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JLCPCB PCBA ORDER TUTORIAL

English v1.0

Abstract

This guide explains how to order a fully assembled PCB from JLCPCB through a simple, three-step process: preparing the fabrication files, ordering components, and submitting the PCBA assembly. It aims to ensure a clear and reproducible workflow for the OCTAVie project.

L. Durieux

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How to Order PCBA with JLCPCB

This document is part of a three-part tutorial series that explains how to place a PCBA (Printed Circuit Board Assembly) order with JLCPCB.

The complete workflow is divided into:

1. Preparing and exporting the fabrication files (Gerber + BOM + CPL). (to be completed later on in another document)
2. Ordering the components (treated this document).
3. Placing the PCBA assembly order once the components have been received by JLCPCB. (treated this document)

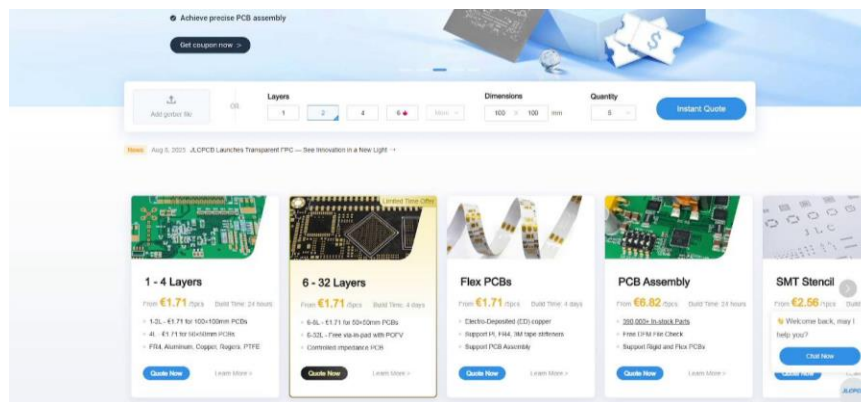
The objective of this guide is to provide a clear, step-by-step process, so that even users with little technical background can successfully reproduce the procedure.

Part 1 – Preparing and Uploading the Fabrication Files

In this section, we explain how to prepare and upload the fabrication files that JLCPCB requires for PCB fabrication and assembly. These files describe the PCB layout and the placement of components, and they are mandatory before you can place an order for assembly.

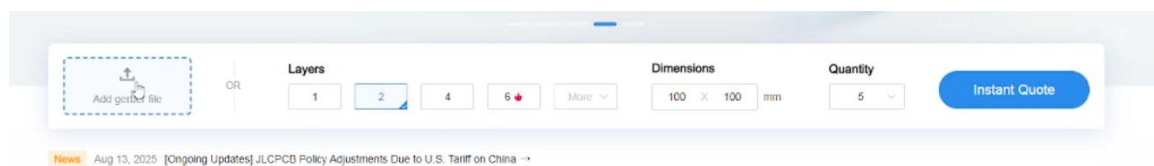
Step 1 – Access the PCB Assembly Ordering Page

Go to <https://jlcpcb.com/>. Log into your JLCPCB account and click on “quote now” of the 1-4 layers sub-windows.



Step 2 – Upload the Fabrication Files

Click on 'Add your Gerber file' and upload the compressed archive (.zip) containing your design files. This archive should include the Gerber files and the Drill files. Note, that for all this project this archive will directly be available to you in the project file.



Step 3 – Review the PCB Preview

After uploading, JLCPCB generates a visual preview of your board. Check that the board outline, copper layers, and drill holes are correct before proceeding. Note that all the right options will be added into JLC automatically. If you do not feel comfortable, leave them by default and it will work.

Standard PCB/PCBA

Advanced PCB/PCBA

SMT-Stencil

3D Printing/CNC

Success, this file has been saved to your File Manager

← Back to Upload File

Detected 4 layer board of 30.4x55.88mm(1.2x2.2 inches)

Gerber Viewer

Base Material

FR-4

Flex

Aluminum

Copper Core

Rogers

PTFE Teflon

Layers

1

2

4

High Precision PCB

6

8

10

12

14

16

More

Dimensions

55.88

30.4

mm

PCB Qty

5

Product Type

Industrial/Consumer electronics

Aerospace

Medical

PCB Specifications

Different Design

1

2

3

4

Delivery Format

Single PCB

Panel by Customer

Panel by JLCPCB

PCB Thickness

0.4mm

0.6mm

0.8mm

1.0mm

1.2mm

1.6mm

2.0mm

Charge Details

Special Offer

€1.70

Via Covering

€0.00

Surface Finish

€0.00

Build Time

PCB:

