



PCB Prototype the Easy Way

Working hours (GMT+8): 9:00 am - 18:00 pm, Mon.- Sat.(12:00 am)

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Multi-language Customer Service:

English: service@pcbway.com

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Española: es-service@pcbway.com

日本語: service25@pcbway.com

After-sales/Complaint: feedback@pcbway.com

Complaint about Sales rep.: service@pcbway.com

Suggestions/Distributor: anson@pcbway.com

Cooperations: simon@pcbway.com

CNC/3D: 3dcnc@pcbway.com

SERVICES OFFICE (FRANCE)

Parc des Varimonts, 10 Avenue de
Thionville, 57140, Woippy, France

Working hours (CEST):

8:30 am - 17:00 pm, Mon. - Fri.

Phone: +33 (0)749781123

www.pcbway.com



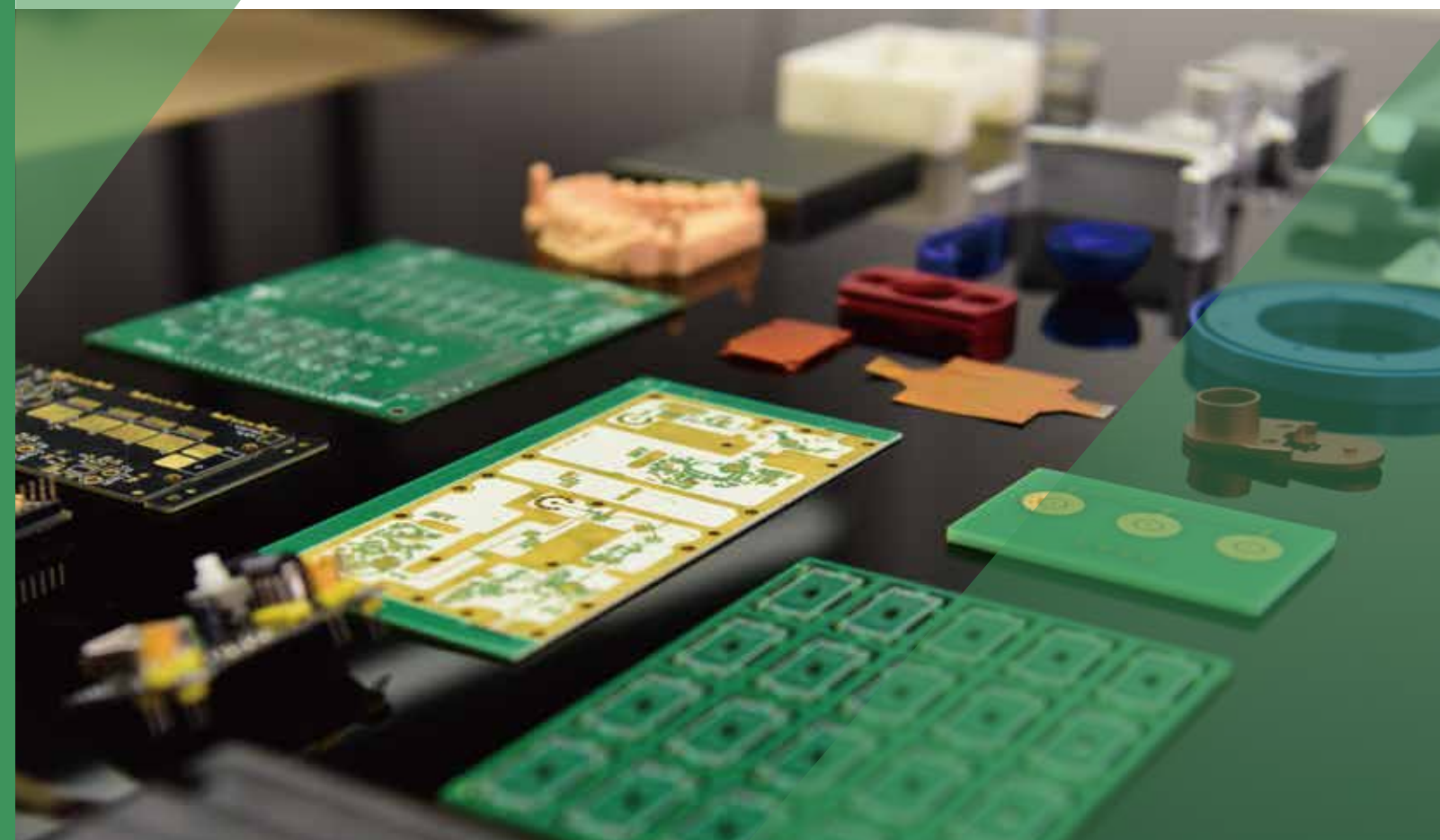
■ PCB Fabrication

■ PCB Assembly

■ CNC | 3D Printing

■ OEM | EMS

Full-service Electronics Manufacturer



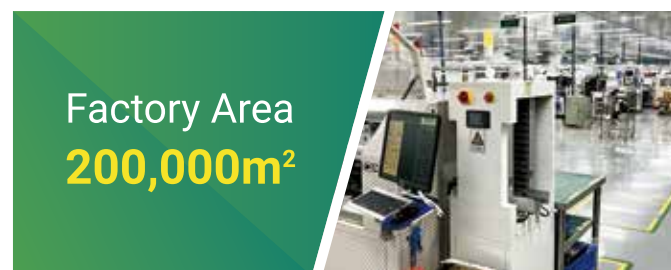
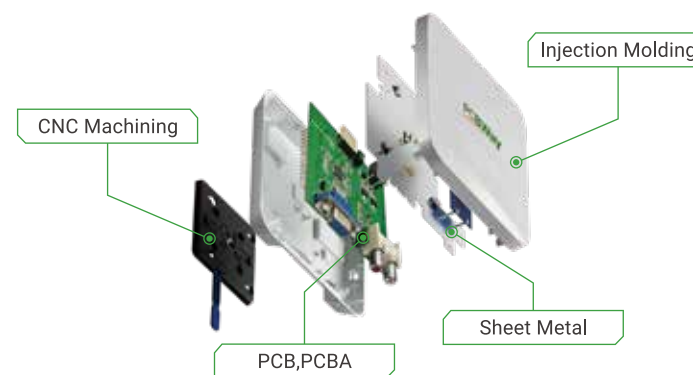
About PCBWay

PCBWay is a manufacturer providing PCB Fabrication, PCB Assembly and Final Product Assembly for over a decade, and has earned a distinguished reputation globally in the industry.

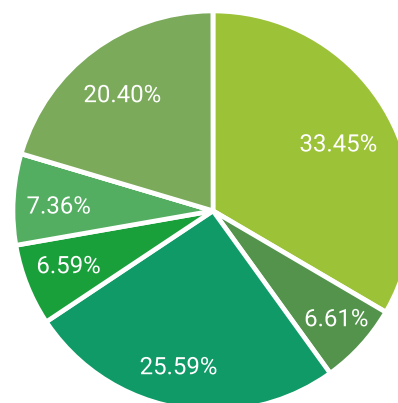
Our factory is located in Shenzhen, China, which takes full use of its electronic industry advantage with the 200,000 m² area and 2800+ employees. Over the past few years, we have established cooperation with over 256,000 engineers, startups, and established companies from all over the world spanning various industries such as consumer electronics, medical, industrial products, and more.

Our website supports automatic quoting, ordering, traceable production, and shipping, all of which can greatly improve efficiency.

Our goal is to turn your idea into a product in an easy way!



