

O-leading 專業 製造 各種 PCB

O-Leading 專業 PCB 製造, PCB 設計, PCB 生產, EMS 服務, 我們 提供 各種 專業 服務. 專業 HDI PCB, 各種 PCB, Rigid-Flexible PCB 各種 專業 服務. 我們 提供 各種 專業 服務. (專業 服務 4 [ABS](#) 專業 服務 [rofessional](#) 專業 服務 [PCB](#) 專業 服務)

專業 服務 各種 專業 服務, 專業 服務 各種 專業 服務. 我們 提供 各種 專業 服務. 我們 提供 各種 專業 服務. 我們 提供 各種 專業 服務.

O-leading 專業 服務 各種 專業 服務, 專業 服務 各種 專業 服務. 我們 提供 各種 專業 服務. 我們 提供 各種 專業 服務. 我們 提供 各種 專業 服務.

專業 服務 各種 專業 服務: 專業 [PCB](#) 專業 [POE OEM](#) 專業

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

專業 服務

Raspberry Pi 4 8GB RAM

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



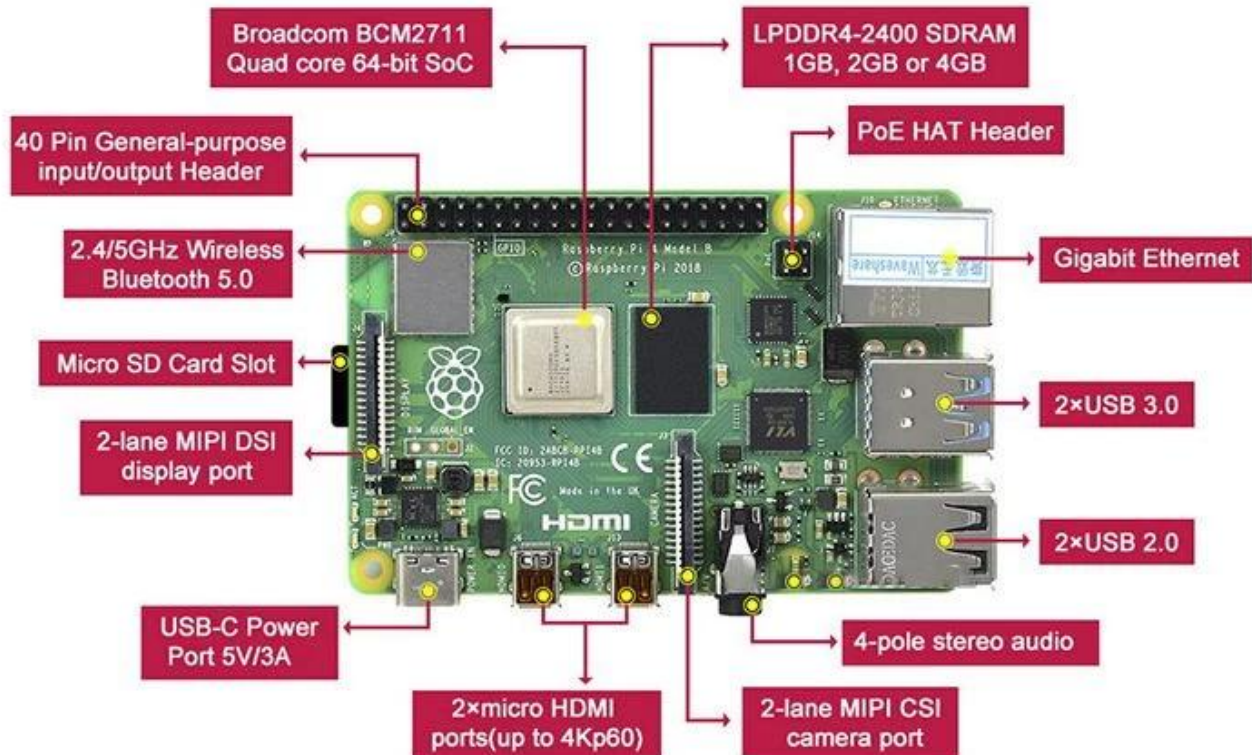
IMPROVEMENTS OF V1.2

1. In addition to the official USB Type-C cable, Pi 4B V1.2 now supports more other USB Type-C cables
2. Relocates the WLCSP SD card voltage switch, to protect the Pi 4B better
3. Optimizes silkscreen printing, to minimize the soldering and bridging in manufacturing process