2 days

€0.00

24 hours

€6.13

24 hours

PCBA Only

€0.00

Calculated Price

€3.41

€1.70

Additional charges may apply for special cases

SAVE TO CART

Shipping Estimate

€18.32

DHL Express

2-4 business days

Weight

0.29kg

Coupons

Save €25.56

Save €12.78

Step 4 – Select PCB Assembly

If you do not feel comfortable to solder the component yourself, you choose pick select assembly PCB. The option by default are also adapted to this project.

PCB Assembly

Assembly cost starting from \$0 with coupon

Assembly top side

Assembly bottom side

PCBA Type

Economic

Standard

What's the difference?

Assembly Side

Top Side

Bottom Side

Both Sides

PCBA Qty

5

2

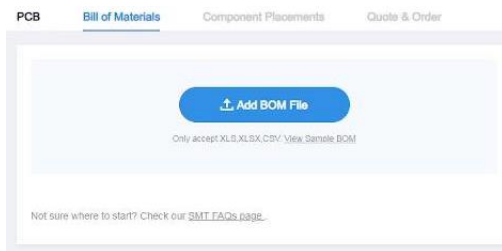
If you feel comfortable assembling it yourself, it will be less expensive, and you will receive the board faster. In that case, you can select the stencil option. However, note that for the microphone, you will need a reflow oven to solder it, and even then, success is not always guaranteed.



For the purpose of this tutorial, we will proceed with the assembly option, as it is the most likely choice for users without prior experience.

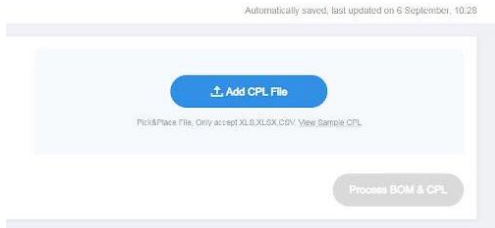
Step 5 – Check the Bill of Materials (BOM)

JLCPCB automatically parses the BOM file (the list of the components on the PCB). Note that the document for all PCB in the project will be available to you.



Step 6 – Check the Component Placement (CPL)

Just like the BOM, you will also need to upload the Component Placement file, which indicates where the components should be placed on the board. Note that the documentation for all PCBs in the project will also be available to you.



