the Sunshine Global Circuit Group since 2023

2,800 m<sup>2</sup> production area

3,000 m<sup>2</sup> monthly capacity

Product focus:  
2-12 L multilayer; high frequency RF;

Quick-Turn, small to medium series production

**Penang**



**Remscheid** since 1966

Part of the Sunshine Global Circuit Group since 2013

3,300 m<sup>2</sup> production area

Product focus:  
2-16 L multilayer, rigid-flex, AI-PCB.

Quick-turn, prototypes, small series

Close cooperation with Chinese plants  
for series production

**Remscheid**



# Worldwide represented



**SUNSHINE USA**  
Plano, Texas

[www.sunshinepcb.de](http://www.sunshinepcb.de)  
[www.sunshinepcb.com](http://www.sunshinepcb.com)  
[www.sunshinepcbgroup.com](http://www.sunshinepcbgroup.com)

## Manufacturing locations

### **Sunshine Global Circuits Co., Ltd.**

Bldg B, #32 Nanhuan Road, Shangxing #2 Industrial Zone, Xinqiao, BaoAn, Shenzhen, Guangdong  
China 518125

Tel. +86 755 2724 3597  
Fax +86 755 2724 3609

### **Jiujiang Sunshine Circuits Technology Co., Ltd.**

GangCheng Rd, ChengXiGang Economic Development Zone, Jiujiang City, Jiangxi  
China 332000

Tel. +86 755 2724 3597  
Fax +86 755 2724 3609

### **Sunshine PCB (Penang) Sdn. Bhd.**

2541 & 2542 Lorong Jelawat 6, Seberang Jaya, 13700 Perai, Penang, Malaysia

Tel. +60 4 399 0791

### **Sunshine PCB GmbH**

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42899 Remscheid  
Germany

Tel. +49 2191 9573 0  
Fax +49 2191 9573 45



**SUNSHINE GERMANY**  
Remscheid,  
North-Rhine Westphalia

**SUNSHINE CHINA**  
Jiujiang, Jiangxi

**SUNSHINE CHINA**  
Shenzhen, Guangdong

**SUNSHINE GERMANY**  
Chemnitz, Saxony

**SUNSHINE MALAYSIA**  
Penang

## Sales subsidiaries

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Fax +49 3722 59967 25

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Hong Kong

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