

Welcome to O-leading

O-Leading [China PCB Assembly PCBA Manufacturer](#) strives to be your one stop solution partner in EMS supply chain, including PCB design , PCB fabrication and PCB assembly,We provide some of the most advanced PCB technology, including HDI PCBs,multilayer PCBs, Rigid-Flexible PCBs.We can support from quick turn prototype to medium & mass Production.

In general, our global customers are very impressed with our services:Rapid response, competitive price and quality commitment.Providing more valuable technical service and overall solution is the way O-leading forward.

Looking to the future, O-leading will concentrate on the innovation and development of electronics manufacturing technology as always, and make persistent efforts on PCB & PCBA one-stop service to provide first-class services and create more value for our customers.

PLEASE CLICK THESE FOR MORE INFORMATION [OEM PCBA Assembling Protective PCB Coating Board](#)

O-LEADING
To Be Reliable, To Be Valuable

WE ALWAYS PROVIDE YOU
BEST RIGID-FLEXIBLE CIRCUIT

WE ALWAYS PROVIDE YOU
BEST HIGH DENSITY INTERCONNECT PCB



Keep *LEARNING*

There's a phrase in Buddhism, 'Beginner's mind.'

It's wonderful to have a beginner's mind

WE HAVE A *DREAM*

Keep *RUNNING*

I would like to live to study, and not study to live.