Industrial Distribution



- Consumer devices
- Medical&Safety
- Industrial products & Agricultural technology
- Test & Measurement
- Telecom & Networking & Communications
- Other

Start from Prototypes

Customized PCB prototyping is remarkably easy backed by our online system which streamlines the process of ordering and production tracking, while a wide range of materials, finishes, and specifications caters to diverse project requirements.

With a quick turnaround time as short as 12 hours and various express delivery methods, PCBWay ensures that you receive prototypes in an incredibly short time at an affordable price.

Moreover, our file review and customer service teams work in shifts to provide 24-hour support, ensuring that customers receive prompt assistance and a truly satisfying experience for all their inquiries, concerns, or customization requirements.

\$ 5.00

1-2 layer & 10 pcs PCB
Build Time: 24 hours

Express Production Service

12h 24h 48h 72h

\$ 29.00

Free Shipping
for 1-20 pcs Assembly

EXPRESS DELIVERY

DHL FedEx IP EMS

Global Standard SF EXPRESS AliExpress

PCB Prototype

Instant Quote
Full feature prototype PCB custom service at low cost.

PCB Assembly

FPC/Rigid-Flex

Advanced PCBs

CNC | 3D Printing

SMD Stencil

Dimensions

Length x Width mm

Quantity

Choose Num (pcs)

Layers

2 Layers

Thickness

1.6mm

Quote Now Get \$5.00 - Free Prototype Order

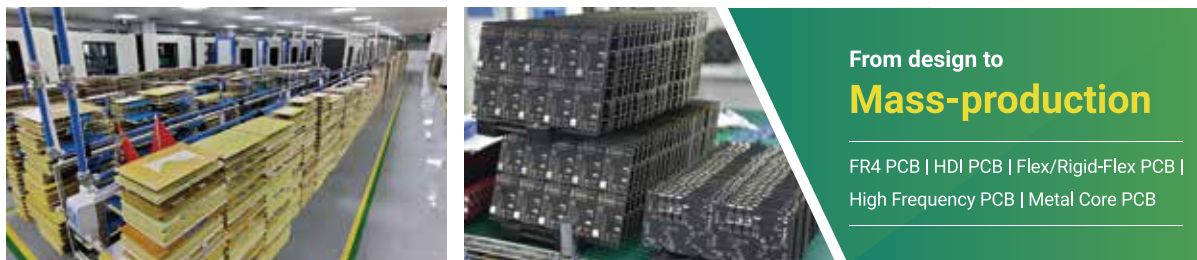
24 hour online Customer service

Be Trusted through Mass Production

Bringing bulk manufacturing to the next level, PCBWay balances both precision and economy. With automated infrastructure and advanced technology, we have strategically organized ourselves to efficiently handle high-volume production at competitive prices.

