



HF PCB PRO
high frequency circuits factory

HF PCB Manufacturing

Innovations and expertise by HF PCB Pro

•Version .2 in 2024

- One-stop PCB & PCB assembly solutions.
- 15+ years of professional PCB experience as a supplier.
- Advanced PCB types including RF, multi-layers, microwave, hybrid PCBs.
- Applied in AI, data communications, aerospace, automotive, radar systems, military, and wireless communications, among others.

[Get a quick quote :](#)

kico@hfpcbpro.com

WhatsApp/ Tel: +86180 3818 8537



About Us

HF PCB PRO is a manufacturer that specializes in PCB manufacturing. Since 2009, they have been providing PCB fabrication and assembly services for precision-based, high-tech, and environmentally friendly PCBs. These include high-frequency PCBs, RF microwave PCBs, multilayer PCBs, and more. These PCBs are used in various fields such as AI intelligence, data communication, wireless communication, radar systems, automotive, medical, and military applications.

We offer high-quality PCB circuit boards, including **high-frequency boards** such as Rogers, Taconic, and F4B, as well as microwave RF radio frequency boards. Our products also include multilayer boards ranging from 2 to 36 layers, antenna PCBs, and specialized circuit boards. Additionally, we maintain a substantial stock of PCB laminates from leading brands such as Rogers, Taconic, Isola, F4B, TP-2, and FR4, featuring dielectric constants spanning from 2.2 to 10.6ε.



- **Core Values**

We place great value on our workforce, which includes a skilled management team and experienced engineers known for their dynamic, dedicated, and enriched expertise.

- **HF PCB Pro Mission**

"Count on our engineering expertise for top-quality, fast, and sustainable PCB services. We're committed to delivering the best for you."

Expertise in High-Frequency PCB Manufacturing



Our Commitment to Sustainability

- 15 years of experience in PCB manufacturing.
- Specialized in advanced PCBs and eco-friendly manufacturing practices.
- ISO/IPC certificates and quality standards.
- Tailored solutions for your Needs.
- Rigid procedures for fabrication with sustainable materials.
- Collaborative approach to meet specific requirements.
- Support and communication throughout the project.

10,000 +
Manufacturing Solutions

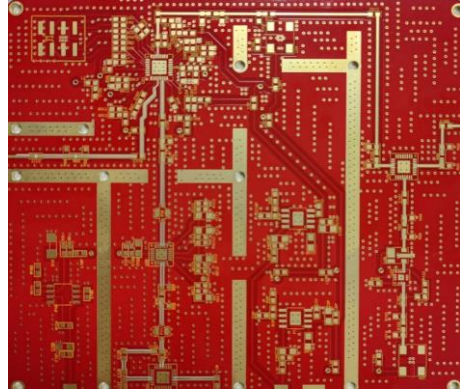
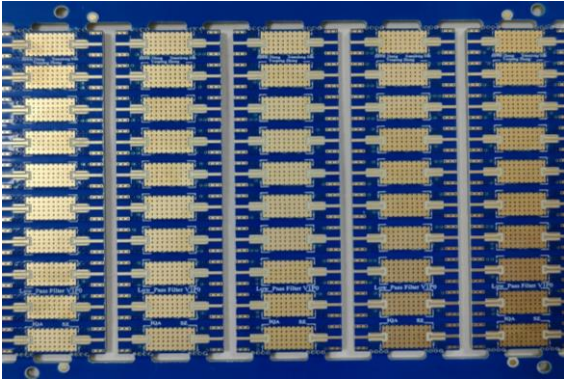
80 +
Senior Engineers