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

Raspberry Pi 4 Completely Upgraded

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



BCM2711B0

64-bit 1.5GHz Quad-core Processor

Choice Of RAM

2GB / 4GB / 8GB

4K Dual HDMI

4K High Resolution Dual Displays

Faster Networking

Gigabit ETH, Bluetooth 5.0, Dual-band WiFi

New USB3.0

2xUSB3.0 + 2xUSB2.0

USB-C Power

Upgraded Power Supply, More Powerful

BCM2711B0

64-Bit Quad-Core Processor

Cortex-A72
ARM Architecture

64-bit
Quad-core

1.5GHz
Frequency

Faster, more powerful CPU

Provides smooth experience like X86 desktop PC



4K Ultra High Definition

Dual Micro HDMI

Upgrade to dual micro HDMI instead of a full size HDMI

Dual displays, up to 60fps refreshing rate

Bluetooth 5.0 BLE

2.4G / 5G Dual-Band WIFI

Upgraded Bluetooth 5.0 BLE, better performance

Dual-band WIFI, along with the Gigabit Ethernet

Better connectivity, faster and more stable networking



New USB3.0 Ports

Faster Data Transmission

2xUSB 3.0 + 2xUSB 2.0

No more trouble when connecting with high speed devices

Raspberry Pi Versions Comparing

	ZERO	ZEROW/ WH	3A+	3B	3B+	4B
SOC	BCM2835		BCM2837B0			BCM2711B0
CPU	ARM11 Single-core 700MHz		ARM Cortex-A53 Quad-core (3B 1.2GHz, 3A+/3B+ 1.4GHz)			ARM Cortex-A72 Quad-core 1.5GHz
GPU	Broadcom VideoCore IV@400MHz					Broadcom VideoCore IV@500MHz
RAM	512MB		512MB	1GB		Choice of 2GB/4GB/8GB
USB	1x micro USB		1x USB2.0	4x USB2.0		2x USB2.0 + 2x USB3.0
HDMI	Micro HDMI		HDMI			Mini HDMI
Bluetooth	N/A	Bluetooth 4.1	Bluetooth 4.2	Bluetooth 4.1	Bluetooth 4.2	Bluetooth 5.0
WiFi	N/A	802.11 b/g/n	3B: 802.11 b/g/n, others: 802.11 b/g/n/ac 2.4GHz/5GHz dual band			
Ethernet	N/A		100Mbps		300Mbps (USB)	1000Mbps
PoE	N/A				Yes	
Power Input	Micro USB (5V 2.5A)					USB Type-C (5V 3A)
Dimensions	65 × 30 x 5 mm		65 × 56 mm	85 x 56 x 17 mm		

2GB/4GB/8GB WHICH SHOULD I CHOOSE?

2GB

Suitable for running lots apps while GUI is not required, e.g. robot controller and smart car.

4GB

Suitable for graphic task or Internet application, e.g. watching video as normal PC, or deploying a network server.

8GB

Suitable for complicate multi-tasking, heavy server workloads e.g. dual display 4K video playing, AI depth vision learning.

