

POE



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Futian district,SZ 518034

Factory:

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POE科技·让世界更亲近

POE Manufacturing , Your Global Technology Partner

POE PRECISION ELECTRONICS CO.,LTD/ WANFENG CIRCUIT CO.,LTD

■ WEB1: www.poe-pcba.com
■ WEB3: www.pcbamake.com

■ WEB2: www.chinapcbsmt.com
■ E-mail: Sales@poe-pcba.com

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Orders@pcbamake.com Sales@chinapcbsmt.com



● POE Profile

1. PCB Production Services

- Material Type
- POE PCB Equipments
- Production Equipments
- May-June Product Shows
- HDI, 5G, RF, Copper and Special Board Production Capacity
- Special Board Shows
- PCB Quickly Prototype
- Testing Services

2. Certificates Shows

3. Quality Control Equipments

4. Market Distribution

5. Customer Reviews

6. PCB Production Environmental Protection

7. Recruit Foreign Agent Office and Future Market Outlook

8. PCB JDM Design Service

ISO9001:2015/UL94V-0/
ISO13485:2016/IPCIII/
IPC II /ROHS/REACH

CHINA 1-40L PCB MANUFACTURING FACILITY

POE PCBs/PCBAs is a high-tech enterprise in Shenzhen, integrating R&D, PCB production, PCB design and sales. Focusing on the design, development, production and sales of high-end PCBs, we provide customers with high level, high speed, high frequency, high advanced, high density, high difficulty HDI PCB design and other types of PCB prototyping, customization and board-making services.



UP to 40 layers of PCB processing technology, the minimum line width spacing 2.5/2.5mil, the highest board thickness aperture ratio of 16:1

Long and short gold finger processing technology and high-density line accuracy control, to meet the requirements of the optoelectronic communication field of circuit board design

High-precision back-drilling technology to reduce the equivalent series inductance over the holes to meet the integrity of product signal transmission requirements

Excellent metal base and ultra-thick copper manufacturing process, to meet the high heat dissipation requirements of power products

High-precision mechanical and laser control depth process to achieve multi-level step slot product structure, to meet the product assembly requirements of different levels

Mature mixing and pressing process achieve the mixing and pressing of FR-4 and high-frequency materials, which can save the material cost for customers while meeting the high-frequency performance of products

Advanced Anti-CAF process technology can greatly improve the reliability and service life of PCB products

The leading buried capacitor and resistor technology can greatly improve the performance of PCB products

MATERIAL TYPE

In order to help our clients reduce product costs, we normally use locally manufactured raw laminates for our PCBs. That being said, we understand that your designs might be made with a very specific material in mind, in order to meet signal integrity and HDI PCB requirements, we will accommodate your PCB material preferences. We also use North American materials such as Isola 370HR, FR408HR, etc. upon request to satisfy your engineering needs.

● PCB Materials



SHENGYI TG150
G170



KB6160 TG130 TG150
TG170



Aluminum Material



Poly-MID FPC Material



Arlon



Isola



Omega



Nelco



Teflon



Nanya

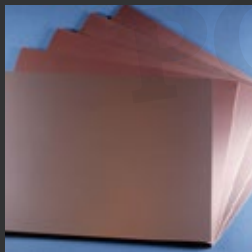


TUS

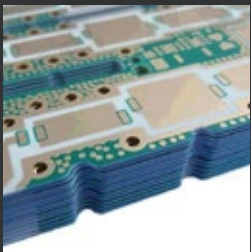
What separates POE from its competition? POE is dedicated to offering our customers the lowest possible costs as well as the very finest in High-Quality PCB Fabrication and High Quality PCB Assembly. When we use substitute materials, we use the best quality substitutes (based on material availability). We avoid using low-quality materials.

If you have any concerns regarding our material selection methodology or if you have any queries regarding specific materials, please feel free to contact us at any time.

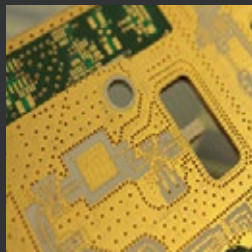
Our sales team will be willing to assist you and provide you with information on pricing and/or lead-time regarding any material. Our FAE and engineering team will be willing to work with you on creating stack-ups and performing impedance calculations.



Rogers
TMM10



Rogers
4350B



Rogers
2000



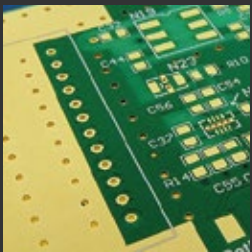
Rogers
3006



Rogers
4003C



Taconic
RF-35



Arlon
25FR



We will work with you to create your PCB Stack-Up. We will perform impedance calculations at the conceptual stage as well as the production stage. We will provide stack-ups including impedance control if necessary, with various materials upon request to demonstrate the impact that different materials have on impedance. Please note that at times extra lead time may be required for some of these materials.



Drilling Machine



PTH Plated



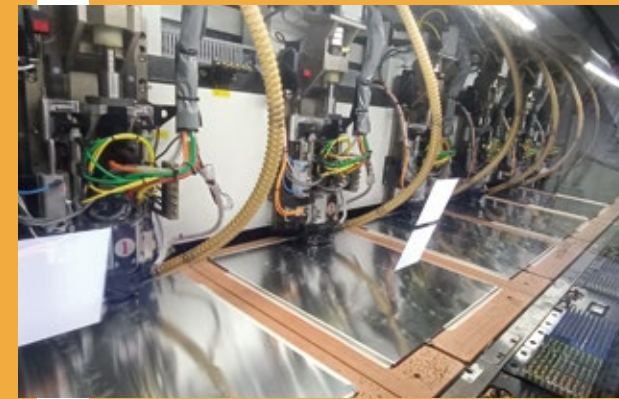
Circuit Etching



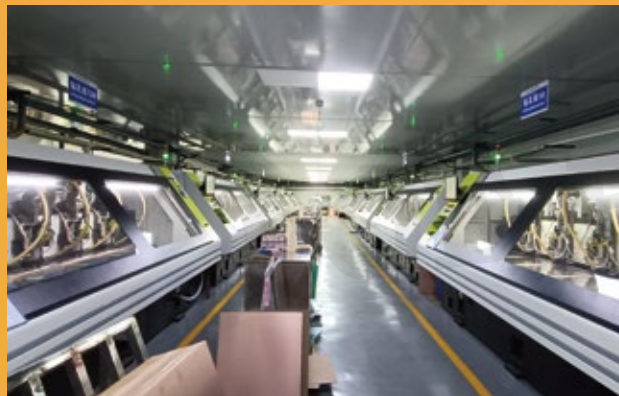
CNC Outline



CNC Outline



Drilling



Drilling



LDI



Sink Copper

PCB EQUIPMENTS SHOW

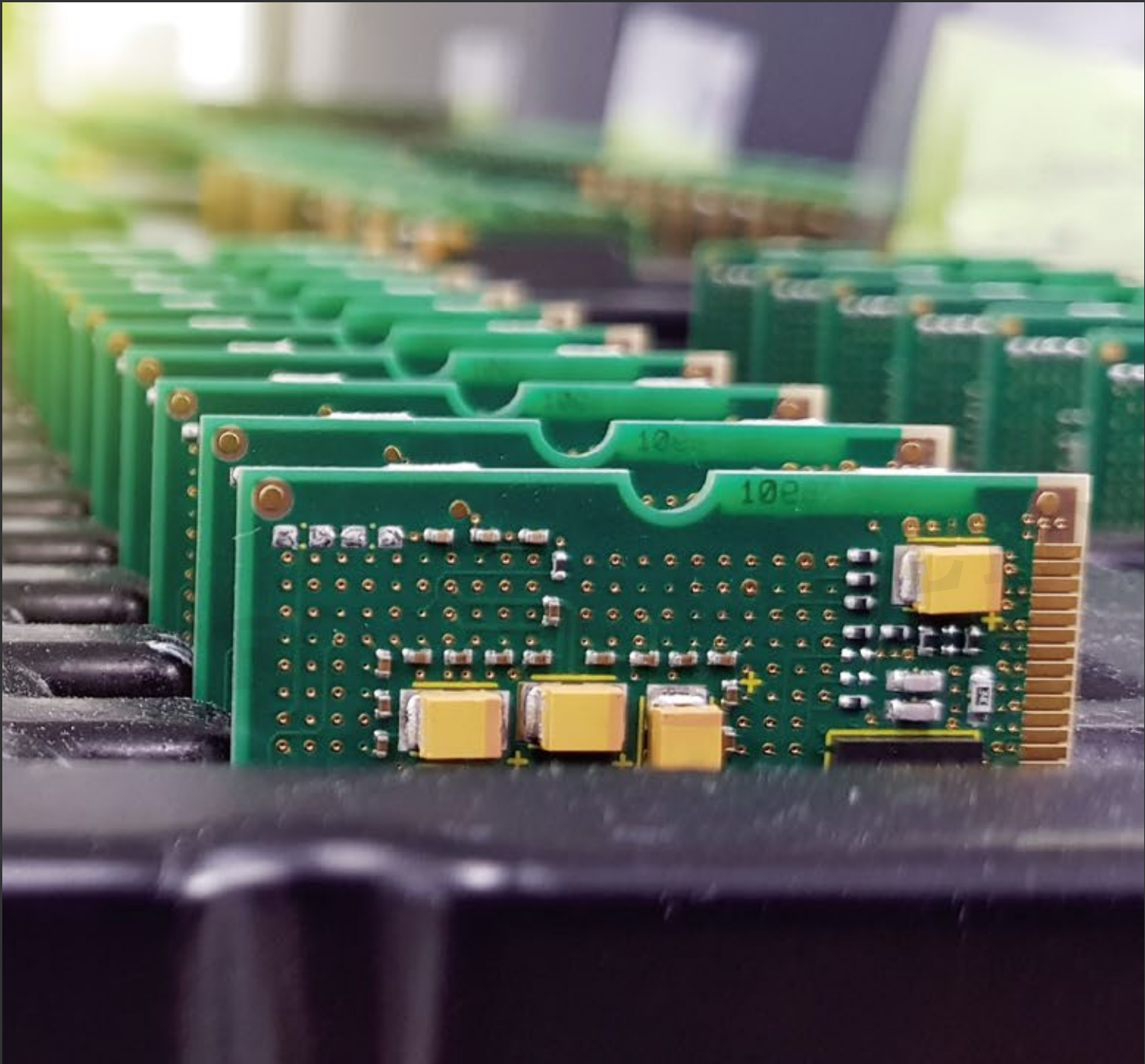
POE continually reinvests in the very latest technology and equipment based on customer demands and industry trends.