5,000 m² +
Factory Area

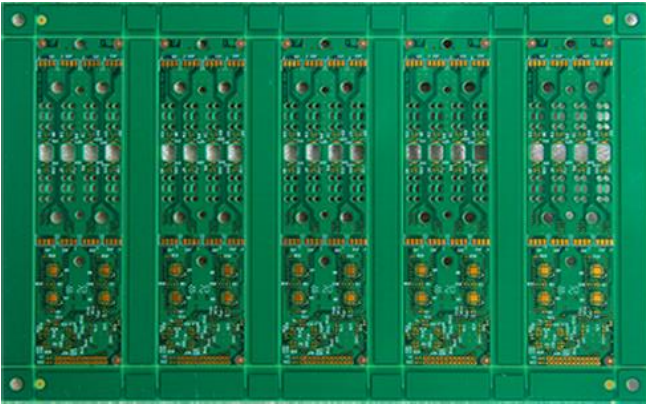
24-Hour
Quick-turn Services



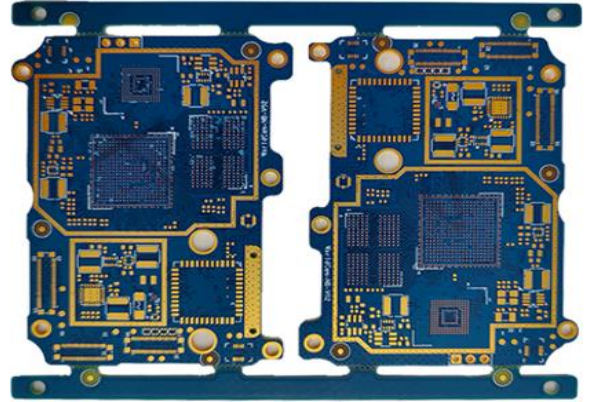
Case Studies-1



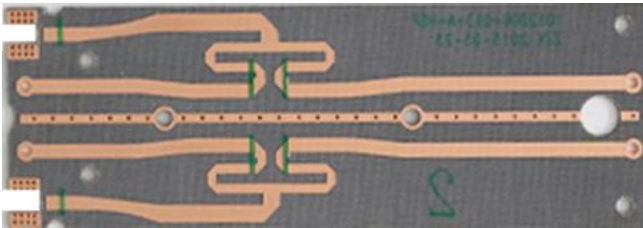
2.0 High Frequency Board Surface Finish



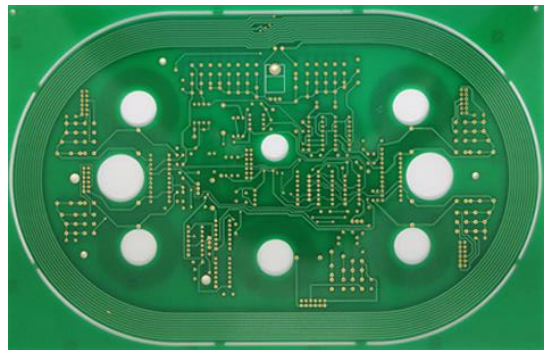
2.1 R05880 High Frequency Board



2.4G R04350B High Frequency Board

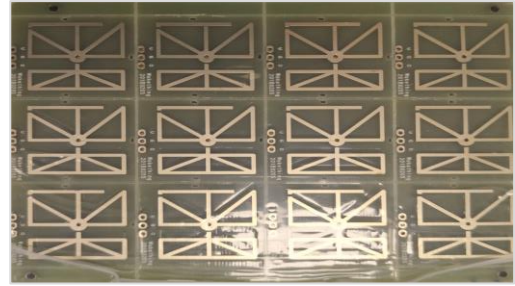
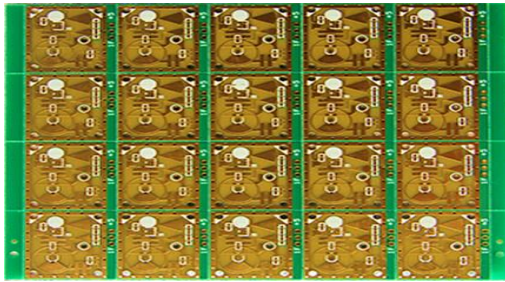


