



智领全球  
电子核心  
科技

2023

WISDOM LEADS GLOBAL  
ELECTRONIC CORE TECHNOLOGY

Office:

Room501-502, Fude life Insurance building, Fuzhong 1st Road, Lianhua street,  
Futian district, SZ 518034

Factory:

Floor 3, Jinyuan Industrial Park, No.56 Tangtou Avenue, ShiyanTown, Bao'an, SZ

- WEB1: [www.poe-pcba.com](http://www.poe-pcba.com)
- WEB2: [www.chinapcbsmt.com](http://www.chinapcbsmt.com)
- WEB3: [www.pcbamake.com](http://www.pcbamake.com)
- E-mail: [sales@poe-pcba.com](mailto:sales@poe-pcba.com)  
[orders@pcbamake.com](mailto:orders@pcbamake.com)  
[sales@chinapcbsmt.com](mailto:sales@chinapcbsmt.com)
- TEL: 0755-25312250

////// Jan - Feb

# CATALOG



## OEM Services for PCB and PCBA Since 1996

Business is about building life-long relationships with attentive service, quality products and honest business practices.

Mr Hu Jiwei  
General Manager

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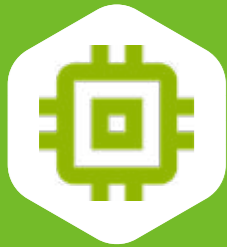
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Customers Remark

# Company Profile

POE China PCB-PCBA-OEM-JDM-ODM  
1-40 layer one stop contract manufacturing facility.

At POE, we strive to provide the most satisfied production service and to be your long term "Partner Of your Electronics". With over 200 diverse, talented and dedicated employees across 5 locations in 4 countries, our vision is to be the most technologically advanced and trusted one stop contract manufacturing solutions provider. We combine an unmatched breadth and depth of end-market experience, technical and design capabilities, manufacturing knowledge, supply chain insights and global product management expertise to enable success for the world's leading brands. We are driven by a common purpose to make a positive impact for each other, our communities, and the environment. POE Manufacturing, your global technology partner.



## MANUFACTURE

POE offers one stop contract manufacturing by making things with global scale and unrelenting quality is anything but simple. We do 1-40layer PCB manufacturing, PCB assembly, components sourcing, programming, testing, cable assembly, SMT stencil, carton, plastic and metal case packaging, 3D case, glue coating and final products ICT test. Managing 700,000+ parts across more than 200 suppliers provides us with key insights into commodity trends, strategies and shortages, so we can mitigate risk for your products. Whether your product requires low-mix/low-volume or high-mix/high-volume manufacturing, we've gotten those — and everything in between — covered. We make end-to-end product development possible, from hardware to software.



## DESIGN

With technology evolving at light speed, time is our most precious commodity. To meet changing needs and new challenges, you need to be able to prototype, test and scale solutions fast. Thanks to our design expertise across numerous industries — including consumer electronics, healthcare, retail, energy and industrial — we can transform blue-sky ideas into practical reality. We bring decades of experience in cutting-edge technologies to reinvent design in every form: manufacturing, automated assembly, products, additive manufacturing and mechanical engineering.



## DELIVERY

In pursuing our vision to be the most technologically advanced and trusted manufacturing solutions provider, we deliver speed-to-market, scale, innovative solutions, high-quality products and excellent customer service — all with an eye on building strong relationships, improving efficiencies and helping you reach your most ambitious goals. This is our promise to you. Our China SMT and PCB facilities plus our total supply chain orchestration solutions deliver end-to-end visibility, instant responses and immediate availability in changing conditions. Supply chain and logistics resilience is the delivered result. All of these add up to one, much bigger result: value. At the end of the day, we measure our success by our ability to deliver unmatched value to all our customers.



A world map with green location pins for POE in USA, Germany, HK, and Singapore. A green box on the right contains the following text:

Head office at: Room501-502, Fude life Insurance building, Fuzhong 1st Road, Lianhua street, Futian district, Shenzhen, China  
 Factory at: 3, Jinyuan Industrial Park, No. 56, Tangtou Avenue, Shiyan Town, Baoan District, Shenzhen, China.

Below the map are five circular images with captions:

- China Factory (Shenzhen)
- HK (warehouse)
- USA (San Francisco)
- Singapore
- Germany Office (Munich)

# POE Service Planning and Development

4000+Customers from 200+Countries and regions

4 Branch ( USA, Germany, Singapore and China)

## You Benefit From Our Global Sourcing Resources

# WORLDWIDE SOURCING and LOGISTIC

POE deals with thousands of parts every week; we have electronic components inventory and a dedicated procurement team.

**Handling** tough component problems is one of our specialties. POE takes care of finding difficult-to-locate or obsolete parts. Cross-referenced and Substitute Parts, where possible, can be performed with your approval, in the case where the original parts are not obtainable, POE has its own unique global IC sources. ICs made in Japan, Korea, mainland China, Taiwan, and other Pacific Rim regions can often be readily sourced. Electronic components, including hard to find, long delivery time and outmoded, will be located for you, if any source can be found in our extensive supplier network.