---Bacon

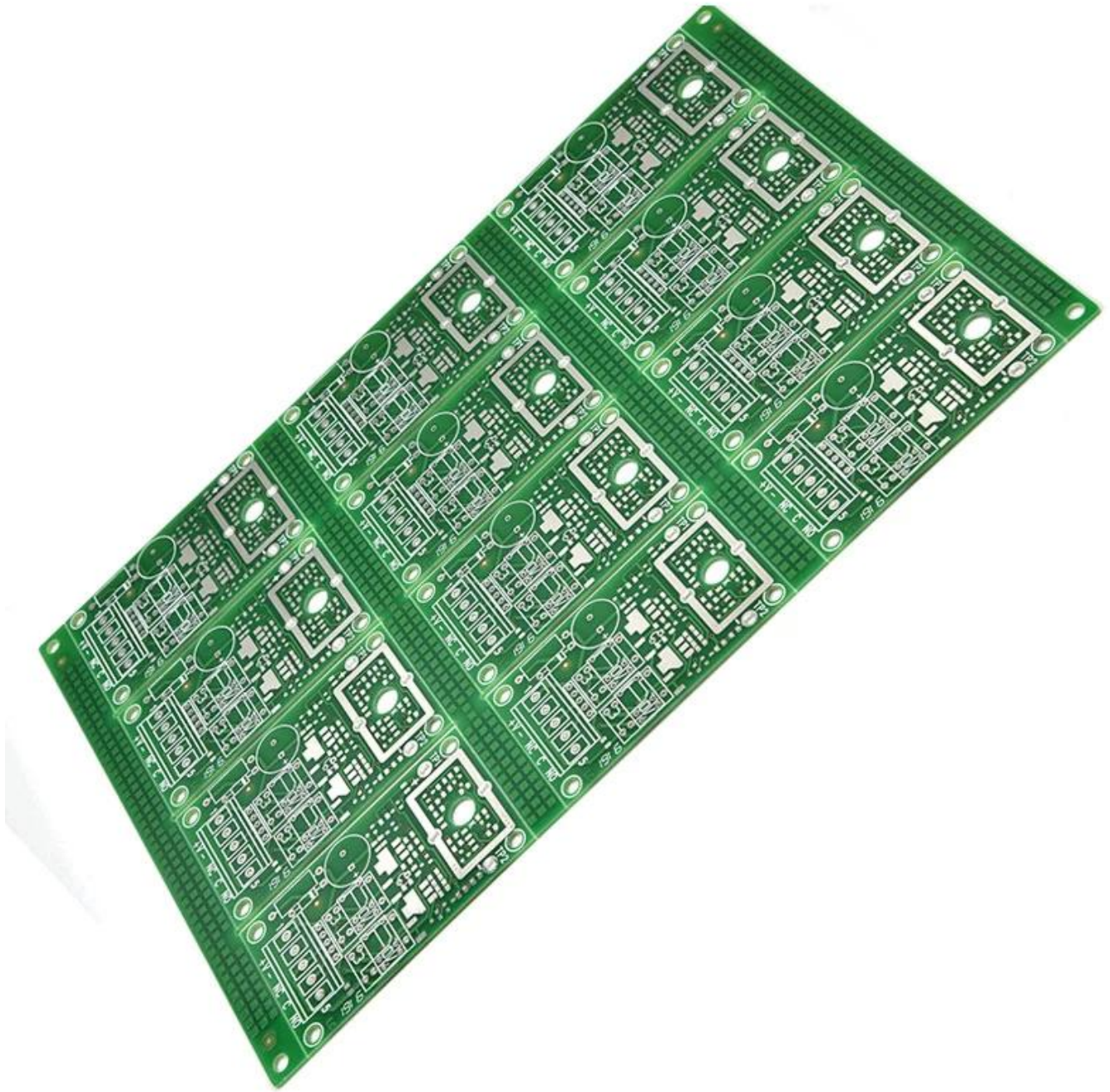


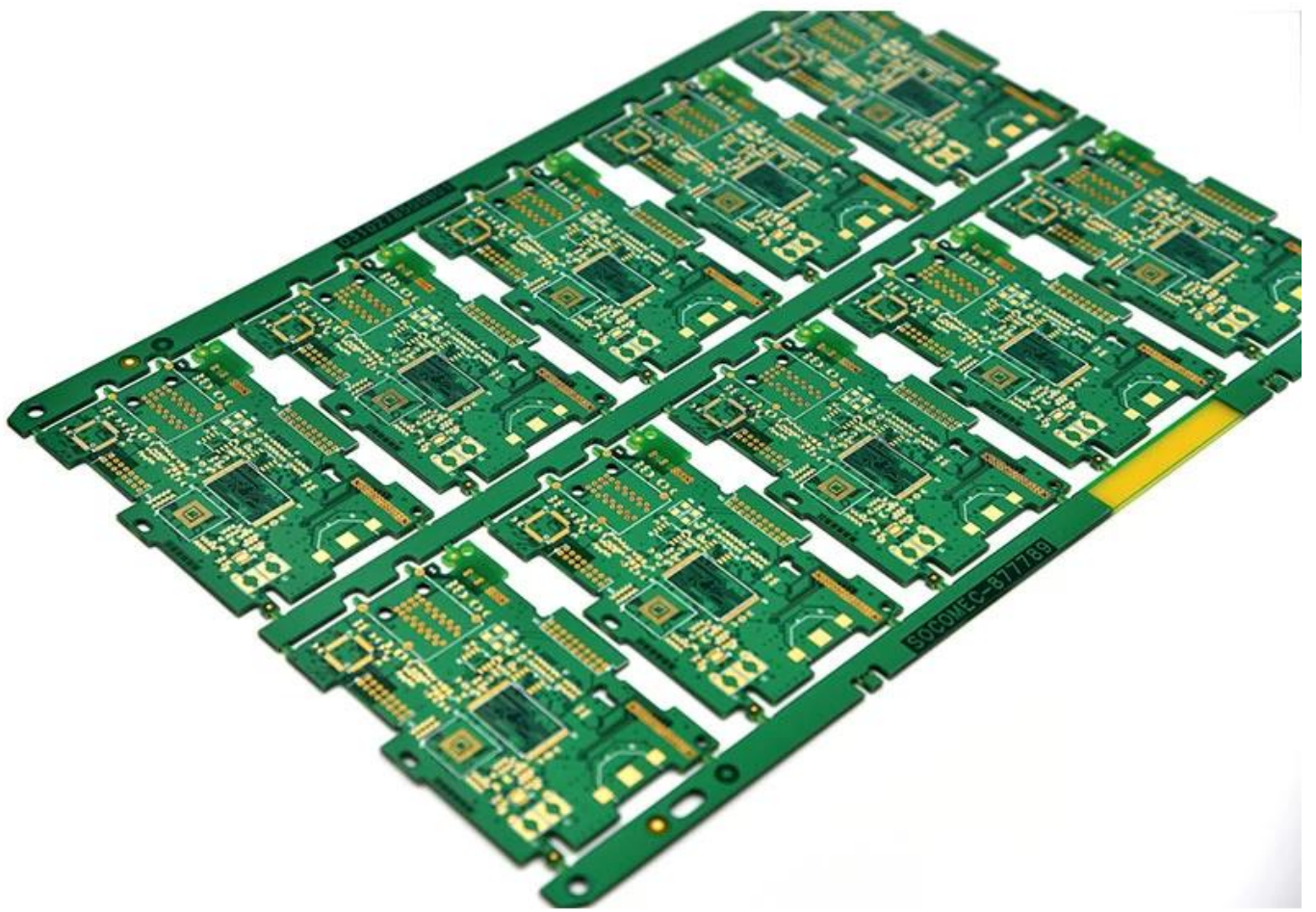
Product Description

China **Electronics Multilayer and Double-Sided PCB**, Electronic Circuit Board PCB Assembly Board customized SMT PCBA fabricatio Printed Circuit Board

| | |
|------------------|--|
| Product name | Printed Circuit Board |
| Brand Name | O-leading |
| Base Material | FR-4/CEM-1/CEM-3/Polyimild/PTFE/Rogers |
| Copper Thickness | 0.4-2mil(10-50um) |
| Board Thickness | 0.2-6mm |
| Min. Hole Size | 0.1mm(4mil)for HDI / 0.15mm(6mil) |
| Min. Line Width | 0.075mm/0.075mm(3mil/3mil) |

| | |
|-------------------|--|
| Min. Line Spacing | 0.003" |
| Surface Finishing | HASL/OSP/Ag/ENIG/ENEPIG/Immersion silver,Tin |