2.2TLF-35 High Frequency Board

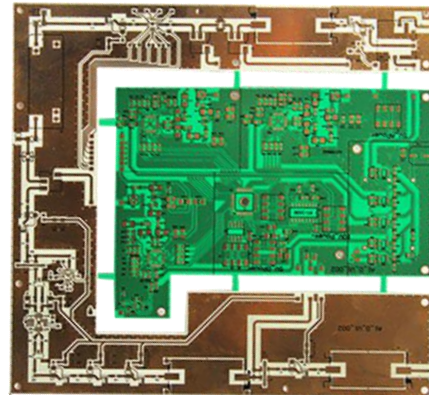
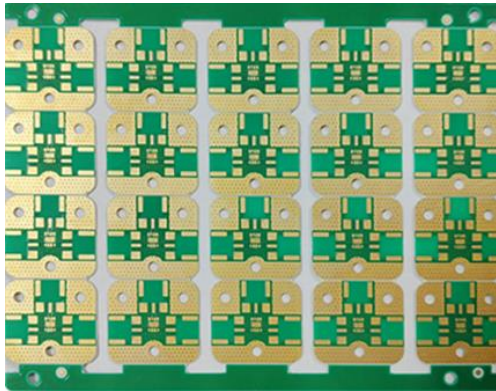


TLA-6 High Frequency Board

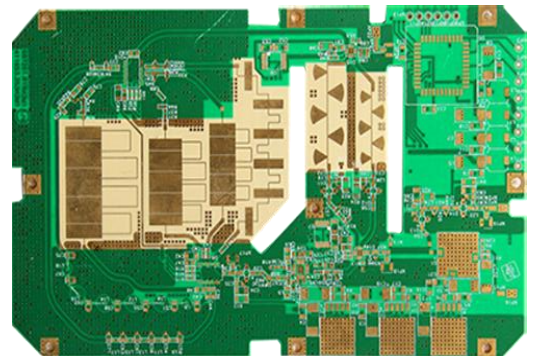
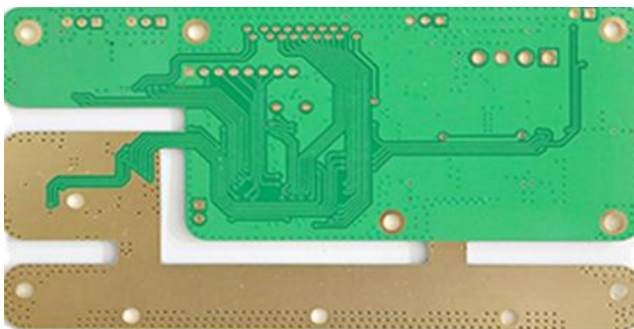
Case Studies-2



