

# Benvenuti in O-Leader

O-leader si impegna ad essere il tuo partner Solution One Stop nella catena di approvvigionamento EMS, incluso il design PCB, la fabbricazione di PCB e il gruppo PCB, forniamo alcune delle tecnologie PCB più avanzate, tra cui PCB più avanzate, inclusi PCBS HDI, PCB multistrato, PCBS flessibile rigido. Supporto dal prototipo di ruota rapida a media e produzione di massa.

In generale, i nostri clienti globali sono molto impressionati dai nostri servizi: risposta rapida, prezzo competitivo e impegno di qualità. Provare un servizio tecnico più prezioso e una soluzione generale è il modo in cui O-guida in avanti.

Guardando al futuro, O-leader si concentrerà sull'innovazione e lo sviluppo della tecnologia di produzione dell'elettronica come sempre e rendono sempre sforzi persistenti sul servizio PCB e PCBA one-stop per fornire servizi di prima classe e creare più valore per i nostri clienti.

Si prega di fare clic su questi per ulteriori informazioni: [P.Fornitore di PCB flessibile rigido professionale per custodia Raspberry PI 4 ABS](#)

**O-LEADING**  
To Be Reliable, To Be Valuable

WE ALWAYS PROVIDE YOU

**BEST HIGH DENSITY INTERCONNECT PCB**

WE ALWAYS PROVIDE YOU

**BEST RIGID-FLEXIBLE CIRCUIT**

## Descrizione del prodotto

Alphabot2 wireless video smart robot alimentato da Raspberry PI 4 con PI4B-4GB

Industrie applicabili: impianti di produzione, aziende agricole, negozi di bevande, altro

Località showroom: nessuno

Nome del prodotto: robot intelligente

Utilizzo: elettronica OEM

Certificato: Rosh. ISO9001.

Maschera di saldatura: verde. Rosso. Blu. Bianca. Nero giallo

Servizio: un servizio tacchino one stop

Caratteristiche: processore quad-core, LAN wireless a doppia banda, Bluetooth 4.2 / ble

## Raspberry Pi 4 Video Robot With PI4B

AlphaBot2 Wireless Video Smart Robot

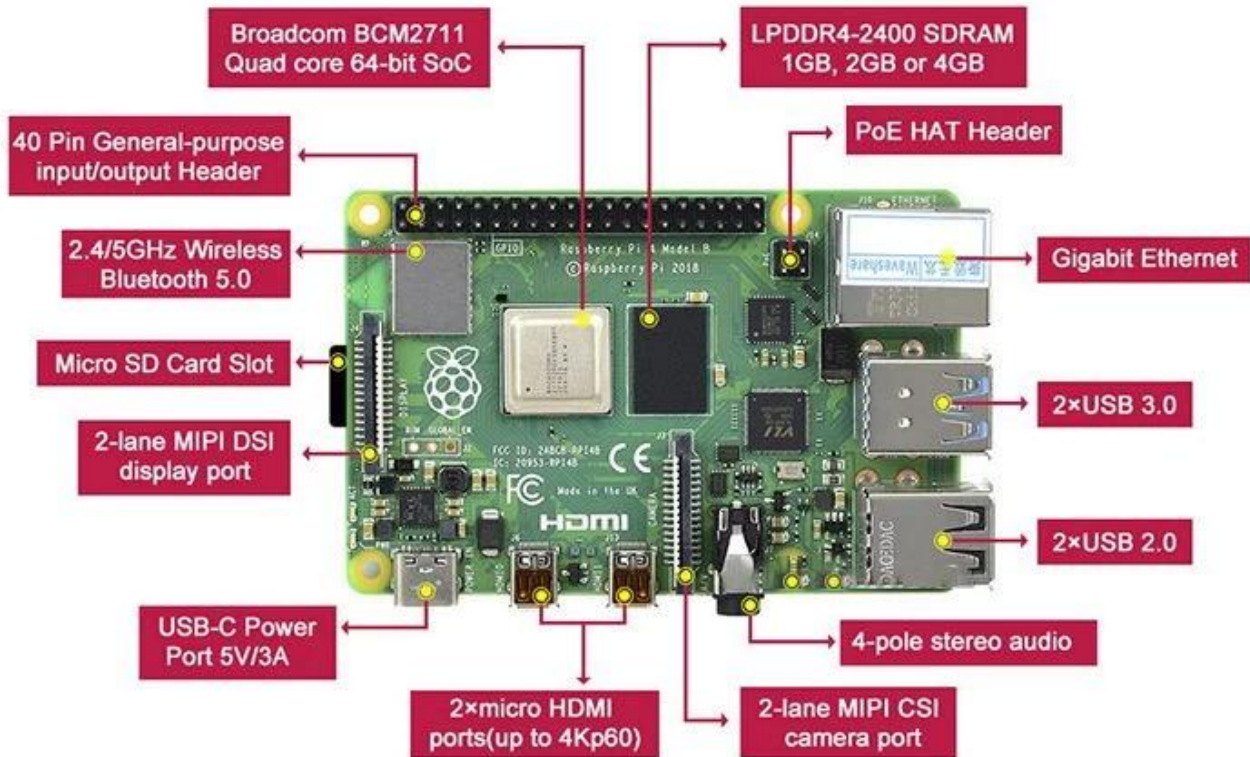
Obstacle Avoidance, Line Tracking, Wireless Remote Control, Video Monitoring...



