

One-stop Electronics Manufacturing Services

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

CATALOGUE

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Conceptual design

03

PCB manufacture

04

PCBA



PART 01

About Us

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



Shenzhen Kingford Technology 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**", and has authoritative certifications of **IATF16949, ISO13485, ISO9001** (Quality management system) and **ISO14001** (environmental management system). 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年+

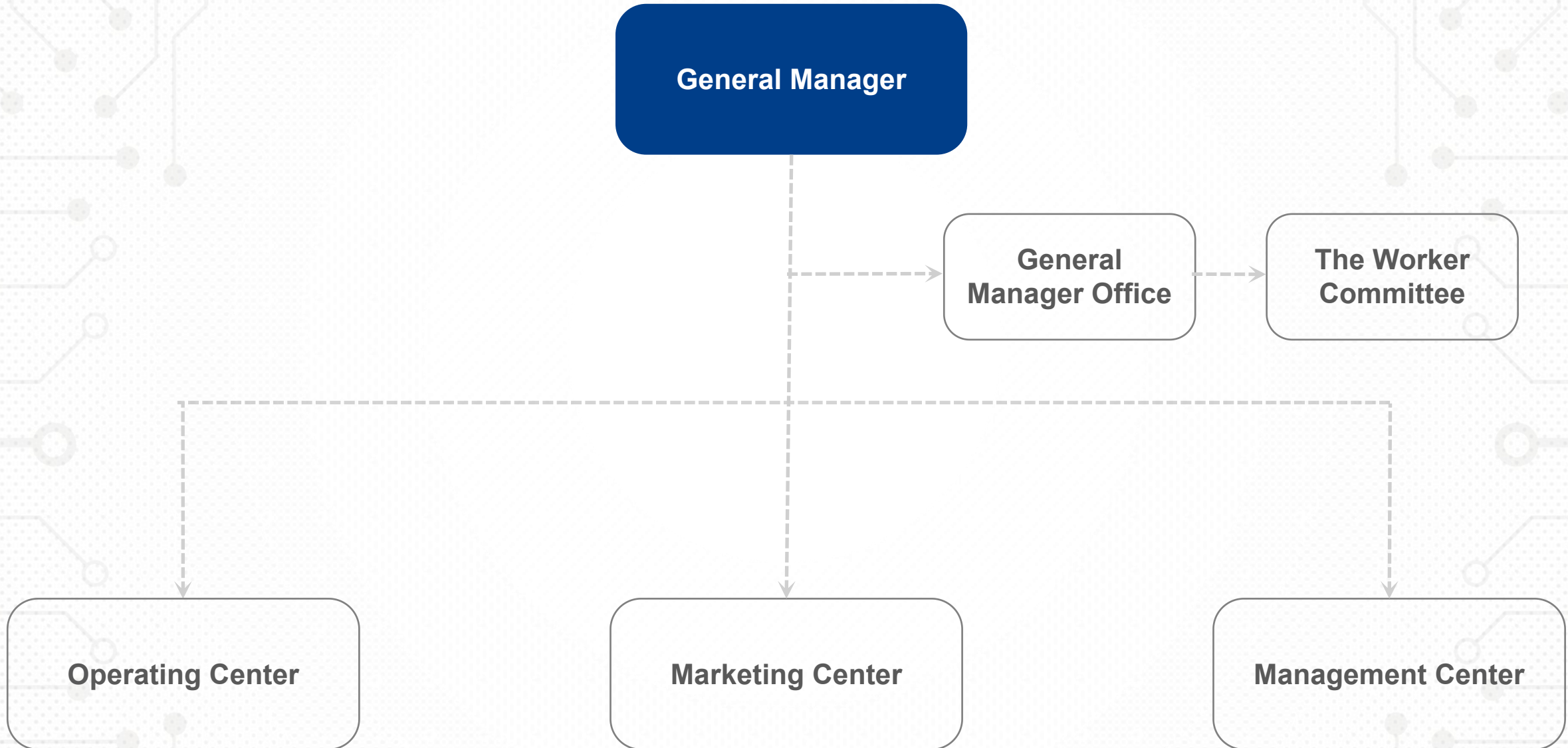


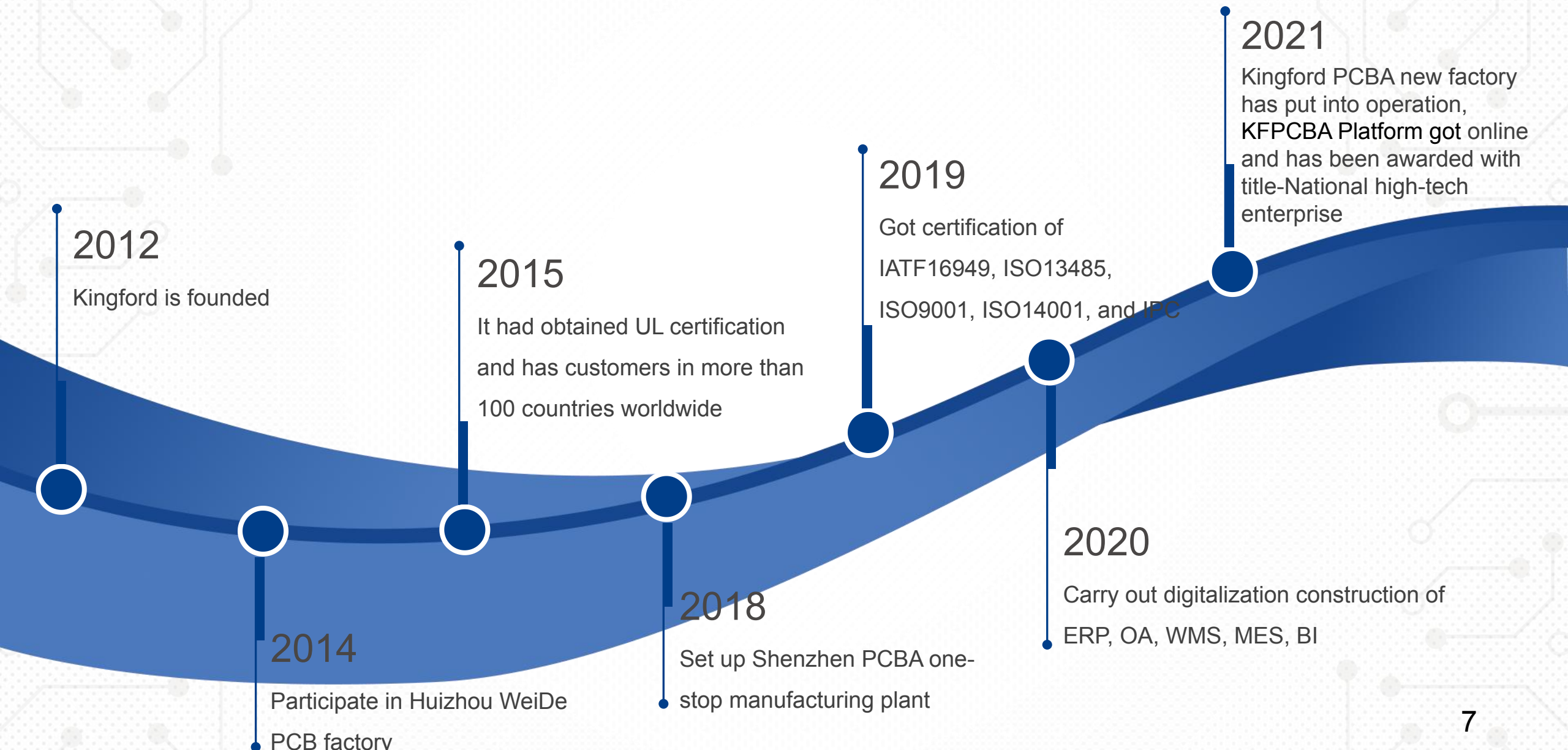
Delivery time
23h

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



ZPMV2.E352816 - Wiring, Printed - Component

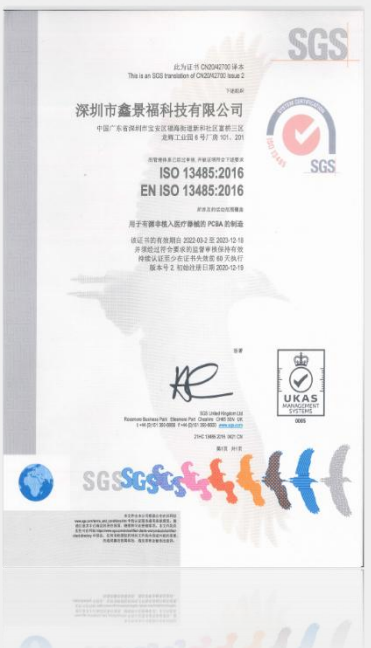
UL Product IQ[®]

ZPMV2.E352816 - Wiring, Printed - Component

See General Information for Wiring, Printed - Component

KINGFORD PCB ELECTRONICS CO LTD
Fug Wei, 10/17
Bright Way Tower
33 Ming Wah Road, Ming Gok
Kowloon, HONG KONG

Type	Min		Cond		SI/	Area	Diam	Limits	Process (FPC)	Temp	Flame	UL796	T	M	C