## Parts Management & Component Sourcing

- Kitted and Turn-Key PCB Assembly
- Sourcing Rare Component
- Parts Incoming Check
- Electrical Characteristic Analysis
- Component Inventory Management
- Part Crosses and Substitutions
- Modules IC Programming
- Quick BOM Pricing in 24 hours
- Component Inventory Management
- Unique Global IC Sources
- Lowest Surcharge Rate
- 700,000 parts from 100+ suppliers

We provide comprehensive components sourcing service to improve our assembly service. Our years of experience in circuit assembly allows us to build a strong relationship with authorized component distributors including Digi-Key, Mouser Electronics, Arrow Electronics, Avnet, etc. which makes it possible for us to get any of your required components at cheap prices.



**DEDICATED  
PROCUREMENT  
TEAM**



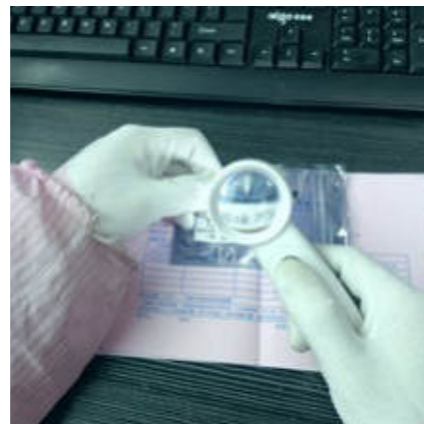
**At POE**, our standard timeline for component sourcing is no more than 1 week from order placement to the arrival of your components at our production facility. POE doesn't charge any markup or handling fees, so the cost of this service is only your direct BOM price. By utilizing data-acquisition systems, such as R.F.I.D. and Bar Code technology, POE achieves real-time inventory control of the materials on the shop floor.

POE sources the best electronic components from high quality vendors and global distributors in order to facilitate a High Quality PCB Assembly experience. All components are procured based on our clients' authorized suppliers and manufacturers. Through our years of industry leadership, POE has established strong relationships with major electronic components distributors including Arrow Electronics, Avnet, Digi-Key Electronics, Farnell Company, Future Electronics, Mouser Electronics, Newark, and Samtec. You are assured of the utmost quality and optimal value for your PCB procurement investment. No substitutions are ever made without your approval.

# 2023



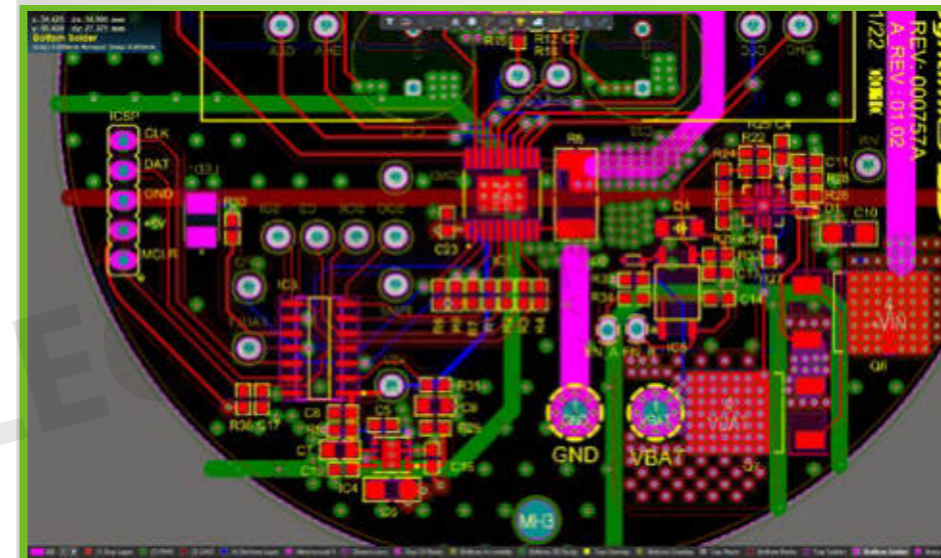
IQC



## PCB DESIGN

### What we need for design & layout?

- Schematics(DSN and .SCH suffixes )
- DXF structure drawing (2D drawing in Auto CAD format, used to position the device and build board size)
- The component specification (the specification must be with the device size diagram for the establishment and physical one-to-one corresponding package)
- Special requirements



Now we offer "PCB Layout and Design Industrial Design, Electronics Development, 3D Printing Box Build Services, Mold Design and Manufacture, Product Lifecycle Management, Software and Firmware Development" services.