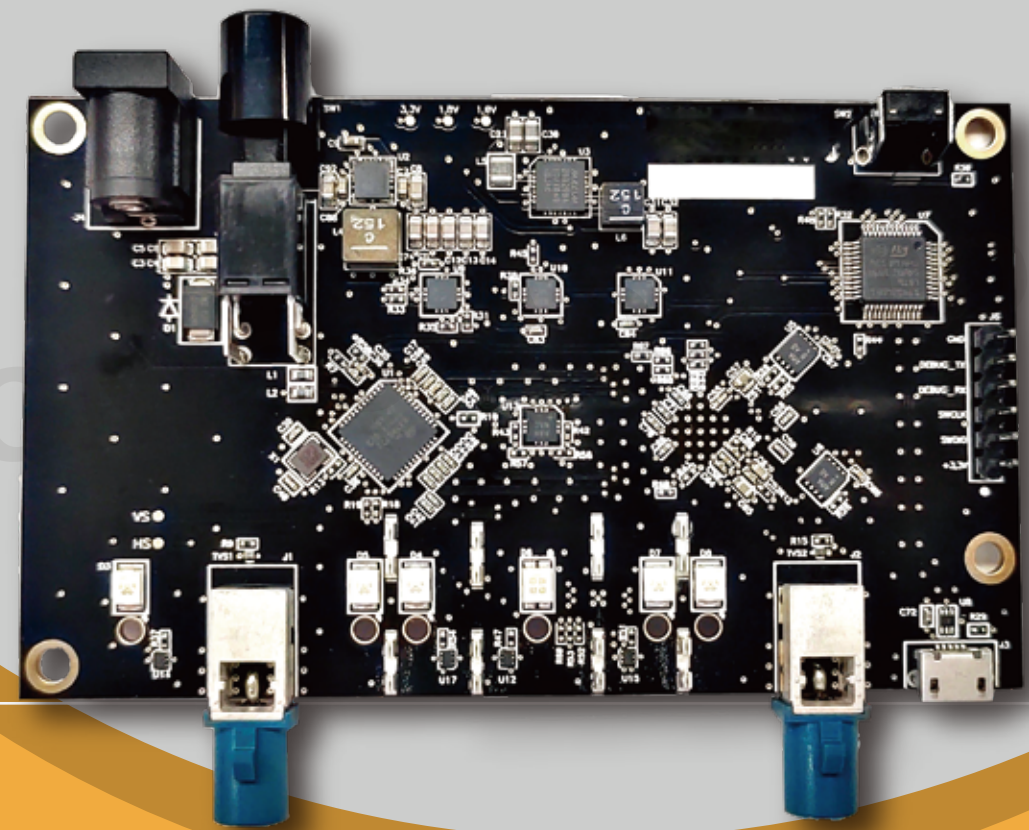
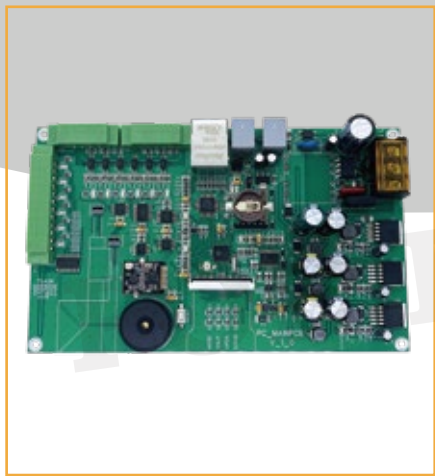
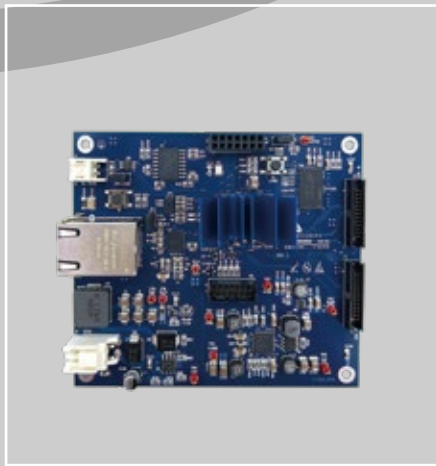
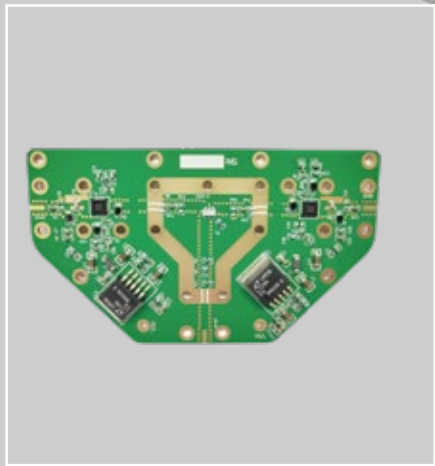
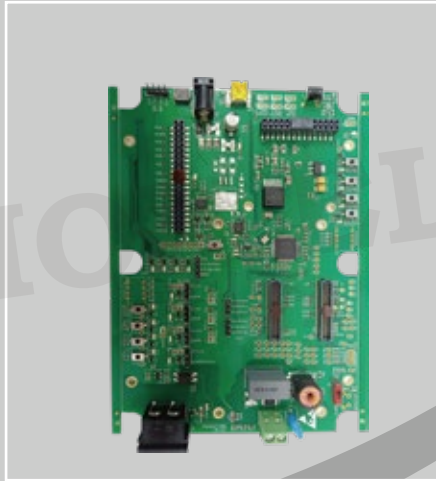
PROCESS CAPABILITY

PCB Manufacturing Capability

項目 Item	2021 製程能力 Manufacture Capability	2022 製程能力 Manufacture Capability
層數Layer	2-20層/2-20Layer	2-30層/2-30Layer
板厚Thickness	0.3-3.5mm	0.2-5.0mm
基料類型Laminate Type	FR4、High TG、高速/高頻、金屬基	高頻、微波、PTFE、非PTFE高頻料 &BT、金屬基、PI
銅箔厚度Copper Foil Thickness	1/3-6oz	1/3-14oz
最小線寬/線距Min.Line Width/Space	75um/75um	75um/75um
最小通孔直徑線距Min.Minimum through hole diameter	0.15mm	0.15mm
通孔徑比Micro channel thickness ratio	12:1	12:1
最小盲孔直徑比Min, blind hole diameter	4mil	4mil
盲孔徑比Blind aperture ratio	0.7:1	1:1
最小介電厚度Min. Dielectric thickness	50um	50um
佈線層數Wiring Layer	2+N+2	3+N+3
表面處理Surface Finish	噴錫、沉金、沉銀、沉銀、OSP HASL ENIG Immersion silver OSP	
(斜邊角度) Chamfer	(角度類型) The angle type of the chamfer	30°, 45°, 60°
最大NPTH孔尺寸 Largest NPTH hole size	6.5mm	>6.5mm
最大PTH孔尺寸 Largest PTH hole size	6.5mm	>6.5mm
最小孔環 Min,annular ring can be kept	6mil	4mil
探測有橋前提IC最小間距 Min, distance between the IC for SM bridge	0.25mm	0.25mm
最小綠油橋 Min.SM bridge for green soldermask	0.1mm	0.1mm
最小黑油橋 Min.SM bridge for black soldermask	0.125mm	0.125mm
外型尺寸公差 Tolerance of dimension size	±0.1mm	±0.08mm
成品板厚公差 Tolerance of board thickness	±10%	<±8%
成品NPTH孔徑公差 Tolerance of finished NPTH hole size	±0.05mm	±0.03mm
成品PTH孔徑公差 Tolerance of finished PTH hole size	±0.076mm	±0.05mm

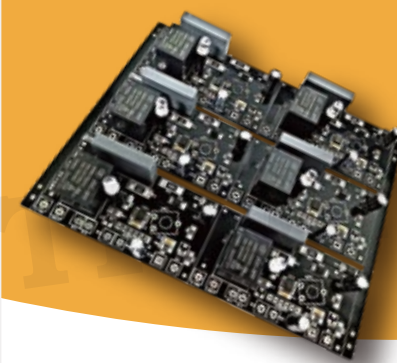
MAY-JUNE PRODUCT SHOWS





FR4,6Layers
1oz Copper Thickness
ENIG Surface Treatment
Black Solder Mask
Impedance Control

**Automotive
Test Equipment**



FR4,2Layers
10Z Copper Thickness,
HASL Lead Free Surface Treatment
Black Solder Mask

Environmental Monitoring



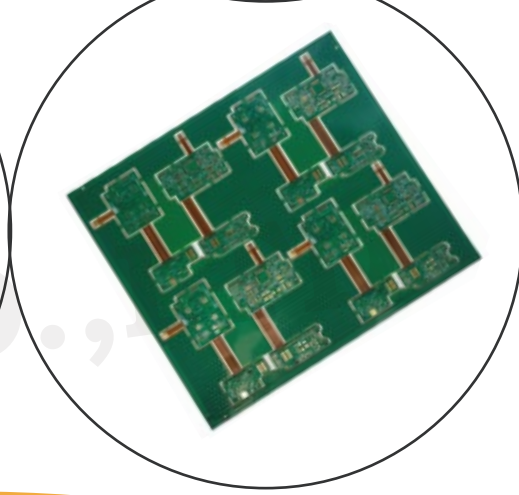
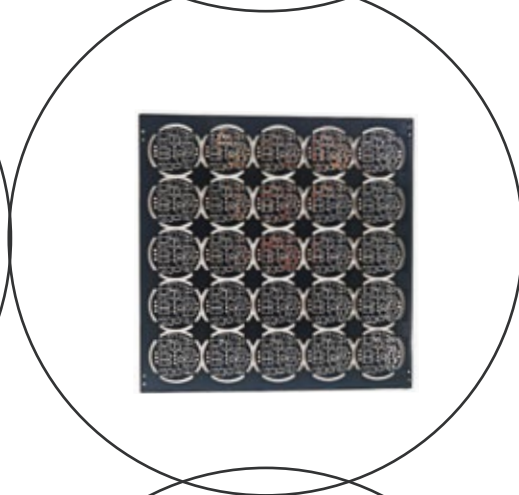
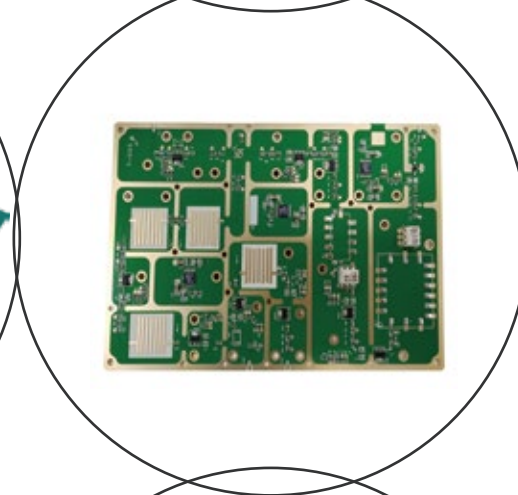
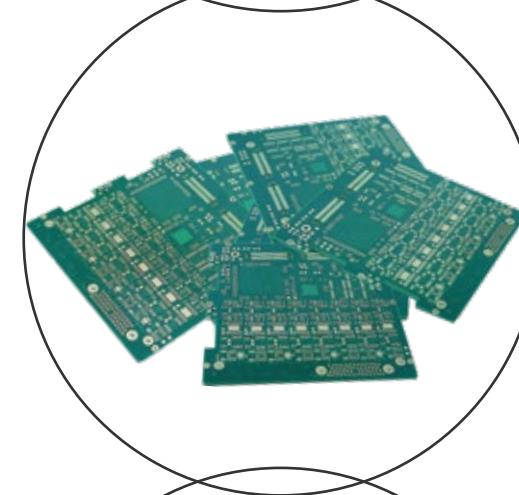
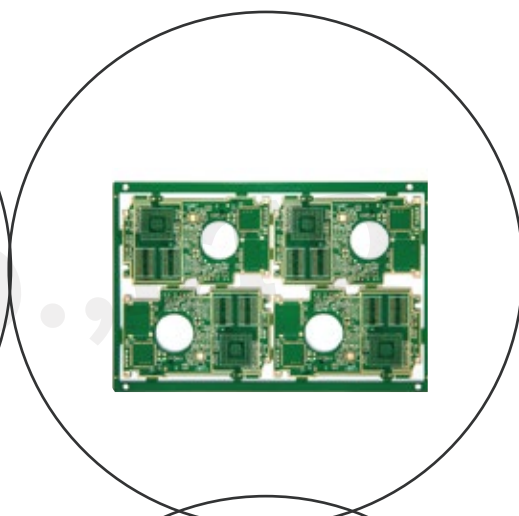
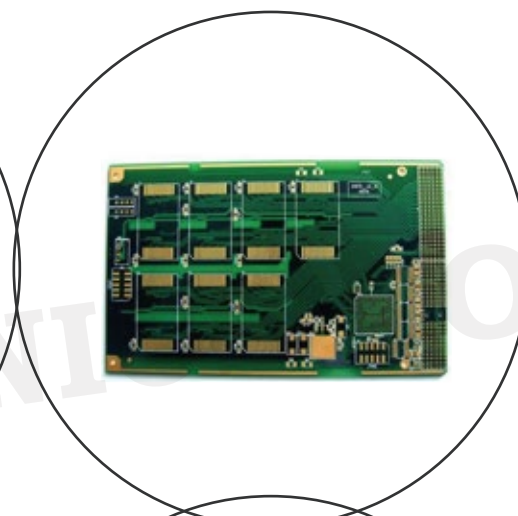
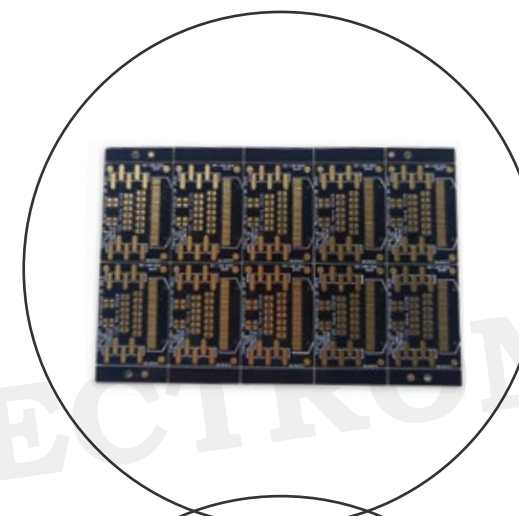
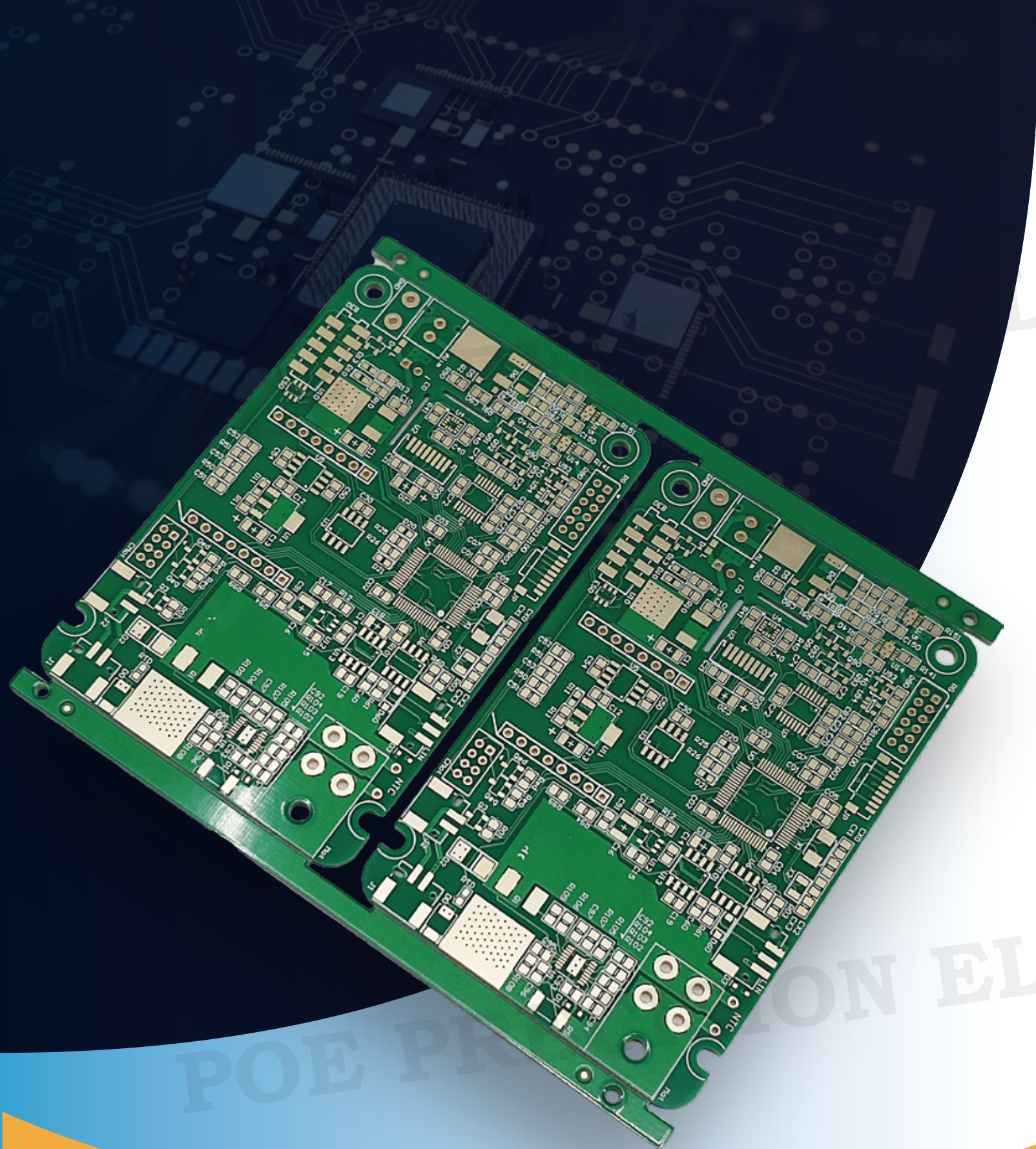
FR4,4Layers
10Z Copper Thickness
HASL Lead Free Surface Treatment