TOP QUALITY PCBA

O-LEADING

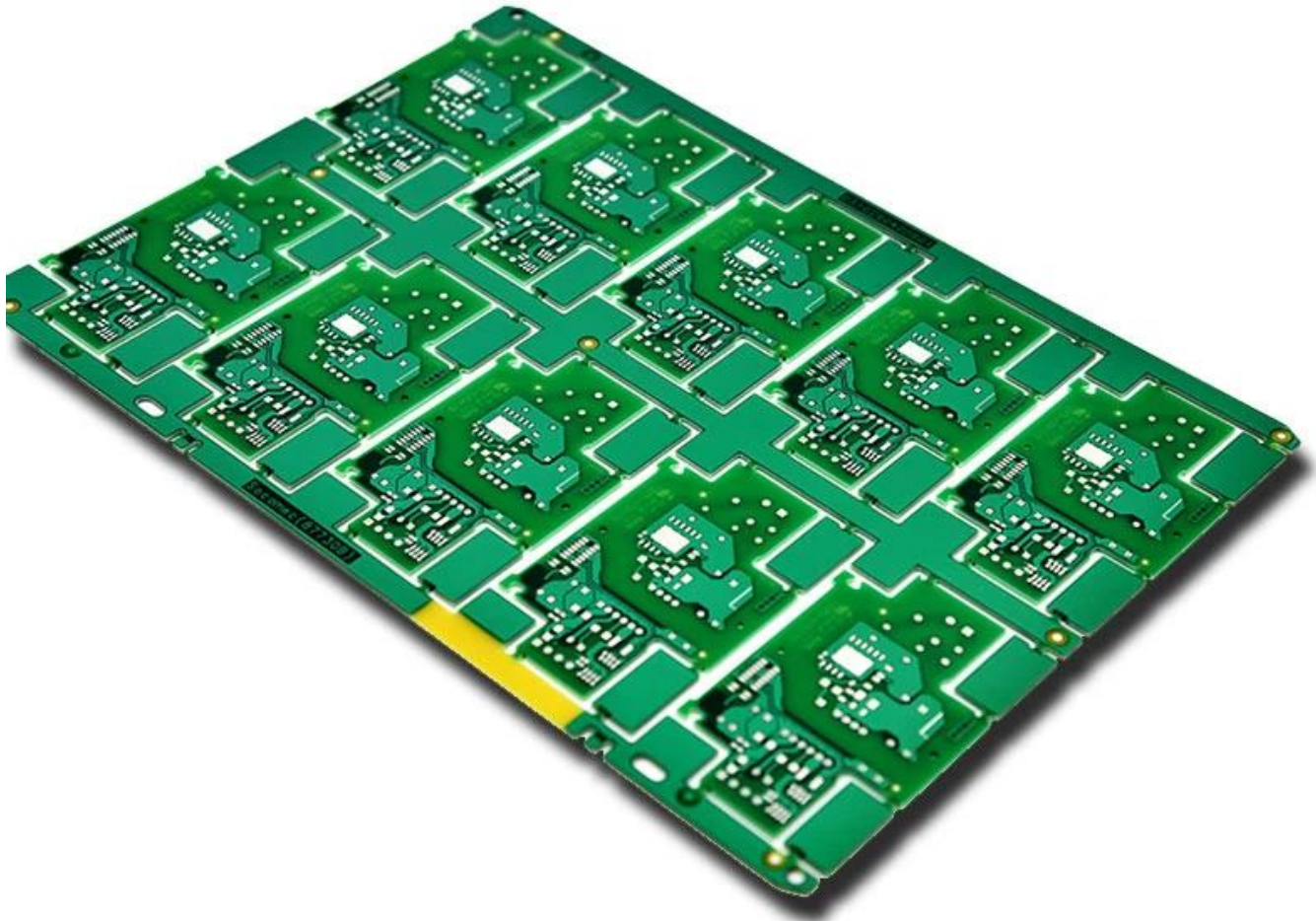
To Be Reliable, To Be Valuable



MAKE YOUR IDEA COME **TRUE**

TOP QUALITY PCBA

O-LEADING
To Be Reliable, To Be Valuable

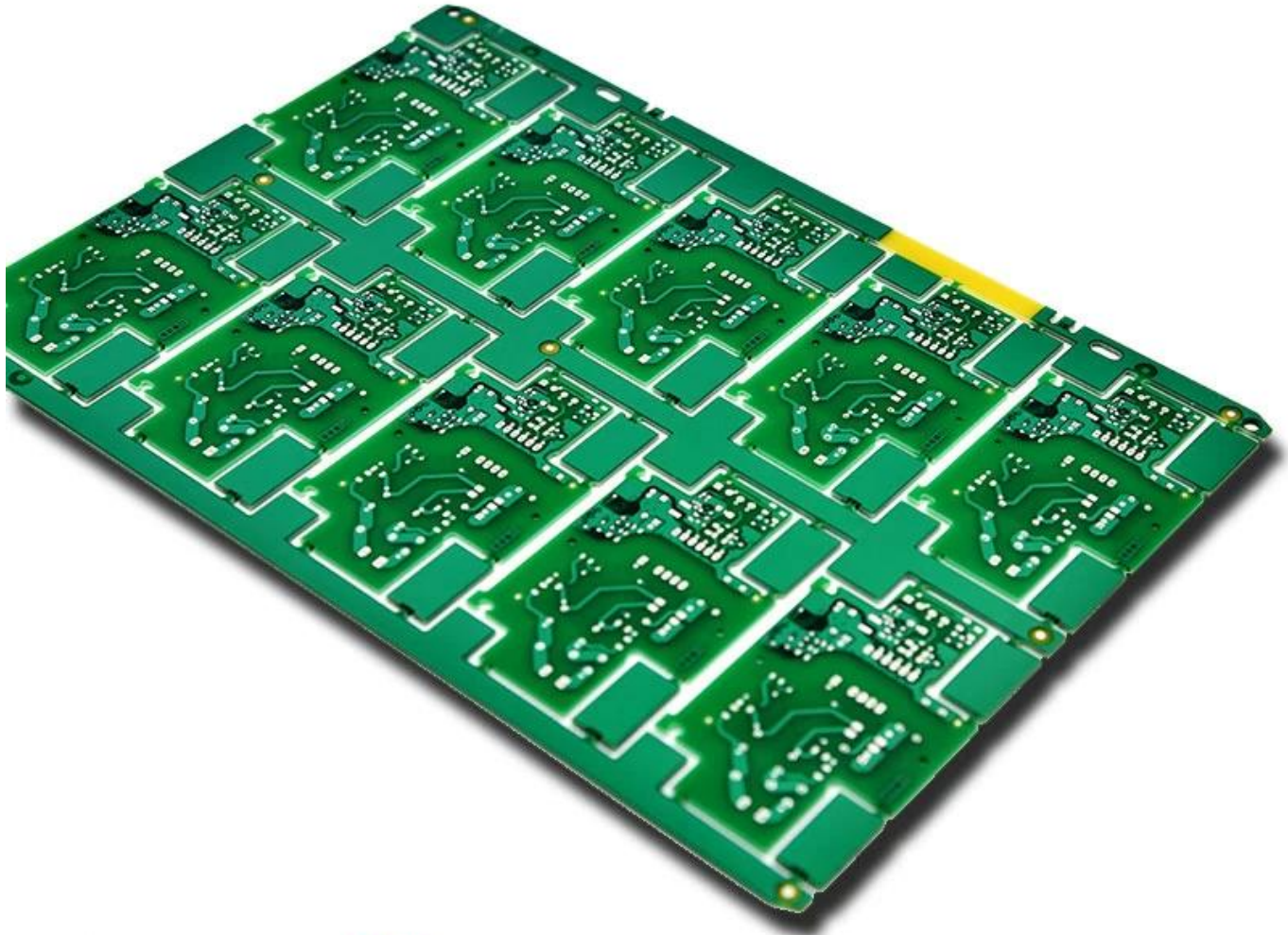


MAKE YOUR IDEA COME TRUE

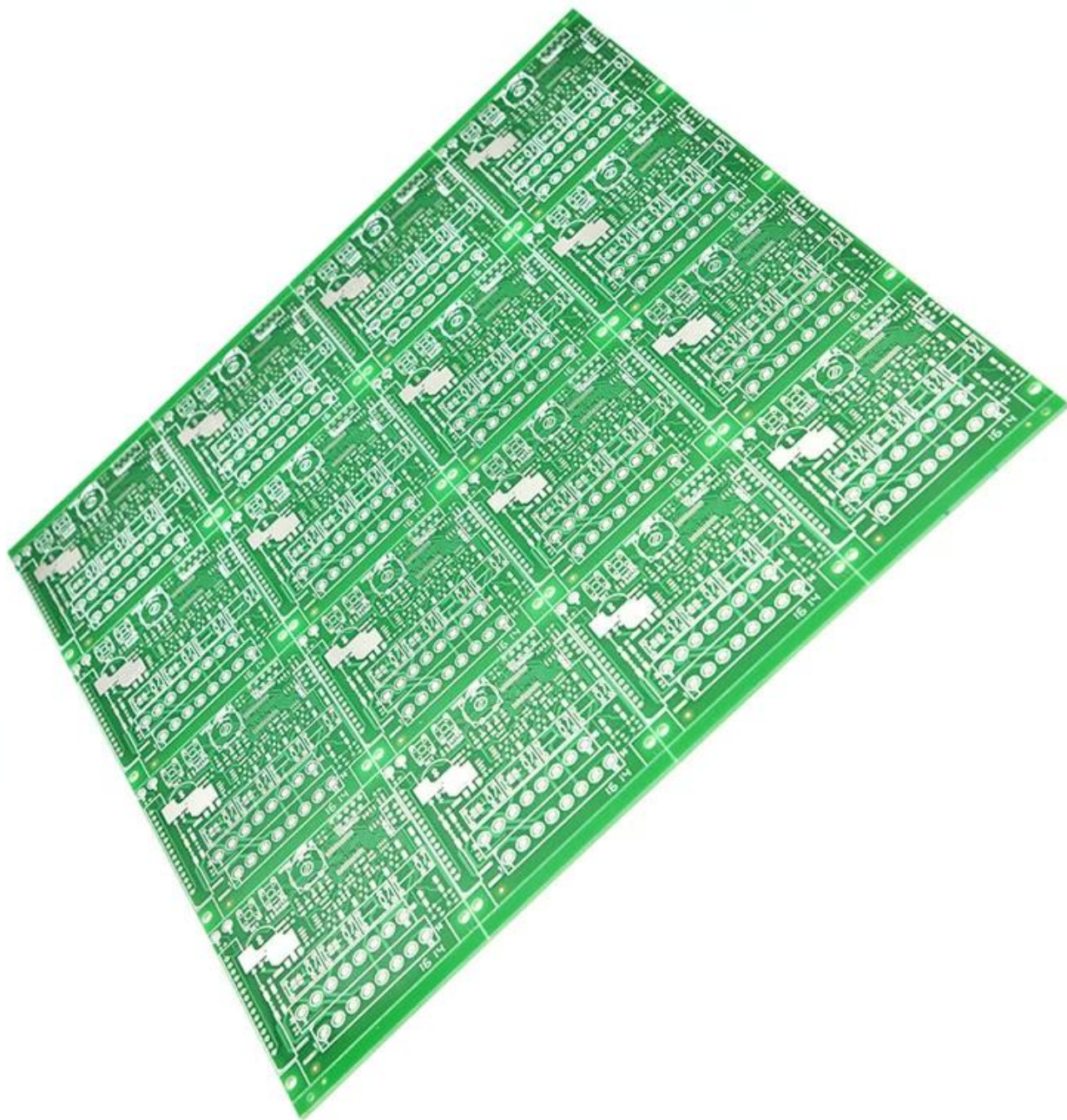
TOP QUALITY PCBA

O-LEADING

To Be Reliable, To Be Valuable



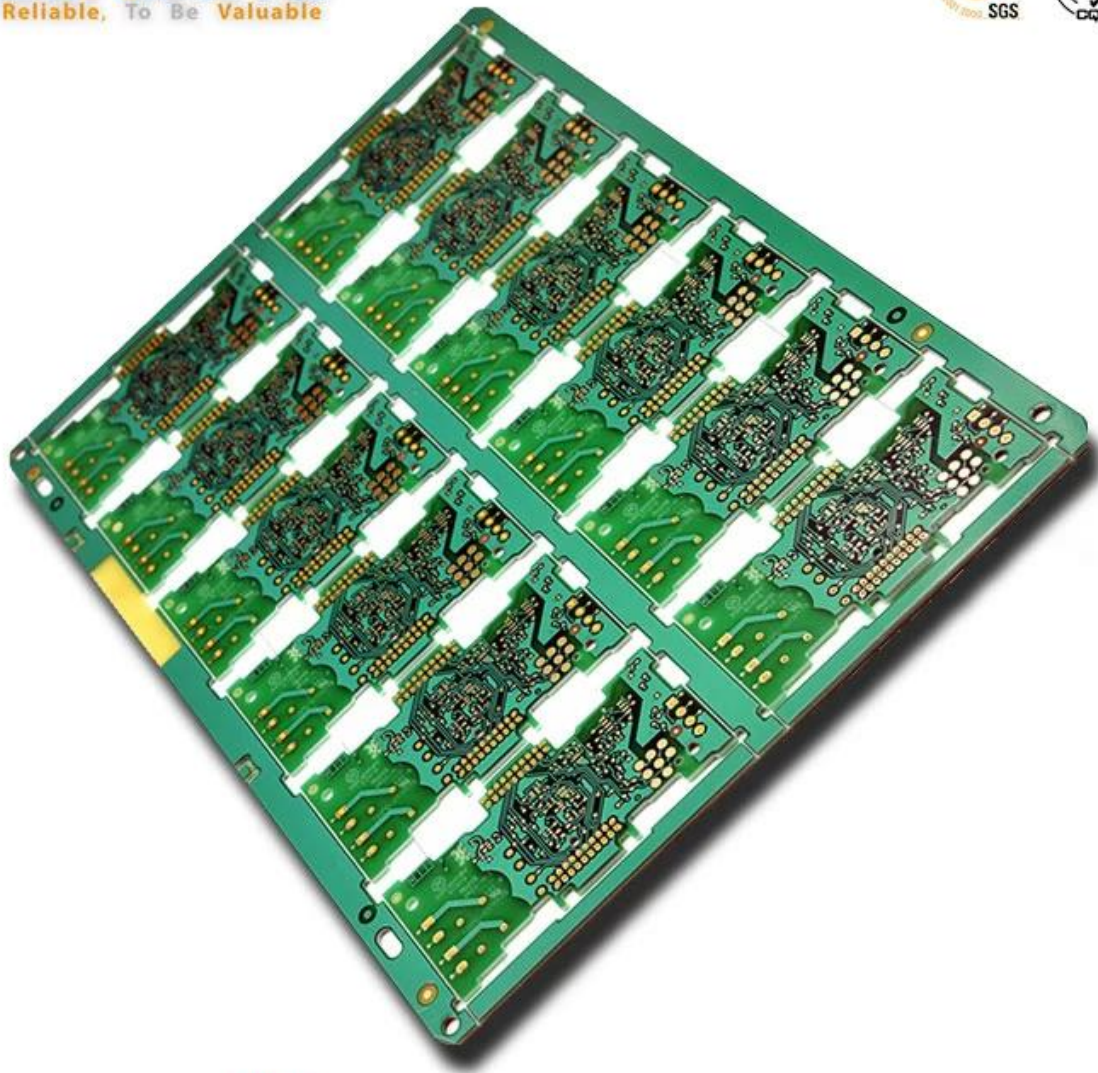
MAKE YOUR IDEA COME **TRUE**



TOP QUALITY PCBA

O-LEADING

To Be Reliable, To Be Valuable



MAKE YOUR IDEA COME TRUE

Market Share

 CONSUMER ELECTRONICS

 AUTOMOTIVE ELECTRONICS

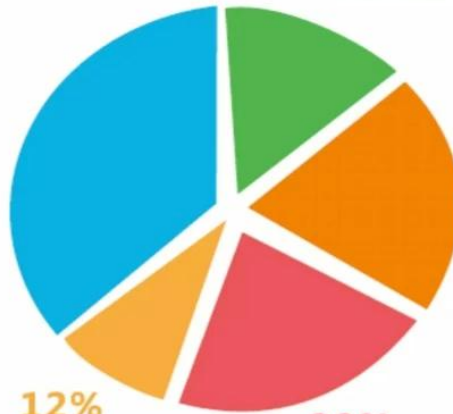
 INDUSTRIAL CONTROL

 INTELLECTUALIZED HOUSEHOLD CONTROL

 OTHER



30%
CONSUMER ELECTRONICS



18%
INTELLECTUALIZED HOUSEHOLD CONTROL

20%
AUTOMOTIVE ELECTRONICS