5.8G Microwave Sensing High Frequency Board



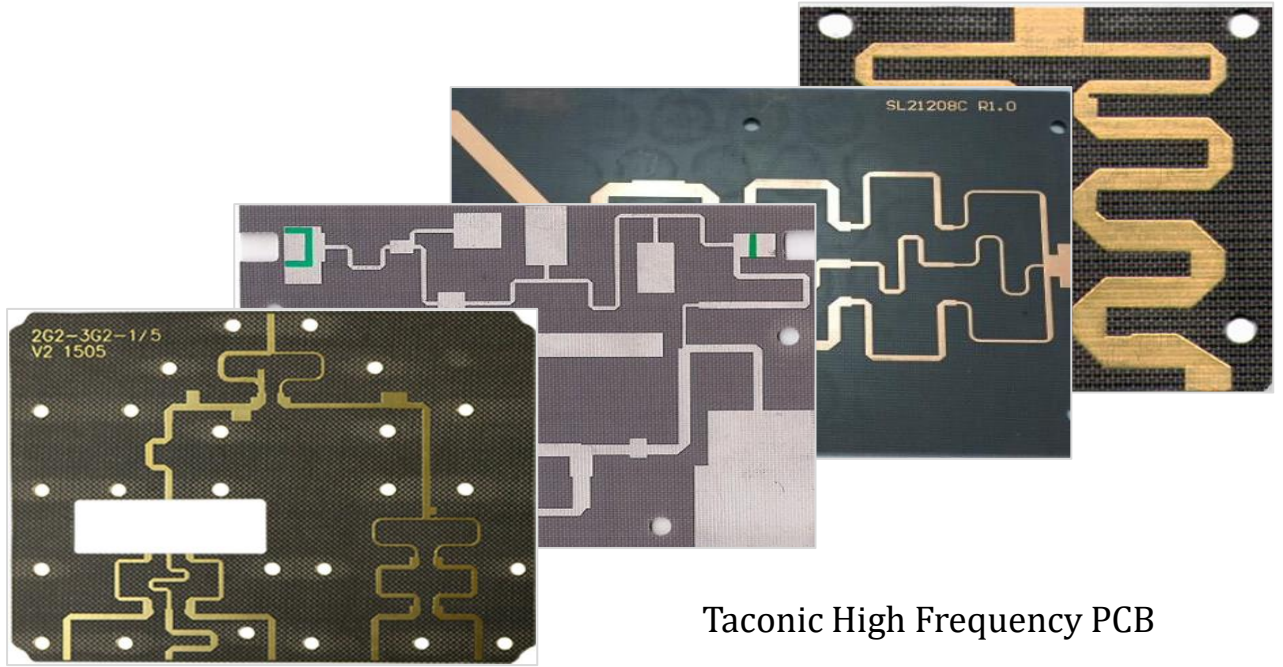
2.4G Microwave Sensing High Frequency Board



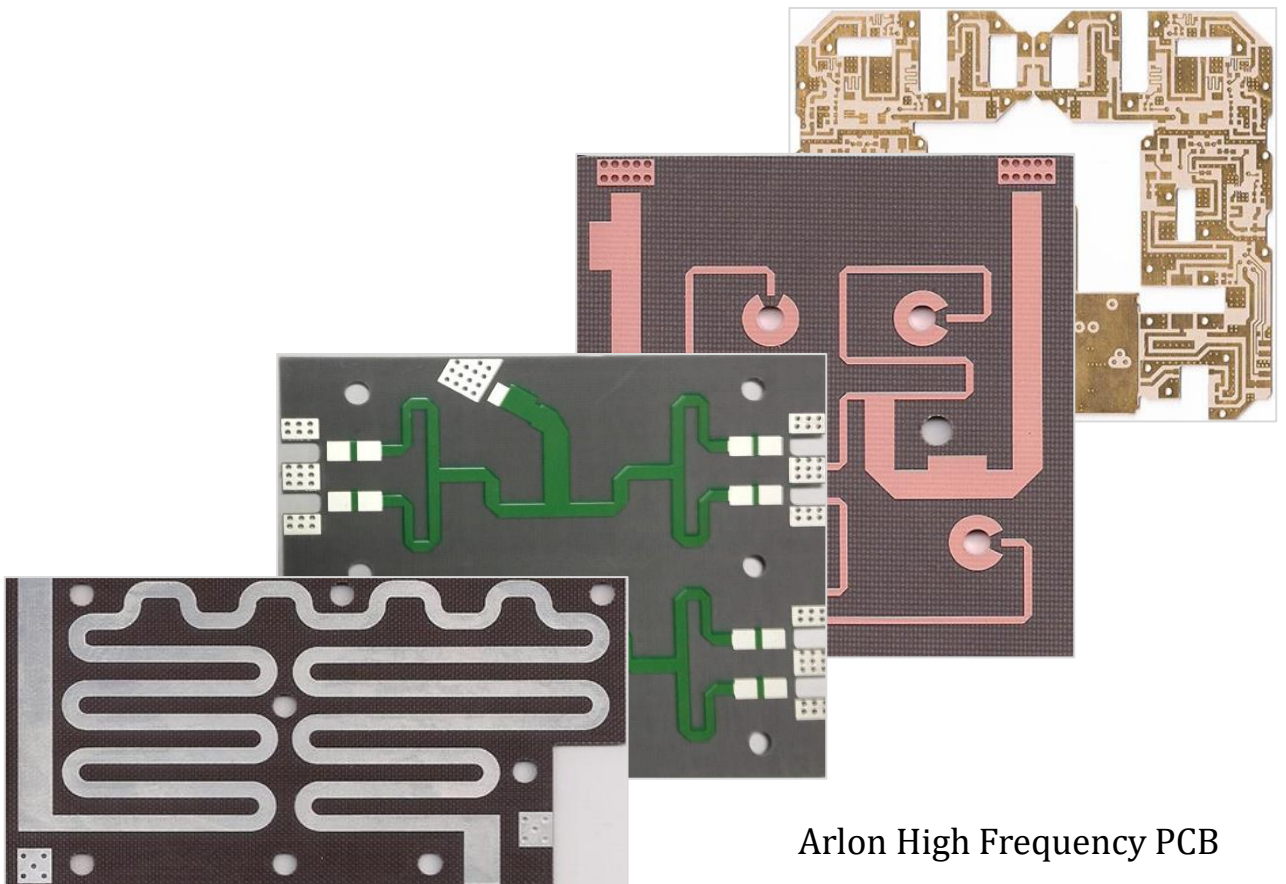
RO4003C Immersion Gold High Frequency PCB