	mm(mil)	mm(mil)	mm(mil)	mm(mil)											
MS	0.18 (0.007)	0.1 (0.004)	17 (0.67)	0.5 (0.020)	0.5	76.2 (3.0)	288	20	-	130	V-0	A8	*		
MS	0.08 (0.003)	0.1 (0.004)	17 (0.67)	0.5 (0.020)	0.5	76.2 (3.0)	288	20	-	130	V-0	A8	*		
MS	0.08 (0.003)	0.1 (0.004)	17 (0.67)	0.5 (0.020)	0.5	76.2 (3.0)	288	20	-	130	V-0	A8	*		
MA	0.13 (0.005)	0.45 (0.018)	17 (0.67)	0.5 (0.020)	0.5	25.4 (1.0)	288	10	-	100	V-0	A8	*		
Single layer metal base printed wiring boards.															
A1	0.10 (0.004)	0.128 (0.005)	17 (0.67)	0.5 (0.020)	0.5	25.4 (1.0)	290	20	-	130	V-0	A8	*		
Single Layer Metal Base Printed Wiring Boards.															
A2	0.1 (0.004)	0.15 (0.006)	17 (0.67)	0.5 (0.020)	0.5	50.8 (2.0)	288	20	-	130	V-0	A8	*		
A3	0.1 (0.004)	0.15 (0.006)	17 (0.67)	0.5 (0.020)	0.5	50.8 (2.0)	288	20	-	115	V-0	A8	*		
Single layer printed wiring boards.															
S1	0.02 (0.0008)	0.06 (0.002)	17 (0.67)	0.5 (0.020)	0.5	25.4 (1.0)	280	10	-	110	V-0	A8	*		
Singlelayer printed wiring boards.															
MS	0.08 (0.003)	0.1 (0.004)	17 (0.67)	0.5 (0.020)	0.5	76.2 (3.0)	288	20	-	130	V-0	A8	*		
MS	0.08 (0.003)	0.1 (0.004)	17 (0.67)	0.5 (0.020)	0.5	76.2 (3.0)	288	20	-	130	V-0	A8	*		