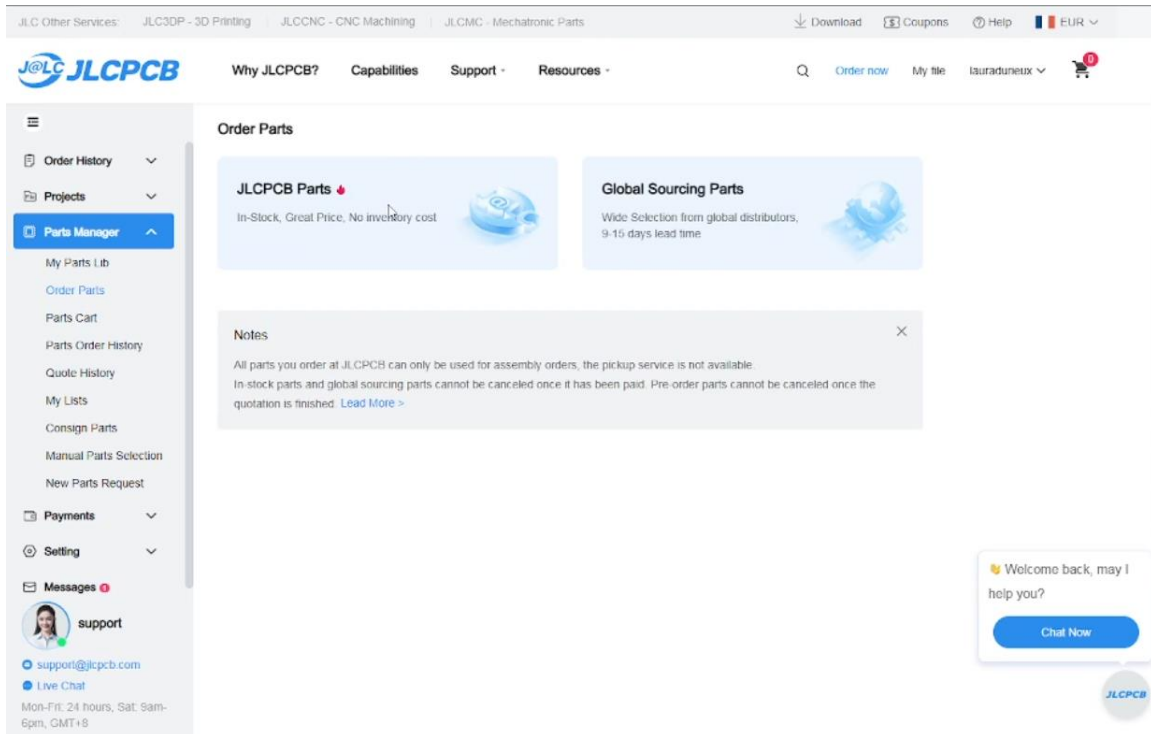
Step 7 – Finalize File Submission

Once the files have been verified, save the configuration to proceed to the next step. The project will then be available under **“My Project” -> “Quote”** on the JLCPCB website, allowing you to return to it later if needed. If you wish to continue immediately, you can proceed by completing the BOM directly. In cases where JLCPCB reports unavailable components, please refer to **Part 2 of this document**, which explains how to handle component sourcing.

Open the JLCPCB website (<https://jlcpcb.com>) and log into your personal account. Make sure your account is active and that you can access the Parts section.

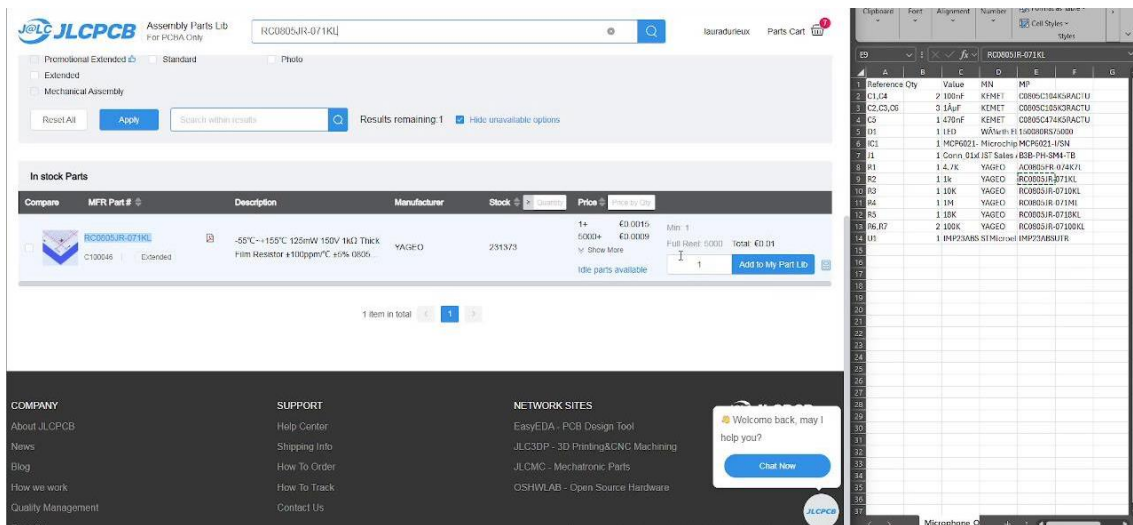
Step 2 – Navigate to the Parts Section

In the top menu bar, click on 'Parts'. This section allows you to search for, select, and order the electronic components required for your design.



Step 3 – Search for Components

Use the search bar to look for each part number listed in your Bill of Materials (BOM). Ensure that you use the correct manufacturer part number to avoid mistakes.



Step 4 – Check Availability and Stock

Confirm that the required quantity is available in JLCPCB's stock. If a component is out of stock, you may need to select an alternative or adjust your order.

⚠ Note: If the component is not directly available but listed in the database, you can request a quotation. For example, the MEMS microphone IMP23ABSUTR is sometimes not available in stock but can still be ordered through a quotation process. Be aware that this may significantly increase lead time.

Step 5 – Add Components to Cart

For each part, specify the required quantity and add it to your shopping cart. Repeat this process for all the items in your BOM.

Step 6 – Review Your Cart

Once all components have been added, open your cart to verify the correctness of part numbers, quantities, and availability. Double-check this step to prevent errors during assembly.