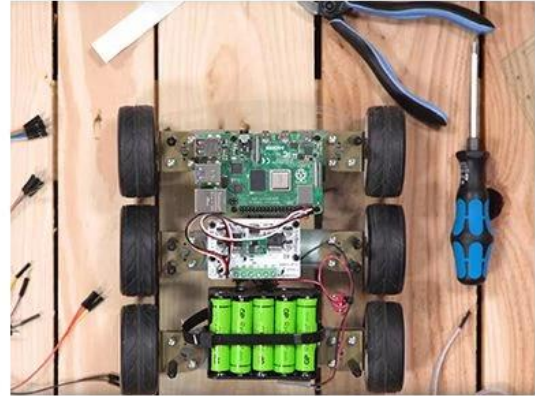
The total operational performance of Pi 4B is more than triple the 3B+'s, even the 2GB variant. Larger RAM has minor impact on performance if the RAM is just enough, therefore, we should choose the RAM capacity that best fits the target project. It is unnecessary to always choose the largest RAM.

Applications

Your Tiny, Dual-Display, Desktop Computer
...And Robot Brains, Smart Home Hub, Media Center, Game Console...



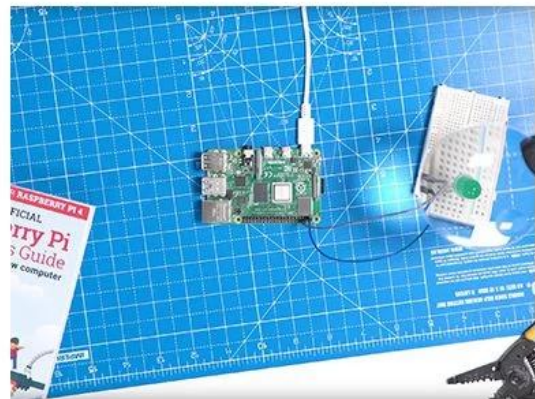
tiny dual-display desktop (balance work and life)



Raspberry Pi smart robot (try the AI magic)



Raspberry Pi game console (relive retro games)



Study and development (DIY endless possibilities)



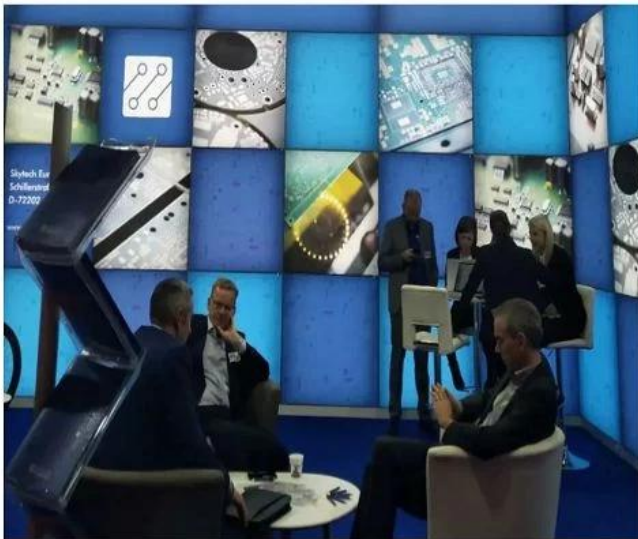
O-LEADING *CUSTOMER*

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

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

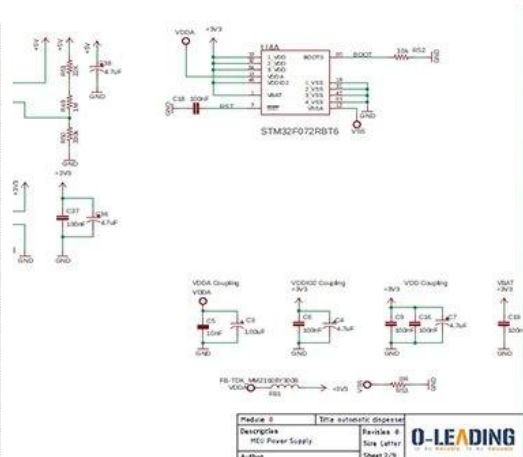
Voltage Table

Volt Pin Number	Description
VDD	Battery Voltage
+3V3	+3.3V
+5V	+5V
USB +5V	USB 5V input
+5V2	Isolated +5V
+12V	12V DC Drive