Industry IoT



FR4,4Layers
10Z Copper Thickness
HASL Lead Free Surface Treatment

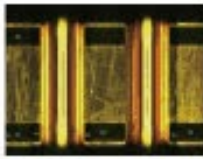

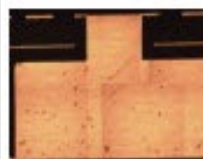
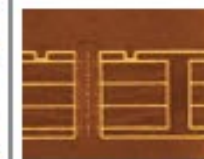
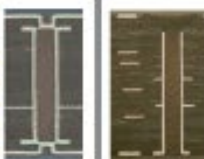

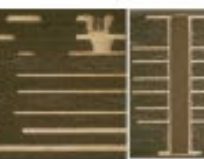
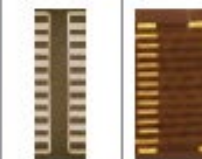

Security IoT



POE PR

ON ELECTRONICS CO.,

POE HDI PCB CAPABILITY

層數 Layer	2L	4L	6L	6L	8L	10L	12L	14L	16L
結構圖 Layer Structure									
產品類型	銅基板 Copper base PCB	深孔鑽 Depth control drill	嵌埋銅[[方銅、 凸合、盲槽] Buried copper inlaid	一階HDI、疊埋孔 1 + N HDI, Buries holes	機械背鑽、蝕刻 背鑽 Mechanical back drilling Etching back drill	二階HDI、POFV 2 + N HDI, POFV	厚銅 Heavy copper	沉頭孔 Countersink head holes	多层板 High layer count



SPECIAL BOARD SHOWS

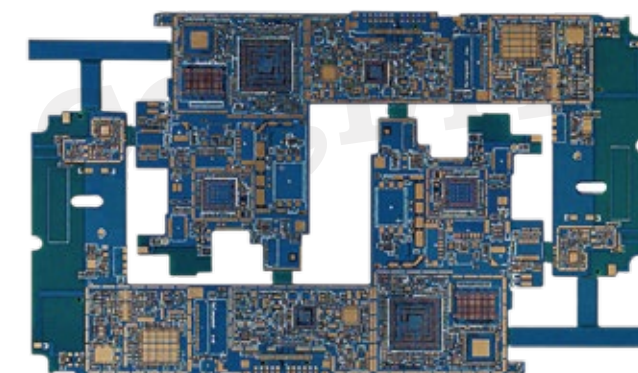
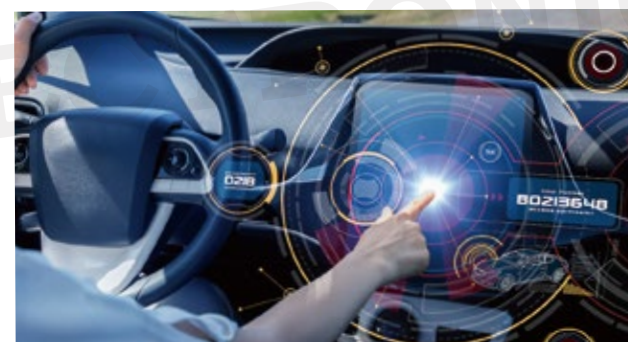
- HDI PCB
- Multi-layer PCBs
- High Frequency High Speed PCBs
- Optical Module PCBs
- 5G Communication PCBs
- RF Antenna PCBs
- Aerospace PCBs
- Semiconductor Test PCBs
- Military PCBs
- Industry Control PCBs
- Flex-Rigid PCBs
- UAV PCBs



HDI PCBs



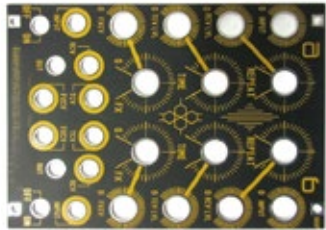
These HDI boards are characterized by higher wire density, finer lines, spaces and high pad connection density per unit area. Also these boards with more components assembled and play an outstanding role in miniaturization and are widely used for infotainment systems.



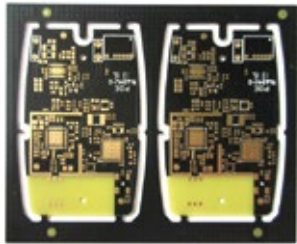


High Frequency High Speed PCBs

Multi-layer PCBs



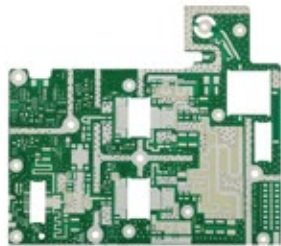
8 Layer, FR4, Immersion Gold,
1.6 mm thickness,
0.15mm Min hole
1oz copper thickness,
Black soldermask,
Yellow silkscreen



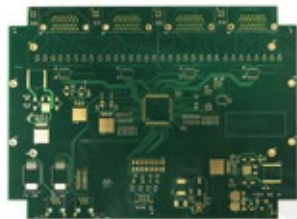
6 Layer, FR4, Immersion Tin
1.6mm thickness,
0.15mm Min hole
1oz copper thickness,
Black soldermask,
White silkscreen
Impedance control



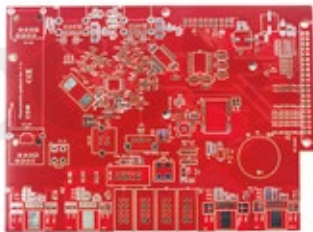
14 Layer, FR4, Immersion Gold
1.6mm thickness,
0.15mm Min hole
1oz copper thickness,
Green soldermask,
White silkscreen



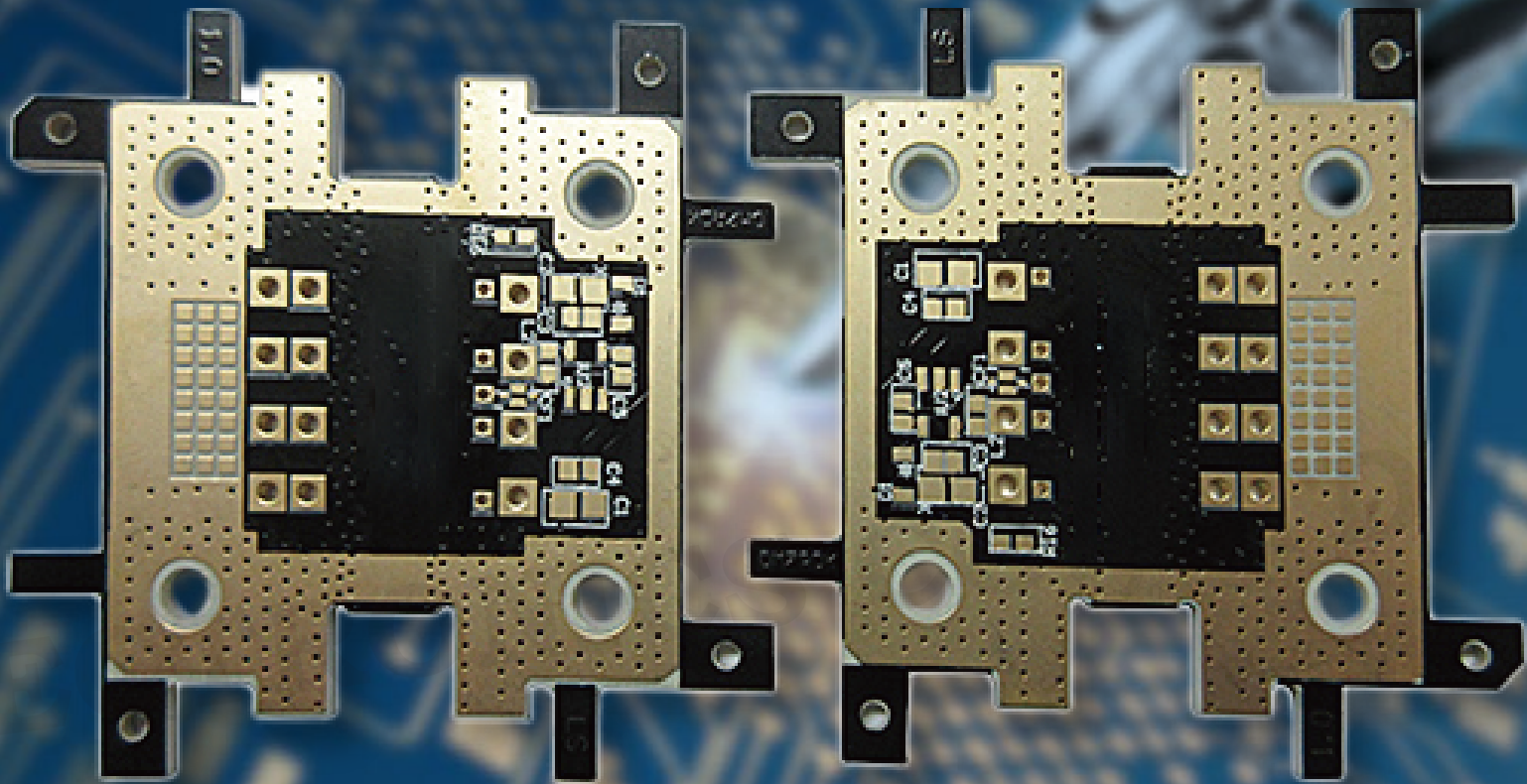
12 Layer, FR4, HASL,
1.6mm thickness,
0.15mm Min hole
1oz copper thickness,
Green soldermask,
White silkscreen
Laser drilling+Mechanical Drilling

