

# Proyecto Multicapa

## Restricciones del fabricante.

Item	JLCPCB	NextPCB	PcbWay
Layer counts	1-6 layers	1-20 layers	1-10 layers
Material	FR-4	FR-4, Aluminum, Rogers, Copper	FR-4, Aluminum
Dielectric constant	4.5(double-side PCB)	4.2	+
Max. Dimension	400x500mm	1-2 layers: 500*600mm 4-20 layers: 400*500mm	500*1100mm (min 5*6mm)
Dimension tolerance	±0.2mm	CNC: ±0.15mm, V-CUT: ±0.2mm	
Thickness Tolerance (Thickness≥1.0mm)	± 10%	± 10%	
Thickness Tolerance (Thickness<1.0mm)	± 0.1mm	± 0.1mm	
Drill Hole Size (Mechanical)	0.20mm- 6.30mm	0.15-6.5mm	
Drill Hole Size Tolerance	+0.13/-0.08mm	≤0.05mm	
Blind/Buried Vias	Don't support	≥ 20μm	
Min. Via diameter	0.4mm	0.45mm	
Hole size Tolerance (Plated)	+0.13mm/-0.08mm	±0.075mm	
Hole size Tolerance (Non-Plated)	±0.2mm	±0.05mm	
Rectangle Hole/Slot	Don't support	With or without fillet angle	
1oz Copper	0.13mm	3.5mil (single side) (3.5mil≈0.09mm)	
2 oz Copper	0.2mm	4.5mil (single side) (4.5mil≈0.11mm)	

Hole to hole clearance(Different nets)	0.5mm	$\geq 12\text{mil}$ (Avoid conductive anodic filament)( $12\text{mil}\approx 0.30\text{mm}$ )	
Min. Hole size	0.2mm	0.2mm	
Via to Via clearance(Same nets)	0.254mm	$\geq 8\text{mil}$ ( $8\text{mil}\approx 0.20\text{mm}$ )	
Pad to Pad clearance(Pad without hole, Different nets)	0.5mm	$\geq 0.40\text{mm}$	
SMD pad to SMD pad clearance(Pad without hole, different nets)	-	$\geq 0.15\text{mm}$	
Via to Track	0.254mm	$\geq 7\text{mil}$ ( $7\text{mil}\approx 0.18\text{mm}$ )	
PTH to Track	0.33mm	$\geq 9\text{mil}$ ( $9\text{mil}\approx 0.23\text{mm}$ )	
NPTH to Track	0.254mm	$\geq 8\text{mil}$ ( $8\text{mil}\approx 0.20\text{mm}$ )	
Pad to Track	0.2mm	$\geq 9\text{mil}$ ( $9\text{mil}\approx 0.23\text{mm}$ )	
H/HOZ (Inner layer)	5mil (0.127mm)	2.5mil ( $2.5\text{mil}\approx 0.06\text{mm}$ )	
1oz (Outer layer)	1/2 layers: 5mil (0.127mm) 4/6 layers: 3.5mil(0.09mm)	3mil ( $3\text{mil}\approx 0.08\text{mm}$ )	
2oz (Outer layer)	8mil (0.2mm)	5.5mil ( $5.5\text{mil}\approx 0.14\text{mm}$ )	
Solder mask opening/ expansion	0.5mm	$\geq 1.5\text{mil}$ ( $1.5\text{mil}\approx 0.04\text{mm}$ )	
Solder bridge	0.2mm(green) 0.254mm(other colors)	Green: 3.5mil Black/White: 5mil other solder mask: 4mil	
Solder mask color	green, red, yellow, blue, white, and black.	Green/Red/Yellow/Blue/White/ Matte Black/Black	Green ,Red, Yellow, Blue, White ,Black
Solder mask dielectric constant	3.8	3.5	
Solder mask thickness	10-15UM	Solder mask thickness on base material: 0.8mil, solder mask thickness on copper: 0.6mil	
Minimum Line Width	6 mil (0.153mm)	Silkscreen printing $\geq 5\text{mil}$ ( $5\text{mil}\approx 0.12\text{mm}$ ) Printer printing $\geq 3\text{mil}$ ( $3\text{mil}\approx 0.08\text{mm}$ )	
Minimum text height	32 mil (0.8mm)	Silkscreen printing $\geq 30\text{mil}$ ( $30\text{mil}\approx 0.76\text{mm}$ )	

