

One-stop Electronics Manufacturing Services

- PCB layout
- PCBA conceptual design
- DFMA service
- PCB manufacture
- SMT+DIP
- Procurement of components
- Finished product assembly test

CATALOGUE

01

About Kingford

02

Conceptual design

03

PCB manufacture

04

PCBA



PART 01

About Us

- 1 company profile
- 2 Thailand plant
- 3 organizational structure
- 4 company history
- 5 company culture
- 6 one-stop service



Shenzhen Kingford EMS Co., Ltd. founded in 2012, is a one-stop PCBA solution service provider who integrates PCB Layout, PCB manufacturing, PCBA solution and product design, component procurement, SMT, DIP, finished product assembly and testing, having over 10 years of experience in serving many domestic and foreign brand customers in a wide range of fields such as Medical, Automotive, Industrial Automation, Artificial Intelligence, Smart Home, Security, Power and Communications, etc..

Kingford is committed to meeting the customer needs of "**multi-variety, small and medium batches, quick turn delivery, and high quality**". Its KFPCBA Platform achieves the fastest **23-hour** delivery of SMT without queuing.

"Digital-driven, Technology Empowerment and Shared philosophy" makes Kingford consistently improve its level of digital intelligence, and create values for customers and partners under the power of technology.



Employees
450+



Factory area
20000m²



Experience
10 years

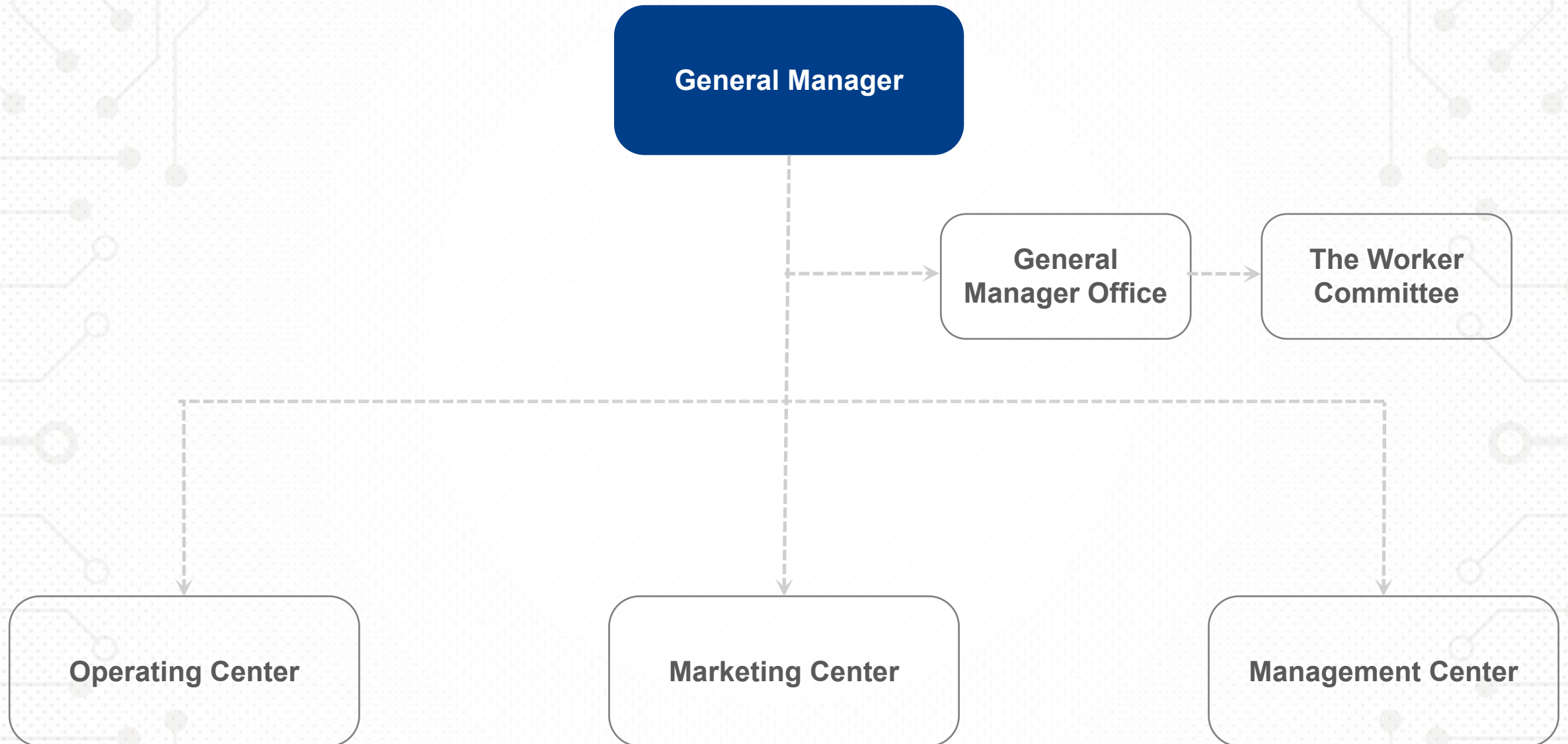


Delivery time
23h

Amata City, Thailand plant

- Located in **Amata, Thailand**
- Land area of **13600 square meters**
- Building area of **144600 square meters**
- It is planned to start construction in **November 2023**
- It is planned to be put into production in **July 2024**





2012

Kingford is founded

2014

Participate in Huizhou WeiDe
PCB factory

2015

It had obtained UL certification
and has customers in more than
100 countries worldwide

2018

Set up Shenzhen PCBA one-
stop manufacturing plant

2019

Got certification of
IATF16949, ISO13485,
ISO9001, ISO14001, and IPC

2020

Carry out digitalization construction of
ERP, OA, WMS, MES, BI

2021

Kingford PCBA new factory
has put into operation,
KFPCBA Platform got online
and has been awarded with
title-National high-tech
enterprise



Corporate mission

In the pursuit of both happiness of material and spiritual for all employees, high quality electronic and electrical products, KF continues to create much value to human life, scientific and technological industries.



corporate vision

To become a respected benchmark enterprise in the electronic manufacturing industry



Corporate values

Customer - centered,
Striver - oriented,
working in cooperating and unity care,
long-term hard struggle,
adhere to self-reflection.