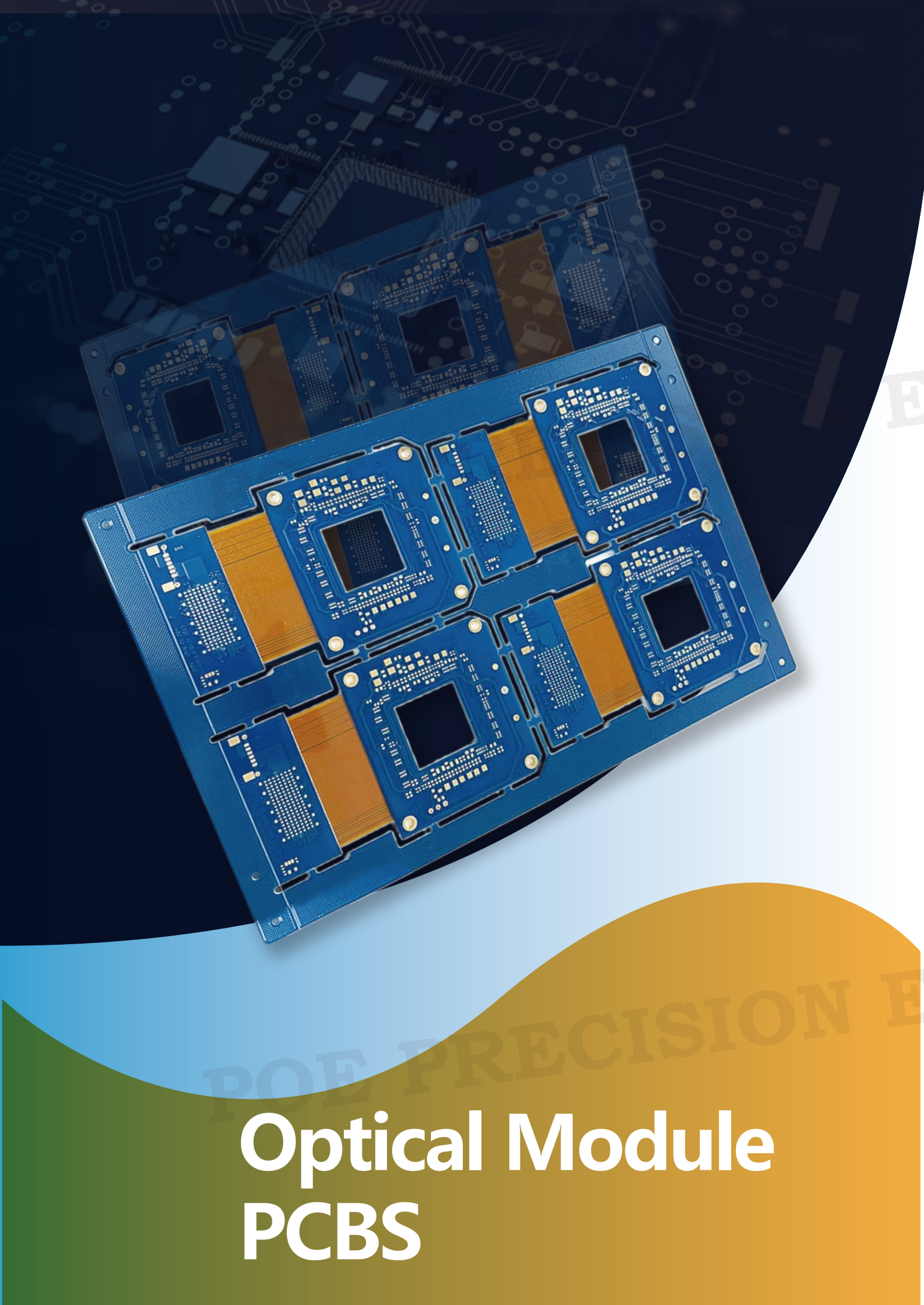


14 Layer, FR4, Immersion Tin
1.6mm thickness,
0.15mm Min hole
2oz copper thickness,
Green soldermask,
White silkscreen



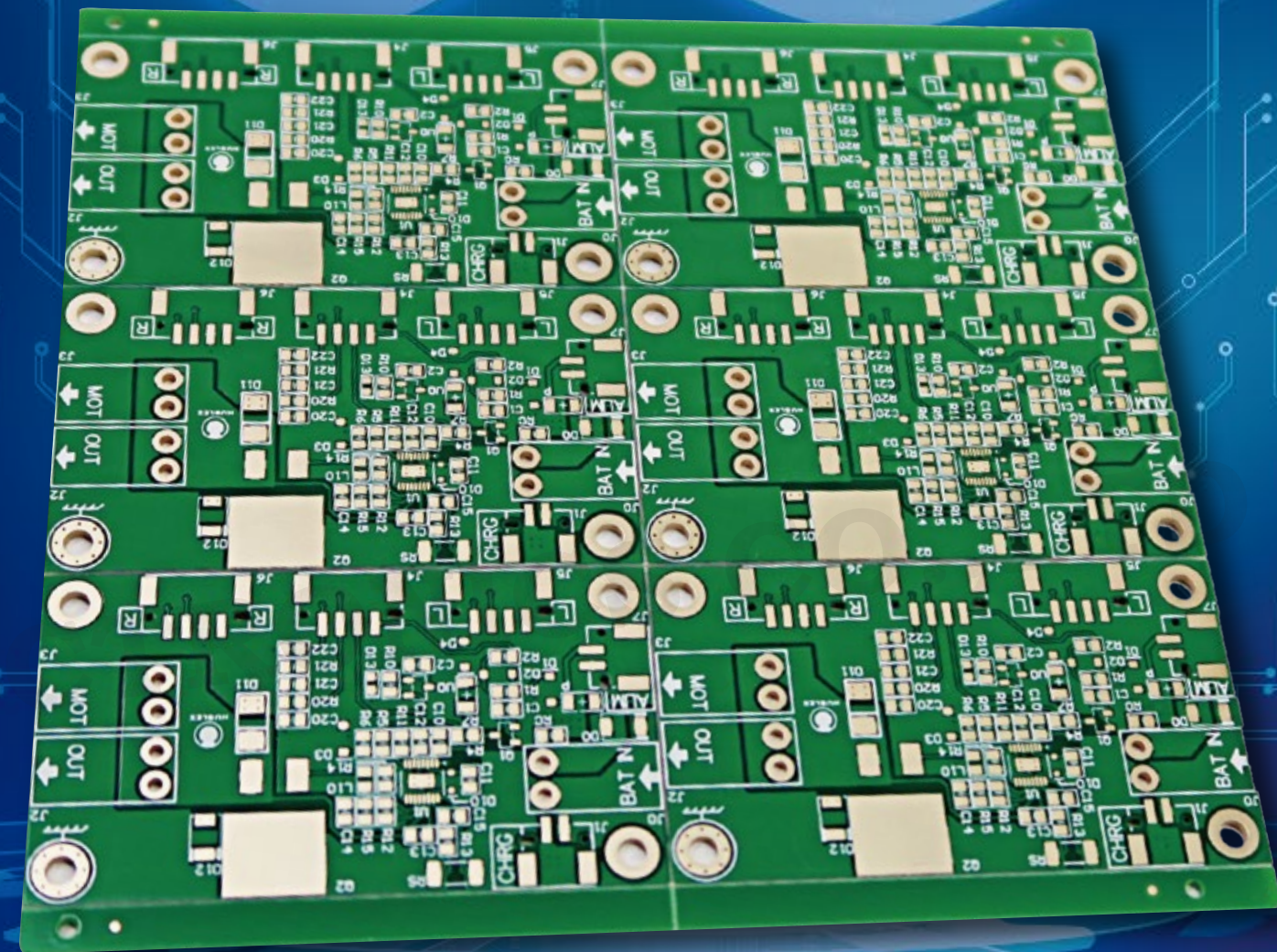
8 Layer, FR4, HASL
1.6mm thickness,
0.15mm Min hole
1oz copper thickness,
Red soldermask,
White silkscreen