2.4G RO4350B High Frequency PCB

Case Studies-3



Taconic High Frequency PCB



Arlon High Frequency PCB

Sustainable Materials -Laminate Brands

HF PCB Pro has all kinds of brands of materials in stock to ensure reliable capabilities, among the table below, we can quote a more favorable prices in the market.

Brand	Model	Standard Thickness (Metal layer excluded) (mm)	Dielectric Loss	DK
F4B	F4BM220		0.0010	2.20±0.04
	F4BM255		0.0013	2.55±0.05
	F4BM265		0.0015	2.65±0.05
	F4BM300	0.127/0.254/0.508/0.762/ 1.016/1.524/2.0/3.0 (Other thickness customizable)	0.0017	3.0±0.05
	F4B350		0.0025	3.5±0.05
	F4BTM400		0.0030	4.00±0.08
	F4BTM440		0.0033	4.40±0.10
	F4BTM615		0.0045	6.15±0.12
Rogers	RO3035	0.127/0.254/0.508/0.762/ 1.524	0.0015	3.5
	RO4350	0.101/0.168/0.254/0.338/0.422/0.508/0.762/1.524	0.0037	3.48
	RO4003	0.203/0.305/0.406/0.508/0.813/ 1.524	0.0027	3.38
	RO3003	0.127/0.254/ 0.508/0.762/ 1.524	0.0010	3.0
	RO3006	0.127/0.254/0.635/1.270	0.0020	6.15
	RO3010		0.0022	10.2
	RT5880	0.127/0.254/0.381/0.508/ 0.787/ 1.570/3.175	0.0009	2.2
	RT5870		0.0012	2.33
	RO6010	0.127/0.254/0.635/1.27/ 1.905/2.54	0.0023	10.2
Taconic	TLY-5A		0.0009	2.17
	TLP-5	0.09 0.13 0.25 0.51 0.79 1.58 2.36 (Other thickness customizable)	0.0009	2.2
	TLY-5		0.0009	2.22
	TLY-3		0.0012	2.33
	TLT-0, 9, 8, 7, 6	0.4 0.13 0.25 0.51 0.79 1.58 3.18	0.0015-0.0021	2.45-2.65
ZY	TLA-6	0.76 1.45	0.0017	2.65
	RF-35	0.25 0.51 0.76 1.52	0.0018	3.5
	RF-60A	0.25 0.64 0.79 1.27 1.52 3.18	0.0038	6.5
	CER-10	0.28 0.64 0.76 1.19 1.58 3.18	0.0035	10.0
	ZYF220D		0.0009	2.20±0.02
ZYF225DA	0.254/0.381/0.508/0.762/1.016/ 1.524	0.0018	2.55±0.04	
ZYF265D		0.0018	2.65±0.04	
ZYF300CA-P	0.381/0.508/0.762/ 1.016/1.524/3.170	0.0018	3.00±0.05	
ZYF350CA		0.0031	3.50±0.05	