Material happiness



Spiritual happiness



Have love pass it on



Social responsibility



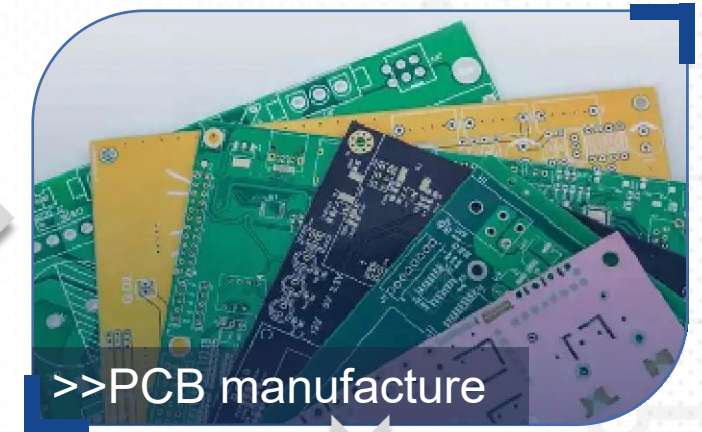
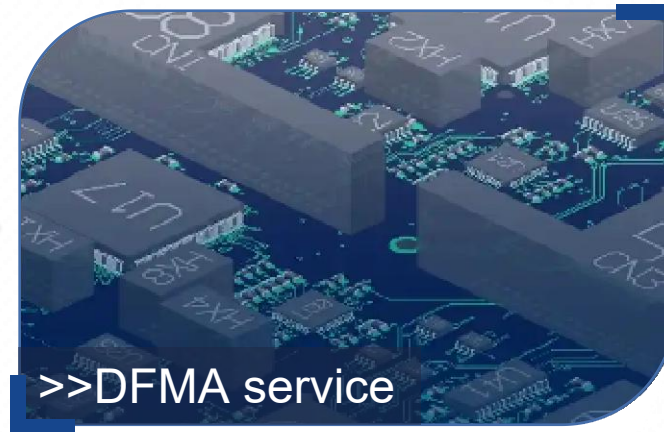
Customer-centric



Read every morning

One-stop PCBA solution provider

Multi-variety, small and medium batch, short delivery time, high quality one-stop PCBA services





PART 02

PCBA Layout

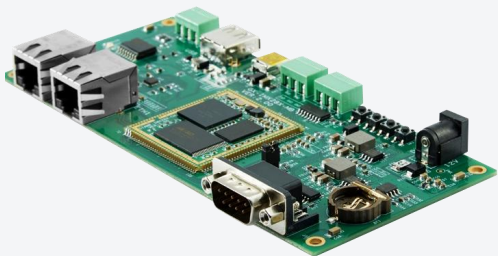
- 1 Solution
- 2 Design advantage
- 3 PCB design case
- 4 PCB design capability
- 5 DFMA service capability