\* The Raspberry Pi 4 is optional, up to your choice.

# Raspberry Pi 4 Completely Upgraded

More Powerful Processor, Richer Multi-Media Capability, Faster Networking

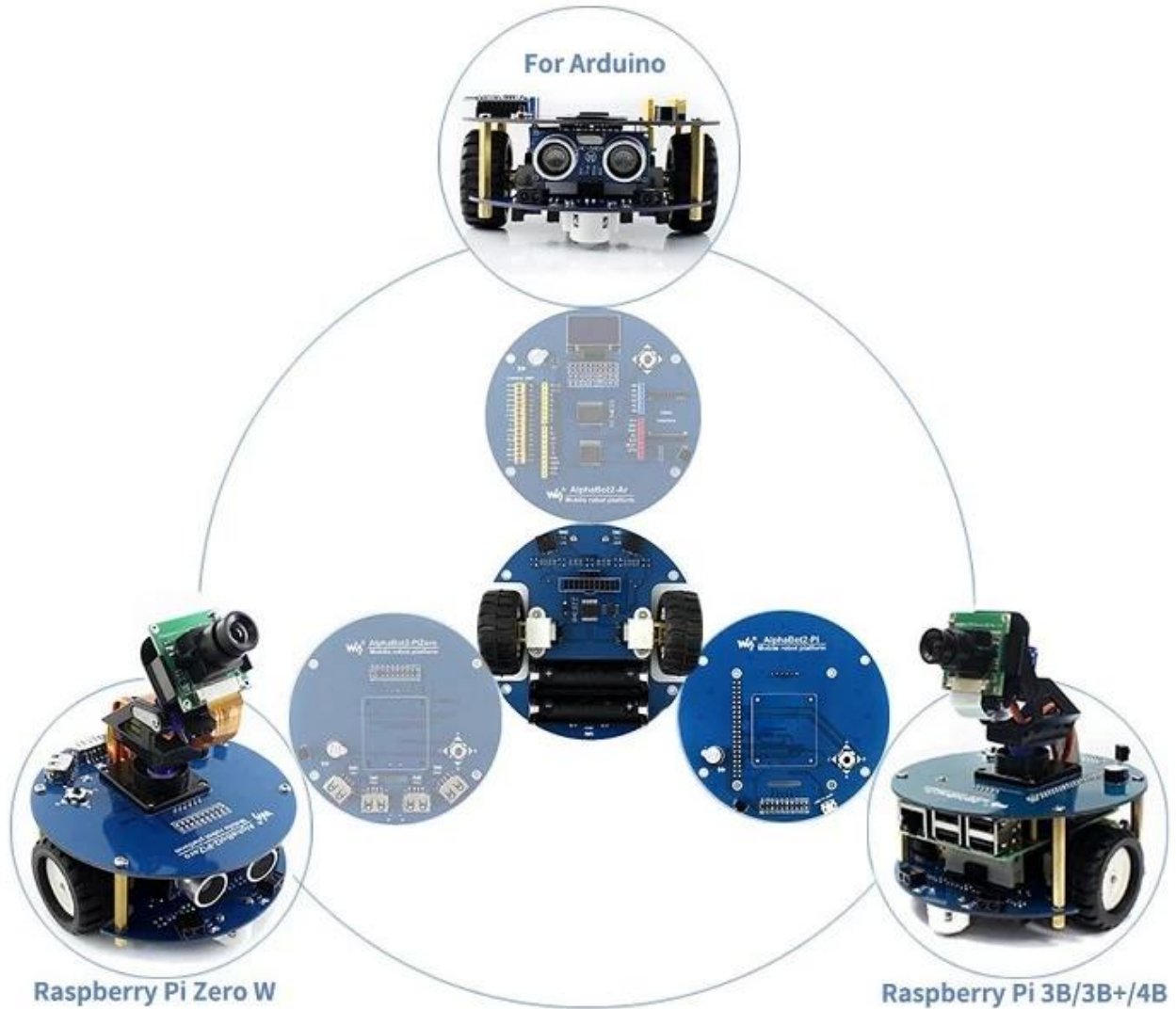


<b>BCM2711B0</b> 64-bit 1.5GHz Quad-core Processor	<b>Choice Of RAM</b> 2GB / 4GB / 8GB	<b>4K Dual HDMI</b> 4K High Resolution Dual Displays
<b>Faster Networking</b> Gigabit ETH, Bluetooth 5.0, Dual-band WiFi	<b>New USB3.0</b> 2xUSB3.0 + 2xUSB2.0	<b>USB-C Power</b> Upgraded Power Supply, More Powerful

# Versatile AlphaBot2 Chassis

Compatible With Multi Controllers Via Related Adapter Boards (Purchased Separately)

Easily Turn It Into A Pi Zero / Arduino Robot



# Modular Design, No More Messy Wiring

Highly Integrated AlphaBot2-Pi Adapter Board:

IR Obstacle Avoidance, 5-Ch Detector Li Tracking, Battery Charging Circuit, High Quality N20 Motor, Rubber Wheels, And Colorful RGB LED



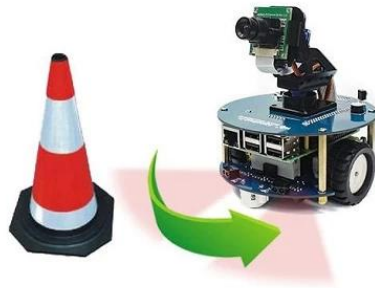
# Raspberry Pi 5MP HD Camera, 1080P

The Leading Role For Vision Applications, Like Mjpg-Streamer Video Monitoring, And OpenCV Intelligent Recognition Driving



# Full Functionality, Common Examples

For More Possibilities, Refer To Example Code And Manual

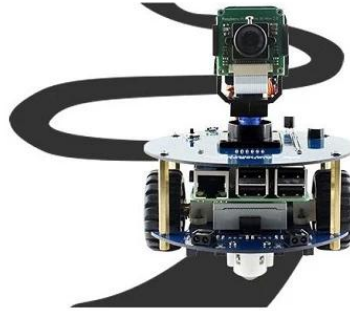


## Obstacle Avoidance

The module sends IR beam and detects objects by receiving the reflected IR beam, to easily avoid obstacles in the way.

## Auto Line Tracking

Features 5-ch IR detector for sensing and analysing the black line, combined with PID algorithm for adjusting robot movement, high sensitivity, stable tracking.