IATF 16949:2016
new high-tech enterprise

UL(E352816)
ISO 13485:2016

ISO 9001:2015
ISO 14001:2015



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.



Material happiness



Spiritual happiness



Have love pass it on



corporate vision

To become a respected benchmark enterprise in the electronic manufacturing industry



Social responsibility



Customer-centric



Read every morning



Corporate values

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

One-stop PCBA solution provider

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





PART
02

PCBA Layout

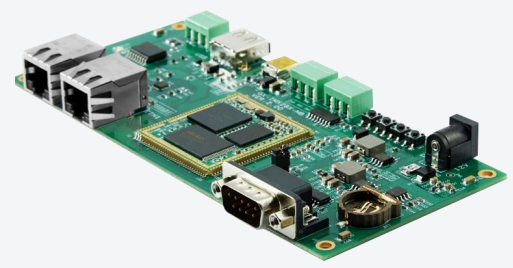
- 1 Solution
- 2 Design advantage
- 3 PCB design case
- 4 PCB design capability
- 5 DFMA service capability

Hardware Development

Embedded machine design scheme

Boards and customization solutions

Standardized core board modules

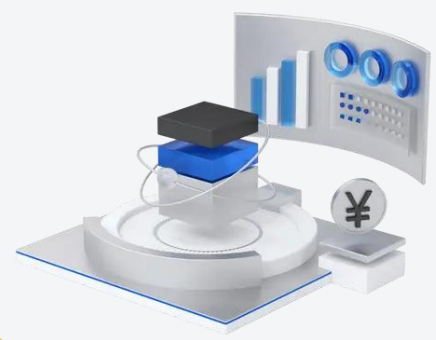


Software Development

BSP board and integrated development

V1/O processing

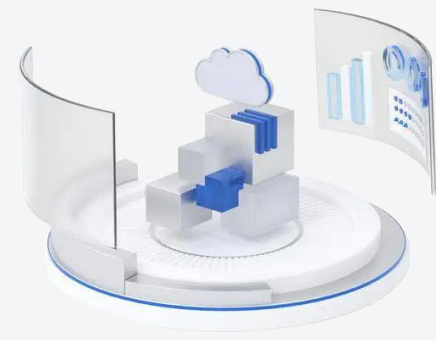
Linux/Android/Windows customizations



Cloud Service Development

Multiple database and storage permissions management

Complete IOT integration

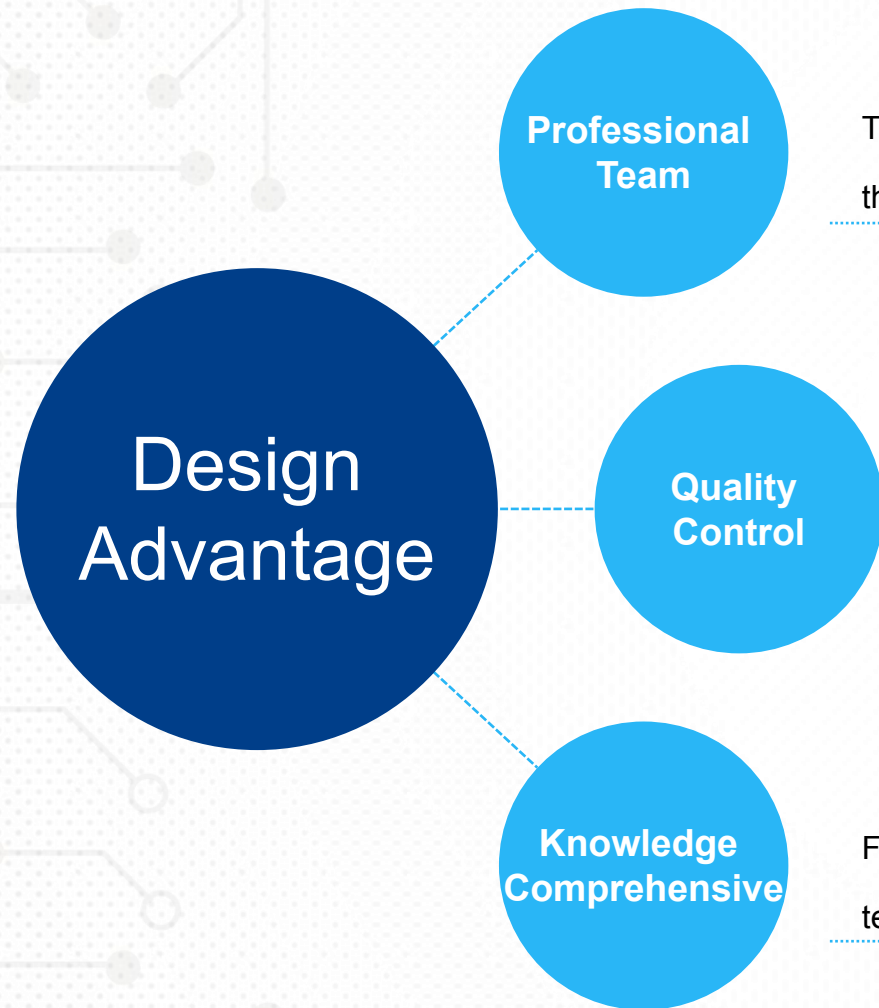


Industrial Design

Product (ID) appearance design

Product (MD) structure design

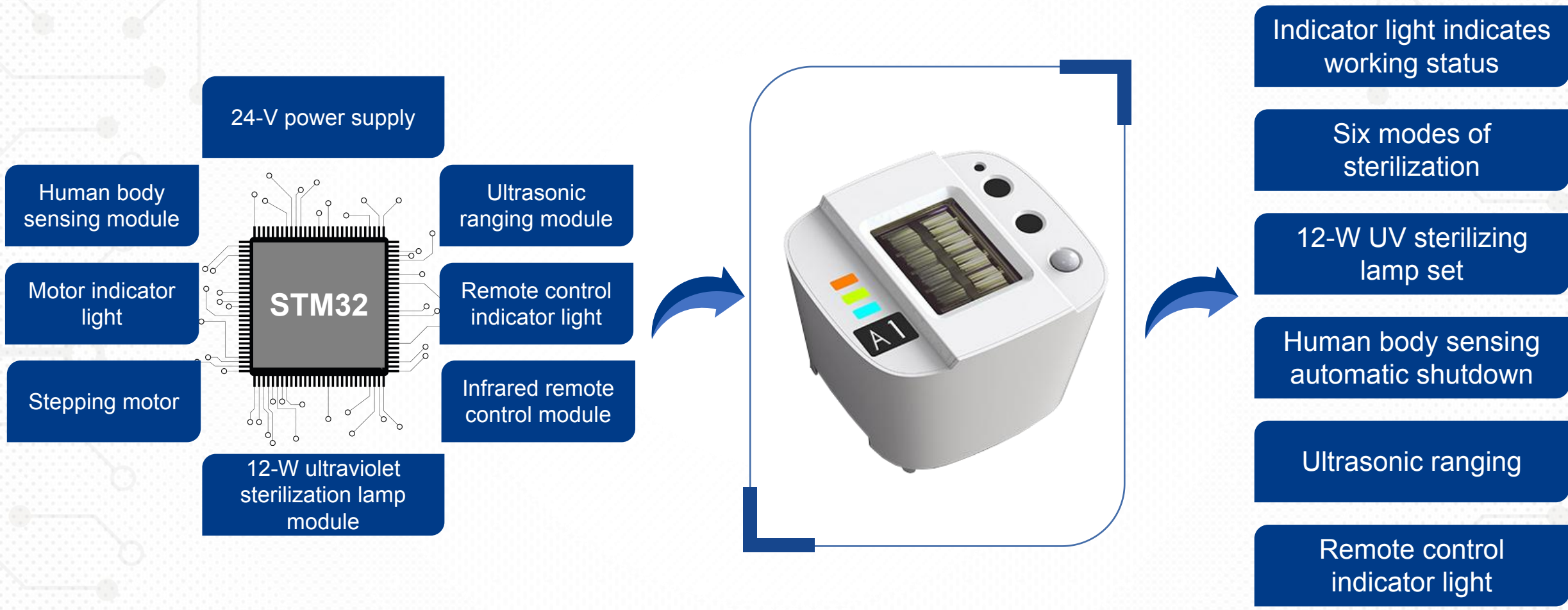


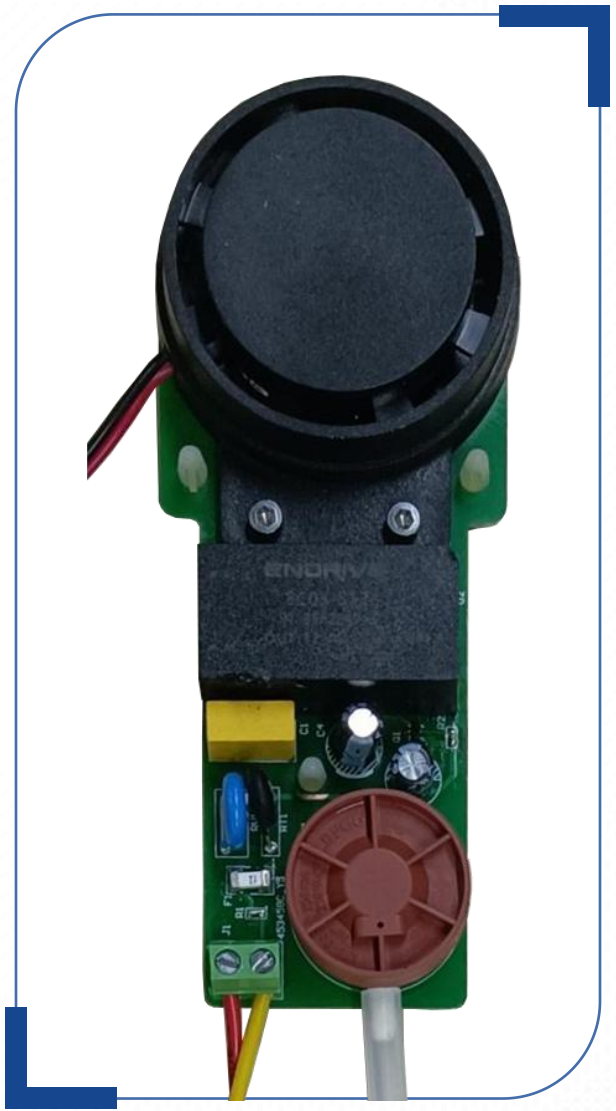
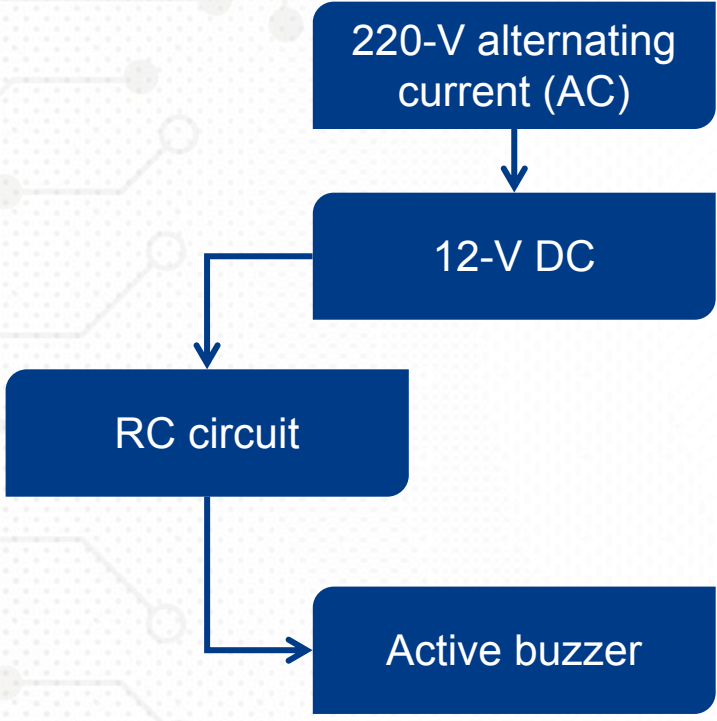


The PCB design team has an average of more than 12 years of work experience, and there are more than 40 PCB designers

Self-developed tools and software, strict quality control system, to ensure the success of one-time board opening, we have our own supporting PCB board factory and patch factory, to ensure the DFMA characteristics of PCB design and cost control