01



02



**One-stop Solution  
and 100%  
On-time Delivery**

**POE has a complete product development system and professional knowledge in manufacturing processes, listed as follows:**

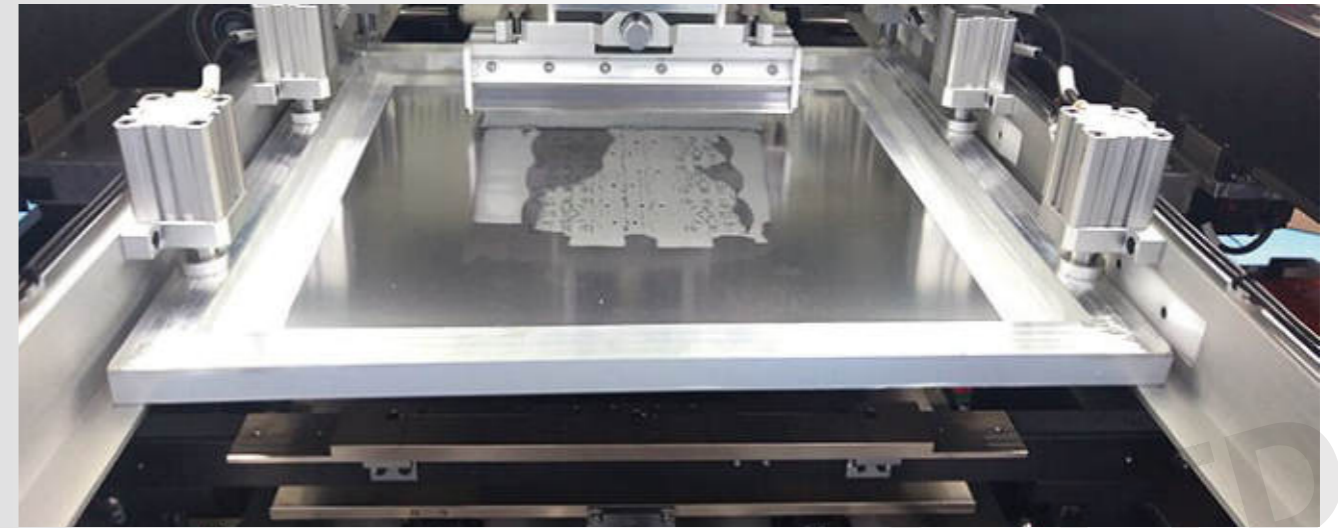
- **Hardware Engineering**
- **Mechanical Engineering**
- **Embedded Software**

**Test Development: Online, Functional, System Level**

- **ECAD – PCB, Backplane Design, and Layout Services**
- **Indoor / Outdoor Enclosure, Rack, Cabinet Design**
- **Thermal Design, Simulation and Testing**
- **Signal Coverage Layout Simulation and Measurement**
- **Failure Analysis, Reliability, Environmental and Mechanical Testing**
- **Regulatory Compliance Services**
- **RF Modeling and Design**
- **Mobile Application Development**
- **Cloud System Development**

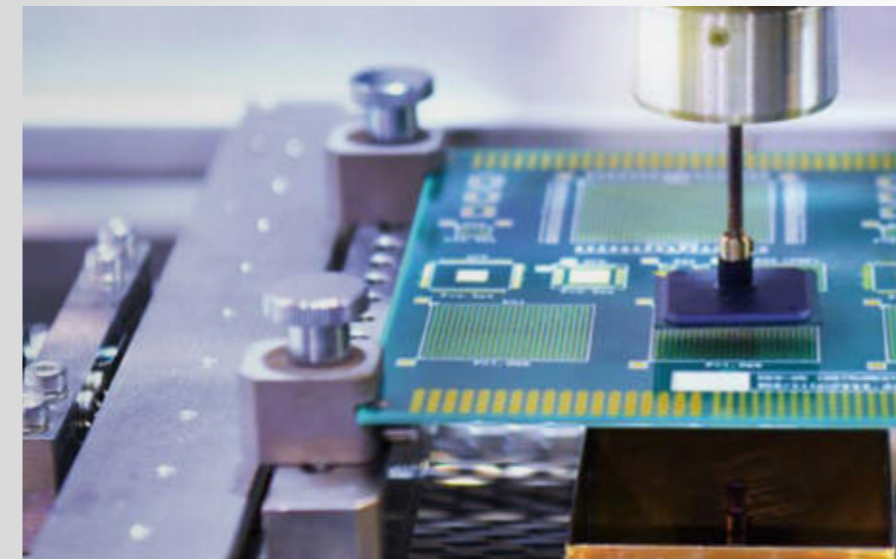
## FACTORY

### EXPANDING



#### SMT Assembly Capabilities

- **SMT Assembly** -- Components are mounted by placing them directly onto the PCB's surface. We have the capabilities to assemble.
- **SMT prototype PCBs** in small production run with manual and/or automated SMT production processes, including single or double-sided component insertions.