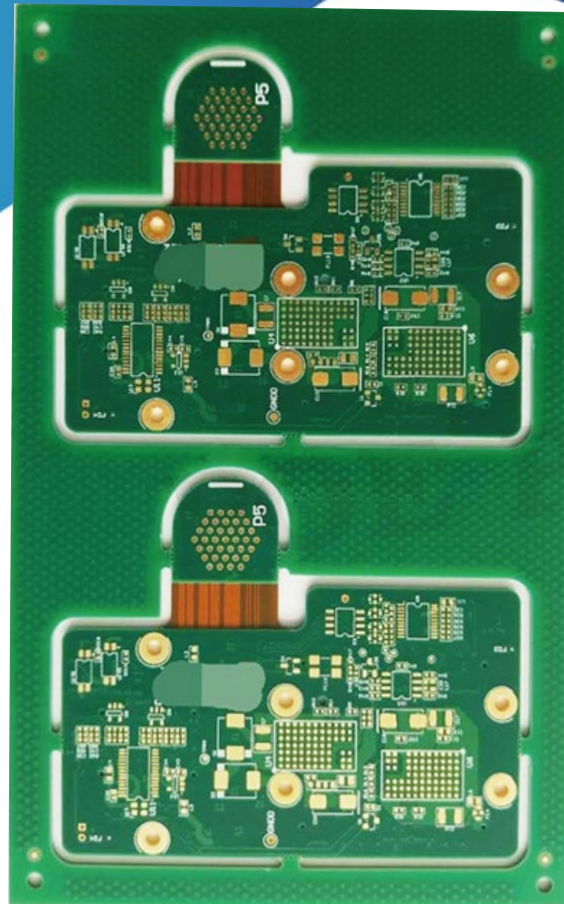


**Optical Module
PCBS**

5G Communication PCBs

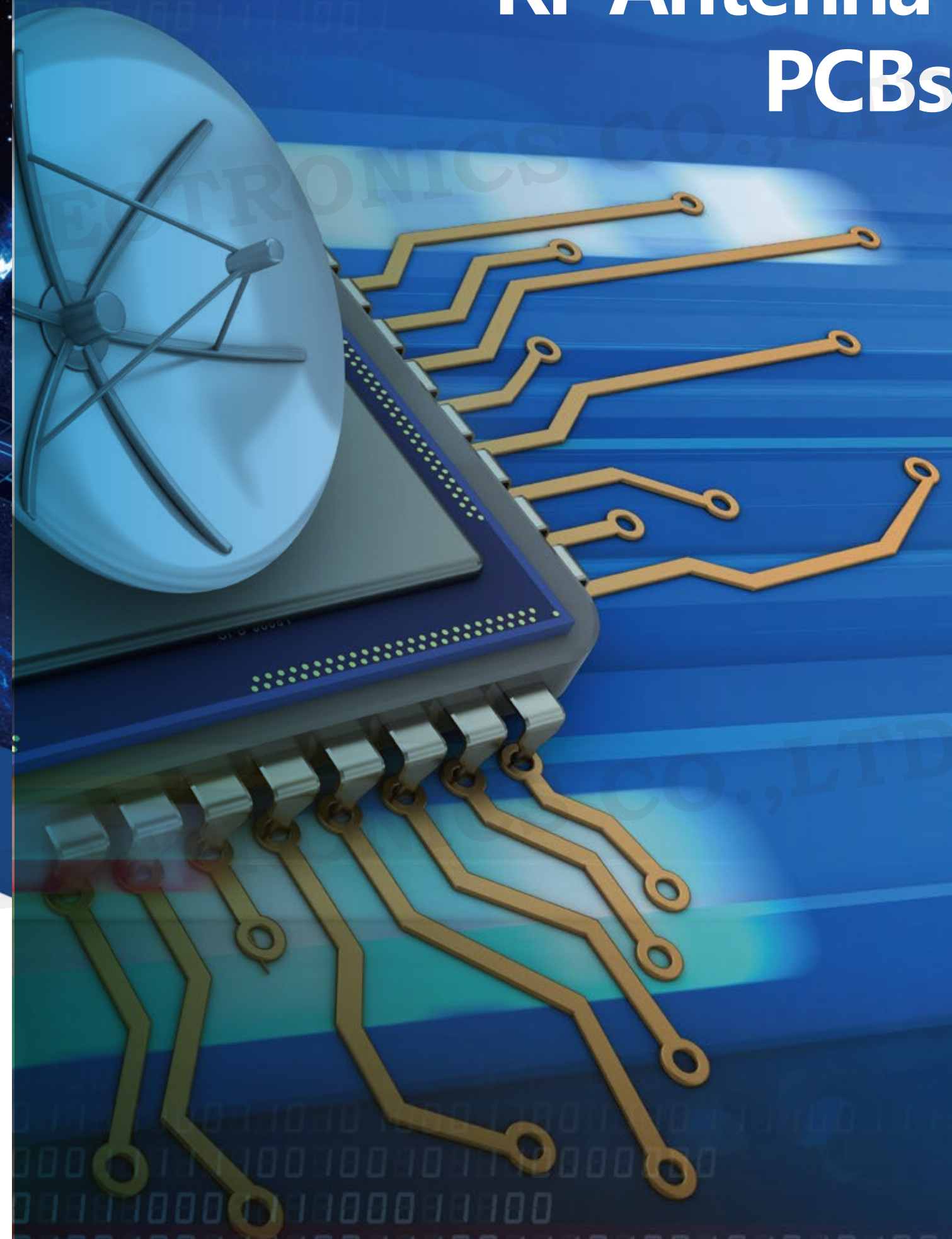


Aerospace PCBs

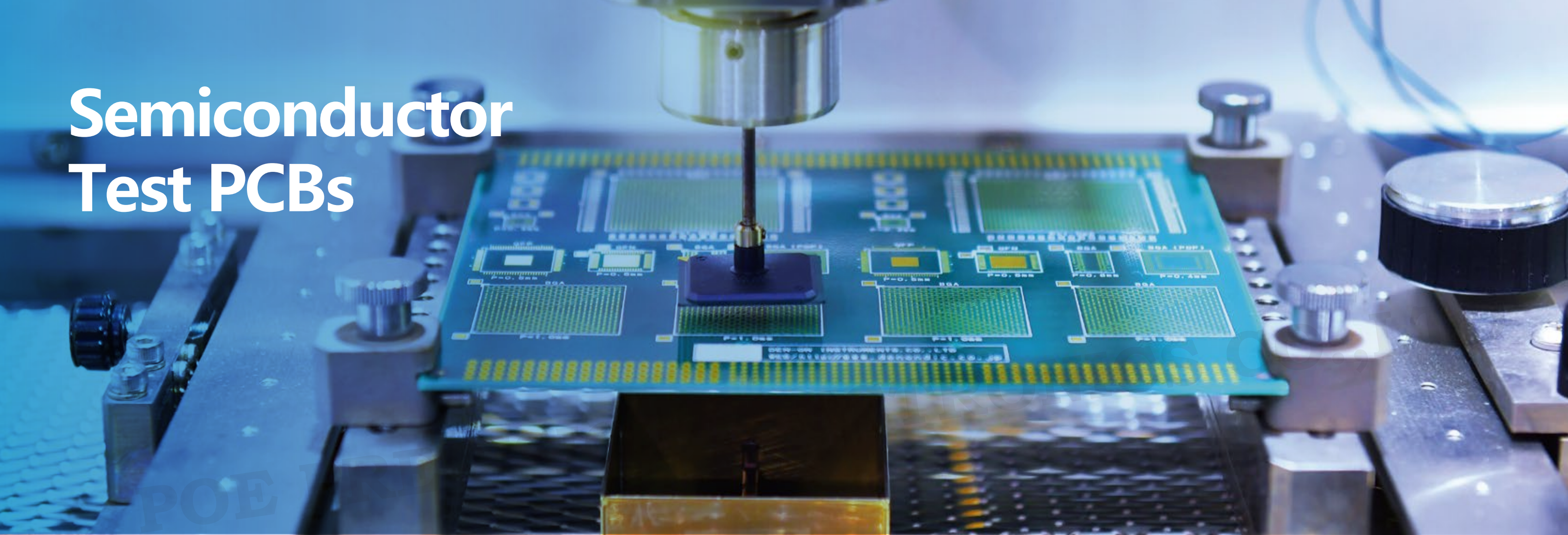


POE PCB is used in a variety of aviation equipment including planes, space shuttles, satellites and radio communications systems.

RF Antenna PCBs



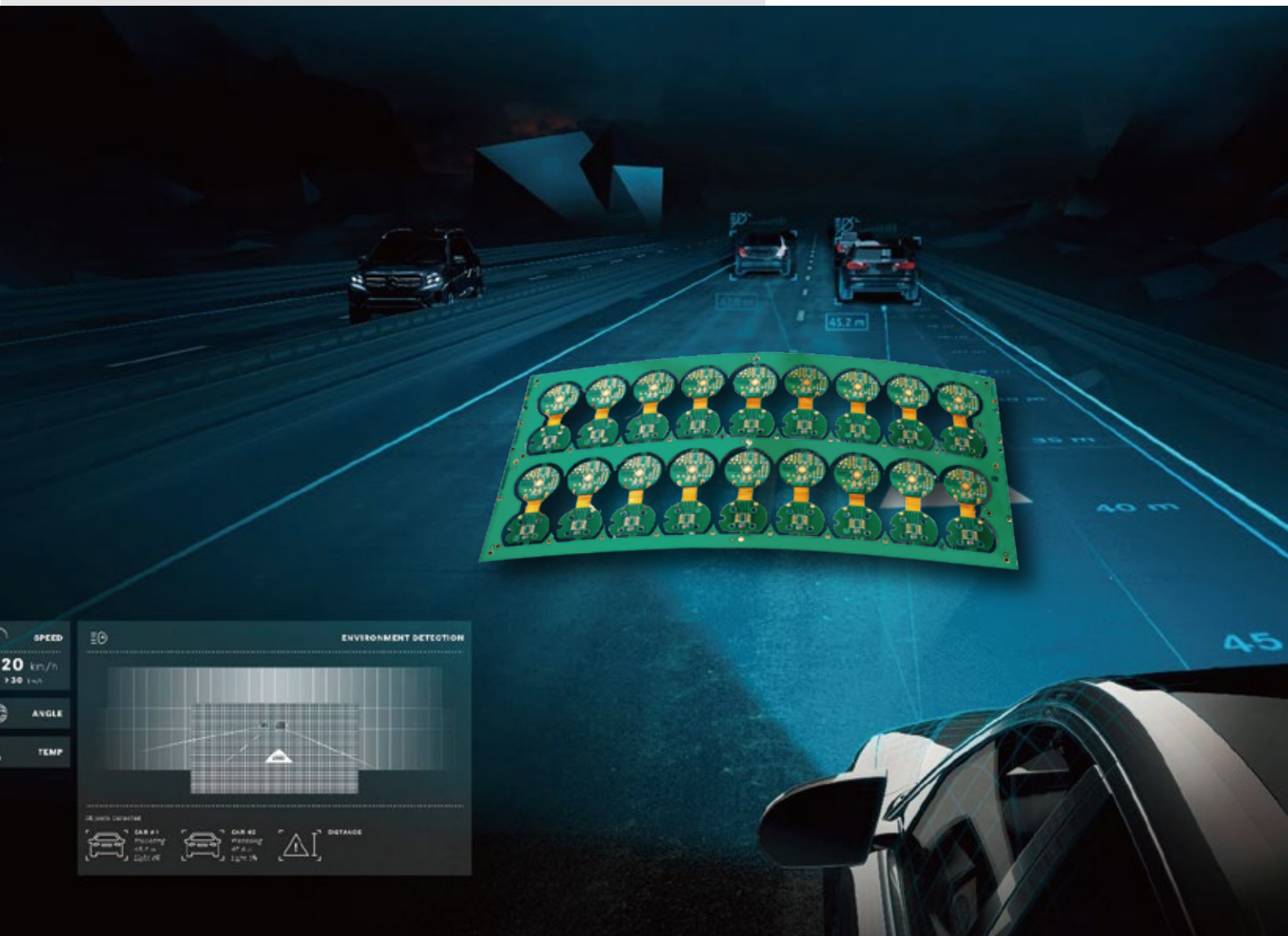
Semiconductor Test PCBs



These industries have high-power machinery and equipment, which are driven by high-power and high-current-driven circuits. For this reason, most of customers choose POE to get the best quality PCB products.

Industry Control PCBs

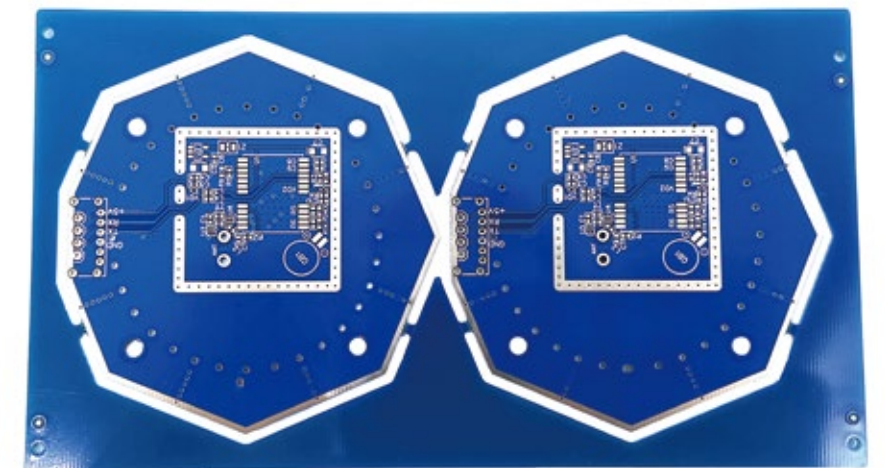
Rigid-Flex PCBs



These are circuit boards combined of rigid and flexible boards, they are usually implemented in light systems LED lighting, medical device, communication, aviation, industrial control, automobile and so on.



UAV PCBs



PCB QUICK TURN PROTOTYPE

POE offers rapid
PCB prototyping
for your research
work.

1



2



3



4

The latest lead time schedule for the standard PCB orders

PCB Order Quantity (m2)	Regular Time (Days)	Fast Service (Hours)
0- 50 pcs & < 1m2	3 - 4 Days	24 Hours
1m2 - 5m2	5 - 6 Days	3 - 4 Days
5m2 - 10m2	6 - 7 Days	4 - 5 Days
More than 10m2	8 - 10 Days	5 - 6 Days

The portfolio of PCBs we produce contains a broad variety of products; from 2L PCBs to highly advanced HDI and flex boards. Even though the PCBs we produced differ a lot regarding functionality and areas of use, they all have one thing in common. The common denominator for all PCBs is that our experts oversee that the production – from prototyping up to volume – is working according to our processes and product specification.

POE do quick turn prototype for worldwide customers. You may choose other time schedules to fit your budget if your work timeframe is not that tight. We offer 48-hour and 72-hour shipping too.

Being quick in delivery never compromises on the quality. With our stringent test procedures, you can be assured that you will be satisfied with our PCB for your high-tech work. Apart from the quality, we can almost beat every other fabricator on prices, which is critical for your work as you may need tens of hundreds of PCBs to finalize your research and design. If you find any other fabricators who offer lower prices, please kindly let us know and we will beat them.

The latest lead time schedule for the advanced PCB orders.

Layers	PCB Order Quantity (m2)	Regular Time (Days)	Fast Service (Hours)
2 Layers	<1 m2	5 Days	48 Hours
	1-5 m2	7 Days	
	>5 m2	8 Days	
4 Layers	<1 m2	5 Days	48 Hours
	1-5 m2	7 Days	
	>5 m2	12 Days	
6 Layers / 8 Layers	<1 m2	7 Days	72 Hours
	1-5 m2	9Days	
	>5 m2	12 Days	
10 Layers	<1 m2	10 Days	96 Hours
	1-5 m2	10Days	
	>5 m2	15 Days	

We shorten the delivery time while guaranteeing quality, produced by chemical processes for pads and vias metallization, refuse conductive adhesive technology to save costs, each order must go through 70 minutes of copper plating, AOI, and probe test, and we take advantage of internationally known base materials. In addition to the reduction in lead time, POE not only reduce the price of small batch PCB, but also the freight cost for DHL parcel less than 2KGS. We offer the first sample freight for free with a worldwide shipping method.

Materials we use for prototype PCBs

Items	PCB Prototype capacity (area < 1m2)	Small and medium batch (area > 1m2)	
	High Halogen -free CTI	shengyi 1151G (CTI≥600V)	shengyi S1151G (CTI≥600V))
	High CTI	shengyi S1600 (CTI≥600V) Kingboard KB6160C	shengyi S1600 (CTI≥600V) Kingboard KB6160C
	Special Material (High low temperature)	shengyi SH260	shengyi SH260
	High Tg FR4	S1000-2, S1000-2M,IT180A	S1000-2, S1000-2M,IT180A
	Ceramic powder filled high frequency	Rogers4003, Rogers4350, Arlon25N,shengyi S7136	Rogers4003, Rogers4350, Arlon25N, shengyi S7136
	PTFE high frequency material	Rogers, Taconic, Arlon,Taizhou wangling	Rogers, Taconic, Arlon,Taizhou wangling
	High Frequency PCB PP	RO4450 0.1mm,shengyi Synamic6,	RO4450 0.1mm,shengyi Synamic6,

NO MOQ



- Our testing capabilities are listed in the following table:

Minimum Continuity
Resistance: 0.1 Ohms

Maximum Test
Voltage: 1000 Volts

Maximum Isolated
Resistance: 25 M Ohm
- 2 G Ohm

- Electrical Test Pitch
(Fixture): 0.020"

Electrical Test Pitch
(Fixture): 0.020"

Electrical Test Pitch
(Flying Probe) 0.004"

- Depending upon both the design and the cost, our testing methodology will either be:

1.The Bed of Nails Fixture Method,
=Mass Production PCBs

2.The Flying Probe Method
=Samples and Prototypes PCBs

”

POE performs 100% electrical testing on all bare pcb's produced. Its facilities are in accordance with IPC-9252 specifications. We either use the Bed of Nails Fixture method or the Flying Probe method to perform the testing in our circuit board manufacturing process.