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[Resources](#)

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[My file](#)
[lauraduneux](#)

Order History

Projects

Parts Manager

My Parts Lib

Order Parts

Parts Cart

Parts Order History

Quote History

My Lists

Consign Parts

Manual Parts Selection

New Parts Request

Payments

Setting

Messages

support

support@jlcpcb.com

Live Chat

Mon-Fri: 24 hours, Sat: 9am-6pm, GMT+8

Parts Cart

JLCPCB Parts (13)

Global Sourcing Parts (0)

Idle Parts (0)

Export

Add Parts

Parts Cart	Search	Unit Price	Qty	Total Price
Samsung Electro-Mechanics CL21B105KAFNFNE C1712 1uF 25V X7R ±10% 0905 Multilayer Ceramic Capacitors MLCC - SM... Customer #: 0		€0.0098	15 2997 Available	€0.15
YAGEO RC0805JR-07100KL C100049 -55°C~+155°C 100kΩ 125mW 150V Thick Film Resistor ±100ppm/°C ... Customer #: 0		€0.0015	10 7173 Available	€0.02
YAGEO RC0805JR-0718KL C137468 -55°C~+155°C 125mW 150V 18kΩ Thick Film Resistor ±100ppm/°C ±... Customer #: 0		€0.0008	5 2223 Available	€0.01
YAGEO RC0805JR-071ML C107699 -55°C~+155°C 125mW 150V 1MΩ Thick Film Resistor ±100ppm/°C ±5... Customer #: 0		€0.0015	5 34237 Available	€0.01
YAGEO RC0805JR-0710KL C100047 -55°C~+155°C 10kΩ 125mW 150V Thick Film Resistor ±100ppm/°C ±... Customer #: 0		€0.0015	5 341784 Available	€0.01
YAGEO RC0805JR-071KL C100046 -55°C~+155°C 125mW 150V 1kΩ Thick Film Resistor ±100ppm/°C ±5... Customer #: 0		€0.0015	5 228390 Available	
YAGEO AC0805FR-074K7L C140869 -55°C~+155°C 400mW 150V 4.7kΩ Thick Film Resistor ±100ppm/°C ±5...			5	

ALL

(All parts ordered at JLCPCB are only for PCBA orders. Pickup service is unava... Subtotal (13) Items

€20.93

Secure Checkout

Welcome back, may I help you?

Chat Now

Step 7 – Place the Order

Click on 'Proceed to Checkout' to finalize the order. Once the order is validated, JLCPCB will process and prepare your components.

Step 8 – Wait for Component Reception

JLCPCB will handle the reception of components into their warehouse. Only after this step will you be able to continue with Part 3 of the tutorial and place your PCBA order.

The screenshot shows the JLCPCB Parts Manager interface. On the left is a sidebar with navigation options: Order History, Projects, Parts Manager (selected), My Parts Lib, Order Parts, Parts Cart, Parts Order History, Quote History, My Lists, Consign Parts, Manual Parts Selection, New Parts Request, Payments, Setting, and Messages. The main area displays a table of components with columns for part name, quantity, price, and status. A chat window is open on the right.

Part Name	Quantity	Price	Status	Action
AC0805FR-074K7L YAGEO AC0805FR-074K7L JLCPCB Part #C140069	5 X \$0.0038	\$0.02	Paid	
CL21B105KAF-NFNE Samsung Electro-Mechanics CL21B105KAFN JLCPCB Part #C1712	15 X \$0.0115	\$0.18	Complete	Reorder
15000RS75000 Würth 15000RS75000 JLCPCB Part #C5156820	5 X \$0.3435	\$1.72	Paid	
RC0805JR-071ML YAGEO RC0805JR-071ML JLCPCB Part #C107659	5 X \$0.0017	\$0.01	Complete	Reorder
RC0805JR-0716KL YAGEO RC0805JR-0716KL JLCPCB Part #C137468	5 X \$0.0009	\$0.01	Complete	Reorder
MCP6021-I/SN MICROCHIP MCP6021-I/SN JLCPCB Part #C148054	5 X \$0.7905	\$3.95	Paid	
RC0805JR-0710KL YAGEO RC0805JR-0710KL JLCPCB Part #C100047	5 X \$0.0018	\$0.01	Complete	
RC0805JR-07100KL YAGEO RC0805JR-07100KL JLCPCB Part #C100049	10 X \$0.0017	\$0.02	Paid	
Pre-order Items				
IMP23ABSUTR ET 14099AB010	5 X \$3.3765	\$16.89	Awaiting Quote	Cancel Order

Chat window: Welcome back, may I help you? Chat Now

Part 3 – Ordering the PCBA Assembly

In this section, we explain how to place the PCBA (Printed Circuit Board Assembly) order with JLCPCB. This step can only be performed once your components have been received at JLCPCB's warehouse (see Part 2). The process links your fabrication files with the stocked components to create the assembled boards.