**Our production facilities can assemble the following SMT types:**

- **Ball Grid Array (BGA)**
- **Ultra-Fine Ball Grid Array (uBGA)**
- **Quad Flat Pack No-Lead (QFN)**
- **Quad Flat Package (QFP)**
- **Small Outline Integrated Circuit (SOIC)**
- **Plastic Leaded Chip Carrier (PLCC)**
- **Package-On-Package (PoP)**
- **Small Chip Packages (pitch of 0.2 mm)**

PCBA

1. POE plans to **add** one more production line to meet customer delivery time.
2. Delivery qualified rate of more than **98%**.
3. **100** different PCBA's are shipped every day.
4. The earliest delivery of the full set of PCBA is **10** days, the fastest processing **only** 1 hour.
5. The component BOM will arrive in **24** hours at the earliest.



## WAREHOUSE CLOUD CONTROL

To meet the needs of customers for more components storage, convenient and fast without loss.



## ADJUST DIP LINES FOR ONE STOP PROCESS



### Steps in soldering a through component:

- In step 1, the hole and pad to be soldered are prepared, with the lead being placed into/through the hole. The lead should be placed in such a way as to keep the bend above the soldered area, reducing heat and solder requirements.
- In step 2, heat is applied evenly to the lead and the pad/hole, heating the material so the solder will adhere to both surfaces.
- In step 3, the solder contacts the end of the iron, which causes the solder to change into a liquid and flow into the hole.
- In step 4, the solder flows through the hole, creating a mound on both the bottom and top side. Since this lead was soldered from the topside, the bottom side should be inspected for adequate solder and joint quality. Some assemblies may require solder from both sides to ensure quality. Adequate clearance inside the hole allows good solder flow through the board, allowing only one side to have solder applied. Tight clearances may require soldering on both sides, increasing soldering time.



**CHINA 1-40 LAYER  
ONE STOP CONTRACT MANUFACTURING FACILITY**

**It is especially important for the following application areas:**

- . Line width violations
- . Spacing violation
- . Excess copper
- . Missing pad
- . Short circuits
- . High frequency
- . High power loads

## AOI INTRODUCTION

### Automated optical inspection (AOI)

It is an automated visual inspection of printed circuit board manufacture where a camera autonomously scans the device under test for both catastrophic failure (such as missing components) and quality defects.

It is commonly used in the manufacturing process because it is a non-contact test method. It guarantees the high reliability of Multi-CB multilayer circuit boards.



Depending on its visual methods, the AOI test can be used to detect a lot of surface defects, such as opens, shorts, incorrect components, missing components, etc.



To reduce the corresponding cost and increase inspection efficiency, it's better to do the AOI test after reflow soldering. Because most of the defects are the result of the failure in the welding process. The good flexibility performance of the AOI test leads to a reduction in cost. Because once a problem is found, manufacturing or assembly parameters can be modified immediately so that subsequent products can be produced correctly.

**The following are the advantage of the AOI test:**

Multiple inspection objects - AOI test works perfectly not only for PCBs but also for PCB assembly. For PCB, defects are checked such as shorts, opens, and insufficient solder. For PCB assembly.

Low cost - Compared with Automatic X-ray Inspection (AXI), AOI is less expensive when inspecting solder joint defects.

Good Flexibility - AOI test can be arranged at any stage of the manufacturing process according to needs and cost tolerance capacity.

## Advantages

# AUTOMATED X-RAY INSPECTION

## Automated X-Ray Inspection

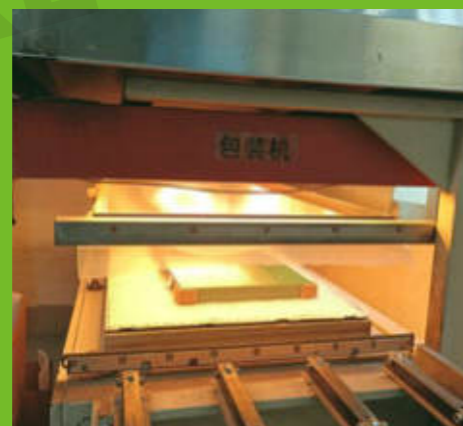
In recent years, automated X-Ray inspection (AXI) has grown as a new type of technology. Similar to optical inspection, an x-ray inspection produces images of the object. The image is then processed by image processing software that detects the position and size/ shape of expected features (for process optimization) or presence/ absence of unexpected/ unintended objects or features (for anomaly detection). Instead of visible light it uses x-rays (typically generated by an x-ray tube) that pass through the object. Opposite the x-ray emitter is a detector that either converts x-ray into visible light (creating an optical image which is then picked up by a camera) or sensor arrays that directly pick up the x-ray and convert it into an electronic image. The image is produced due to the different absorption of x-rays when passing through the object and can, therefore, reveal structures inside the object that are hidden from outside view.



## To know

the inspection coverage of AXI clearer, the table below as reference.

Defect Type	AXI
<b>Soldering defects</b>	
Open circuits	Y
Solder bridges	Y
Solder shorts	Y
Insufficient solder	Y
Solder void	Y
Excess solder	Y
Solder quality	Y
<b>Component defects</b>	
Lifted lead	Y
Missing component	Y
Misaligned or misplaced component	Y
Incorrect component value	N



## PCB EQUIPMENTS SHOW

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



POE.,LTD

## Quick Sample Low Price

2layer 30usd,  
4layer 80usd....