Process Capability

NO.	Item	Description	Process Capability	General
1	Laminate	Type	Rogers/Taconic/Arlon/Isola/Nelco/CHUKOH/FR-4/F4B/TP-2/High TG...	
		Thickness	0.1-12mm	
2	Process Capability	Layer	<ul style="list-style-type: none"> 2-36 layers radio frequency PCB, Hybrid PCB, Multilayer HDI PCB 	
		Surface Finish	ENIG/Gold Plating/Immersion Silver/Silver Plating/HASL/Gold finger/OSP/Nickel-palladium Gold/Resin plugging/Countersinking/ENIG+Hard Gold Plating/ImNi+ImTin/ENIG+OSP	
3	Copper Foil Thickness	Completed Copper Thickness	0.5oz-5oz	1oz-3oz
4	Size	Max Panel Size	480*800mm	600*600mm
5	Drilling	Drilling Diameter	≥0.1mm	≥0.2mm
		Aperture Tolerance	±0.05mm	±0.075-±0.08mm
		Hole Position Tolerance	±0.05mm	±0.075mm
6	Inner Layer	Inner Core Thickness	0.1-4.0mm	0.2-2.0mm
		Trace/Space	2.5mil/3mil	3mil/4mil
		Registration Precision	2mil	3mil
7	Size	Plate Thickness Tolerance	±0.1	±10%
		Registration	≤0.05mm	≤0.1mm
8	Electroless Plating Copper	Hole Wall Copper Thickness	20um-50um	≥20um
9	Profiling	Profile Type	Routing/Punching/V-CUT/Beveled Edges Laser Cutting	
10	Out Layer	Trace/Space	2.5mil/3mil	3mil/4mil
11	Etching	Tolerance	±0.01mm	±20%
12	Processing	BGA	≥8mil	≥12mil
		IC	≥3mil	≥6mil
		Aspect Ratio	14:01	10:01
		Board Thickness	0.1-10.0mm	0.2-4.0mm
13	Chemical Gold Plating/Electronic Plating	Nickel Thickness	≥120u	
		Gold Thickness	1-5u	
14	Solder Mask	Color	Green/Blue/Black/Red/White/Yellow	
		Thickness	15-35um	
		Solder Mask Bridge	≥3mil	≥5mil
		Plug Hole Diameter	0.15-0.6mm	0.3-0.4mm
15	Legend	Color	Green/Blue/Black/Red/White/Yellow	
		Trace Width/Space	6mil/6mil	
16	Impedance	Impedance Tolerance	±10%	
17	Quality Control	Single and double- Sided printed boards with plated-through holes technique standard GB4588.2-88, Design and Use of Printed Boards IPC-A-600G IPC-6015		

Advantages of Our High-Frequency PCBs

- High signal integrity and performance.
- Superior quality and reliability.
- Customization options.
- Fast prototyping and production.

Our Manufacturing Process

Step1. Upload your designs.

Simply upload your [CAD & 99sE & Gerber files](#) and submit a clear and informative RFQ online.

Step2. Receive design analysis.

We will perform a full manufacturability analysis and transparent pricing based on your information, or customize a better solution.

Step3. Start process.

Our engineers will process your product using the required technology and optimal materials.

Step4. Receive your products.

Your product will be shipped directly to your door within strict deadlines.



HF PCB Pro Equipments

Our company is equipped with cutting equipments, printing, bonding equipments, etching equipments, and testing equipments.