STM32F072 PinOUT table

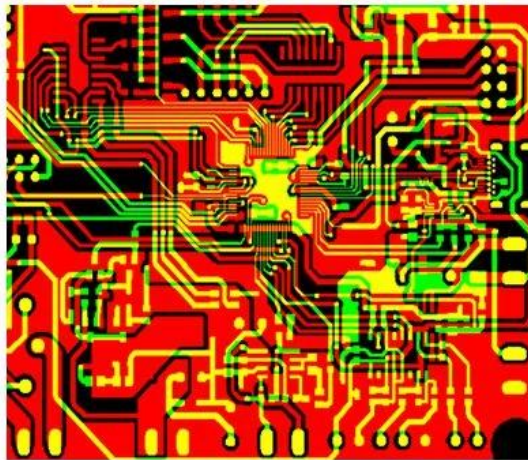
Wire Name	Description	DIO	Mode	Note
SHTN_TOF	Shutdown Time of flight sensor		Output	Logic '0' to shutdown
I2C_SCL_TOF	I2C communication with time of flight sensor		I2C1_SCL	
I2C_SDA_TOF	I2C communication with time of flight sensor		I2C1_SDA	
I2C_SCL_IR	I2C communication with thermopile sensor		I2C2_SCL	
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 Valuable

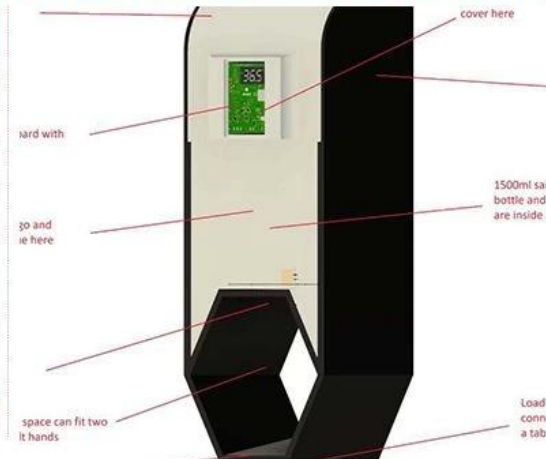


HARDWARE schematics

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	124114	MA04-2	SV2	
1	PPPC04	MA04-2	SV1	8 POS , 4*2 FEMALE PIN HEADE
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
1	100k	R-0603	R20, R7	Thick Film Resistors - SMD 0603



PCB Assembly MECHANICAL DESIGN

Skyworth 创维

HAT 和而泰
HAT 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

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: 4093862301024670

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: 4090347501024670

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 board...

★★★★★

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)



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!

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 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.



O-LEADING TRAINING



Keep *LEARNING*

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

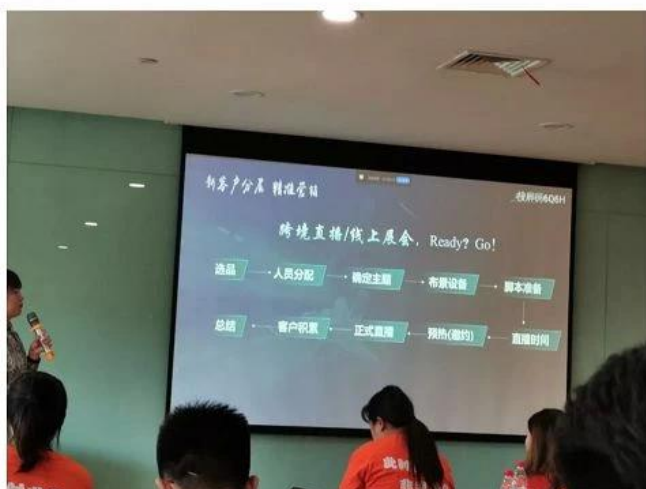
It's wonderful to have a beginner's mind