ORDER NOW

PCB prototyping used to be the nightmares of many electronics professionals. POE now terminates the nightmares! We can get your first-try boards in 24 hours.

Check POE PCB manufacturing capabilities in the following table:

Feature	Capability
Min. Line Width	0.076mm/3mil
Min. Hole Size	0.15mm(mechanical) 0.1mm(laser drilling)
Min. Line Spacing	0.076mm/3mil
Copper Thickness	1oz--13oz
Base Material	Aluminum, FR4, Flex, Flex-rigid, HDI, Rogers,
Board Thickness	0.2mm~7.0mm
Surface Finishing	HASL with lead, HASL Lead-free, Immersion gold, OSP, Hard Gold
Finsih Cooper	1-13oz
Solder Mask	Green, Red, Yellow, Blue, White, Black, Purple, Matte Black, Matte green
Silkscreen	White, Black
Testing	Fly Probe Testing (Free) and A.O.I. testing
Build time	24 hours
Lead time	1-40layers

## NO MOQ

The monthly production capacity is 40000 m<sup>2</sup>



## 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	沉鑽孔 Countersink head holes	多層板 High layer count

# POE

## Quality VS Price

POE observes well-defined tolerances and testing procedures that have been time tested and continuously reviewed to ensure the best results for your project every time. We provide a variety of default PCB Options at a Standard Price that are suitable for the vast majority of projects, so you only need to deviate from these defaults when your project has a specific requirement. For more information on our specific capabilities and recommendations, feel free to check out our extensive, DFM Guidelines document.



### A few examples are given below to highlight the types of projects that might need to make extra investments to ensure quality:

1. High power applications, where traces carry high levels of current, often require Heavy Copper
2. High speed applications, with signals in the MHz range, often require special Laminate Materials
3. New and complex projects might require additional verification, such as In-Circuit Testing (ICT) or Functional Circuit Testing (FCT)

If you still have questions about which of our services are right for your project, we would be happy to work with you on DFM questions so that you can reduce your PCB Assembly Cost while maintaining high quality.

To send us your questions, or to send you PCB Design Files in for an official quote, you can Contact Us any time!

# Quality Certification

ISO9001:2015/UL94V-0/  
ISO14001:2015  
ISO13485:2016/  
IPCIII/IPCII/ROHS/REACH



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- 3
- 4
- 5



RoHS    ISO9001: 2015    ISO13485: 2016    ISO14001:2015    UL

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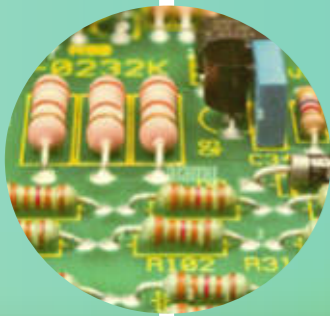


## Responsibility

Providing the best product and service to make it more competitive.

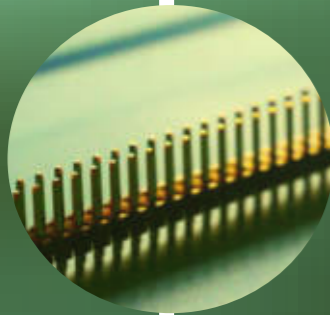


As a responsible electronic circuit company, while pursuing business value, POE is more actively practicing social responsibility and exploring sustainable development roads with customers, employees, partners, the environment, and communities. In this process, POE will strive to continuously create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



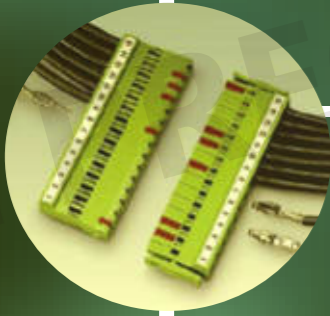
01

Orders of components reached 700,000 kinds from more than 200 countries and regions.



02

BOM quote The maximum quotation speed is 2 hours and 7\*24 hours.



03

BOM global procurement cost control low to meet your price needs (without any additional costs).

04

BOM part number replacement, professional, efficient and accurate to save your product cost.



05

Supporting screws, wire, Kitting carton box & foam, label, QR code, handbook and strip, low domestic purchase price and fast delivery.

06

Customized small iron sheet, switch, transformer, terminal, low price fast delivery to meet your needs of various products.