From entry-level to expertise systematic advanced training, there are all kinds of special technical trainings every week





- Active buzzer
- AC-DC module power supply
- Low cost, high precision
- RC delay circuit

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

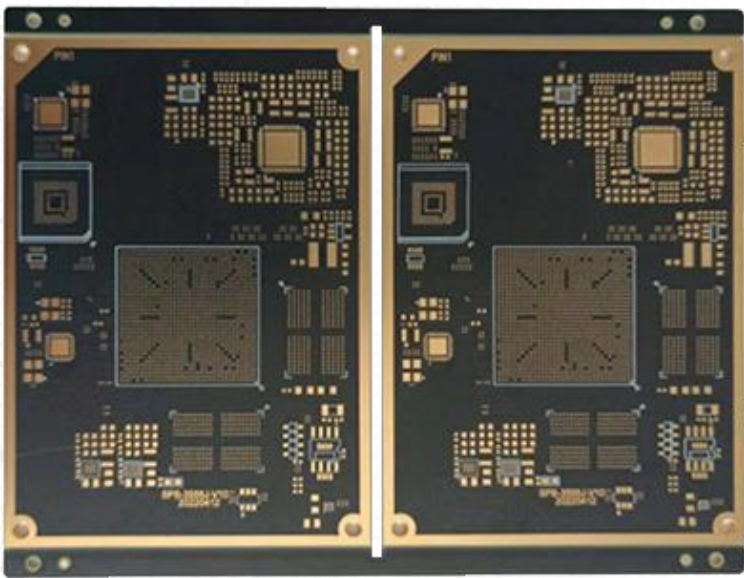
Specification subset category	Device interference analysis	Affiliation	Specification subset category	Specification subset category explain	Affiliation	
Ass_C2c	Device interference analysis	Assemble	Fab_BackDrill	Back analysis of drill	Assemble	
Ass_C2c_Matrix	Safety distance analysis of device package 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		<p>Continuous innovation: Add about 50 rules per year and customize development commitments</p>			
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					