Over the years, PCBWay has consistently been at the forefront of the PCB manufacturing and assembly industry. We have the capacity to manufacture 500,000 m² of PCBs and assemble 20,000 different product designs per month.

We are dedicated to offering high-quality products, from material inspection to final testing. Our commitment extends to timely customer support, professional engineering assistance, and responsive after-sales service, recognizing the paramount importance of both quality and service. Our goal is to be your trusted, long-term manufacturer.



Our Main Services

Your one-stop solution to engineering projects.

- 01 PCB Fabrication**

Rapid PCB prototyping in 12 hours meets your urgent needs. Most customization options can fully cover your possible requirements.
- 02 PCB Assembly**

We help you source components globally. Turnkey assembly service with quick quotation makes the whole process seamless.
- 03 CNC Machining | 3D Printing**

High-precision part production can be within hours. Online quotation system speeds up the prototyping process.
- 04 OEM | EMS**

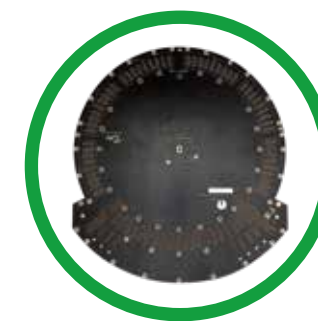
Our complete supply chain saves your time from design to final product. Quality-assured mass production brings your product to market smoothly.

PCB Fabrication

PCBWay offers rapid PCB prototyping for your research work. We can get your first-try boards right in 24, or even 12 hours! Prototyping stage is the most critical period of time for engineers, students and hobbyists. PCBWay not only makes your boards quick, but also makes your job right as well as cost-effective. This greatly reduces your cost and shorten the time for developing your electronic products.

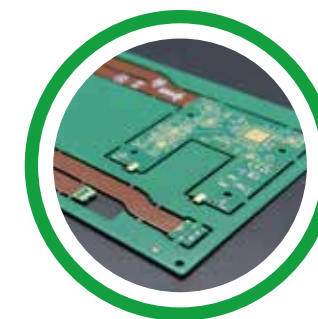
HDI PCB

- 4 - 60 layers
- FR-4, HighTg, Halogen-free, PTFE
- Finished Copper: 1/30Z-80Z
- MinTrack/Spacing(Inner): 2/2mil (H/HOZ base copper)
- Min BGA Pitch: 0.35mm



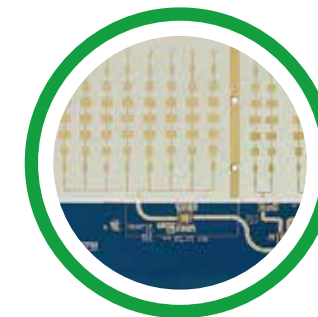
Flex/Rigid-Flex PCB

- 1 - 32 layers
- Min hole size/Pad size(diameter): $\phi 0.15/0.35\text{mm}$
- Min FPC Thickness: 0.08mm
- Stiffener(Min thickness of Top/Bottom): 0.05mm/0.05mm
- E-Test, Design-Rule-Check



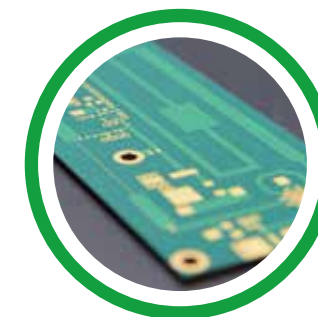
High Frequency PCB

- RO4003C, RO4350B, Ro3003, Ro3010, RT5880
- Min. Track/Spacing: 2mil
- Min. Hole Size: 0.15mm
- Finished Cooper: 1-2oz
- Board Thickness: 0.2-3.2mm



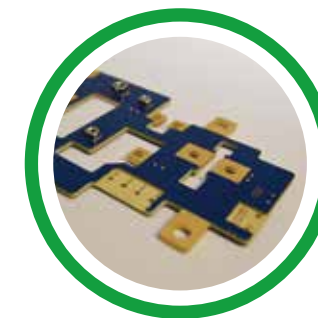
Metal Core PCB

- Aluminum core, Copper core
- Thermal conductivity:
1.0W/(m · K) 1.5W/(m · K) 2.0W/(m · K) 3.0W/(m · K)
- Min. Track/Spacing: 4mil
- Min. Hole Size: 1-layer(0.8mm) 2-layer (0.2mm)
- Board Thickness: 0.4-3.2mm