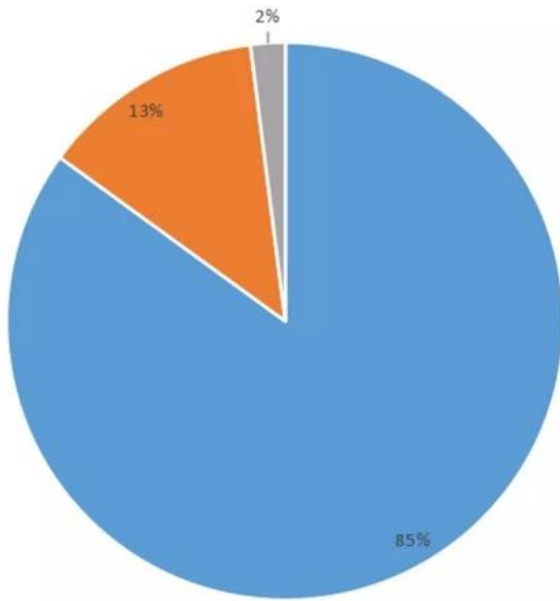


12%
OTHER

20%
INDUSTRIAL CONTROL



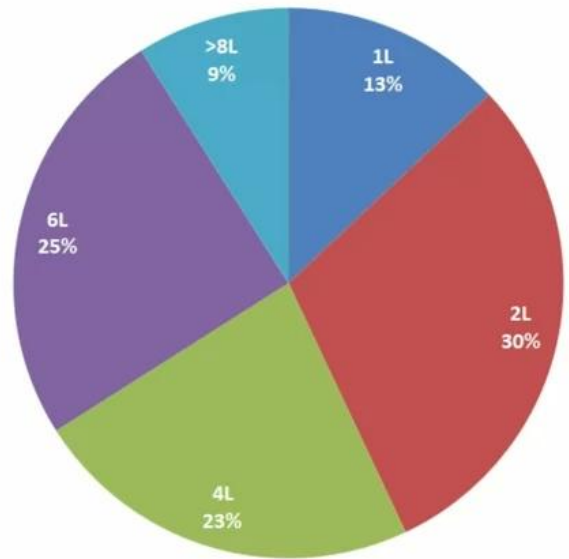
Product types



■ FR-4 PCB ■ MC PCB ■ rigid-flexible PCB

Product layers

■ 1L ■ 2L ■ 4L ■ 6L ■ >8L



Production Process

18 years experience in one-stop PCB and PCBA, we can make your idea come true,



Our Team



Factory PCB



Automatic vacuum press machine



Drilling Machine



Pattern Plating Machine



Scrubbing Machine



Developing Machine



Routing Machine



High-speed flying probe machine



E-test Machine

Factory SMT



HOW O-LEADING MAKE A PROJECT FOR YOU

Hardware Dispenser Application Not



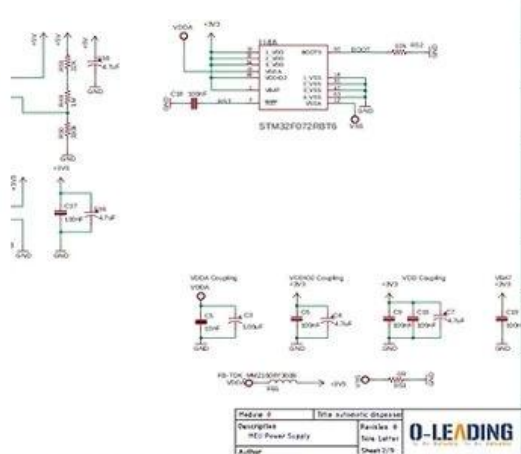
Automatic Dispenser Application Not

Voltage Table

| Volt Pin Number | Description |
|-----------------|-----------------|