POE PCB ELECTRICAL TESTING

To test the PCBs, we require the NETLIST file. Although we create a reference netlist from the customer's original Gerber data during PCB fabrication, we always prefer to receive the CAD file based on the netlist for comparison. Since a CAD-based netlist is generated before PCB routing, it provides another layer of checking (against the Gerber output). This allows us to catch any PCB faults introduced in the event of an error in the Gerber files. For complete PCB assembly projects, this helps to ensure that the boards are 100% correct before all components are installed.

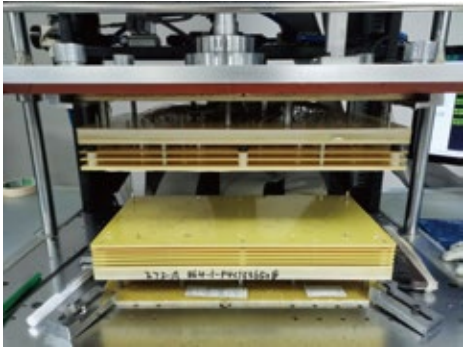
Sometimes customers are unclear about the difference between Fixture (Bed of Nails) vs Flying probe testing, as well as the costs associated with them. The following example will clarify the difference between the two methods, as well as the cases in which one or the other might yield a more efficient PCB assembly process.

For this example, let's assume there are 3,500 test points with 750 nets installed.

E-Test Fixtures (bed of nails)

(All points are tested simultaneously)

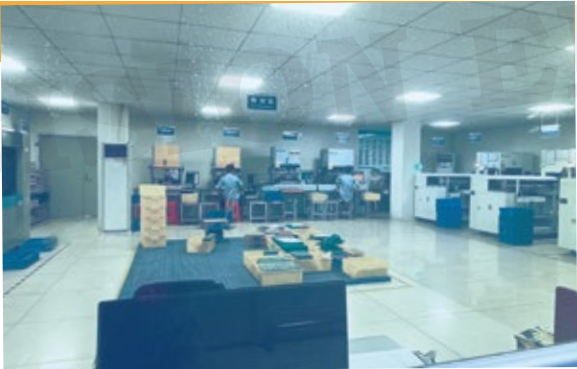
Electrical test pitch = 0.020"
Setup time: 30 minutes
Learn time: 0 minutes
Debug / check for missing pins: 10 minutes
Test time per board: 40 seconds



Flying Probe

(All points are tested simultaneously, however, this process involves both setup time to create the fixture and additional costs associated with the cost of materials.)

Electrical test pitch = 0.004"
Setup time: 0 minutes
Learn time: 20 minutes
Test time per board: 6 minutes
Test time per board: 40 seconds



The points are tested one at a time.
There is no setup time because the machine learns the program as it operates.

Testing Report

Upon request, we supply the following reports free of charge

- 1. Micro Sections
- 2. X-Section Reports
- 3. Cross Section Reports
- 4. Solderability Report
- 5. TDR Test Report (For Impedance Controlled PCBs)
- 6. Hipot Test (For all cores < 0.003")
- 7. Peel Strength Report
- 8. COC
- 9. RoHS Compliance Report
- 10. UL Certificate

✓ If Fine pitch is not a concern (depending on the design), our threshold is 15 manufacturing PCB Panels. Therefore, we would select a testing method based on the following thresholds:

- 1. Flying Probe: less than 15 Manufacturing Panels
- 2. Test Fixture: more than 15 Manufacturing Panels

Impedance control is matching PCB trace dimensions and locations with the properties of the substrate material to make sure that the strength of a signal traveling along a trace is within a required range. It consists in measuring the impedance of certain traces when the PCB is manufactured and making sure they are within the limits given by the designer.

The impedance of a PCB line is determined by its inductance and capacitance inductance, resistance and conductance. The main factors affecting the impedance of the PCB line are the width of the copper wire, the thickness of the copper wire, the dielectric constant of the dielectric, the thickness of the dielectric, the thickness of the pad, the path of the ground and the surrounding lines, the impedance of the PCB ranges from 25 to 120 ohms.

Traces and slabs constitute the control impedance. PCBs are often constructed in multiple layers and the control impedance can be used in different ways. However, whichever method is used, the impedance value will be determined by its physical structure and electronic characteristics.

Width and thickness of the signal trace height of the core or pre-filled material on both sides of the trace Configuration of traces and slabs Insulation constant of core and pre-filled material.

IMPEDANCE CONTROL



Microstrip

Microstrip is a type of electrical transmission line that can be fabricated using printed circuit board technology and is used to convey microwave-frequency signals. It consists of a conducting strip separated from a ground plane by a dielectric layer known as the substrate.

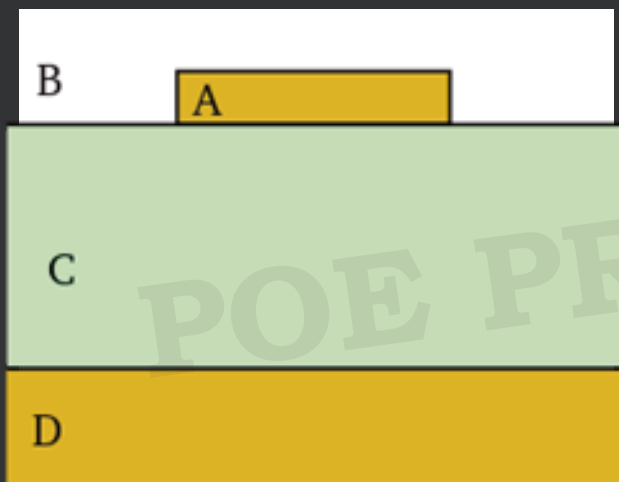
Cross-section of microstrip geometry. Conductor (A) is separated from the ground plane (D) by dielectric substrate (C). Upper dielectric (B) is typically air.

For the lowest cost, microstrip devices may be built on an ordinary FR-4 (standard PCB) substrate. However, it is often found that the dielectric losses in FR4 are too high at microwave frequencies and that the dielectric constant is not sufficiently tightly controlled. For these reasons, an alumina substrate is commonly used.

Microstrip lines are also used in high-speed digital PCB designs, where signals need to be routed from one part of the assembly to another with minimal distortion, and avoiding high cross-talk and radiation.

Microstrip is one of many forms of planar transmission line, others include stripline and coplanar waveguide, and it is possible to integrate all of these on the same substrate.

A differential microstrip—a balanced signal pair of microstrip lines—is often used for high-speed signals such as DDR2 SDRAM clocks, USB Hi-Speed data lines, PCI Express data lines, LVDS data lines, etc., often all on the same PCB. Most PCB design tools support such differential pairs.

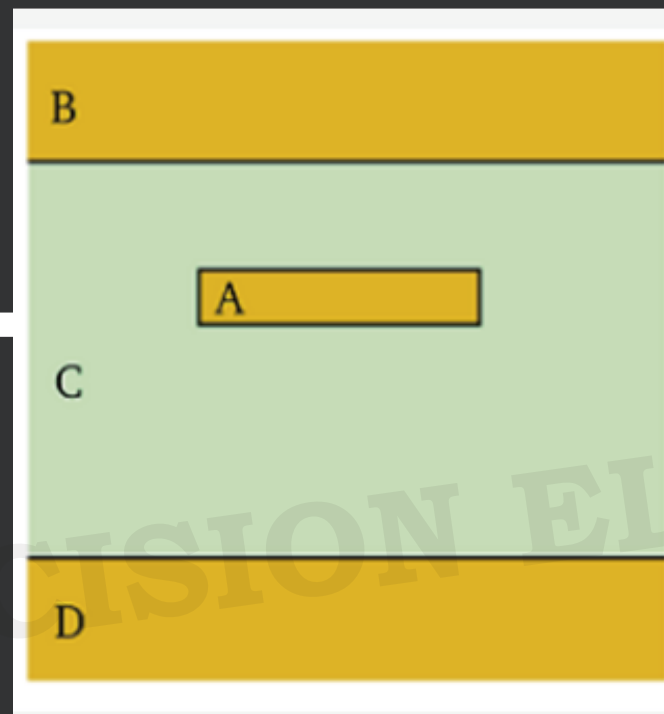


Stripline

A stripline circuit uses a flat strip of metal that is sandwiched between two parallel ground planes. The insulating material of the substrate forms a dielectric. The width of the strip, the thickness of the substrate, and the relative permittivity of the substrate determine the characteristic impedance of the strip which is a transmission line. As shown in the diagram, the central conductor need not be equally spaced between the ground planes. In the general case, the dielectric material may be different above and below the central conductor.

Cross-section diagram of stripline geometry. The central conductor (A) is sandwiched between ground planes (B and D). The structure is supported by a dielectric (C).

To prevent the propagation of unwanted modes, the two ground planes must be shorted together. This is commonly achieved by a row of vias running parallel to the strip on each side.



PCB CERTIFICATES SHOWS



RoH2.0

ISO9001: 2015

ISO13485: 2016

REACH

UL

Strict PCB quality management system

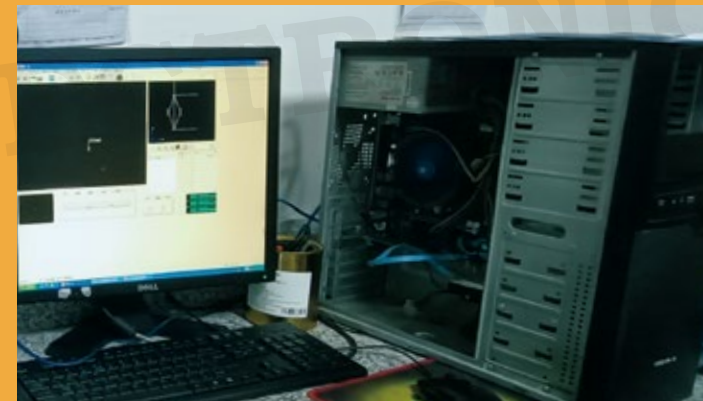
1. UL certification.
2. ISO9001: 2015 quality System certification.
3. ISO13485:2016 quality system certification.
4. Manages the processing of fixed products in strict accordance with IPC6012II / military standard / customer standard / enterprise internal standards.
5. Strict customer information confidentiality management system.
6. RoHS.Reach quality system certification.