## Bluetooth Control

Provides mobile APP to control the robot movement and peripherals, such as RGB LED color, onboard buzzer, etc.

## Infrared Control

With the IR receiver onboard, it is allowed to control the robot via IR remote controller, make it move forward or change direction...



Web control (Mobile/Tablet/PC)    Qt software control (PC)    APP control (Android phone)

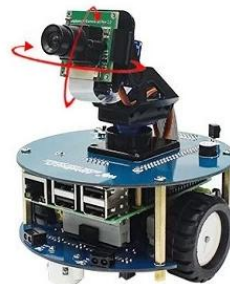


## WiFi Control

Supports WiFi remote control, real time video monitoring via webpage / APP / PC, also features routing function by creating WiFi hotspot.

## 2-DOF Pan-Tilt

2-DOF pan and tilt + hardware PWM controlled servo, smoothly rotates the camera to capture omnibearing images.





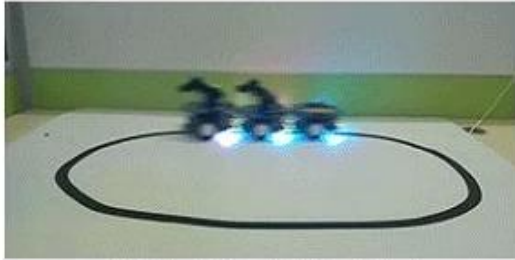
AlphaBot2-Pi robot RGB LED control



AlphaBot2-Pi robot video monitoring



AlphaBot2-Pi robot Bluetooth control



multi AlphaBot2 robots line following



AlphaBot2-Pi robot obstacle avoiding



# Kits Selection Guide

Various Raspberry Pi 4 Kits Are Available, Find Your Favorite One

## Starter Kit

The very essential parts to get started, guaranteed compatibility and stability.

- 16GB Class10 high speed micro SD card
- 5V 3A Type-C power supply
- Cool brass heat sink
- Extra free micro SD card reader



## Display Kit

Build your own all-in-one computer powered by Raspberry Pi 4, much more funny.

- 7inch wide viewing angle HD touch screen
- High quality black/white acrylic protective case
- HDMI to micro HDMI cable
- 16GB micro SD card, power supply...

## Sensor Kit Pi x Arduino

Sensors are important parts of IoT, while the Arduino is a massive ecosystem, this kit provides a way for the Pi to make use of these powerful things.

1 + 1 > 2

- Pi to Arduino adapter board
- 13x popular sensors
- 16GB micro SD card, power supply...



## Robot Kit AlphaBot

Make a Raspberry Pi smart mobile robot, easily use it for obstacle avoidance, line tracking, Bluetooth / IR / WiFi remote control, or video monitoring. Arduino compatible.

- AlphaBot driver board
- AlphaBot chassis
- Modules: Camera / Line tracking / Speed measuring...
- Raspberry Pi 4 is NOT included

## Robot Kit AlphaBot2

Make a Raspberry Pi smart mobile robot, easily use it for obstacle avoidance, line tracking, Bluetooth / IR / WiFi remote control, or video monitoring. A smaller and more flexible one.

- AlphaBot2-Pi (adapter board)
- AlphaBot2-Base (base chassis)
- Modules: Camera...



## Robot Arm Kit

Flexible and stable 4-DOF metal robot arm, allows to be controlled by smart phone through Bluetooth or WiFi connection.

"Just grab it"

- Servo driver board
- Metal mechanical arm structure
- 4x servos, power supply...
- Raspberry Pi 4 is NOT included