Hardware Development

Embedded machine design scheme

Boards and customization solutions

Standardized core board modules



Software Development

BSP board and integrated development

V1/O processing

Linux/Android/Windows customizations



Cloud Service Development

Multiple database and storage permissions management

Complete IOT integration

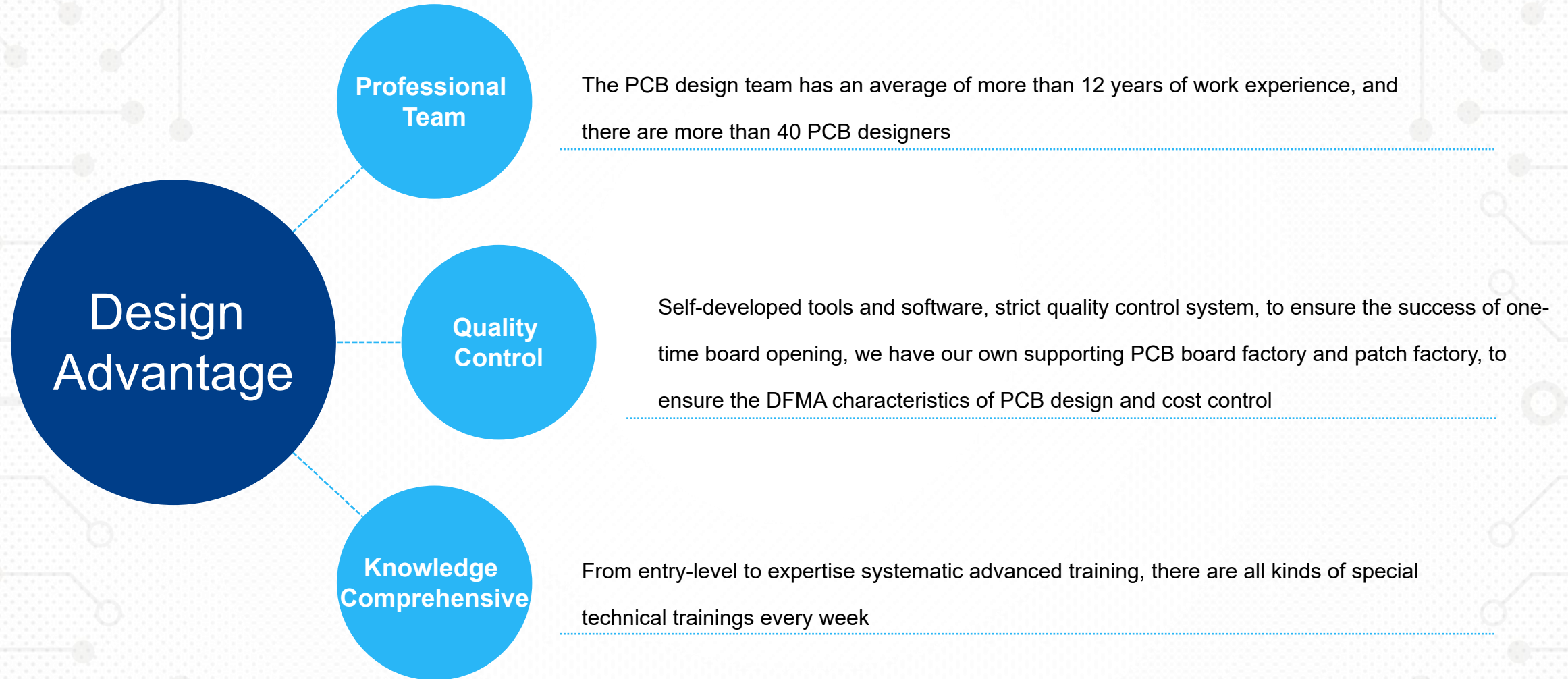


Industrial Design

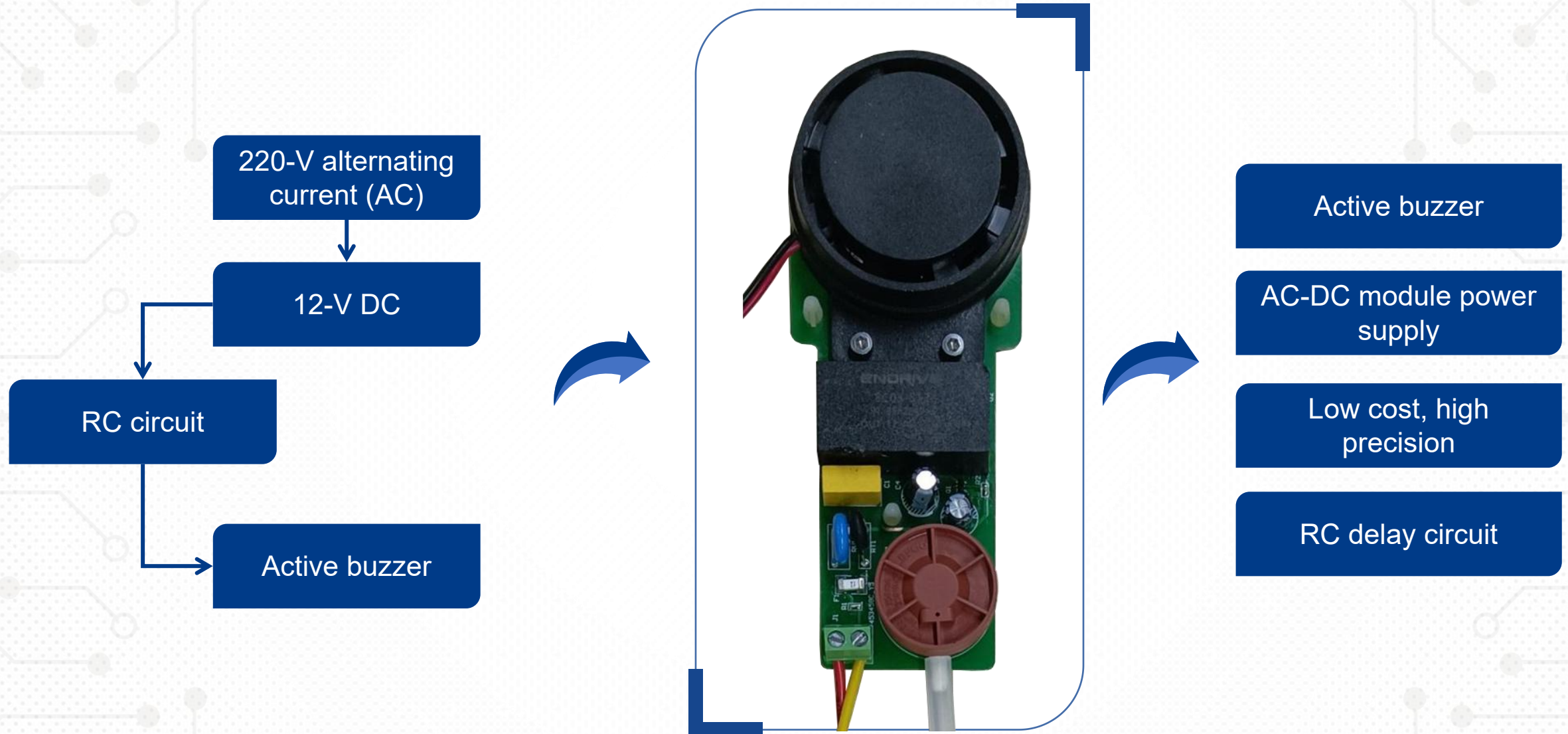
Product (ID) appearance design

Product (MD) structure design









PCBA Design Ability

design ability	Design EXP		Pin quantity	Delivery time
The maximum design of Pin quantity	60K		0 - 1000	3 – 5
Maximum connected bit	40K		2000 - 3000	5 – 7
Maximum number of design layers	40-layer		4000 - 5000	8 – 12
Maximum design power consumption of a board	360-W		6000 - 7000	12 – 15
HDI	1+N+1, 2+N+2,.....X+N+X		8000 - 9000	15 – 18
High speed differential design	2019	10 Gbps, 76 cm	10000 - 13000	18 – 20
	2012	14Gbps, 100cm	14000 - 15000	20 – 22
	2013	28Gbps, 10.6cm	16000 - 20000	22 - 30
			The soonest delivery time(Working days)	10000 pins/6 Days

DFMA service ability

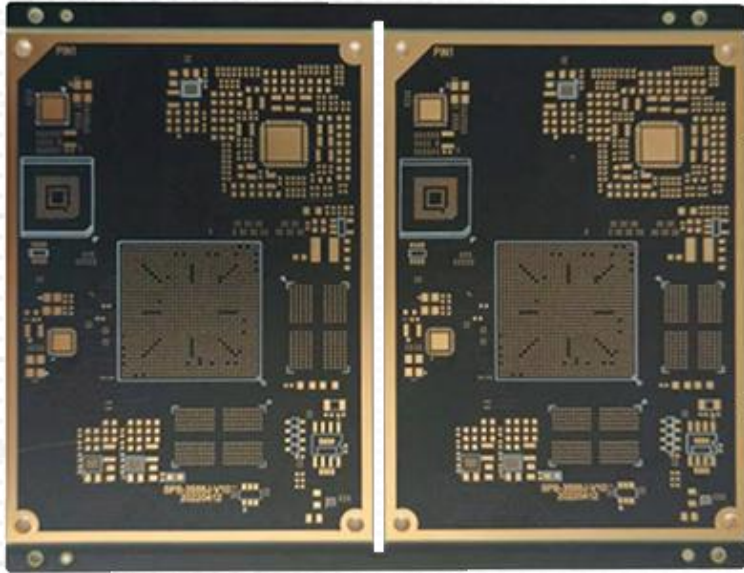
Specification subset category	Device interference analysis	Affiliation	Specification subset category	Specification subset category explain	Affiliation
Ass_C2c	Device interference analysis	Assemble	Fab _BackDrill	Back analysis of drill	Assemble
Ass_C2c_Matrix	Safety distance analysis of device package category matrix		Fab_Drill	Drilling analysis	