| VDD | Battery Voltage |
| +3V3 | +3.3V |
| +5V | +5V |
| USB +5V | USB 5V input |
| +5V/2 | Isolated +5V |
| +12V | 12V DC Drive |

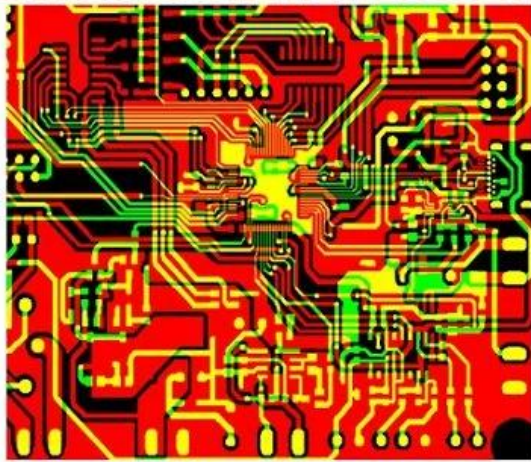
STM32F072 PinOUT table

| Wire Name | Description | DIO | Mode | Note |
|-------------|---|----------|-----------------------|------|
| SM7N_TOF | Shutdown Time of flight sensor | Output | Logic '1' to shutdown | |
| I2C_SCL_TOF | I2C communication with time of flight sensor | I2C1_SCL | | |
| I2C_SDA_TOF | I2C communication with thermopile sensor | I2C1_SDA | | |
| I2C_SCL_IR | I2C communication with load cell control pins | I2C2_SCL | | |
| I2C_SDA_IR | | I2C2_SDA | | |
| RATE_IC | | Output | | |
| DOUT_IC | | Output | | |

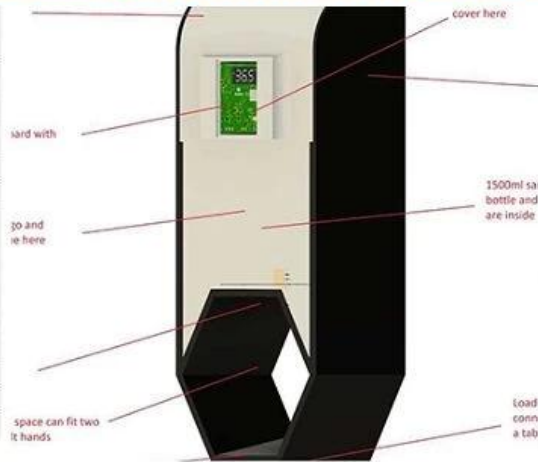
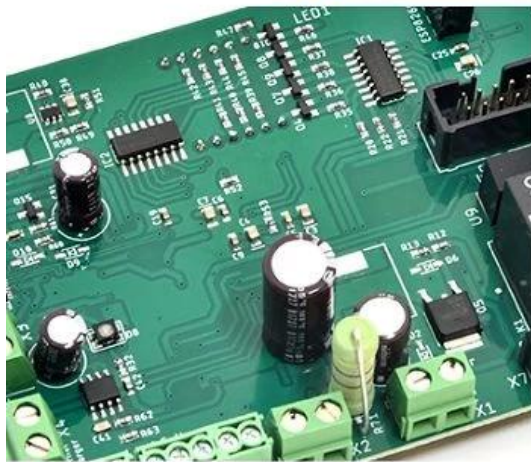