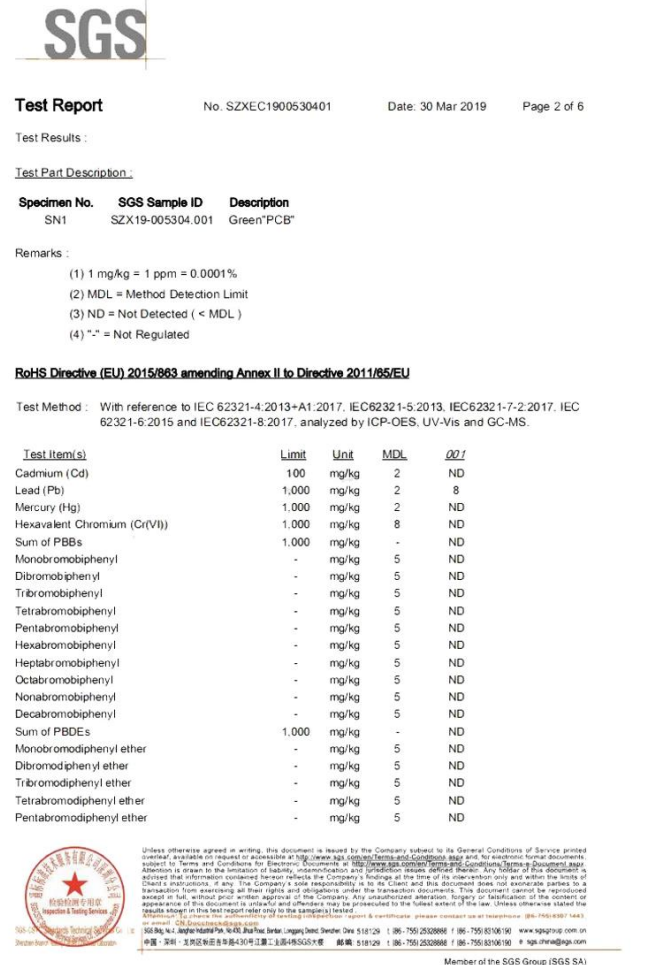
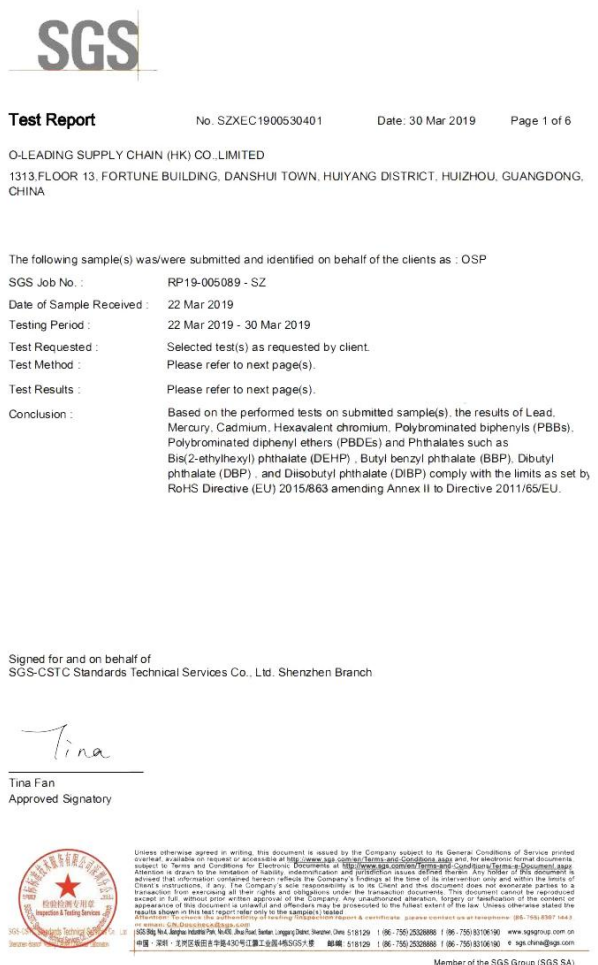
WE HAVE A *DREAM*