Ass _Cooling Plate	Cold plate assembly analysis		Fab _Embedded	Buried device analysis	
Ass_Fiducial	Optical point analysis		Fab _Laser Dill	Laser drilling analysis	
Ass _General	General assembly and process analysis		Fab_Profile	Molding analysis	
Ass _Land Pattern(IPC7351)	Design specification analysis of surface mount element pads		Fab _Signal(inner)	Internal circuit analysis	
Ass_Land Pattern(THI)	Design specification analysis of through - hole device solder pad		Fab _Signal(outer)	External line analysis	
Ass_Reflow	Analysis of reflux process specification		Fab _Signal(P&G)	Power supply and grounding analysis	
Ass_Rework	Maintenance process specification analysis		Fab _Silk screen	Screen printing analysis	
Ass_Routing	Specification analysis of plate processing technology		Fab _Solder Mask	Resistance welding analysis	
Ass _Solder Paste	Upper analysis of solder pad		Test Point	Test point analysis	Test point
Ass _Stencil Paste	Technical specification analysis of steel mesh opening		Continuous innovation: Add about 50 rules per year and customize development commitments		
Ass_Thermal	Specification analysis of hot pad				
Ass_Wave	Analysis of wave soldering process specification				
Ass _Wave Selective	Process specification analysis of tool selective wave soldering				



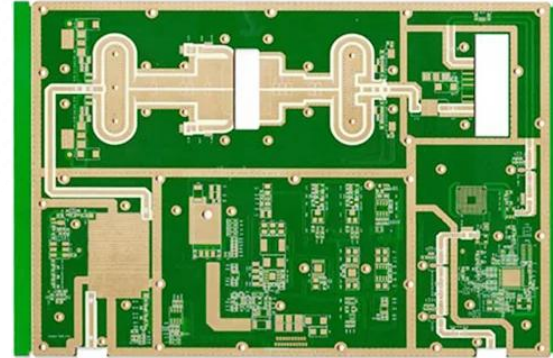
PART 03

PCB manufacture

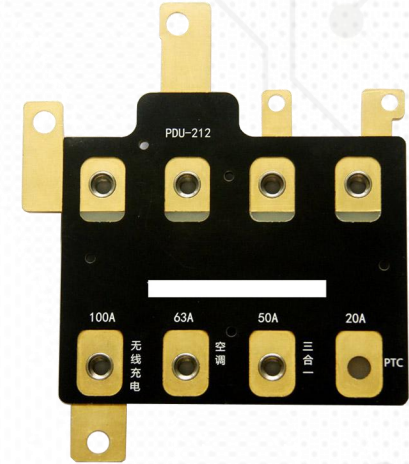
- 1 PCB product display
- 2 PCB manufacturing capacity
- 3 PCB production equipment
- 4 PCB checkout equipment