Press Fit Machine



Exposure Unit



Automatic Screen Printing Machine



Template Machine



Finished Product Repair Machine



Film Developing Machine



Horizontal Etching Machine



Routing Machine



Profile Room



DES Outer Line



Laminating Machine



Wire Drawing Machine

Quality Control

HF PCB Pro build a whole set of **quality assurance system**, including **IQC, process flow control, finished goods inspection, after-sales services**. It enable us offer our customer the most reliable and sustainable products, increase our market competitiveness, gain our reputation.

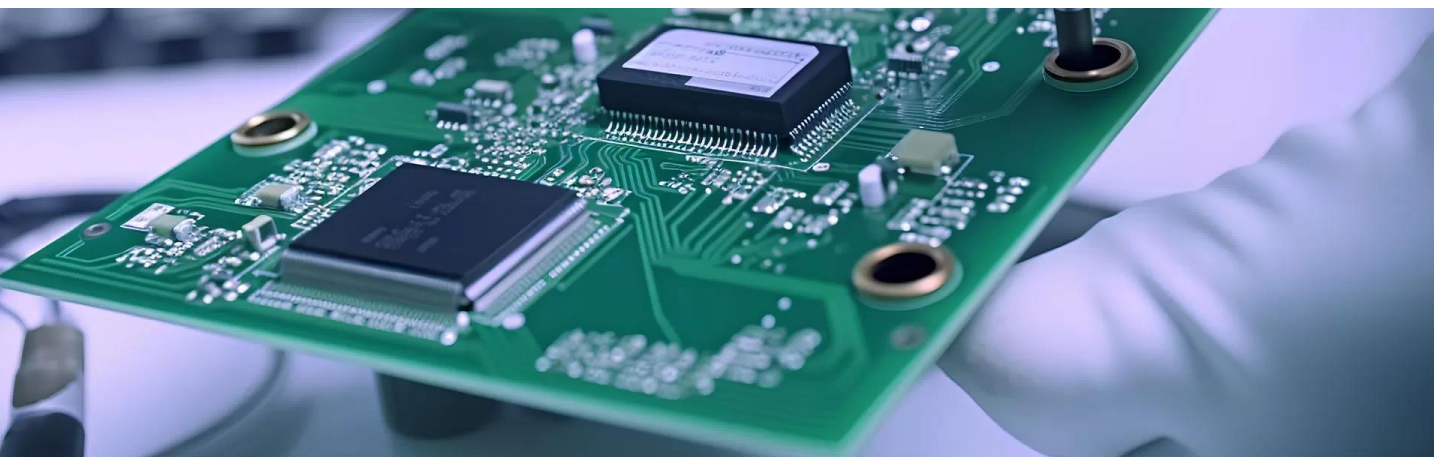
Compliance with industry standards.

Our manufacturing and inspection comply **IPC 1~3 Class and PEPFAG standard**.

XCE also performs product quality control in strict accordance with the standards of "Technical Conditions for Metallised Single/Double Sided Printed Boards", "Design and Use of Printed Circuits", "Quality Management System" and so on.

Continuous improvement initiatives.

Our objective is "no production of defectives, no delivery defectives, no outflow of defectives". Adopt scientific quality management mode, with advanced management experience and the high tech of the industry, to achieve leadership in the area. We will build the PCB according to our customer's requirements to meet their expectations and to quickly deliver high-quality, cost-effective products and services.



Business Philosophy: Offering the best products and services.

Quality Guideline: Quality first, service-oriented, continue improving, fulfill customers.

Quality Aim : PCB customer complaints $\leq 1\%$

Qualified double-sided boards $\geq 99\%$

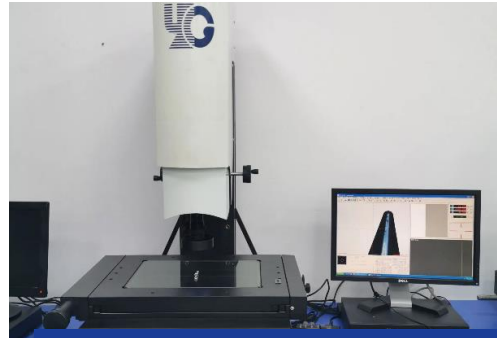
Qualified multilayer boards $\geq 98\%$.