HARDWARE schematics

PCB PRODUCTION COMPONENTS SOURCING



| Qty | Value | Device | Parts | Description |
|-----|---------|---------------|---------|---------------------------------|
| 4 | AK500/1 | AK500/2 | X1, X2 | CONNECTOR |
| 1 | AK500/3 | AK500/3 | X7 | CONNECTOR |
| 1 | 124114 | MA04-2 | SV2 | |
| 1 | PPPC04 | MA04-2 | SV1 | 8 POS, 4*2 FEMALE PIN HEAD |
| 1 | ML10 | ML10 | SV4 | HARTING |
| 1 | 8MHZ | XTALL_CSTCE8M | X5 | STCE8M00G52-R0 RESONATOR |
| 1 | 0R | R-0603 | R53 | Thick Film Resistors - SMD 0603 |
| 2 | 10R | R-0603 | R12, R5 | Thick Film Resistors - SMD 0603 |
| 8 | 100R | R-0603 | R1, R2 | Thick Film Resistors - SMD 0603 |
| 1 | 270R | R-0805 | R15 | Thick Film Resistors - SMD 0605 |
| 1 | 330R | R-0603 | R11 | Thick Film Resistors - SMD 0603 |
| 9 | 680R | R-0603 | R20, R3 | Thick Film Resistors - SMD 0603 |
| 17 | 1k | R-0603 | R9, R10 | Thick Film Resistors - SMD 0603 |
| 2 | 4.7k | R-0603 | R17, R6 | Thick Film Resistors - SMD 0603 |
| 2 | 5.1k | R-0603 | R18, R7 | Thick Film Resistors - SMD 0603 |
| 9 | 10k | R-0603 | R16, R3 | Thick Film Resistors - SMD 0603 |



PCB Assembly MECHANICAL DESIGN

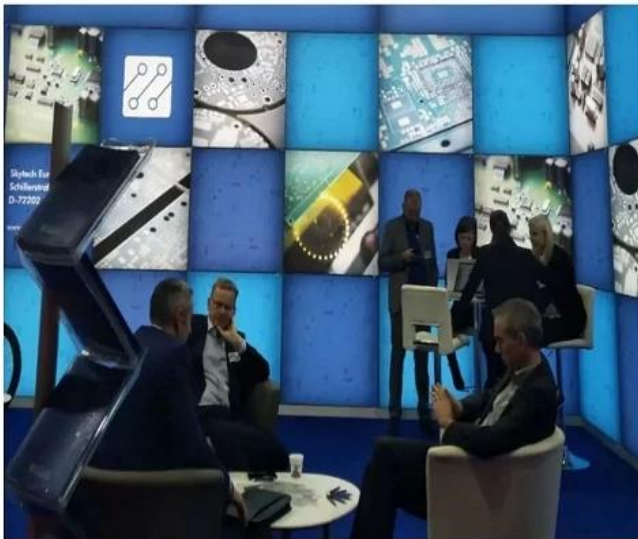
O-LEADING CUSTOMER

To be **RELIABLE**

- Q**uality first ,
- C**ustomer supreme ,
- S**cientifically management ,
- S**triving for famous brand



THE CUSTOMER IS KING



To be **VALUABLE**

- S**cience and technology keeps head ,
- P**ut people first ,
- B**e precise and practical ,
- C**ontribute sincerely

Skyworth 创维

HET 和而泰
HET INTELLIGENT CONTROL

dongweikeji
东威科技

美的 Midea

STAR-NET
星网锐捷

FORYOU
ADAYO 华阳集团

EDIFIER[®]

Cultraview 金锐显

3nod 三诺

T&W

TCL

AcBel 康舒科技
ACBEL POLYTECH INC.

Honeywell

Schneider
Electric

ZTE 中兴

EMERSON

BYD

PHILIPS

TE
connectivity

VIDEOTON

O-LEADING **CUSTOMER REVIEW**

CUSTOMER VOICE IS **EXTREMELY IMPORTANT TO US**

订单编号: 49335463501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

High quality usb power pcb , pcba manufacturer

★★★★★

Fancy has done an excellent job, whenever we write, she answered us within 1 second, O-leading is very perfect with fast delivery, fast logistics, the most important thing is good quality, good packaging, thank you!

[回复该评论](#)

oem customized rohs pcb drawing schematic s...

★★★★★

We received the boards, the quality is very good, the price is very reasonable, Fancy is very nice & smart & experienced, the logistics is super fast, I will come to see more in the future.

[回复该评论](#)

订单编号: 49298271001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

High TG180 FR-4 Circuit HDI PCB 94V0 Board ...

★★★★★

perfect product, perfect PCB supplier!

[回复该评论](#)

oem customized rohs pcb drawing schematic s...

★★★★★

Very good and professional PCB product as usual!

[回复该评论](#)

Strip LED Aluminum FR-4 lighting PCB board 9...

★★★★★

High quality, fast delivery, good service, competitive price, lucky and happy to purchase from O-leading!

[回复该评论](#)

订单编号: 49024962001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

High quality Keyboard pcb & pcba Factory SMT...

★★★★★

Top quality, it's the right choice to choose O-leading to make the PCB & PCBA

[回复该评论](#)

订单编号: 4093862201024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

Professional Printed Circuit Board Manufactur...

★★★★★

Very high quality PCB products, O-leading is the best PCB supplier that we have ever worked with.

订单编号: 44068794501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

High TG180 FR-4 Circuit HDI PCB 94V0 Board ...

★★★★★

We bought two batches, one by DHL, the other one by air, good quality and fast delivery!

LISTEN TO **CUSTOMER VOICE**

订单编号: 40903347501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

Strip LED Aluminum FR-4 lighting PCB board 9...

★★★★★

Very fast delivery! Fantastic, good job!!!

Professional Printed Circuit Board Manufactur...

★★★★★

Very happy to great support from O-leading, they are not only professional on the PCB, but also provide good PCB products, very good supplier!

hot sale rigid-flexible PCB with 0.2mm BGA an...

★★★★★

very professional supplier

High Quality custom FPCB/Flex PCB/FPC/Flexi...

★★★★★

Good product

OEM ODM PCBA Bluetooth Wireless Marking G...

★★★★★

high soldering quality

Electronic parts haptic pcba Circuit Board asse...

★★★★★

Very Good product

订单编号: 36919647001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

AML-S802 Quad-core Android embedded boar...

★★★★★

Good products

Fast delivery low cost pcb fabrication O-leadin...

★★★★★

Good supplier

Lidar IR Sensor board pcba(H08R6x)

★★★★★

perfect product

Customized PCBA design PCB design

★★★★★

perfect

Audio Speaker and Headphone Jack (H07R3x)

★★★★★

High quality, good

订单编号: 37378603001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

half hole pcb, half hole pcb module, half hole m...

★★★★★

Top half hole pcb supplier, very perfect goods

High Quality custom FPCB/Flex PCB/FPC/Flexi...

★★★★★

this rigid-flexible pcb quality is perfect!

Electronic parts haptic pcba Circuit Board asse...

★★★★★

Very satisfied with O-leading products and quality, especially their on-time delivery, fantastic!

Raspberry pi 0 Zero Raspberry Pi Zero Pi W ver...

★★★★★

Fantastic products!!

double layer pcb with red S/M and LF-HASL su...

★★★★★

Good!

Be **kind** to your client,
because he has many choices,
but he chooses you instead.