# La nostra squadra

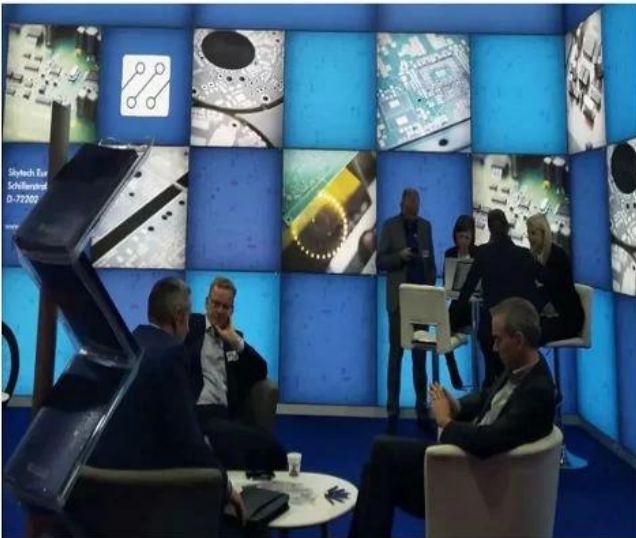
O-LEADING *CUSTOMER*

To be *RELIABLE*

- Quality first ,
- Customer supreme ,
- Scientifically management ,
- Striving for famous brand



*THE CUSTOMER IS KING*



To be *VALUABLE*

- Science and technology keeps head ,
- Put people first,
- Be precise and practical,
- contribute sincerely

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Factory PCB

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Automatic vacuum press machine



Drilling Machine



Pattern Plating Machine



Scrubbing Machine



Developing Machine



Routing Machine



High-speed flying probe machine



E-test Machine

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Factory SMT

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# HOW O-LEADING MAKE A PROJECT FOR YOU

Hardware Dispenser Application Not

## Automatic Dispenser Application Not

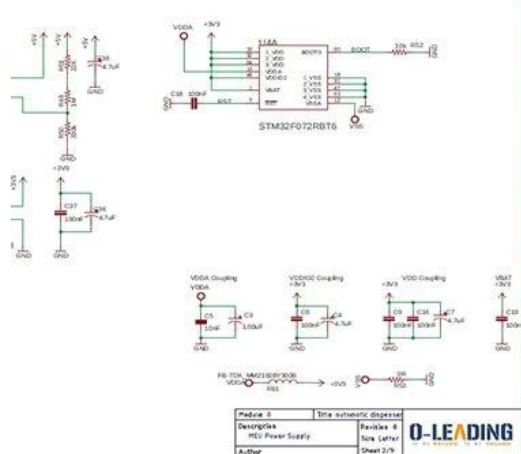
Voltage Table

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

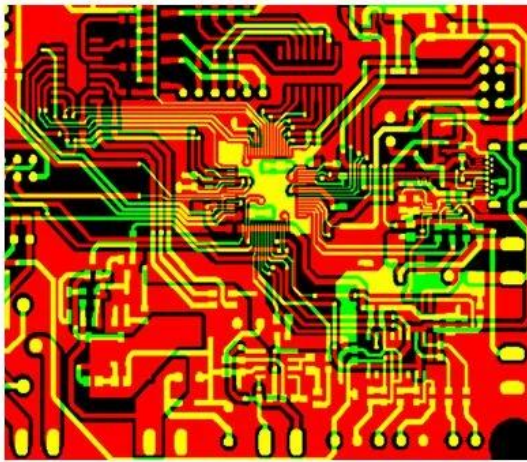
Wire Name	Description	DIO	Mode	Note
SMTN_TOF	Shutdown Time of flight sensor	Output	Logic '0' to shutdown	
I2C_SCL_TOF	I2C communication with time of flight sensor	I2C1_SCL		
I2C_SDA_TOF	I2C communication with thermopile sensor	I2C1_SDA		
I2C_SCL_IR	I2C communication with thermopile sensor	I2C2_SCL		
I2C_SDA_IR	I2C communication with thermopile sensor	I2C2_SDA		
RATE_LC	Load cell control pins	Output		
DOUT_LC	Load cell control pins	Output		