		Printer printing $\geq 24\text{mil}$ ( $24\text{mil}\approx 0.61\text{mm}$ )	
Character width to height ratio	1:6	$\geq 6:1$	
Pad To Silkscreen	0.15mm	$>6\text{mil}$ ( $6\text{mil}\approx 0.15\text{mm}$ )	
Trace to Outline	0.2mm	0.2mm	
Trace to V-cut line	0.4mm	0.4mm	

## Cotizaciones:

### Next PCB:

### Fabricación

PCB Price

Build Time	Qty	Total
<input checked="" type="radio"/> 6 days	100	\$244.17
<input type="radio"/> ⚡ 96 hours	100	\$324.17

Area: 0.3353 m<sup>2</sup>

Weight: 1.1735 kg

Shipping Cost

UNITED STATES OF AMERICA

DHL

3-5 days, Weight: 1.1735 kg
 

\$ 38.51

CHN Time Zone(GMT+8): 2021-05-31 03:27:00

Payment after the day of ordering 18:00 ( GMT+8 )

Delivery time

2021/06/06 PM

Receipt confirm

2021/06/11 PM

PCB Cost

\$244.17

Shipping Cost

\$38.51

All Total

\$282.68

Material:

Layer Count:

TG:

Board Type:

Size (single):  x  mm

Breakaway Rail:

Quantity (single):  pcs

PCB Thickness:

Solder Mask Color:

Silkscreen:

Finished Copper Weight:

Inner Copper Weight:

Min. Trace / Space (mm):

Min. Drilled Hole:

Via Process:

Surface Finish:

Reeling of GP:

Electrical Test:

Conform Working Curve:

Plated Half-holes / Plated Through Hole:

Impedance:

Microsection Analysis Report:

Ensamble:

## PCB Assembly

Three Options:

<b>Turnkey</b> We supply the parts	<b>Kitted or Consigned</b> You supply parts	<b>Combo</b> You supply some parts we do the rest
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Please complete the data to get an instant PCB assembly quote.

PCB Quantity:  pcs

The Number of Components:

Quantity of Pads:

Quantity of Through Hole:

PCB Dimension:  mm x  mm

X-ray Testing Quantity:

Assembly Side(s):

Board Breakout:

Conformal Coating:

Package:

#### Assembly Service Price

Build Time	Qty	Total
✓ 3-5 days	100	\$368.64

Weight: 0.5868 kg

#### Shipping Cost

 UNITED STATES OF AMERICA ▼

DHL ▼

  3-5 days, Weight: 0.5868 kg \$ 31.03

CHN Time Zone(GMT+8): 2021-05-31 03:43:17

Payment after the day of ordering 18:00 ( GMT+8 )



Delivery time  
2021/06/05 PM



Receipt confirm  
2021/06/10 PM

Assembly Service Cost \$368.64

Shipping Cost \$31.03

**All Total \$399.67**

## PCB way:

### Fabricación

### Pricing And Build Time

PCB Price

Price Comparison Matrix

Build Time	Qty	Total
8-9 days	100	\$ 249

Final price is subject to our review.  
The order has been surging recently. Our delivery date may delay 1-2 days. Bulk orders may delay 2-3days.  
Good news is that our new factory's production lines are in the testing phase and will be officially put into production in June.