”

Quotation  
Purchase  
Advantages



# Shipping Method Guide

(DHL, UPS, FEDEX/TNT, Hongkong Post/  
China Post/CDEK/OCS, EMS, Air,  
Sea/air and Sea)



## Delivery

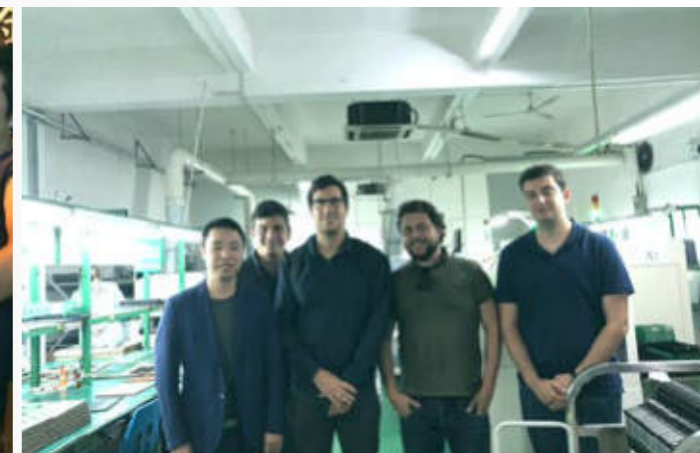
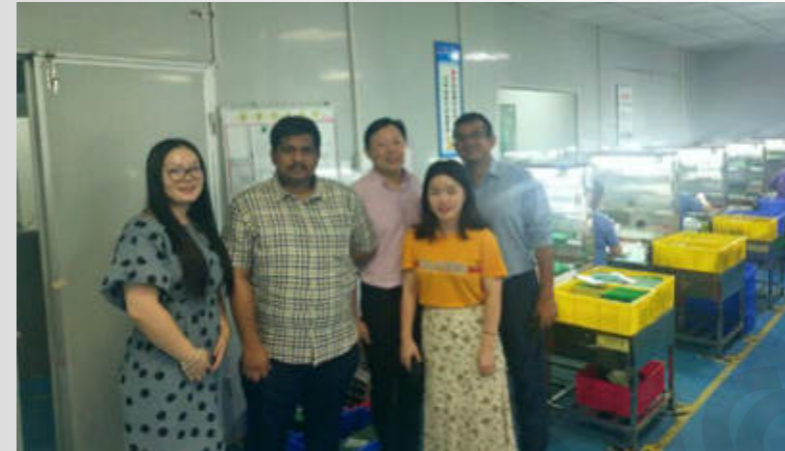
POE accept EXW, FOB, CIF, CPT and DDP shipping terms with worldwide customer.

*Orders Combination, Shipping and Payment Policy.*

*One Payment, One Shipment!*

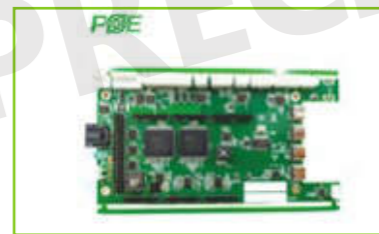
1. The purpose of order combination is to save shipping cost. If your schedule for your PCBs is not TIGHT, combine your orders and ship together.
2. By combining all these orders to one Group and pay now, you hereby confirm all these orders will be shipped together around xx, xx, xxxx. This is the date that we can finish your last PCB order in this ORDER GROUP, and we may need some extra time for express company to pick up your package.
3. If there are expedited orders, or you need some regular orders to be shipped earlier, please inform our sales team and pay separately so that we can ship as scheduled for the specific order(s).
4. We strongly suggest you pay for your orders on or before 8:30GMT, so that our factory can start fabrication the same day immediately.
5. Freight maybe calculated before shipping for much more accurate freight cost.

# Customer Visit



# ✓ New Product Show

✓ With Imported State-of-the-Art fully automatic production machines and our professional international sales team, purchasing team and engineering team, we are able to offer our customers low-cost and one-stop PCB Assembly Services.



## Application

We have customers from all over the world, including a wide variety of industries like Medical, High-tech Agricultural, Airplane recorder, Automobile, Database information, Industrial, Home appliance and so on.



Medical



Aviation



UAV



Automobile



Communication



Consumer Electronic



Industrial Control



5G

# POE Culture

## Birthday Party is Held Monthly

POE observes every Employees' birthday as employees are an asset/ possibilities to an company.

All employees feel wanted and a part of the company as they are appreciated and remembered for important events like birthdays. POE makes every employees feel special and demonstrates that cares about all the employees.



## POE Organized a Hiking Activity

Enjoying the scenery during the hike promotes mutual understanding among employees, creates opportunities for employee communication and improves team cohesion.

The employees were divided into four groups for the race. Except for speed competition a creative project was added to let everyone enjoy the fun of hiking.



To respond to the government's epidemic prevention and control, On November 19, 2022, POE chose Shenzhen as the location for the annual group trip, two days.

# Value-Added Service

## 01 Functional Testing

Is your product functionally fit for release? This question depends on how customer focused you are. Without consistently delivering a compelling experience, brands or enterprises cannot boost customer satisfaction. Programming loading and Functional testing services validate that an application performs as per with the desired functionality specifications and competently meets the end-user expectations. Our functional testing solutions aid our clients in increasing their client base, enjoying greater ROI and gaining a better market standing.

02

### 3D printing Enclosure We Provide

POE provides industrial 3D printing services for the production of a wide range of high-quality 3D printed parts. Our internal capabilities include additive manufacturing technology. Whether your electronic products require precision plastic or metal cases, we can provide you with the best solution. We cooperate with reliable plastic and metal factories and can provide production services, including PC/PVC/ABS/Metal... gloss or polished surfaces of various materials. Engraving can also be carried out according to your design.