**O-LEADING**  
TO BE RELIABLE, TO BE AVAILABLE

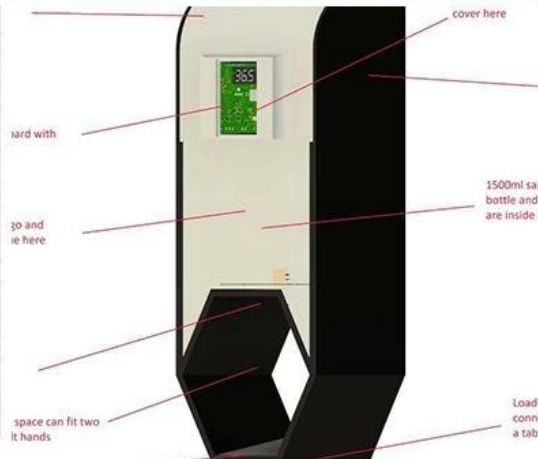


## HARDWARE schematics

## PCB PRODUCTION COMPONENTS SOURCING



Qty	Value	Device	Parts	Description
4	AK500/2	AK500/2	X1, X2	CONNECTOR
1	AK500/3	AK500/3	X7	CONNECTOR
1	1241148	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, R1	Thick Film Resistors - SMD 0603
9	10k	R-0603	R16, R3	Thick Film Resistors - SMD 0603



## PCB Assembly MECHANICAL DESIGN

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**<sup>®</sup>

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**

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: 4932411001024670


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...**

★★★★★

This is a very difficult PCB design, but we are lucky to find O-leading to support the PCB for us very good to a PCB supplier.




**universal FR4 Multilayer PCB washing machine...**

★★★★★

Fancy gives us very excellent service, very professional and experienced, O-leading is the best one of our suppliers, very happy to work with them.

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: 4093842301024670

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: 44068794501034670

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!

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

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)



**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)



**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)



**Raspberry pi 0 Zero Raspberry Pi Zero P1 W ver...**

★★★★★

Fantastic products!!




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

★★★★★

Good!

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)



**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!

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

# Certificazioni

O-LEADING *TRAINING*



Keep *LEARNING*

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

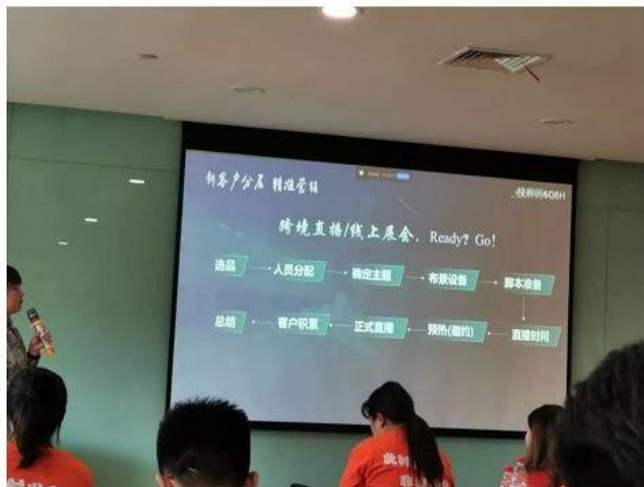
It's wonderful to have a beginner's mind

WE HAVE A *DREAM*

Keep *RUNNING*

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

----Bacon







**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. : RP19-005089 - SZ  
Date of Sample Received : 22 Mar 2019  
Testing Period : 22 Mar 2019 - 30 Mar 2019  
Test Requested : Selected tests(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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SGS 检测有限公司 深圳分公司 地址: 深圳市福田区中康路12号卓越世纪中心1号楼1501-1502室 邮编: 518029 电话: 86-755-83071443 传真: 86-755-25888888 电子邮箱: [sgs@sgs.com](mailto:sgs@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.	SGS Sample ID	Description
SN1	SZX19-005304.001	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, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	0/1
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	8
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1,000	mg/kg	8	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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

<b>O-LEADING-S02</b>	0.2 (0.008)	0.2 (0.008)	17 (0.67)	SS	25.4 (1.0)	260	4	130	HB	▲	*
<b>O-LEADING-S03</b>	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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# Capacità di processo