Step 1 – Access the PCB Assembly Service

Log into your JLCPCB account and go to the 'Quote & Order' section. Select 'PCB Assembly' to start a new order.

The screenshot shows the JLCPCB File Manager interface. The left sidebar is the same as in the previous screenshot. The main area displays a list of uploaded files with columns for file name, upload date, and file size. A preview of a PCB assembly is shown at the top.

File Name	Upload Date	File Size
Microphone_OCTAVic_FAB_v3	2025-07-14 09:39:47	9456059A
OCTAVic_FPGAAssy_Fab_V2	2025-07-14 09:39:47	9456059A

2 items in total

Step 2 – Review Component Matching

JLCPCB automatically matches your BOM with components in stock. If you ordered components separately (Part 2), they are linked automatically once available in the warehouse.

Uploaded BOM Data			Review Matched Parts					
Top Designator	Comment	Footprint	Matched Part Detail	Qty	Source	Lib Type	Total Cost	Select
C1,C4	100nF	Capa smd 0805	C0805C104K5RACTU C3018562 100nF 50V X7R ±10% 0805 Multilayer Ceramic...	20	10 My Parts 10 JLCPCB	Extended	€0.1372	<input checked="" type="checkbox"/>
C2,C3,G6	1uF	smd 0805	CL21B100KA-FNFE C1712 1uF 25V X7R ±10% 0805 Multilayer Ceramic C...	21	15 My Parts 6 JLCPCB	Extended	€0.0588	<input checked="" type="checkbox"/>
C5	470nF	capa smd 0805	CL21B474K03FNNE C13967 470nF 50V X7R ±10% 0805 Multilayer Ceramic...	20	JLCPCB	Basic	€0.2362	<input checked="" type="checkbox"/>
D1	150000RS7500 0	150000RS75000	150000RS75000 C5159220 140° 150mcd 20mA 2V 625nm 630nm Red Wat...	5	My Parts	Extended	€0.00	<input checked="" type="checkbox"/>
IC1	MCP6021-I_SN	MCP6021-I_SN	MCP6021-I/SN C148054 -40°C→+85°C 10MHz 1mA 1pA 1pA 2.5V-8...	5	My Parts	Extended	€0.00	<input checked="" type="checkbox"/>
J1	B3B-PH-SM4-TB	B3B-PH-SM4-TB	B3B-PH-SM4-TB(LF)(SN) C160353 -25°C→+85°C 1 100V 1x3P 2A 2mm 3 3P 6 6m...	5	My Parts	Extended	€0.00	<input checked="" type="checkbox"/>
R1	AC0805FR-074 K7L	AC0805FR-074K7L	AC0805FR-074K7L C140869 -55°C→+155°C 125mW 150V 4.7kΩ Thick Film ...	20	5 My Parts	Extended	€0.0462	<input checked="" type="checkbox"/>
R2	RC0805JR-071 KL	RC0805JR-071K KL	RC0805JR-071KL C100046 -55°C→+155°C 125mW 150V 1kΩ Thick Film R...	20	15 JLCPCB	Extended	€0.0230	<input checked="" type="checkbox"/>
R3	RC0805JR-071 0KL	RC0805JR-0710 KL	RC0805JR-0710KL C100047 -55°C→+155°C 10kΩ 125mW 150V Thick Film ...	20	5 My Parts	Extended	€0.0230	<input checked="" type="checkbox"/>
R4	RC0005JR-071 ML	RC0005JR-071M L	RC0005JR-071ML C107699 -55°C→+155°C 125mW 150V 1MΩ Thick Film R...	20	15 JLCPCB	Extended	€0.0217	<input checked="" type="checkbox"/>
R5	RC0805JR-071 RKL	RC0805JR-071S KL	RC0805JR-071RKL C137468 -55°C→+155°C 125mW 150V 18kΩ Thick Film ...	20	5 My Parts 15 JLCPCB	Extended	€0.0115	<input checked="" type="checkbox"/>
R6,R7	RC0805JR-071 00KL	RC0805JR-0710 0KL	RC0805JR-07100KL C100049 -55°C→+155°C 100kΩ 125mW 150V Thick Film ...	20	10 My Parts 10 JLCPCB	Extended	€0.0145	<input checked="" type="checkbox"/>
U1	IMP23ABSUTR	IMP23ABSUTR	IMP23ABSUTR C317146 -30dB 150uA 2.75V 64dB Omnidirectional RHL...	5	My Parts	Extended	€0.00	<input checked="" type="checkbox"/>