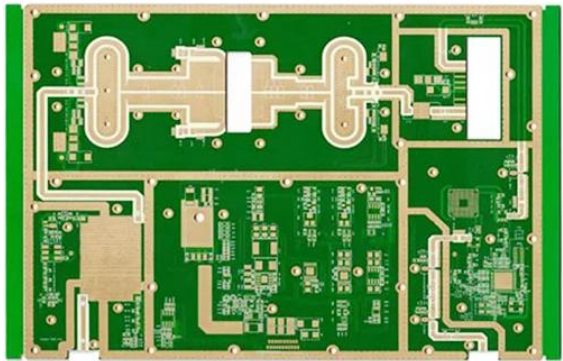
PART
03

PCB manufacture

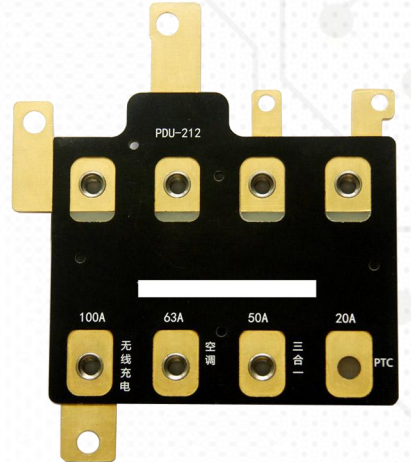
- 1 PCB product display
- 2 PCB manufacturing capacity
- 3 PCB production equipment
- 4 PCB checkout equipment



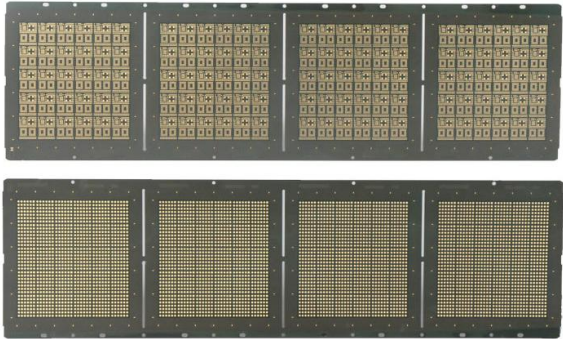
Circuit board of HDI



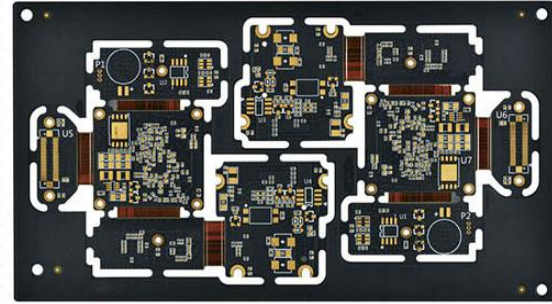
High frequency circuit board



Circuit board on metal substrate



IC onboard circuit board



Combination of soft and hard boards

PCB Manufacturing Capacity

PCB Manufacturing Capacity				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				



Automatic drilling



Double-exposure



Laser cutting



Inkjet lettering



Scanner



PCB molding



Flying probe tester



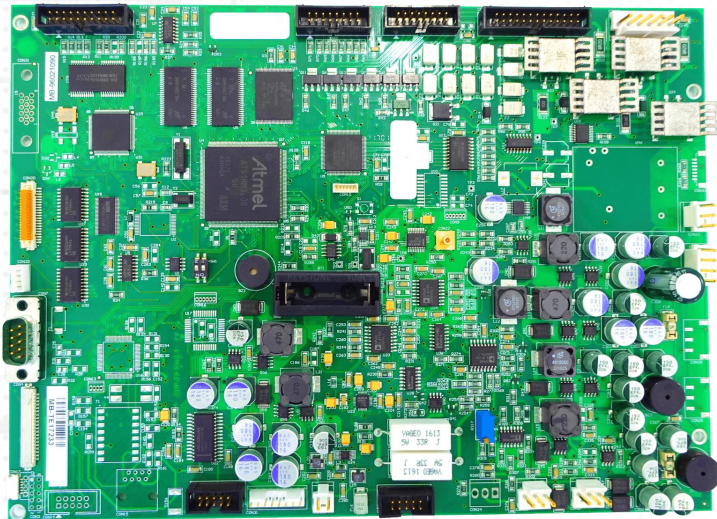
Full automatic tester



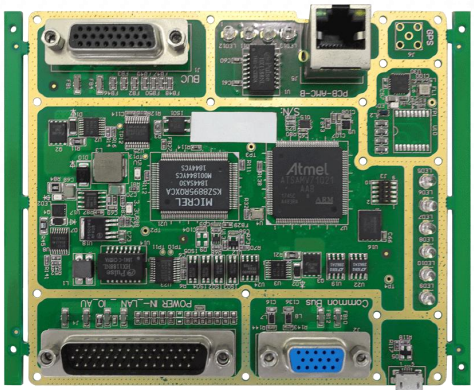
Quadratic element detector

 PART
04 PCBA

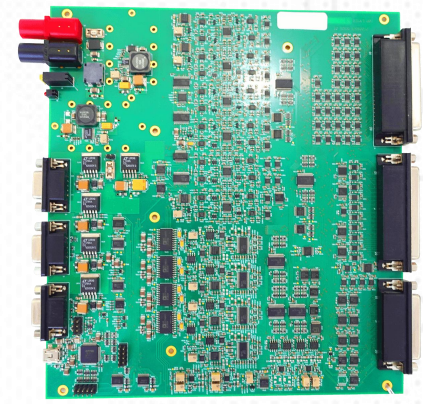
- 1 PCBA product display
- 2 Workshop show
- 3 SMT production line configuration
- 4 PCBA Assembly capacity
- 5 Assembly production equipment
- 6 Assembly test equipment