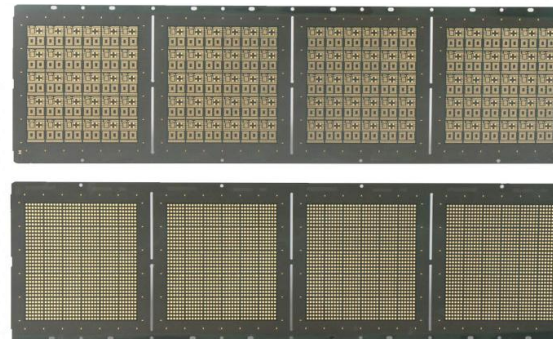
Circuit board of HDI



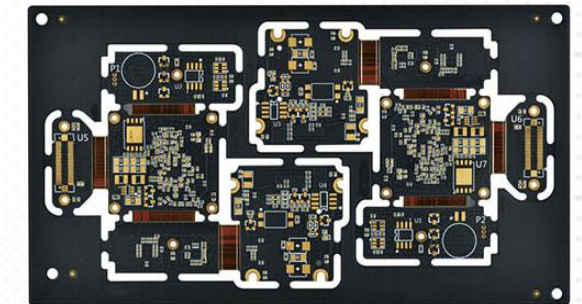
High frequency circuit board



Circuit board on metal substrate



IC onboard circuit board



Combination of soft and hard boards

PCB Manufacturing Capacity

Item		Batch	Specimen	Item		Batch	Specimen
Number of layers		2~68-L	120-L	Thickness to diameter ratio (finished aperture)	Veneer	20:1	28:1
The largest thickness		10-mm (394-mil)	14-mm (551-mil)		Backboard	25:1	35:1
Minimum line width spacing	Core	2.2-mil/2.2-mil	14-mm (551-mil)	Materials	No lead/halogen	EM827, 370HR, S1000-2, IT180A, EM825, IT158, S1000 / S1155, R1566W, EM285, TU862HF	
	Outer sphere	2.5-mil/2.5-mil	2.2-mil/2.2-mil		High speed	Megtron6, Megtron4, Megtron7, TU872SLK, FR408HR,N4000-13 Series, MW4000, MW2000, TU933	
Para ability	The same core plate is aligned	±25-um	±20-um		High frequency	RO3003, RO3006, RO4350B, RO4360G2, RO4835, CLTE, Genclad, RF35, FastRise27	
	Interlayer para	±5-mil	±4-mil		Others	Polyimide, Tk, LCP, BT, C-ply, Fradflex, Omega , ZBC2000	
The largest copper thick		6Oz	30 Oz	Surface treatments		Spray tin, chemical nickel gold, chemical tin, OSP, chemical silver, Goldfinger, Electroplated hard/soft gold, selective OSP, chemical nickel palladium gold	
Bore diameter	Machine drilling	≥0.15 mm(6-mil)	≥0.1 mm(4-mil)				
	Laser drilling	0.1 mm (4-mil)	0.050mm (2-mil)				
Maximum size (finished size)	Veneer	850 mm X 570 mm	1000 mm X 600 mm				
	Backboard	1250 mm X 570 mm	1320 mm X 600 mm				

19



Automatic drilling



Double-exposure



Laser cutting



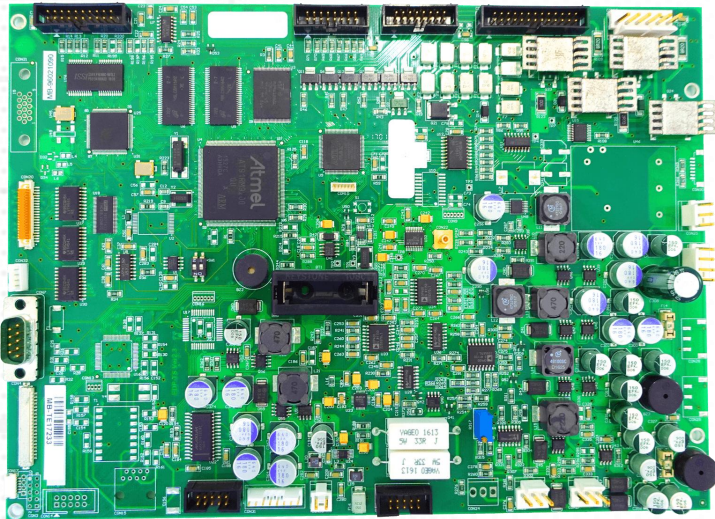




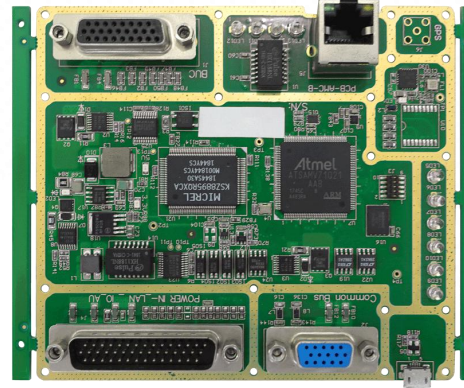
PART 04

PCBA

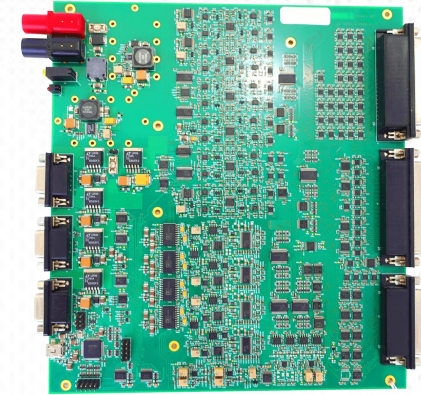
- 1 PCBA product display
- 2 Workshop show
- 3 SMT production line configuration
- 4 PCBA Assembly capacity
- 5 Assembly production equipment
- 6 Assembly test equipment