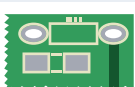


Other PCBs with Special Process

- Embedded Copper PCB
- Backplane PCB
- Cavity PCB
- Whole/Partially Hybrid PCB
- Black Core PCB (After-dark)



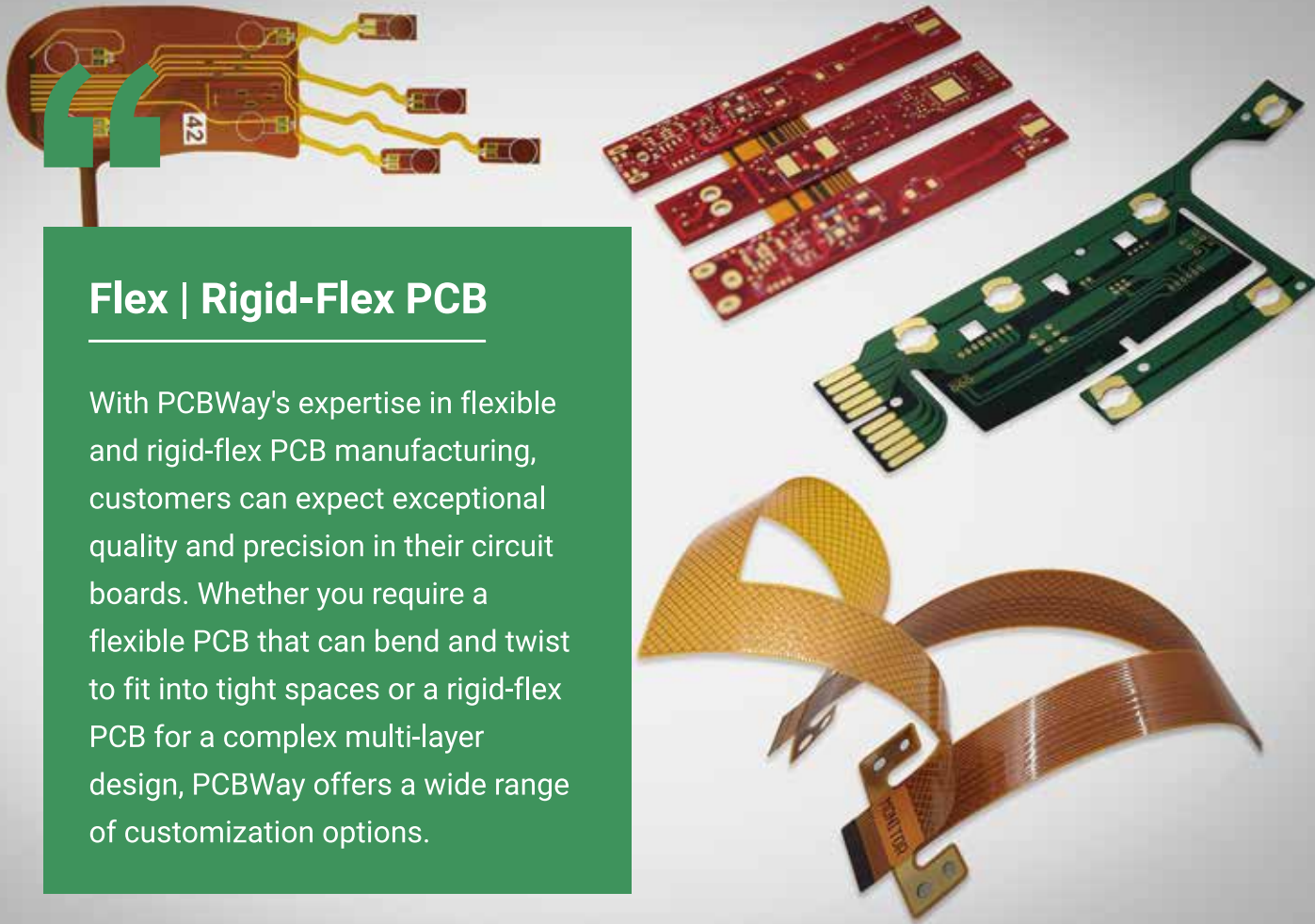
PCB Capabilities

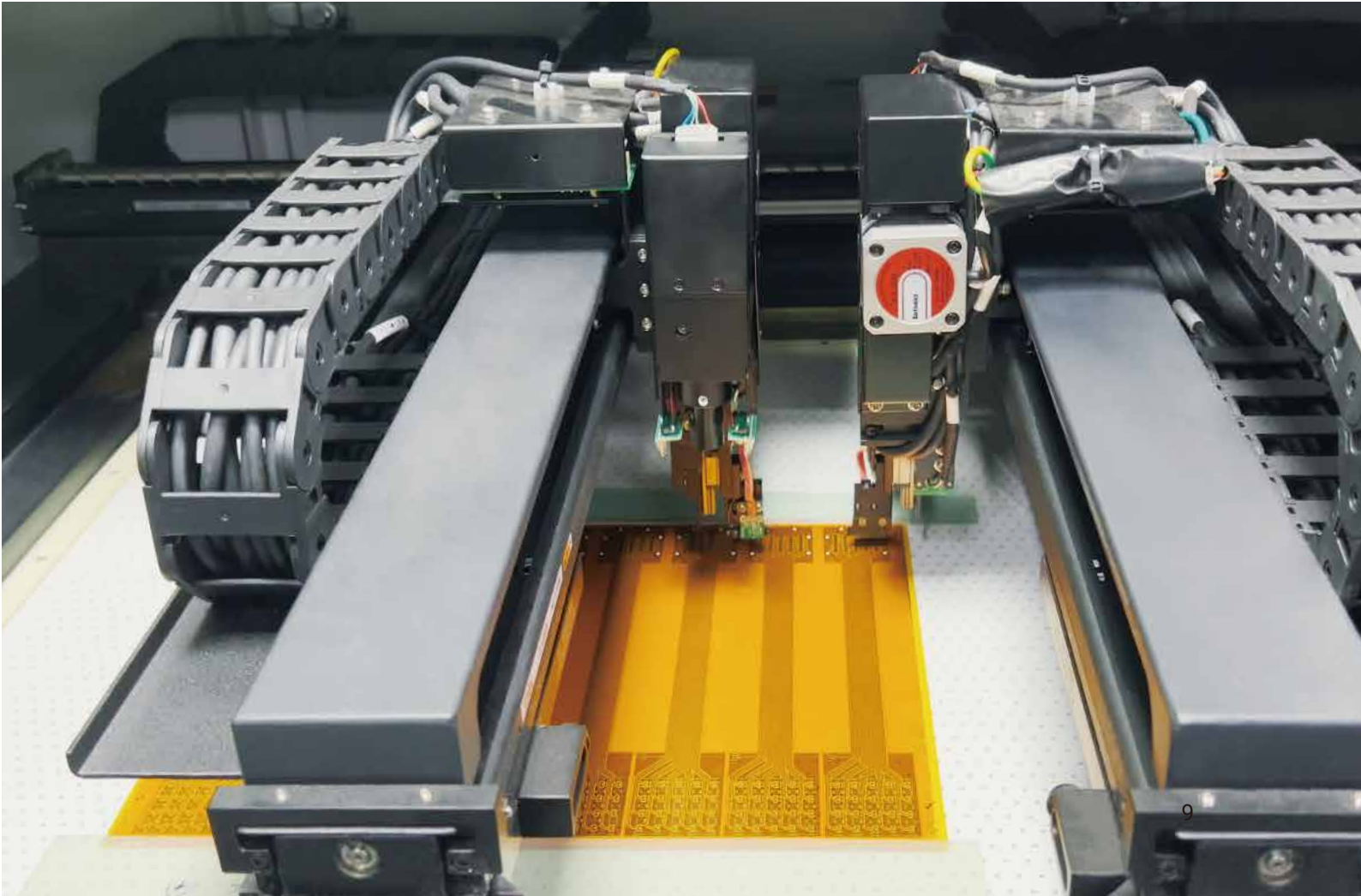
No.	Item		Process Capability Parameter	
1	Base material	—	FR-4 High Tg Halogen-free PTFE Polyimide Metal Core PCB	
2	PCB type	—	Through hole board HDI	
3	Max layer count	—	60 layers	
4	Min base copper thickness		1/3 OZ(12um)	
5	Max finished copper thickness		13 OZ	
6	Min trace width/spacing		Inner layer	Portion 2 / 2mil, overall 3 / 3mil (H/H OZ base copper)
7			Outer layer	2/2mil (1/3 OZ base copper)
8	Min spacing between hole to inner layer conductor	—	4 mil	
9	Min spacing between hole to outer layer conductor	—	4 mil	
10	Min annular ring for via		2 mil	
11	Min annular ring for component hole	—	5 mil	
12	Min BGA diameter	—	6 mil	
13	Min BGA pitch	—	0.3 mm	
14	Min hole size		0.15mm(CNC) 0.1mm(Laser)	
15	Max aspect ratios	—	20:1	
16	Min soldermask bridge width		3 mil	
17	Soldermask/circuit processing method	—	Film LDI	
18	Min thickness for insulating layer		2 mil	
19	HDI & special type PCB	—	HDI(1-7steps) R-FPC(2-16layers) High frequency mixpressing(2-20layers) Buried capacitance & resistance	
20	Surface Finish type	—	ENIG HAL HAL lead free OSP Immersion Sn Immersion silver Plating hard gold Plating silver ENEPIG	
21	Max PCB size	—	1200*600 mm	

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Flex | Rigid-Flex PCB

With PCBWay's expertise in flexible and rigid-flex PCB manufacturing, customers can expect exceptional quality and precision in their circuit boards. Whether you require a flexible PCB that can bend and twist to fit into tight spaces or a rigid-flex PCB for a complex multi-layer design, PCBWay offers a wide range of customization options.