Certifications

CICC INSPECTION CERTIFICATION



嘉泰认证

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 18118Q10347R05

We hereby certify that
O-LEADING SUPPLY CHAIN(HK) CO.,LIMITED
 Credit No: 61691591-000-07-18-7
 Registration Add: FLAT/RM 1205 12/F TAI SANG BANK BUILDING 130-132 DES
 VOEUS BOAD CENTRAL HK
 Business Add: 1313, Floor 13, Fortune Building, Danshui Town, Huiyang
 District, Huizhou, Guangdong, China

Has implemented and maintains a **Quality Management System**
 Which fulfils the requirements of the following standards
GB/T19001-2016 idt ISO9001:2015

Scope of certification
 Sales of printed circuit boards

Initial issuance period: February 27, 2018
 Renewal date: April 22, 2019

This certificate is valid during: April 22, 2019 ~ February 26, 2021
 This certificate is invalid without CICC qualified label in the following period

| | | |
|-----------------------------|------------------------------|----------------|
| First supervision and audit | Second supervision and audit | Qualified mark |
|-----------------------------|------------------------------|----------------|

The certification implementation scope does not include those production services which shall be obtained by the relevant effective administrative provisions and qualification provisions regulated by the state. The effectiveness of this certificate shall be notified by annual surveillance audit of CICC. The certificate shall be valid also only together with the surveillance audit certificate. The initial issuance of this certificate can be searched at the portal of CICC: www.cicc.com.cn. For the date of validity see above text.






CICC INSPECTION CERTIFICATION



嘉泰认证

质量管理体系认证证书

证书号: 18118Q10347R05

兹证明
诚领供应链(香港)有限公司
 统一社会信用代码: 61691591-000-07-18-7
 注册地址: 香港中環德輔道中 130-132 號大生銀行大廈 1205 室
 经营地址: 广东惠州惠阳淡水南亨西路财富大厦 13 楼 1313

建立的质量管理体系符合
GB/T19001-2016 idt ISO9001:2015 质量标准适用条款的要求

认证范围
 印刷线路板的销售

初次发证日期: 2018年02月27日
 换证日期: 2019年04月22日
 证书有效期: 自2019年04月22日至2021年02月26日
 在下列期限内, 未经 CICC 黏贴合格标贴, 本证书无效

| | | |
|-------|-------|-----|
| 第一次监审 | 第二次监审 | 粘标处 |
|-------|-------|-----|

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Test Report

No. SZXEC1900530401 Date: 30 Mar 2019 Page 1 of 6

O-LEADING SUPPLY CHAIN (HK) CO., LIMITED

1313.FLOOR 13, FORTUNE BUILDING, DANSHUI TOWN, HUIYANG DISTRICT, HUIZHOU, GUANGDONG, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : OSP

SGS Job No. : RP19-006089 - SZ
Date of Sample Received : 22 Mar 2019
Testing Period : 22 Mar 2019 - 30 Mar 2019
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Tina
Tina Fan
Approved Signatory



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中国 深圳 深圳市福田区福强路430号13楼 邮编: 518129 电话: 86-755-25288888 86-755-83106190 sgs.china@sgs.com

Member of the SGS Group (SGS SA)



Test Report

No. SZXEC1900530401 Date: 30 Mar 2019 Page 2 of 6

Test Results :

Test Part Description :

Specimen No. : SN1
SGS Sample ID : SZX19-005304.001
Description : Green"PCB"

Remarks :
(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Table with 5 columns: Test Item(s), Limit, Unit, MDL, and 0/1. Lists various substances like Cadmium, Lead, Mercury, Hexavalent Chromium, and various brominated biphenyls with their respective limits and detection results.



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中国 深圳 深圳市福田区福强路430号13楼 邮编: 518129 电话: 86-755-25288888 86-755-83106190 sgs.china@sgs.com

Member of the SGS Group (SGS SA)



ZPMV2.E490354 - WIRING, PRINTED - COMPONENT

Wiring, Printed - Component

See General Information for Wiring, Printed - Component

O-LEADING SUPPLY CHAIN (HK) CO LTD

E490354

ROOM 1205, 12/F
TAI SANG BANK BLDG
130-132 DES VOEUS ROAD
CENTRAL, HONG KONG

| Type | Cond Width | | | SS/ DS/ DSO | Max | Max | | Meets UL796 | C T | |
|--|---------------|----------------|----------------------|-------------------|----------------|-----------------|-------|----------------|--------|-----------|
| | Min | Cond | Area | | Solder | Oper | Flame | | | |
| | mm(in) | Edge mm(in) | Thk mic(mil) | | Diam mm(in) | Limits C sec | | | | Temp C |
| Multilayer (mass laminate) printed wiring boards. | | | | | | | | | | |
| O-LEADING-401 | 0.1 (0.004) | 0.3 (0.012) | 34 (1.34) | DS | 12.7 (0.5) | 260 | 10 | 130 | V-0 | - |
| O-LEADING-407 | 0.08 (0.003) | 0.2 (0.008) | 17 (0.67) | DS | 9.7 (0.4) | 260 | 10 | 130 | V-0 | All |
| Multilayer printed wiring boards. | | | | | | | | | | |
| O-LEADING-408 | 0.125 (0.005) | 0.125 (0.005) | 12 (0.47) Int:136 | DS | 50.8 (2.0) | 280 | 20 | 130 | V-0 | All * |
| Single layer printed wiring boards. | | | | | | | | | | |
| O-LEADING-002 | 0.38 (0.015) | 1.14 (0.045) | 34 (1.34) | SS | 19.1 (0.8) | 260 | 10 | 105 | V-0 | All - |
| O-LEADING-003 | 0.38 (0.015) | 1.14 (0.045) | 34 (1.34) | SS | 19.1 (0.8) | 260 | 10 | 130 | V-0 | ▲ - |
| O-LEADING-033 | 0.15 (0.006) | 0.3 (0.012) | 34 (1.34) | SS | 25.4 (1.0) | 260 | 10 | 120 | V-0 | All - |
| O-LEADING-205 | 0.1 (0.004) | 0.3 (0.012) | 34 (1.34) | DS | 69.6 (2.7) | 260 | 10 | 130 | V-0 | All - |
| O-LEADING-206 | 0.15 (0.006) | 0.33 (0.013) | 17 (0.67) | DS | 69.6 (2.7) | 260 | 10 | 130 | V-0 | All - |
| O-LEADING-D01 | 0.14 (0.006) | 0.15 (0.006) | 33 (1.30) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All * |
| O-LEADING-S01 | 0.25 (0.010) | 0.25 (0.010) | 17 (0.67) | SS | 25.4 (1.0) | 260 | 4 | 130 | V-0 | All * |

WIRING, PRINTED - COMPONENT | UL Product iQ

| | | | | | | | | | | |
|----------------------|--------------|--------------|-----------|----|------------|-----|---|-----|-----|-------|
| O-LEADING-S02 | 0.2 (0.008) | 0.2 (0.008) | 17 (0.67) | SS | 25.4 (1.0) | 260 | 4 | 130 | HB | ▲ * |
| O-LEADING-S03 | 0.25 (0.010) | 0.25 (0.010) | 34 (1.34) | SS | 25.4 (1.0) | 260 | 4 | 130 | V-0 | All * |

* - CTI marking is optional and may be marked on the printed wiring board.