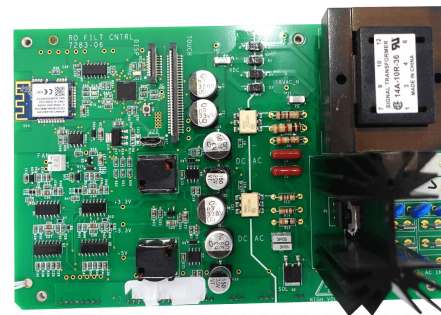
Medical treatment of PCBA



Navigation communication of PCBA



Industrial control of PCBA



New energy of PCBA



Automotive electronics of PCBA



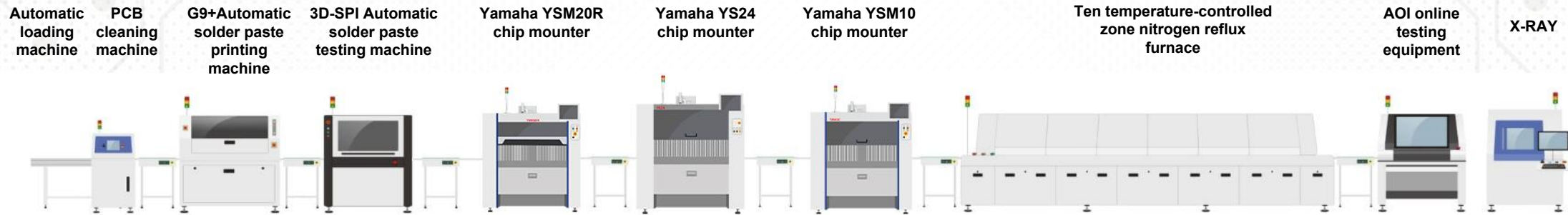
SMT workshop

The company has **3,000 m²** of 100,000 level dust-free workshop, **10 automatic** high-speed SMT lines, equipped with automatic paste printing machines, new imported Yamaha YS24, YS12, YS12F, 10 temperature-controlled zone with nitrogen reflux furnaces, wave soldering and other high-end equipment. Equipped with online 3D SPI, online AOI, X-RAY, intelligent first tester, automatic board machine, selective 3 anti-paint coating and other equipment. At the same time SMT production passed rate of **99.9%**.

DIP workshop

The company has **1000 m²** DIP electrostatic workshop, equipped with professional DIP welding team and advanced welding equipment, equipment will be equipped with **6 lead-free** wave welding machines, plug-in capacity of **100,000 points** per day.





Automatic loading machine	PCB cleaning machine	G9+Automatic solder paste printing machine	3D-SPI Automatic solder paste testing machine	Yamaha YSM20R chip mounter	Yamaha YS24 chip mounter	Yamaha YSM10 chip mounter	Ten temperature-controlled zone nitrogen reflux furnace	AOI	X-RAY
Put the unmounted PCB board in the SMT board machine and automatically send the board to the suction board machine	It is specially used for the cleaning of tin beads, flux traces and scratches. It will not generate static electricity and will not damage the PCB board.	Fully automatic, high-precision solder paste printing; Printing accuracy: $\pm 0.018\text{mm}$ Repeatability: $\pm 0.01\text{mm}$ PCB printing circumference: $50 \times 50\text{mm} \sim 610 \times 510\text{mm}$	Can detect missing printing, less tin, more tin, continuous tin, offset, poor shape, board surface pollution; support rapid detection of 03015, 01005, 0201 solder paste; Detection accuracy: $1\mu\text{m}$, Height: $0.37\mu\text{m}$ PCB size range: $50 \times 50\text{mm}(\text{Min}) \sim 630 \times 590\text{mm}(\text{Max})$	Multifunctional mounter, can mount 01005, 0.35mm BGA Maximum mounting: $L50 \times W50\text{mm} \sim L810 \times W490\text{mm}$ Position: 140 Speed: 95,000CPH (0.027sec/CHIP) Accuracy: $\text{CHIP} \pm 0.035\text{mm} (\pm 0.025\text{mm})$ $\text{Cpk} \geq 1.0 (3\sigma)$	High-speed module machine, high precision, the smallest can mount 03015, 01005 and other precision devices; Maximum mounting: $L50 \times W50\text{mm} \sim L700 \times W460\text{mm}$ Position: 120 Speed: 72,000CPH (0.05sec/CHIP) Accuracy: $\pm 0.05\text{mm} (\mu + 3\sigma)$, $\pm 0.03\text{mm} (3\sigma)$	Multifunctional mounter, can mount 01005, 0.35mm BGA Maximum mounting: $L50 \times W50\text{mm} \sim L510 \times W460\text{mm}$ Position: 48 Speed: 46000CPH (0.078sec/CHIP) Accuracy: $\pm 0.035\text{mm} (\pm 0.025\text{mm})$ $\text{Cpk} \geq 1.0 (3\sigma)$	Lead-free, 10 temperature zones, smooth temperature rise, reliable quality, suitable for super large and super thick PCB welding Temperature control accuracy: within $\pm 1^\circ\text{C}$ Maximum weldable size width: 600mm	Detection speed: $< 230\text{ms}/\text{FOV}$ PCB size range: $50 \times 50\text{mm}(\text{Min}) \sim 510 \times 300\text{mm}(\text{Max})$	Minimum focus size $0.25\mu\text{m}$ Suitable for open circuit and short circuit detection of BGA, QFN and other devices