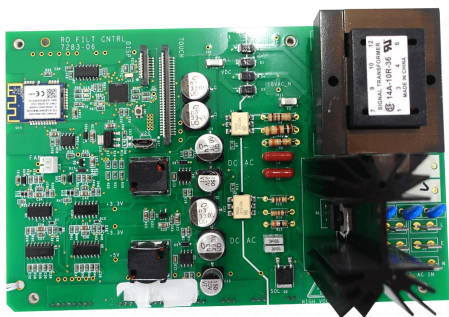
Medical treatment of PCBA



Navigation communication of PCBA



Industrial control of PCBA



New energy of PCBA



Automotive electronics of PCBA



SMT workshop

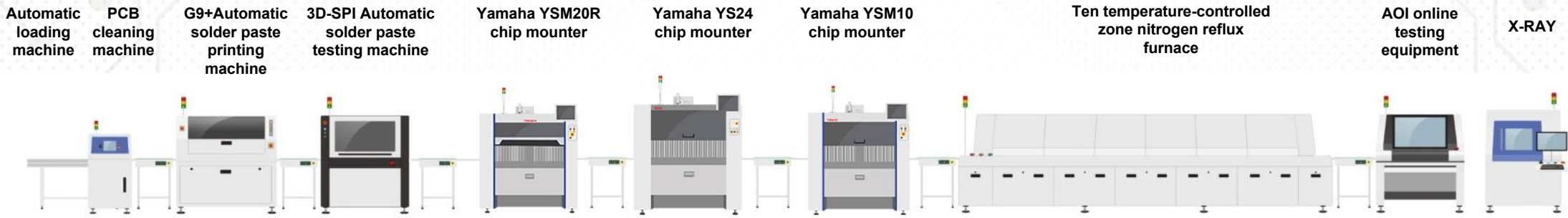
The company has **3,000 m²** of 100,000 level dust-free workshop, **10 automatic** high-speed SMT lines, equipped with automatic paste printing machines, new imported Yamaha YS24, YS12, YS12F, 10 temperature-controlled zone with nitrogen reflux furnaces, wave soldering and other high-end equipment. Equipped 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.



PART 04 - SMT production line configuration



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 0.25mm 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	
			CSP/BGA	Minimum sphere spacing	0.5	0.3≤pitch<0.5	0.5	0.3≤pitch < 0.5
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	



Yamaha high speed placement machine



Automatic solder paste printing machine



Ten temperature-controlled zone nitrogen reflux furnace





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



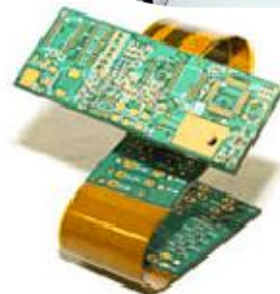
Arterial stiffness tester PCB circuit board assembly