Inspection Machines

Quality control team operates according to rigorous testing procedures with testing equipments.



Automated Optical Inspection Machine



2D Coordinate Measuring Machine



Flying Probe Tester



Metallographic Microscope



V-CUT Machine



PTH CU Thickness Gauge



Impedance Meter



Laboratory

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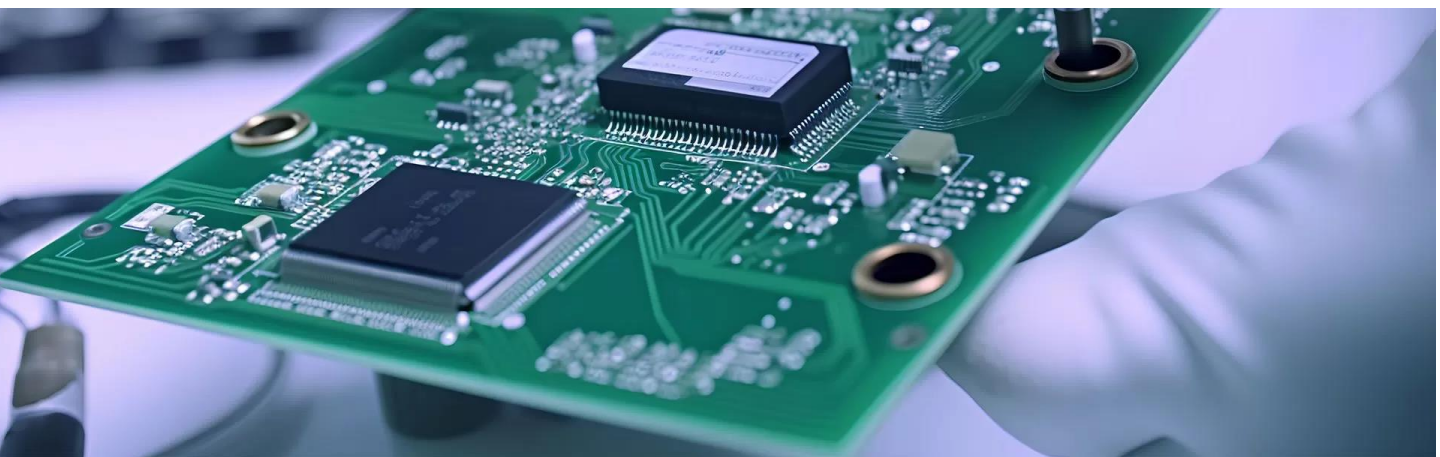
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Qualified multilayer boards $\geq 98\%$.

What HF PCB PRO Served Cover All Fields



Areospace



Radar /Wireless Communication



Military



Artificial Intelligence



Drone



Medical Industry



5G

Comprehensive Client Supports



- #1 - Reliable PCB manufacturing & assembly.
- #2 - Quality PCB fabrication
- #3 - Best on-time PCB shipping record
- #4 - Financially stable cutting-edge equipment continues to improve the efficiency.
- #5 - 24 -hour live tech support
- #6 - PCB instant quoting
- #7 - Easy PCB order status tracking
- #8 - No minimum PCB order requirements

Contact Us

Call us for a quick quote >>



kico@hfpcbpro.com
www.hfpcbpro.com



Skype: kico_111



WhatsApp: +86 18038188537



+86 18038188537



3rd Floor, Building 4, Lisheng Industrial Park, Tangwei Community, Fuhai Street, Baoan District, Shenzhen, Guangdong 518103, China



Shenzhen Xinchenger Electronics Co., Ltd.