03

### PCB Design & Layout Service

POE design team are sophisticated with printed circuit board design and layout services for 20+ years in terms of medical devices, musical instruments, RF converter, smart consumer products, system controllers for solar power, temperature & humidity monitor, IOT units etc.

04

### Cable Assembly

Due to our deep industry knowledge and rich experience, we can support customers to produce a series of complex and specific cable assembly applications. Which include but not limited to audio/video cable, computer cable, flat cable, LCD cable, network cable, power cable assemblies.

05

### PCB Engineering Solution

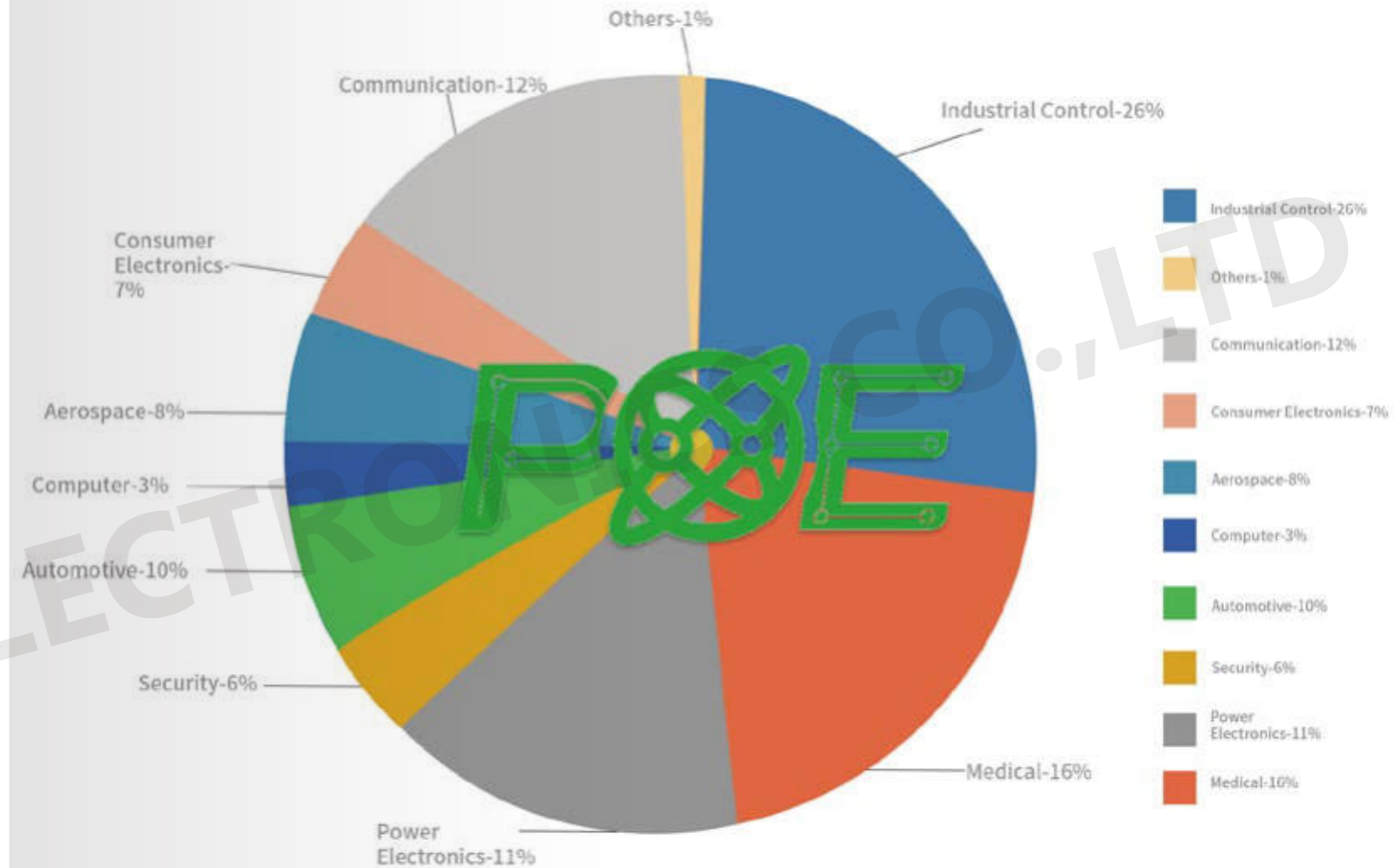
POE routinely works with end customers in a consulting capacity to ensure the board specs are the best fit for the end application and within budget. We are PCB experts and this is one way that we differentiate ourselves from brokers in this industry. We know PCBs and are passionate about working with our customers to impact their competitiveness, time to market, R&D on new products or more.