Shipping Cost:

UNITED STATES OF AMERICA ▲

DHL ▼

3-7 Days , wt : 1.174 kg **\$38**

CHN Time Zone(GMT+8): 2021/5/31 3:45:59

Payment before 2021/05/31 06:00 (GMT+8 Only PCB)

Shipment Date  
2021/6/8 AM

Delivery Date  
2021/6/13

PCB Cost: US \$ 249

Shipping: US \$ 38

**Total: US \$ 287**

**Save to Cart**

Board type:

Single pieces Panel by Customer Panel by PCBWay

Different Design in Panel:

1 2 3 4 5 6

\* Size (single):

50.8 X 66 mm inch'→mm

\* Quantity (single):

100 pcs

Layers:

1 Layer 2 Layers 4 Layers **6 Layers** 8 Layers 10 Layers 12 Layers 14 Layers

Material:

FR-4 Aluminum Rogers HDI (Buried/blind vias) Copper Base

FR4-TG:

TG 130-140 **TG 150-160** TG 170-180

Thickness:

0.2 0.4 0.6 0.8 1.0 1.2 **1.6** 2.0 2.4 2.6 2.8 3.0 3.2

Min Track/Spacing:

3/3mil 4/4mil 5/5mil **6/6mil** 8/8mil

Min Hole Size:

0.15mm 0.2mm 0.25mm **0.3mm** 0.8mm 1.0mm No Drill

Solder Mask:

Green Red Yellow Blue White Black

Silkscreen:

White Black None

Edge connector:

Yes **No**

Surface Finish:

**HASL with lead** HASL lead free Immersion gold(ENIG) OSP Hard gold Immersion silver(Ag)

Via Process:

**Tenting vias** Plugged vias Vias not covered

Finished Copper:

Bare board(0 oz Cu) **1 oz Cu** 2 oz Cu 3 oz Cu 4 oz Cu 5 oz Cu 6 oz Cu 7 oz Cu


Inner Copper:

**1 oz** 1.5 oz 2 oz 3 oz 4 oz 5 oz 6 oz

Extra pcb product number:

☐ Not to add extra pcb product number on board (extra+\$3)

## Ensamble


**Assembly Service**

3 flexible options:
☒
**Turnkey**  
PCBWay supply parts
☐
**Kitted or Consigned**  
Customer supply parts
☐
**Combo**  
You supply some parts  
we do the rest

Board type:

Single pieces

Assembly Side(s):

Top side

We suggest choose to do panel if single PCB qty is more than 20pcs or any side of single board is smaller than 50mm.

Quantity:

100

pcs

Stencil

Yes

Please fill in total quantity of single PCBs.







Pay attention:

☐ No
☒ Yes

The following components need to be paid attention to during the assembly process:  
Mfg Part No., welding temperature  
Mfg Part No., it is forbidden to use plate washer water to avoid corrosion

Number of Unique Parts:

95









Example no. of Unique Parts: 6 kinds

Fill in to get the exact price, or leave it blank to wait for final quote.

Number of SMT Parts:



92



Fill in to get the exact price, or leave it blank to wait for final quote.

Number of BGA/QFP Parts:



3

Fill in to get the exact price, or leave it blank to wait for final quote.

Number of Through-Hole Parts:

3

Fill in to get the exact price, or leave it blank to wait for final quote.



### Pricing And Build Time

### Assembly Service Price

	Per Piece	Qty	Total
<input checked="" type="radio"/>	8.8/pcs	100	\$ 881
<input type="radio"/>	5.4/pcs	200	\$ 1072
<input type="radio"/>	3.0/pcs	500	\$ 1515
<input type="radio"/>	2.1/pcs	1000	\$ 2143

Final price is subject to our review.  
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Good news is that our new factory's production lines are in the testing phase and will be officially put into production in June.

## Shipping Cost:



 3-7 Days, wt: 0.500 kg \$25

Assembly Service Cost:	US \$ 881
Shipping:	US \$ 25
Order discount:	US \$ -25
<b>Total:</b>	<b>US \$ 881</b>



**Save to Cart**

- En JLCPCB no es posible fabricar ya que no pueden fabricar PCB con vías enterradas.