Flex/Rigid-Flex PCB Capabilities

No.	Item		Process Capability Parameter	
1	Base material	—	Adhesive PI Adhesiveless PI Halogen-freePI No flow PP	
2	PCB type	—	FPC Rigid-Flex	
3	Max layer count	—	16 (FPC) 32-10 (Rigid-Flex)	
4	Min base copper thickness		1/3 OZ(12um)	
5	Max finished copper thickness		2 OZ	
6	Min trace width/spacing		Inner layer	0.06/0.06mm (1/3oz)
7			Outer layer	0.06/0.06mm (1/3oz)
8	Min annular ring for via		2 mil	
9	Min BGA diameter	—	8 mil	
10	Min hole size		0.15mm (CNC) 0.1mm (Laser)	
11	Max aspect ratios	—	10:1	
12	Surface Finish type	—	ENIG OSP Immersion Sn Immersion silver ENEPIG	
13	Max PCB size	—	1200*238mm (FPC) / 250*520mm (Rigid-Flex)	
14	Impedance tolerance	—	±8%	
15	Buried Via(Yes/No)	—	YES	
16	Minimum Coverlay Overlap Distance	—	0.3 mm	
17	Minimum EMI Shielding Film Overlap Distance	—	0.25 mm	
18	EMI Shielding Film Overlap Registration Tolerance	—	0.05 mm	
19	Minimum Distance from Drilled Via to Transition Line	—	0.7 mm	
20	Minimum Distance from Laser Via to Transition Line	—	0.3 mm	



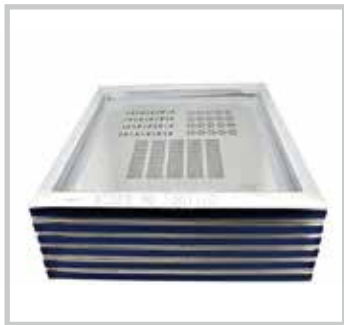
PCB Assembly

PCBWay offers turn-key PCB assembly services in prototype quantities or low-volume to mass production runs, making PCB and assembly seamlessly under one roof, which can not only shorten the turnaround time, but also ensure the high quality.



SMT Stencil

- Customize SMT stencils with different sizes
- Free stencil for assembly service
- Only 10 USD for a non-frame stencil
- 1-2 days production time



PCB Assembly

- Support NPI prototypes to mass production
- SMT,THT,BGA, turnkey PCB Assembly
- IC Programming, Functional Testing
- Small as 01005,0201 size or 3mil pitch devices, own 28 SMT lines



Full Product Assembly

- Cable and Harness Assembly
- Box Build Assembly
- Electro Mechanical Assembly
- Conformal Coating