06

### Conformal Coatings

Different types of conformal coating materials or chemistries are used depending on the specific needs of your PCB are. Acrylic Resin (AR): It is the most commonly used because it is economic and protects a broad range of contamination.

# Marketing



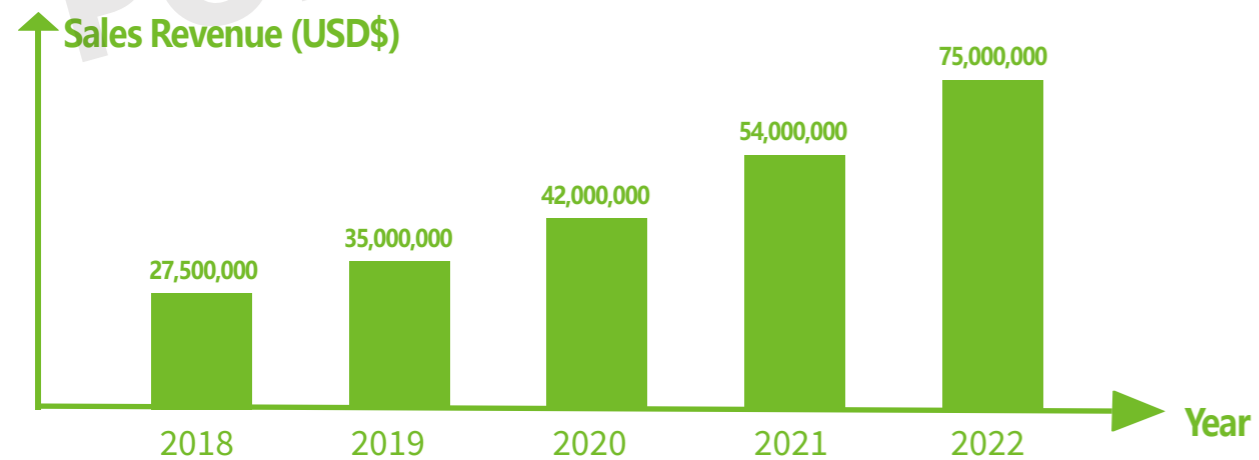
**Established clients with refined products and excellent service.**

### Application fields of POE products and distribution of major customers:













Our products are widely used in Medical Instrments, Industrial Control, Power Electronics, Security, Consumer Electronics, Communication, LED Products, Aerospace and others.

# Milestones

- 1996** Bare PCB manufacturing for 1-12layers.
- 2002** Factory size expanded to 4000m<sup>2</sup> and manufacturing capability 40000m<sup>2</sup>/month.
- 2008** POE Precision Electronics Co.,ltd HK company registered.
- 2011** Shenzhen wanfeng technology Co.,ltd registered and begin to export worldwide.
- 2012** International Sales department started to run, new era of POE worldwide market Wanfeng Circuit (HK) Co.,ltd Registered in HK.
- 2014** Expanded marketing and sales department, 5 departments start to run.
- 2017** Sales and Marketing range: Europe,North America, Australia,Asia ,South America, Middle East 4000more customers from 200 countries and places.
- 2018** UL certificate, move to new office 800m<sup>2</sup>.
- 2019** Shenzhen Kexin precision Electronics co.,ltd start to run. Invested one more SMT lines in Nanshan district :1500m<sup>2</sup> ROHS certified.
- 2020** Invested two more SMT lines,factory expanded and moved to new site: 2500m<sup>2</sup> IPC standards, ISO9001: 2015 and ISO13485: 2016 certified.
- 2022** Moved to new office in Central Business District, worked with famous companies worldwide



# Customers Remark

- 1.We have been testing them, and the results so far are great. Thank you very much for your great service. KALA 
- 2.We are satisfied with the last order. You did a great job on making those boards and the lead time is short. The boards look very professionally made and they operate well. Carl Norman 
- 3.You have done a perfect assembly! And I congratulate you. I'm advertising you with my clients, but it won't be fast, big companies are pachyderms! Thomas Chris 
4. Excellent communication and same professional completion as last time. Rochest Kail 
5. Boards works great. Thank you for the good job. Andrea Semith 
6. From what we have seen and tested so far, I am happy to say we are pleased with the PCBs that you supplied. We are also working on other plugin PCBs that will be part of this project, and once they are ready, I will also send you for quote and samples. PaulChristopher 
7. Thank you the amazing job, my best for you and assembly team, keep you on my top list. Natha Thatha 
8. Impressive BGA assembly quality. Michael 
9. Nice quality and on time. Henrik Oshas 
- 10.I have received the samples, everything referring to the pcb quality is great. Antonio Chetest 
- 11 .We received the package. I thank you for the quality of your efficient and fast services. It is with pleasure that we will continueour project with you. Thank you also for your gift. As soon as we have completed the development of our project, I will contact you again. Fredetric Danis 
12. Thank you very much for the very good communication we had! This was one of the reasons to choose your company. Andrew 
13. Dear Joy, Please find attached a short video which I think says it all. PCB construction, solder quality, and also the care and attention you took with packaging the boards for shipment.