Keep *RUNNING*

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

----Bacon







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		Cond Thk mic(mil)	SS/ DS/ DSO	Max		Max		Meets UL796	C T	
	Min	Min			Area	Solder	Oper	Flame			
	mm(in)	mm(in)			Diam	Limits	Temp	Class			
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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PCB 規格

PCB 規格	
銅厚	1 ㎛ -32 ㎛
銅箔重量	1 / 3oz-12oz
銅箔厚度 / 銅厚	3.0mil / 3.0mil
銅箔厚度 / 銅厚	4.0mil / 4.0mil
Max Aspect Ratio	10 : 1
銅厚	0.2mm ~ 5.0mm
銅箔厚度 (mm)	635 * 1500mm
銅箔厚度 (mm)	400 ㎛
Plated 銅厚	+/- 3mil
Blind / Buried Via (All 銅)	銅
Via Fill (銅箔, 銅厚)	銅
銅箔	FR-4, FR-4high Tg, 銅箔, 銅箔, Polyimide, 銅箔
銅箔	HASL, OSP, ENIG, HAL-LF, Immersion silver, Immersion 銅, 銅箔, 銅箔

SMT 規格

PCB 規格	FR-4, CEM-1, CEM-3, 銅箔銅厚, FPC
銅箔 PCB 規格	510x1500mm
銅箔 PCB 規格	50x50mm
PCB 規格	0.5mm-4.5mm
銅厚	0.5-4mm
銅箔厚度 (mm)	0201
銅箔厚度 (mm)	0603 銅箔
銅箔厚度 (mm)	15mm
銅箔厚度 (mm)	0.3mm
銅箔 BGA 銅厚	0.4mm
銅箔厚度	+/- 0.03mm

PCB 規格

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

1.1

1.2

1.3

1.4

1.5.

###

4. PCB ≠ PCBA 到底 差别 在哪里?

4.1 BOM (Bill of Materials) : , .

4.2 PCB Gerber 文件.

4.3 PCB 制程 与 PCBA 制程.

4.4 問題 問.

4.5 00 00 00 000 00 000 00 00.

5. PCB 如何影响环境？

$\square\square \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square \text{ AOI} \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square \rightarrow \text{PTH} \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square$
 $\square\square \rightarrow \square\square \text{ AOI} \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square \rightarrow \square\square \rightarrow \text{E / T} \rightarrow \square\square.$

6. HDI 如何影响国家发展？

□□ □□ □□ □□ □□□□ : □□□ □□□ □□, □□□ □□, VCP □□, □□ □□□, LDI □.

この事業は、三菱商事株式会社、日立製作株式会社、LDI株式会社、日立製作株式会社と共同で実施する。

7. □□□ □□ □□□ □□ □□ **0-** □□□ □ □ □□□□?

[illegible]

8. FPC 00 000 000 00000? O-Leading SMT 0000 00 0 0 0000?

O-Leading 8 mm FPC 1 mm pitch. 2000mm * 240mm Flex Capability

□□□□ □□ □□□□ SMT □ □□ □□□□ □□□□□.

9. PCB □□□ □□□ □□ □□ □□□□?

```

;;
;; 000;
;; 000;
;; 00 00;
PCB 00;
00 00;
00 000 0000.

```

10. PCB, PWB 及 FPC 有何不同?

PCB □ □ □ □ □ □ □ □.

PWB Printed Wire Board

FPC Flexible Printed Board

11. PCB □□□ □□□ □□□ □ □□□□ □ □□□ □□□□□?

PCB □□□ □□□ □ □□ □□□ □□□□□□□□.

□□□□ Tg □□ □□ □□□□ □□□□□.

CTE

□□□ □ □□ □□ : □□□□□ PCB □□ 50 □ □□ 250 °C □□ □□ □ □□□□□.

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 000 00.0 0.00000.

12. O-leading rigid-flex PCB

O-leading rigid-flex PCB FPC PCB 0000 00 000000 00 00 0000 0000 0 00000. 0000 00000 00 0000 00000 0000 00 0 00 00000 00 0000 0000 0000 00000 0 00000.

13. □□□□ □□□ □□□□□□?

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