Step 3 – Check Placement (CPL File)

Verify the component placement preview carefully to ensure footprints, orientations, and positions are correct. Adjust if necessary.

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Microphone - Ultrasounds
OCTAV V3.0

P&I - ICube

Q

Order now

My file

laura.durieux

C3	C13967	470F	caps 470...
D1	CS156920	130080K...	130080K...
I01	C148554	MCP602...	MCP602...
J1	C180333	B2B-F11...	B2B-F11...
H1	C160859	AC080CF...	AC080CF...
R0	C100046	RC0805...	RC0805...
R3	C100047	RC0805...	RC0805...
R4	C107699	RC0805...	RC0805...
R5	C137468	RC0805...	RC0805...
R6/R7	C100049	RC0805...	RC0805...
U1	CS171749	IMP23AB...	IMP23AB...

WELCOME BACK, MAY I HELP YOU?

Chat Now

* The preview for reference only. Check final part placement at DPM Analysis in Order History in 4-6 hours after placing the order.

Step 4 – Finalize and Save to Cart

Once satisfied, review the order summary including PCB parameters, assembly options, and components. Save the order to your cart.

Microphone_OCTAVie_FAB_v3

PCB Bill of Materials Component Placements **Quote & Order**

Automatically saved, last updated on 6 September, 09:51

Charge Details	
PCB Price	€12.44
Via Covering	€0.00
Special Offer	€5.96
Color	€6.48
Standard PCBA Price	€46.22
Setup Fee	€21.30
Stencil	€6.70
Panel	€0.00
Large Size	€0.00
Components (13 items)	€0.57
Feeders (loading fee)	€16.61
SMT Assembly	€0.64
Packaging fee	€0.40
Build Time	
PCB: 3 days	€0.00
Assembly: 2 - 3 days	€0.00

Total Price: €58.66

Weight: 438.90g

Product Description: Research/Education/DIY/Entertainment / O...

uqL

SAVE TO CART

Welcome back, may I help you?



Chat Now

Step 5 – Proceed to Checkout

Click 'Checkout' to confirm the order. This guide does not include payment details.

SHOPPING CART

All (1) JLCPCB (1) JLC3DP (0) JLCNC (0) JLCMC (0)

Item	Qty	Build Time	Price
JLCPCB (PCB/PCBA/Stencil)			
 Microphone_OCTAVie_FAB_v3_Y6 PCB prototype:Y6-9456059A Customer #: 02 Black, 1.6 Thickness, HASL (with lead) Product Details Edit Order	5	3 days	€12.44
 Microphone_OCTAVie_FAB_v3_Y6 Standard PCBA: SMT025090560371-9456... Customer #: 02 Assemble top side Product Details	5	2 - 3 days	€46.22

SUMMARY (2 items)

Merchandise Total €58.66

Shipping Estimated €7.27

Subtotal €65.93

Est. shipping date 2025-09-11

Order won't be shipped until all items are ready.

Weight 0.44kg

Secure Checkout

+Add new item

Payment method may vary by country.

SSL ENCRYPTED PAYMENT

Step 6 – Wait for Production

After confirmation, JLCPCB will manufacture and assemble your boards. You will receive a tracking number once the boards are shipped.

License Information

Hardware license: CERN Open Hardware License v2 (Strongly Reciprocal – OHL-S).

Software license: GNU General Public License v3 (GPLv3), ensuring that all modifications remain open-source.

Documentation license: Creative Commons Attribution-ShareAlike 4.0 International (CC-BY-SA 4.0).

Versioning

AUTHORS	VERSION	DATE	COMMENT
L. DURIEUX	V1.0	26.09.25	Document first release
L. DURIEUX	V1.0	0.5.10.2025	Formatting