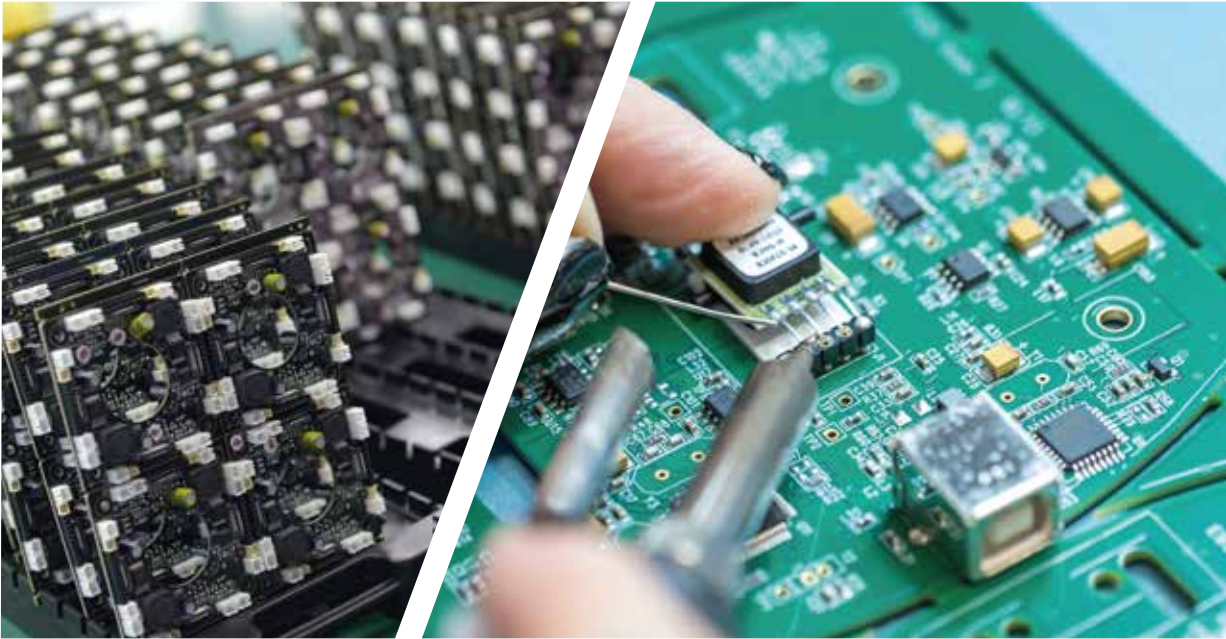


PCB Assembly Capabilities

No.	Item	Process Capability Parameter
1	PCB Types	Rigid, Flexible, and Rigid-Flex PCBs. MCPCBs, and Rogers PCBs.
2	Types of Assembly	THD (Thru-Hole Device), SMT (Surface-Mount Technology), SMT & THD mixed, 2 sided SMT and THD assembly, Box Build Assembly, Cable Wire Harness Assembly, Electro Mechanical Assembly, LED PCB Assembly, Conformal Coating, Electronic Potting
3	Order quantity	1-10,000,000+
4	Components	Passives parts, smallest size 01005 (inch), Fine pitch to 8Mils BGA, uBGA, QFN, POP and Leadless chips, Connectors and terminals
5	Component Package	Reels, Cut tape, Tube and tray, Loose parts and bulk
6	Board Dimension	Min Board with size 10mm*10mm (Boards smaller than this size need to be panelized), Max: 510mmx460mm
7	Board shape	Rectangular, Round, Slots and Cutouts, Complex and Irregular
8	Assembly proces	Leaded process, Lead-Free (RoHS)
9	Design file format	Gerber RS-274X, BOM (Bill of Materials) (.xls, .csv, .xlsx), Centroid (Pick-N-Place/XY file)
10	Salesand support	Emails, Phone calls, online quotation for assembly
11	Electrical testing	X-ray Inspection, AOI (Automated Optical Inspection), Functional testing

PCB Assembly Capabilities

No.	Item	Process Capability Parameter
12	Turnaround time	1-5 days for only PCB assembly 10-16 days for turnkey PCB assembly
13	PCB thickness	Bulk Order: T=0.4~4.0mm Sample Order: Unlimited
14	Equipment placement accuracy	Bulk Order: ±0.35mm @3σ Sample Order: ±0.35mm @3σ
15	SMD production capacity	Bulk Order: 1000K points/day Sample Order: 200 Orders/day
16	DIP production capacity	Bulk Order: 500K points/day Sample Order: 200 Orders/day



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CNC | 3D Printing

In order to meet the needs of some customers about customizing other parts, we have added a number of additional services, like CNC machining, 3D printing, Sheet metal fabrication, and Injection molding.



CNC Machining
Milling (3-, 4- & full 5-axis),
turning & post processing



Sheet Metal Fabrication
Laser cutting, bending,
post processing



3D Printing
SLA, MJF, SLS, SLM, FDM, DLP, SAF
High Precision & Superb Service



Injection Molding / Vacuum Casting
Rapid tooling, family molds,
multi-cavity molds and overmolding

CNC Machining standards

Limits for nominal size	Plastics Coarse class (c)	Metals Medium class (m)
0.5mm* to 3mm	±0.2mm	±0.1mm
3mm to 6mm	±0.3mm	±0.1mm
6mm to 30mm	±0.5mm	±0.2mm
30mm to 120mm	±0.8mm	±0.3mm
120mm to 400mm	±1.2mm	±0.5mm
400mm to 1000mm	±2.0mm	±0.8mm
1000mm to 2000mm	±3.0mm	±1.2mm
2000mm to 4000mm	±4.0mm	±2.0mm

How we ensure high quality machined parts

Standards :

- Advanced CNC machines
- Skilled machinists
- Quality materials with testing reports
- Precision tooling
- Tolerance control
- Inspection protocols
- First article inspection for orders of 100+ units
- ISO9001, ISO14001, ISO27001 and IATF 16949 certifications
- DFM analysis