QUALITY CONTROL EQUIPMENTS



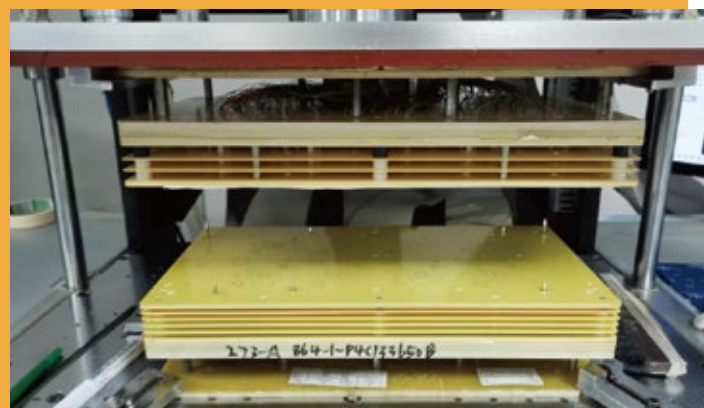
AOI



Impedance Tester



X-Ray



E-Test



Probe Flying Test



Ion Stain Tester



Function Test



FAI

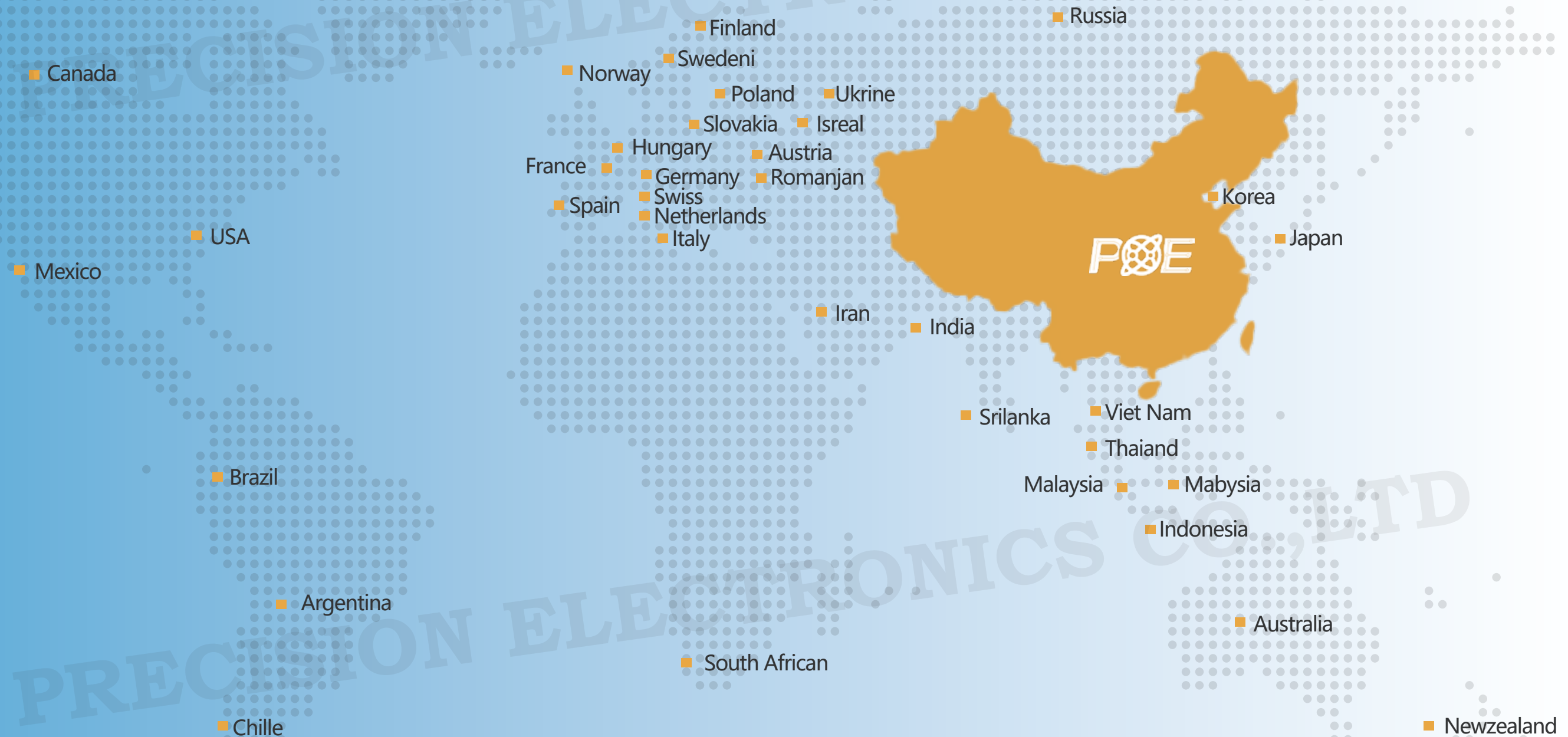


Automatic Etest

MARKET DISTRIBUTION

Products are exported to more than 200 countries and regions such as Europe, America, Australia, the Middle East, Southeast Asia.

With excellent quality and fashionable products, we are confident to go to the world and build POE's global brand strength.



CUSTOMER REVIEWS



Hi Lrisel

The shipment arrived some days ago and just got to check it. Summer holidays started in Hessen so there is time to spend with the family 😊

Quality of the boards looks very good. I will do some electrical tests later this week and I am confident they work out fine.

Thank you for the friendly and professional transaction.

I will get back to you for a re-order in time.

Kind regards,

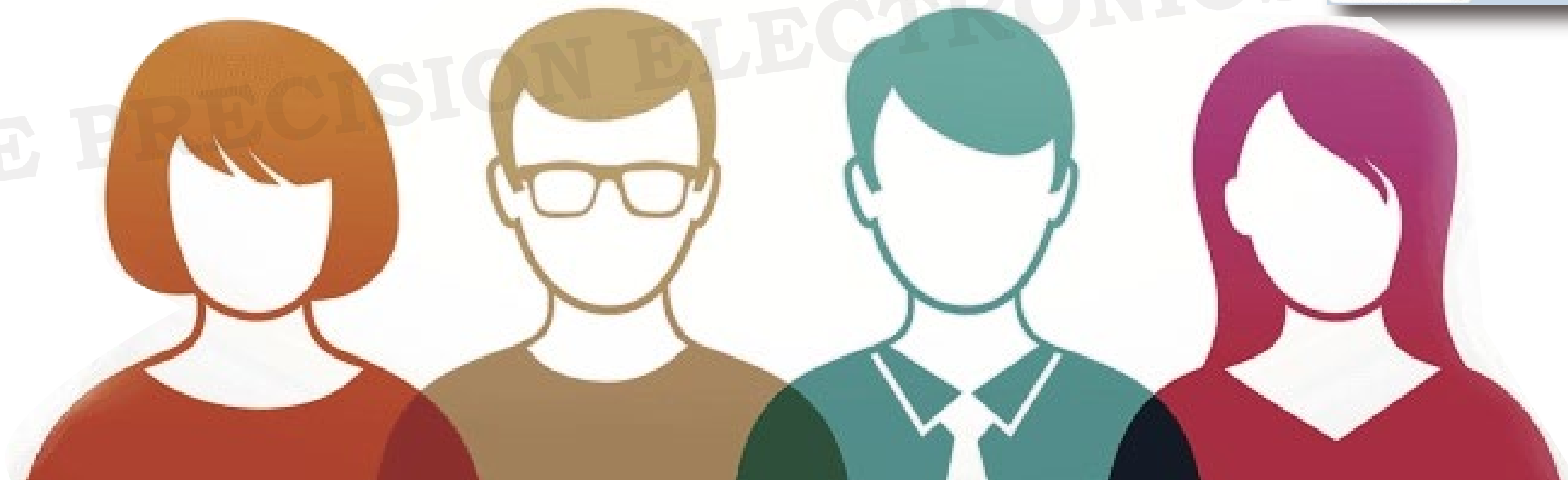
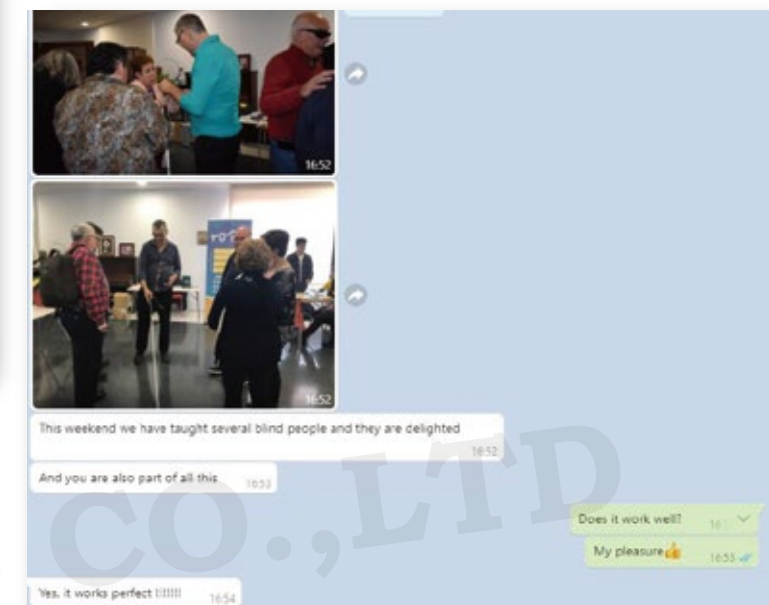
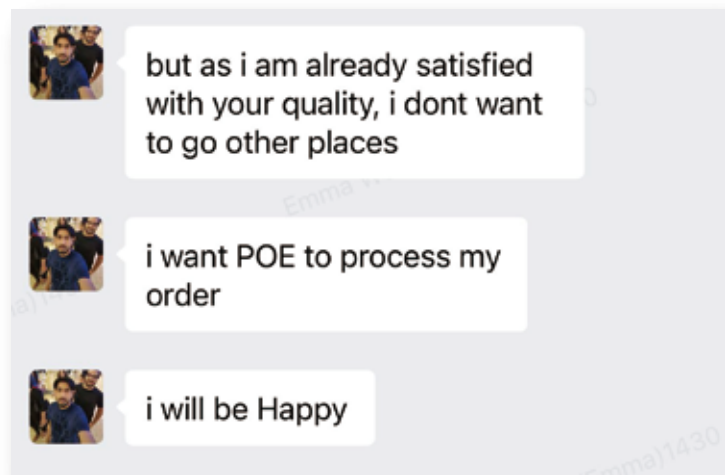
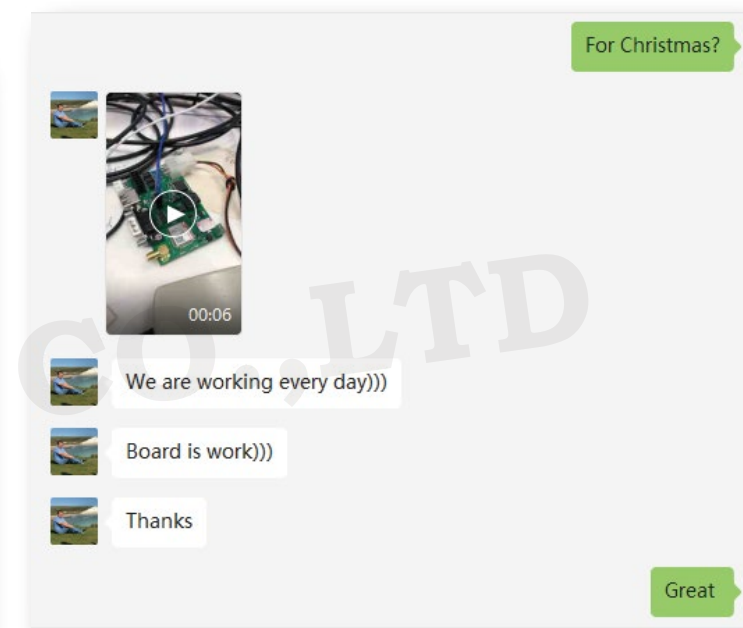
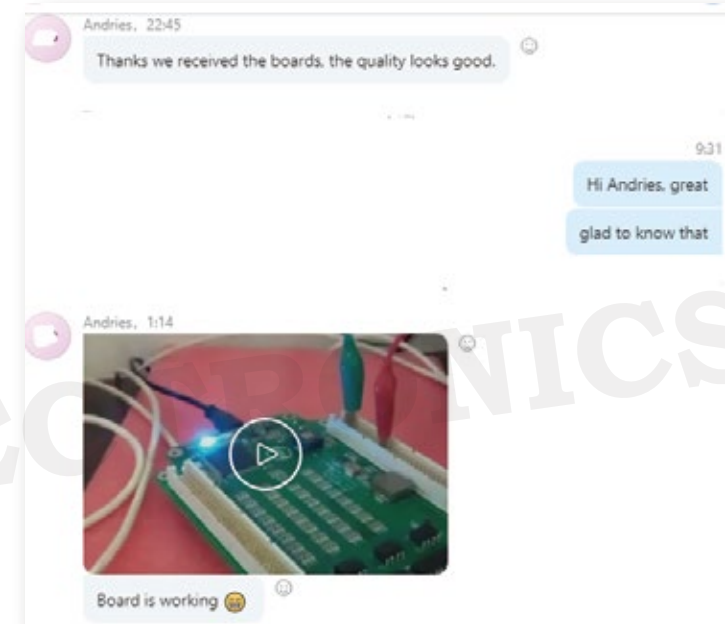
Wolfgang

Dear Jessie,

Thank you very much for your mail.

My compliments to your engineers. They did a very good job in helping me to correct the errors I made.

It shows the quality of your company. 😊



”



Responsibility

Providing you with the highest-quality products and services possible in a timely fashion and at a competitive price

POE is more actively practicing social responsibility and exploring sustainable development roads with customers, employees, partners, the environment and communities. In this process, POE will strive to continuously create economic value through sustainable development management, and work with various stakeholders to address the social and environmental challenges of global development through cooperation.

Being first exposed to the concept of sustainable development of the system in 2015, POE has continuously improved its social responsibility concepts and practices and, formed a social responsibility management model based on international standards such as ISO9001:2015, etc, of the important long-term development strategies. In 2016, we improved on the previous social responsibility management model and established a CSR management committee to promote the company to better identify and respond to the opportunities and challenges encountered in the practice of social responsibility.

At this stage, POE will focus on providing a sustainable development connection foundation for the Internet of everything, and commit to making the connection more valuable, promoting green development and building a better world.

CSR Statement



We implement green environmental protection measures. It pursues energy conservation, safety, and environmental protection in each and every link in our operations and pro-actively promotes the concept of manufacturing being dedicated to the balance between the needs of mankind and nature.

We follow relevant laws, regulations and other requirements.

Reducing material and energy consumption and reasonably disposing of waste to build on the foundation towards achieving clean production.

Ensuring a good production environment to guarantee product safety and employees' health.

Providing employees with training that spreads our environmental direction to strengthen environmental awareness and fulfill environmental responsibilities.