PCBA Assembly Capacity Table

Item				Batch (mm)		Sample board (mm)	
				Conventional Process	Non-conventional Process	Conventional Process	Non-conventional Process
SMT assembly	PCB specification	Length and Width (L*W)	Minimum	L≥50,W≥50	L < 50	50*50	L < 50
			Maximum	L≤460, W≤460	L > 460, W > 400	L≤450, W≤350	450 < L < 800, 350 < W < 400
		Thickness(T)	Thinnest	0.5	T < 0.5	0.8	T < 0.8
			Thickest	4.5	T > 4.5	2	T > 2
	Component Specifications	Boundary dimension	Minimum	0.6*0.3	0.3*0.15	0.6*0.3	0.3*0.15
			Maximum	200*125	200*125	200*125	200*125
			Thickest	T≤6.5	6.5≤T≤25	T≤6.5	6.5≤T≤25
		QFP/SOP/SOJ and many classes	Minimum PIN spacing	0.4	0.3≤pitch < 0.5	0.4	0.3≤pitch < 0.4
			Minimum sphere spacing	0.5	0.3≤pitch0.5	0.5	0.3≤pitch < 0.5
		CSP/BGA					
DIP assembly	PCB specification	Length and Width (L*W)	Minimum	L≥50W≥30	L < 50	L≥50, W≥30	L < 50
			Maximum	L≤500, W≤300	L≥500, W≥300	L≤500, W≤300	L≥500, W≥300
		Thickness(T)	Thinnest	0.8	T < 0.8	0.8	T < 0.8
			Thickest	2	T > 2	0.2	T > 2







Smart test instrument



Anti-corrosion paint
coating machine

Application Field [Medical]