## Capacità di produzione PCB.

Conteggio del livello	1Layer-32layer.
Spessore di rame finito	1 / 3OZ-12OZ
Min Larghezza linea / spaziatura interna	3.0mil / 3.0mil.
Larghezza minima linea / spaziatura esterna	4.0mil / 4.0mil.
Rapporto Max Aspect.	10: 1.
Spessore del bordo	0,2 mm-5.0mm.
Dimensione massima del pannello (pollici)	635 * 1500mm.
Dimensione minima del foro forato	4Mil
Tolleranza del foro piegata	+/- 3mil.
BIIND / Vias sepolti (tipi AII)	Sì
Via Riempimento (conduttivo, non-conduttivo)	Sì
Materiale di base	FR-4, FR-4High TG. MATERIALE GRATUITO FREE, ROGERS, BASE DI ALLUMINIO, Poliimmide, rame pesante
Finiture superficiali	Hasl, osp, enig, hal-lf, Immersion argento, Tin di LMMER, dita d'oro, inchiostro del carbonio

## Capacità di produzione SMT.

Materiale PCB	FR-4, CEM-1, CEM-3, scheda a base di alluminio, FPC
Dimensione max PCB.	510x1500mm.
MIN Dimensioni PCB.	50x50mm.
Spessore PCB.	0,5 mm-4.5mm.
Spessore del bordo	0,5-4mm.
Dimensione dei componenti min	0201.
Componente di dimensioni del chip standard	0603 e più grande
Componente massima altezza	15mm.
Min Pitch	0.3mm.
Min BGA Ball Pitch	0.4mm.
Precisione del posizionamento	+/- 0,03mm.

# Confezione e consegna

# 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. In che modo gli o-leader garantiscono la qualità? Il nostro standard di alta qualità è ottenuto con quanto segue.

- 1.1 Il processo è rigorosamente controllato secondo gli standard ISO 9001: 2008.
- 1.2 Ampio uso del software nella gestione del processo di produzione
- 1.3 Attrezzature e strumenti di test all'avanguardia. Per esempio. Sonda volante, ispezione a raggi X, AOI (ispettore ottico automatico) e TIC (test in circuito).
- 1.4. Team di garanzia della qualità ridotto con processo di analisi del caso fallimento
- 1.5. Formazione e istruzione del personaleContinuo

### 2. In che modo O-leader mantiene il prezzo competitivo?

Nell'ultimo decennio, i prezzi di molte materie prime (ad es. Rame, prodotti chimici) erano raddoppiati, triplicati o quadruplicati; La valuta cinese RMB aveva apprezzato il 31% sul dollaro USA; E anche il nostro costo del lavoro è aumentato in modo significativo.

Tuttavia, o-leader ha mantenuto il prezzo fisso. Questo possiede interamente alle nostre innovazioni nel ridurre i costi, evitando i rifiuti e il miglioramento dell'efficienza. I nostri prezzi sono molto competitivi nel settore allo stesso livello di qualità.

Crediamo in una partnership win-win con i nostri clienti. La nostra partnership sarà reciprocamente vantaggiosa se possiamo fornirti un costo e una qualità di Edgeon.

### **3. Che tipo di schede possono il processo di leader o?**

Common FR4, Schede ad alte TG e alogeni, Rogers, Arlon, Telfon, alluminio / schede a base di rame, PI, ecc.

### **4. Quali dati sono necessari per la produzione PCB e PCBA?**

4.1 BOM (Bill of Materials) Con Designatori di riferimento: descrizione dei componenti, nome del produttore e numero di parte.

4.2 File Gerber PCB.

4.3 Disegno di fabbricazione PCB e disegno di assemblaggio PCBA.

4.4 Procedure di prova.

4.5 Eventuali restrizioni meccaniche come requisiti di altezza di assemblaggio.

### **5. Qual è il flusso di processo tipico per PCB multistrato?**

Taglio del materiale → Film secco interno → Interiore dell'incisione → Interno Aoi → Multi-Bond → Strati Stack Up Pressatura → Foratura → PTH → Placcatura del pannello → Pellicola a secco esterno → Pellicola a secco → Placcatura del motivo → Incisione esterna → Esterno Aoi → Maschera di saldatura → Marchio del componente → Finitura superficiale → Routing → E / T → Ispezione visiva.