Periodically reviewing our environmental management system in order to continue to improve it and prevent any negative impact on the environment.



ONICS CO.,LTD

Environmentally friendly



Employee health and safety are the foundation of the corporate culture at POE. We promote the values of people-oriented and safety first and encourage employees to regard their own health and safety.



The workshop is the core of the PCB factory and the "home" we rely on. Regular training in the workshop environment and personnel requirements are indispensable and important links.



POE adheres to clean production in accordance with the environmental management system and pays attention to the environment and safety control in the production process and the labor protection of employees. We rigorously implement relevant laws and strictly including the "Safe Production Law," the "Fire Prevention Law of PRC", and the "Code of Occupational Disease Prevention", to establish safe production responsibilities at every level.

Lead Free

POE's RoHS Solution

In today's era, environmental responsibility is a key aspect of business innovation. POE provides products and solutions to help customers grow in their own industries. Our RoHS-compliant PCB boards do not contain lead, and we follow the worker's contract and directives of recycling rules. Creating the future involves not only technological advancement but also compliance with standards for creating a safe industry and the planet.

POE has been making lead-free boards since 2012. Our lead-free boards are made from laminates with high-Tg to withstand the increased temperature and time required well during assembly. The surface finishes are also RoHS compliant.

Lead-Free PCB Assembly

Lead-Free RoHS compliant PCB assembly services have been a part of our capabilities for years. Our long history in electronics manufacturing provides our customers with exceptional quality and high yields using this new technology every day. Attention to detail along with unsurpassed customer service has contributed to POE's long-term collaboration with customers.

In addition to Lead-Free processing, POE also offers high-quality SnPb soldering solutions for product that do not meet RoHS requirements.



RECRUIT FOREIGN AGENT OFFICE/ FUTURE MARKET OUTLOOK

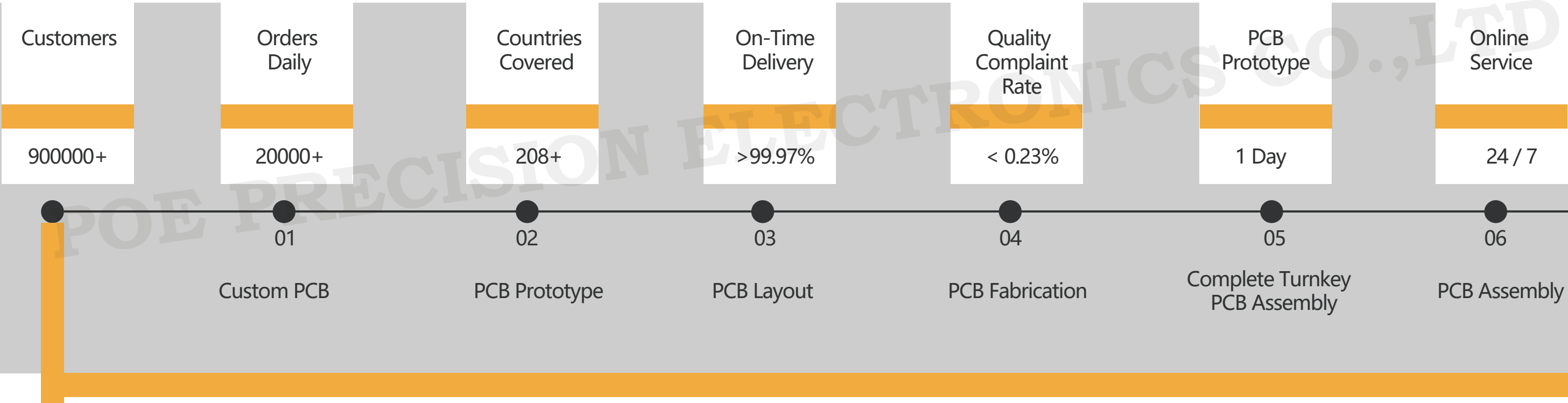
We Can Provide Services:

- 1. PCB Manufacturing
- 2. PCB Assembly
- 3. PCB Fabrication
- 4. Advantages of Complete Turnkey PCB Assembly
- 5. Competitive Capabilities

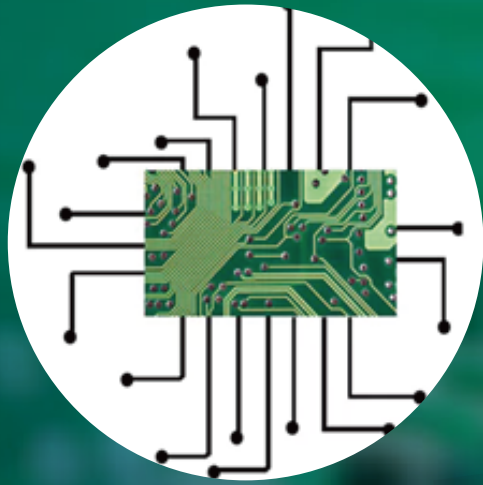
POE “Partner Of your Electronics”
POE has been at the forefront of the PCB and PCBA industry.
Please feel free to contact us if you are interested in.

★★★★★

We sincerely hire global agents and offices in Europe,
United States and Middle East



PCB Manufacturing



POE manufactures bare boards with various sizes, technologies, types and complexities! We can serve high-mix and complex custom boards with low volume or high-volume circuit board requirements with our in-house manufacturing, testing, quality control and supply chain support.

PCB Prototype

PCB Prototype is the basic method for making the circuit boards because there are no proper circuit boards without design. Our experience in this genre allows us to build PCB prototypes in just 24 hours.

Our Deliverables

1. PCB Prototype service - 2 layers

Tin Lead Reflow (or Silver) (or Gold) No Silkscreen No Solder mask 23 Preset Drill Sizes up to 200pc PCB prototype.



2. PCB Prototype service - 2,4 and 6 layers

SMOBC (HASL) (or OSP) (or Immersion Gold) + Silkscreen + Soldermask 23 to 24 Preset Drill Sizes up to 200pc PCB prototype.



PCB Assembly

We are working successfully for our customers in varied industries like aerospace, telecommunication, defense, medical, automobile and robotics. We have developed a personalized approach at every stage of the PCB assembly process.



PCB Fabrication

POE has adopted advanced methods and the latest technologies of PCB fabrication, which can ensure the performance of fabricated circuit boards. Our experts are capable of managing every complex requirement of PCB fab services. We understand every need of our client and offer multilayer PCBs, quick turn PCB fab, rigid-flex PCBs, RF circuit boards, ATE printed circuit boards, custom PCB fabrication and so on.

Advantages of Complete Turnkey PCB Assembly

Multilayer PCB

We are equipped to handle complex boards with up to 40 layers

Quick Turn PCB Fabrication

Quick Turn PCB is always an imperative when it comes to PCB fabrication. After all quick go-to-market, is a big source of competitive advantage.

Prototype PCB Fabrication

PCB is crucial to the success any electronic device. Prototype PCB Fabrication is the perfect answer to avoid any costly mistakes.

PCB Functional Testing

PCB functional testing is the most crucial procedure or step to ensure zero defect printed circuit boards. When it comes to any electronics product, quality and reliability are key.

LED Circuit Boards

With PCB technology evolving, LED circuit boards are exciting product innovation for consumer and industrial applications.

High Frequency PCBs

They find use in a variety of high-speed design applications that require a frequency range of 500MHz to 2GHz.

Rogers PCB

Such material is also the need of the hour when signal integrity and impedance matching are of utmost importance.

High Temperature PCB

When fabricating PCBs for high temperature applications, the glass transition temperature of PCB is extremely important to consider.

Metal Core PCB

A metal core PCB also referred to as a thermal PCB and MCPCB, differs from the traditional FR4 printed circuit boards in that incorporates a metal material as its base.

RoHS Circuit Boards

We provide UL approved circuit boards with different types of finishing which meet the requirements of RoHS, REACH and other metal regulations.

Bare Board PCB

A bare board PCB (printed circuit boards) and the bare board testing play critical roles in PCB creation.

Rigid Flex PCBs

Rigid Flex PCBs are a great choice for ultra-thin packaging needs. Rigid-flex printed circuit boards is a hybrid board that integrates elements from both hard boards, and flexible circuits.

Flexible Circuit Boards

Flexible circuit boards are your go-to-choice when you need PCBs to offer you the freedom of shaping them into different configurations.

Rigid Printed Circuit Boards

Widely used, rigid PCBs are made up of a solid substrate material, which ensure that the circuit board isn't distorted.

RF Printed Circuit Boards

manufacturing, it has to be RF Printed Circuit Boards or popularly it known as RF PCBs.

Advantages

Take Less Time in PCB Assembly

Complete turnkey PCB assembly is a fast solution for companies that need an effective form of electronic assembly. When the PCB turnkey Assembly is introduced, it reduce the amount of time and provided overseas solutions to the clients that make the PCB assembly three times faster. With our complete turnkey services, get the best printed circuit boards in minimal time.

Cost-Effective PCB Assembly

Turnkey PCB assemblies have given several ways of reducing the cost in manufacturing. You can get the finest printed circuit board delivered without any trouble that can take place during the procurement process. The best turnkey PCB assembly experts can prepare the printed circuit board with all its components and reduce manufacturing costs.

Versatile Services for PCB Assembly

If you switch to turnkey PCB assembly, you can get several services from the manufacturer that are efficient and cost-effective methods of the printed circuit board assembly.

POE is an ISO 9001 2015, ISO 13485 2016, IPC, ROHS, UL and SGS certified company that focuses on the quality of printed circuit boards.



Competitive Capabilities

If you require that we sign a Non-Disclosure Agreement (NDA), please send it to us prior to sending your files and we will be happy to accommodate.

Our Office Hours are Monday through Saturday from 9:00 AM to 20:00 PM China time.
We are looking forward to working with global agencies and offices to enhance POE strength and POE brand. Working together and making progress together with world-wide customers



AOI Automatic Optical Inspection

Automated optical inspection (AOI) is an automated visual inspection of printed circuit board (PCB) (or LCD, transistor) manufacture where a camera autonomously scans the device under test for both catastrophic failure (e.g. missing component) and quality defects.



X-Ray Inspection

Not only does X-Ray inspection detect issues in PCB assembly, but the analysis of an X-Ray image can help to determine the root cause of a given defect, such as insufficient solder paste, skewed part placement, or improper reflow profile.



Automatic Solder Paste

With high accuracy and high stability, GKG G5 followed in the SMT industry is the development trend of a new generation of fully automatic printing machines.



Pick & Place Machine

Once solder paste is applied to the bare PCBs, they are moved to POE's automated Pick & Place machines for the actual mounting of components on their associated pads.



Manual Soldering

POE employs a staff of highly skilled manual soldering specialists to take care of any such requirements, who provide consistent and reliable workmanship even up to IPC-A-610 Class 3 Standards.



Reflow Oven

Reflow soldering is the most widely used method of attaching surface mount components to printed circuit boards (PCBs). The aim of the process is to form acceptable solder joints by first pre-heating the components/PCB/solder paste and then melting the solder without causing damage by overheating.



Wave Soldering Machine

Wave soldering is a bulk soldering process used for the manufacturing of printed circuit boards. It is mainly used in soldering of through hole components.



Plate Washer

The automatic PCB stencil printer is used to print solder paste onto circuit boards automatically to save labor cost and achieve full automation for SMT assembly line. It's used after PCB loader machine.

POE PCB JDM DESIGN SERVICE

JDM means joint development manufacturing, which is based on OEM and fills the gap between OEM and ODM. For OEM the subcontract manufacturer doesn't need strong design capability. On the contrary, they just need very strong manufacturing capabilities, skilled workers, advanced component supply chain management capabilities, and low price. Then OEM factory organizes the manufacturing as per the customer's drawings. But ODM is totally different and requires the manufacturer to have a very strong design capability. But ODM can waste time and energy of the manufacturer on some uncertain projects and also cause the manufacturer couldn't gather enough sources to serve all customers well, so JDM comes to fill this gap between OEM and ODM. By JDM.



JDM means the customer and manufacturing supplier design and develop a product together. The customer designs and manufactures the distinctive parts. While the supplier accomplishes the design and manufacture of certain modules, along with final box-build assembly. This can create a complex yet rewarding partnership for both the outsourcing enterprise and the JDM. It's a relationship that is built upon collaboration from beginning to end. When the customer designs a product, the manufacturer joins in and is responsible for designing some parts of this product. Then the customer review manufacturer's design is workable or not. By JDM the customer and manufacturer can complement each other's technology weaknesses. The customer can use less cost to get the final design and products, and the manufacturer can also use fewer resources and energy to get better and higher profit projects.

POE offers the best manufacturing and supply chain and also works with customers on product design and manufacturing coupled with the board, mechanical design, software design, manufacturing, and validation to fully address customers' expectations and requirements as well as the needs of various applications.

JDM ODM Solution Service for Startup company and Engineering company