Marking: Company name or file number and type designation. May be followed by a suffix to denote factory identification or burning test classification.

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Process Capability

PCB Production Capabilities

| | |
|-------------------------------------|---|
| Layer Count | 1Layer-32Layer |
| Finished copper thickness | 1/3oz-12oz |
| Min Line width/spacing internal | 3.0mil/3.0mil |
| Min Line width/spacing external | 4.0mil/4.0mil |
| Max Aspect Ratio | 10:1 |
| Board thickness | 0.2mm-5.0mm |
| Max Panel size(inches) | 635*1500mm |
| Minimum Drilled Hole Size | 4mil |
| Plated Hole Tolerance | +/-3mil |
| Blind/Buried Vias (All Types) | YES |
| Via Fill(Conductive,Non-Conductive) | YES |
| Base Material | FR-4,FR-4high Tg,Halogen free material,Rogers,Aluminium base,Polyimide,Heavy Copper |
| Surface finishes | HASL,OSP,ENIG,HAL-LF,Immersion silver,Immersion Tin,Gold fingers,Carbon ink |

SMT Production Capabilities

| | |
|------------------------------|---|
| PCB Material | FR-4,CEM-1,CEM-3,Aluminum-based board,FPC |
| Max PCB size | 510x1500mm |
| Min PCB size | 50x50mm |
| PCB Thickness | 0.5mm-4.5mm |
| Board thickness | 0.5-4mm |
| Min Components size | 0201 |
| Standard chip size component | 0603 and larger |
| Component max height | 15mm |
| Min lead pitch | 0.3mm |
| Min BGA ball pitch | 0.4mm |
| Placement precision | +/-0.03mm |

Packaging & Delivery

Shipping service



| Quick Turn Lead Time | | |
|----------------------|----------|---------------------|
| Layer Count: | Lead Tim | Special Requirement |
| 1L/2L | 2-3days | 24 Hours,48 Hours |
| 4L | 3-4days | 48 Hours |
| 6L | 4-5days | 72 Hours |
| 8L | 5-6days | NA |
| 10L | 6-7days | NA |
| 12L | 7-8days | NA |
| 14L | 8-9days | NA |

| Standard Lead Time | | |
|--------------------|------------------|------------------------|
| Layer Count: | Sample Lead Time | Volume order lead time |
| 2L | 4 days | 10 days |
| 4L | 5 days | 11 days |
| 6L | 6 days | 12 days |
| 8L | 8 days | 14 days |
| 10L | 10 days | 16 days |
| 12L | 12 days | 18 days |
| 14L | 14 days | 20 days |
| 16-32L | 18 days | 24 days |

FAQ

1. How do O-Leading ensure quality?Our high quality standard is achieved with the following.

- 1.1 The process is strictly controlled under ISO 9001:2008 standards.
- 1.2 Extensive use of software in managing the production process
- 1.3 State-of-art testing equipments and tools. E.g. Flying Probe, X-ray Inspection, AOI (Automated Optical Inspector) and ICT(in-circuit testing).
- 1.4.Dedicated quality assurance team with failure case analysis process
- 1.5.Continuous staff training and education

2. How do O-Leading keep your price competitive?

Over the last decade, prices of many raw materials (e.g. copper, chemicals) had doubled, tripled or quadrupled; Chinese currency RMB had appreciated 31% over US dollar; And our labor cost also increased significantly.

However, O-Leading have kept our pricing steady. This owns entirely to our innovations in reducing cost, avoiding wastes and improving efficiency. Our prices are very competitive in the industry at the same quality level.

We believe in a win-win partnership with our customers. Our partnership will be mutually beneficial if we can provide you anedgeon cost and quality.

3. What kinds of boards can O-Leading process?

Common FR4, high-TG and halogen-free boards, Rogers, Arlon, Telfon, aluminum/copper-based boards, PI, etc.

4. What data are needed for PCB & PCBA production?

4.1 BOM (Bill of Materials) with reference designators: component description, manufacturer's name and part number.

4.2 PCB Gerber files.

4.3 PCB fabrication drawing and PCBA assembly drawing.

4.4 Test procedures.

4.5 Any mechanical restrictions such as assembly height requirements.

5. What's the typical process flow for multi-layer PCB?

Material cutting → Inner dry film → inner etching → Inner AOI → Multi-bond → Layer stack up Pressing → Drilling → PTH → Panel Plating → Outer Dry Film → Pattern Plating → Outer etching → Outer AOI → Solder Mask → Component Mark → Surface finish → Routing → E/T → Visual Inspection.

6. What's the key equipments for HDI manufacturing?

Key equipment list is as following: Laser drilling machine, Pressing machine, VCP line, Automatic Exposing machine, LDI and etc. The equipments we have are the best in the industry, laser drilling machines are from Mitsubishi and Hitachi, LDI machines are from Screen(Japan), Automatic Exposing machines are also from Hitachi, all of them make we can meet customer's technical requirements.

7. How many types of surface finish O-lead can do?

O-the leader has the full series of surface finish, such as: ENIG, OSP, LF-HASL, gold plating (soft/hard), immersion silver, Tin, silver plating, immersion tin plating, carbon ink and etc. .. OSP, ENIG, OSP + ENIG commonly used on the HDI, we usually recommend that you use a client or OSP OSP + ENIG if BGA PAD size less than 0.3 mm.

8. What's your capability for FPC? Can O-Leading provide SMT service also?

O-Leading can fabricate FPC from single layer to 8layer, the working panel size can be as large as 2000mm*240mm, please find the details in the page "Flex Capability". We also provide SMT one stop service to customer.

9. What are the main factors which will affect the price of PCB?

Material;

Surface finish;

Technology difficulty;

Different quality criteria;

PCB characteristics;

Payment terms;

Different manufacturing countries.

10. What's the definition of PCB, PWB and FPC and what's the difference?

PCB is short for Printed Circuit Board;

PWB is short for Printed Wire Board, same meaning as Printed Circuit Board;

FPC is short for Flexible Printed Board.

11. What factors should be considered when choosing the material for a PCB board?

Below factors should be considered when we choose the material for PCB:

The material's Tg value should be greater than the operation temperature;

Low CTE material has good performance of thermal stability;

Good thermal resistance performance: Normally PCBs are required to resist 250°C for at least 50s.

Good flatness; In consideration of the electrical properties, low loss/high permittivity material is used on high frequency PCB;
Polyimide glass fiber substrate used for flexible PCB; Metal core is used when the product has strict requirement of heat dissipation.

12. What's the merits of O-leading's rigid-flex PCB?

O-leading's rigid-flex PCB has the characters of both FPC and PCB, so it can be used in some special products. Some part is flexible while the other part rigid, it can help save product's interior space, reduce product volume and improve performance.

13. How to you make the impedance calculation?

The impedance control system is done using some test coupons, the SI6000 soft and the CITS 500s equipment from POLAR INSTRUMENTS. The equipment measures the impedance on a representative track configuration coupon of which the client has given us a determinate value and tolerance.