PCB assembly for medical ultrasound system



Hematology analyzer circuit board assembly



PCB assembly for endoscopy imaging system



Arterial stiffness tester PCB circuit board assembly



Nuclear magnetic resonance device circuit board assembly



CT scanner circuit board



Rigid and flexible PCB for medical equipment

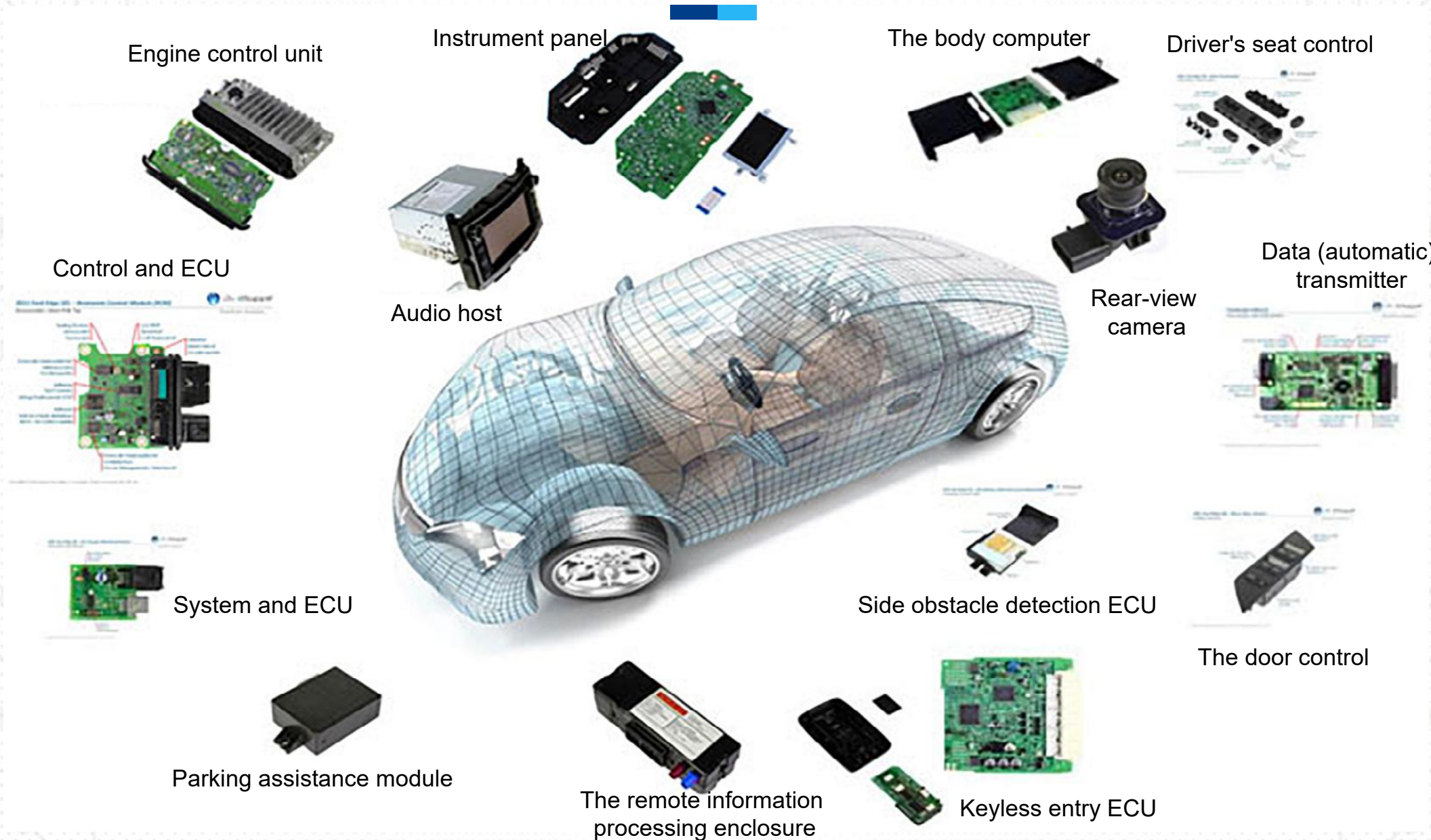


Medical wearable PCB flexible



Ventilator circuit board assembly

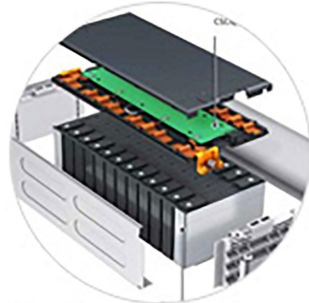
Application Field [Automotive]



Application Field [Internet of Things]



Air blower



Battery system



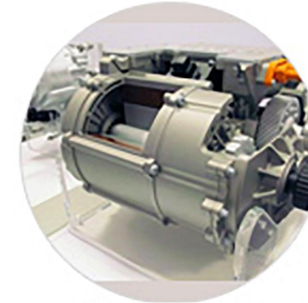
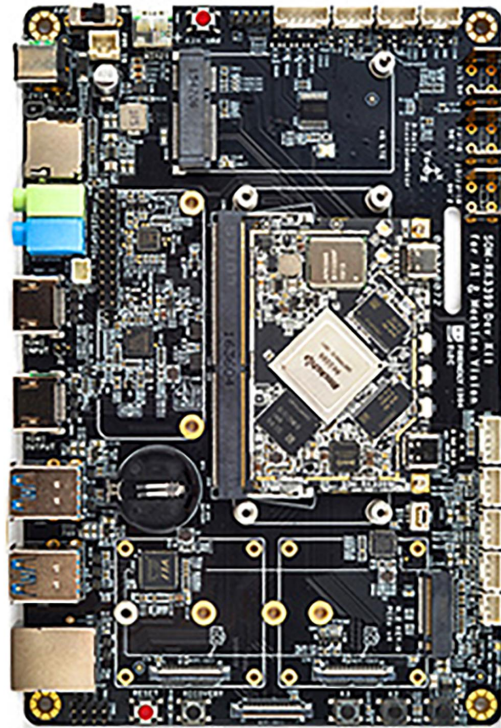
Circuit protection



Industrial control



Control relay



Driving motor



Human-computer interface



Instrumentation



Electronic device



Instrument

Application Field [Smart Home]



Air-conditioner control



Av equipment



Air conditioning control



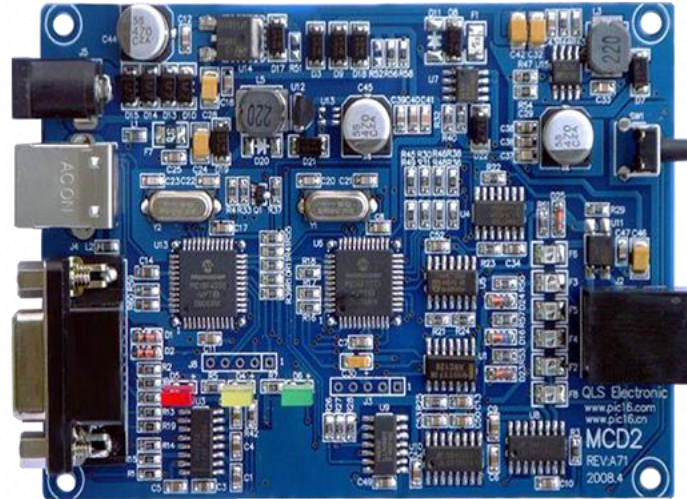
Av system



Control button



Illuminating system



Fail-safe system



Network equipment



Electric control



Digital theatre system

Advantage of service

Surviving by guaranteeing quality, Seek opportunities with credibility,
Adhering to the principles of customer-centric, strivers-oriented, working in
cooperating and unity care, long-term hard work, and self-reflection.



Professional Team

1

Strong supply chain and engineering team

With a supply chain team of nearly **20 people**, an engineer team of more than **40 people**, and more than **10 years** of industry experience, we can not only provide customers with the fastest quotation service, but also provide high-quality products and services.

2

Professional sales team

We have a sincere and professional sales team, its service purpose is: heart to heart, customer-oriented, listening to the voices of customers, thinking about what customers think, to create unlimited values for customers.

3

Professional technical team

We have a professional and experienced quality and technical inspection team, the process of all links is strictly checked, and we strictly control the quality of products.

4

Fast response service team

We have a stable and rapid quotation ability of professional service team, **7/24 hours** to process technical documentations.





All in all

Meeting customers' need is the driving force of Kingford development
High customers' satisfaction is the yardstick by which all work is measured

Contact us



Scan the following
public accounts



Scan and focus on Tiktok

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THANKS
for your listening