3D Printing standards

Process	Tolerance
SLA	L<100mm,±0.2mm. L>100mm,±0.2%*L(mm)
DLP	L<100mm,±0.1mm. L>100mm,±0.1%*L(mm)
SLS	L<100mm,±0.25mm. 100< L<200mm,±0.3mm 200< L<500mm,±0.5mm. L>500mm,±0.1%*L(mm)
MJF	L<100mm,±0.25mm. L>100mm,±0.25%*L(mm)
SLM	L<100mm,±0.3mm. L>100mm,±0.3%*L(mm)
FDM	L<100mm,±0.2mm. L>100mm,±0.2%*L(mm)

How easy and fast you can order 3D printed parts

1 - Upload 3D model

- Free DFM
- Online real-time pricing
- More than 100 material options

2 - Production

- 3D Printing on advanced devices
- Professional post-processing team
- Material quality assurance

3 - Shipment

- Shockproof packaging
- Real-time logistics tracking





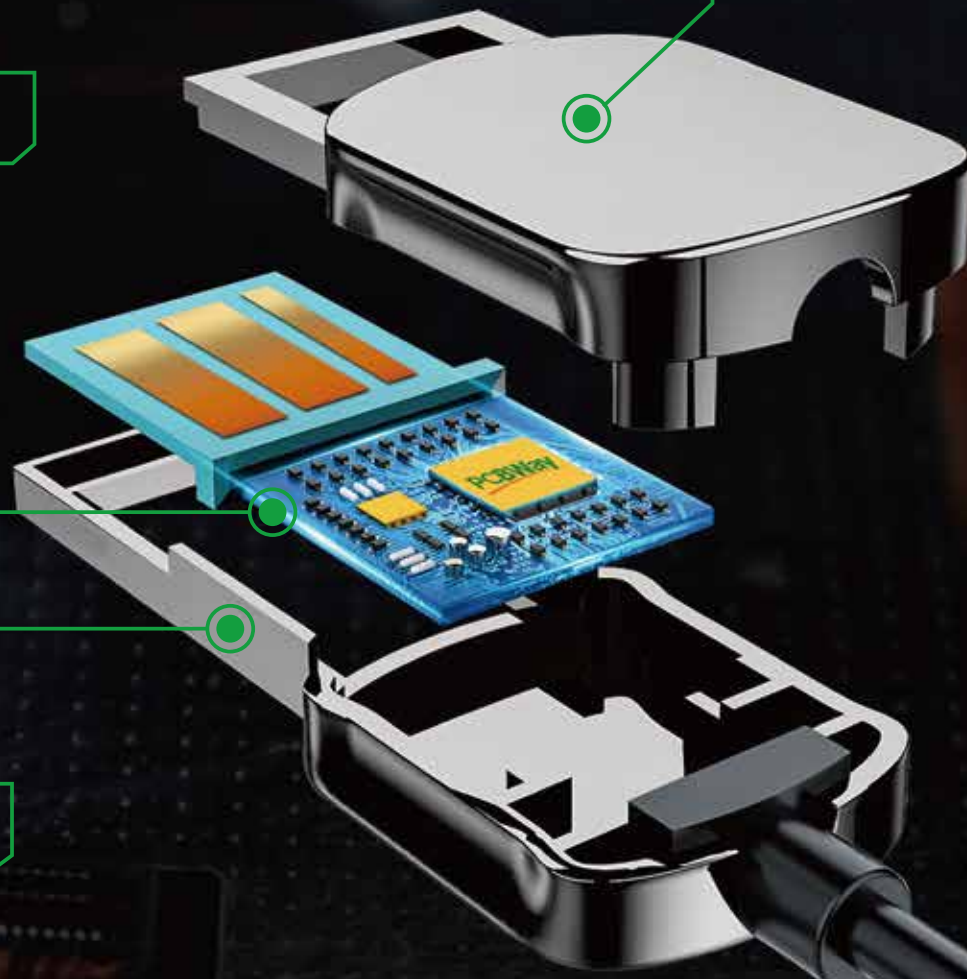
OEM | EMS

Based on our complete supply chain management system, and many years of accumulated resources integration ability, in 2021, we launched a OEM | EMS service, which is committed to meet the demand of customers one-stop product customization.

Injection Molding

PCB, PCBA

CNC Machining



Product Creativity and Feasibility Analysis //

Our professional engineering team will accurately grasp your needs, and deeply participate in your product creativity, give reasonable suggestions. Producibility analysis will be performed for each step.

Smart Electric Sea Breeze Floor Fan



Single & Three Phase Smart Electric Meter



ATV motorcycle display module



Finished Product Showcase

Product Design //

PCBWay product developers are specialized in designing electronics devices, including industrial design, PCB design, embedded design, software design, web and mobile applications for IoT devices, etc.

Supply Chain Management //

Every part involved in the product, we will timely contact with the production departments or suppliers to confirm if it's better to produce or directly purchase. We will carry out cost control and quality management for each link.

Production and Testing //

PCBWay has more than 5 factories to compliment the fabrication of a fully functional prouduct, and multiple testing devices for every step of production. We are responsible for the quality of final products.