### **6. Quali sono le apparecchiature chiave per la produzione di hdi?**

L'elenco delle apparecchiature chiave è il seguente: perforatrice laser, macchina per la pressatrice, linea VCP, macchina per esposizione automatica, LDI e ecc.

Le apparecchiature che abbiamo sono le migliori del settore, le perforatrici laser provengono da Mitsubishi e Hitachi, le macchine LDI sono provenienti da schermo (Giappone), anche le macchine per l'esposizione automatica sono anche da Hitachi, tutte effettuano che possiamo soddisfare i requisiti tecnici del cliente.

### **7. Quanti tipi di finitura superficiale o-piombo possono fare?**

O-Il leader ha la serie completa di finitura superficiale, come ad esempio: enig, osp, lf-hasl, placcatura in oro (morbido / duro), argento ad immersione, stagno, placcatura d'argento, placcatura di stagno, inchiostro di immersione e ecc. OSP, enig, osp + enig Comunemente usato sull'HDI, di solito consigliamo di utilizzare un client o osps osp + ITIG se la dimensione del pad BGA è inferiore a 0,3 mm.

### **8. Qual è la tua capacità di FPC? L'o-leader può fornire anche un servizio SMT?**

O-leader in grado di fabbricare il FPC dal singolo livello a 8layer, le dimensioni del pannello di lavoro possono essere grandi come 2000mm \* 240mm, si prega di trovare i dettagli nella pagina "Capacità Flex" Forniamo anche un servizio SMT one stop al cliente.

### **9. Quali sono i principali fattori che influenzeranno il prezzo del PCB?**

Materiale;

Finitura superficiale;

Difficoltà tecnologica;

Criteri di qualità diversi;

Caratteristiche del PCB;

Termini di pagamento;

Diversi paesi produttivi.

### **10. Qual è la definizione di PCB, PWB e FPC e qual è la differenza?**

PCB è corto per circuito stampato;

PWB è corto per la scheda di filo stampato, stesso significato del circuito stampato;

FPC è corto per una scheda stampata flessibile.

### **11. Quali fattori dovrebbero essere considerati quando si sceglie il materiale per una scheda PCB?**

Sotto i fattori dovrebbero essere considerati quando scegliamo il materiale per PCB:

Il valore TG del materiale dovrebbe essere maggiore della temperatura operativa;

Basso materiale CTE ha una buona prestazione della stabilità termica;

Buone prestazioni termiche resistenze: normalmente i PCB sono necessari per resistere a 250 °C per almeno 50 anni.

Buona piattezza; In considerazione delle proprietà elettriche, il materiale di bassa perdita / alta permittività è utilizzato su PCB ad alta frequenza; Substrato in fibra di vetro polimidrico utilizzato per PCB flessibile; Il nucleo in metallo viene utilizzato quando il prodotto ha requisito rigoroso della dissipazione del calore.

### **12. Quali sono i meriti del PCB rigido-Flex di O-Stainer?**

Il PCB rigido-Flex di O-Leading ha i caratteri di FPC e PCB, quindi può essere utilizzato in alcuni prodotti speciali. Alcune parti sono flessibili mentre l'altra parte rigida, può aiutare a salvare lo spazio interno del prodotto, ridurre il volume del prodotto e migliorare le prestazioni.

### **13. Come fare il calcolo dell'impedenza?**

Il sistema di controllo dell'impedenza viene eseguito utilizzando alcuni tagliandi di prova, il SI6000 morbido e l'apparecchiatura CITS 500S da strumenti polari.

L'attrezzatura misura l'impedenza su un coupon di configurazione del brano rappresentativo di cui il cliente ci ha dato un valore e una tolleranza determinati.