CT scanner circuit board



Nuclear magnetic resonance device circuit board assembly



Rigid and flexible PCB for medical equipment

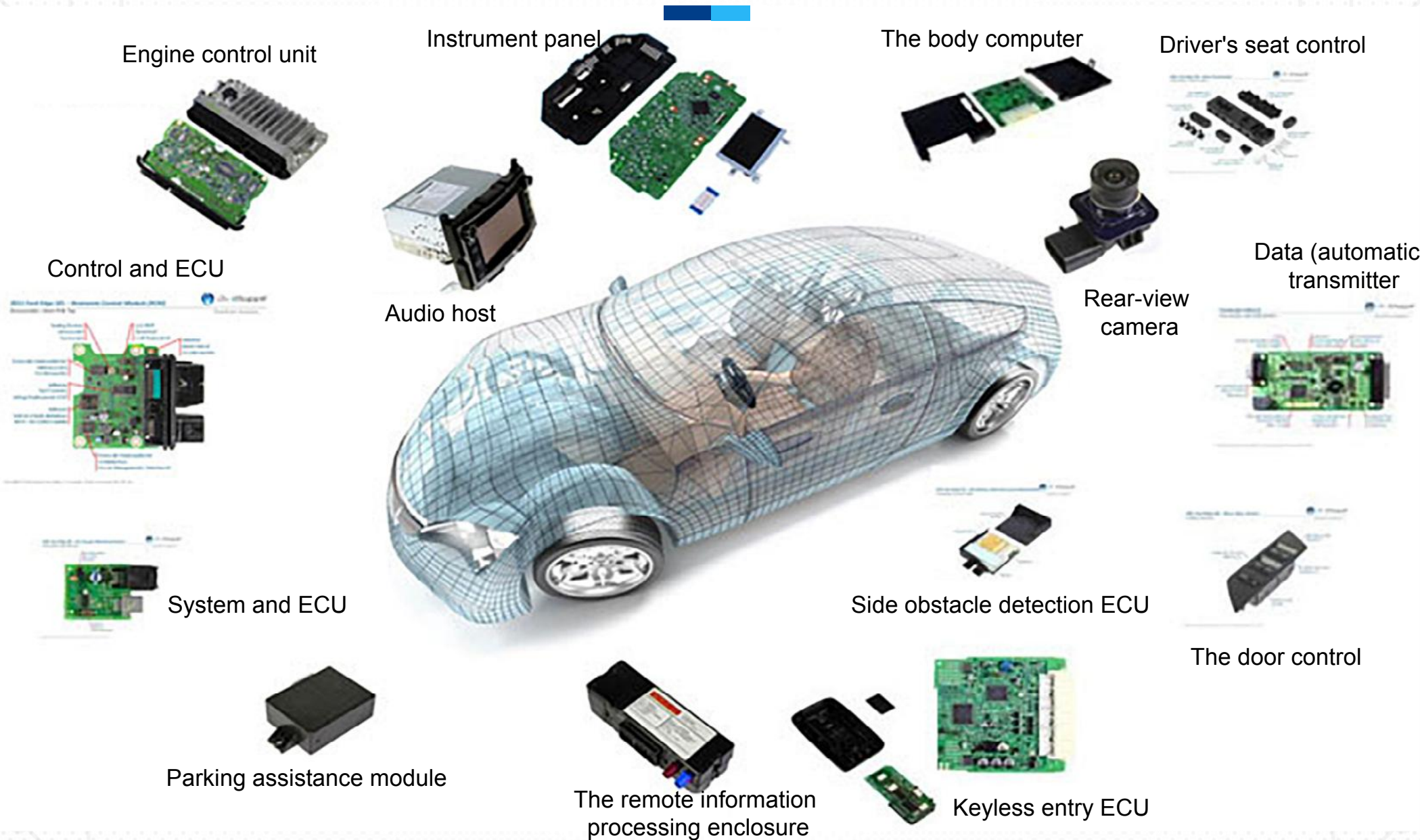


Medical wearable PCB flexible



Ventilator circuit board assembly

Application Field [Automotive]



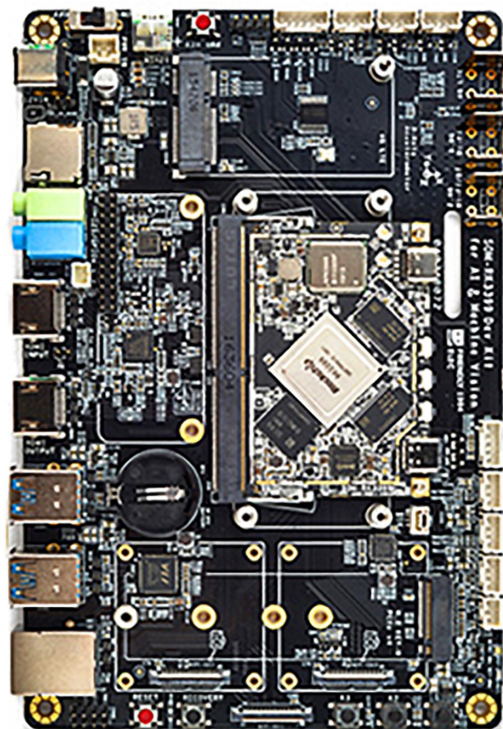
Application Field [Internet of Things]



Air blower



Battery system



Circuit protection



Driving motor



Electronic device



Industrial control



Control relay



Human-computer interface



Instrument



Instrumentation

Application Field [Smart Home]



Av equipment



Air conditioning control



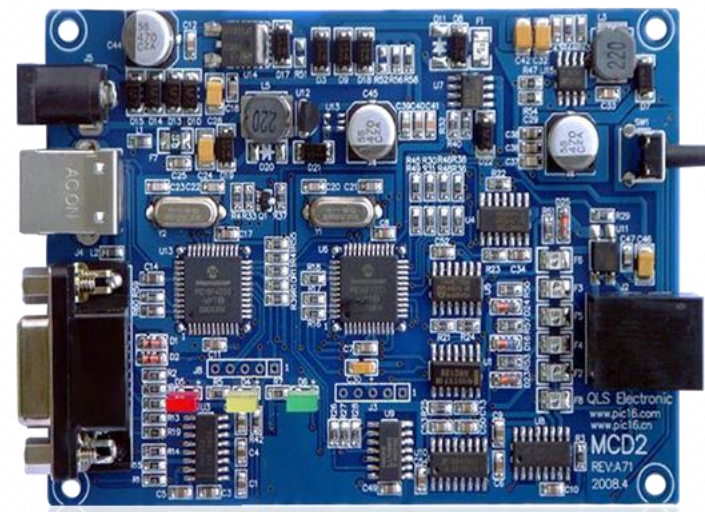
Av system



Air-conditioner control



Illuminating system



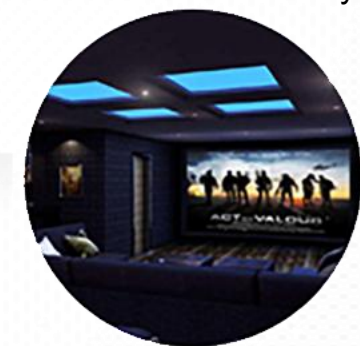
Fail-safe system



Control button



Electric control



Digital theatre system



Network equipment

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

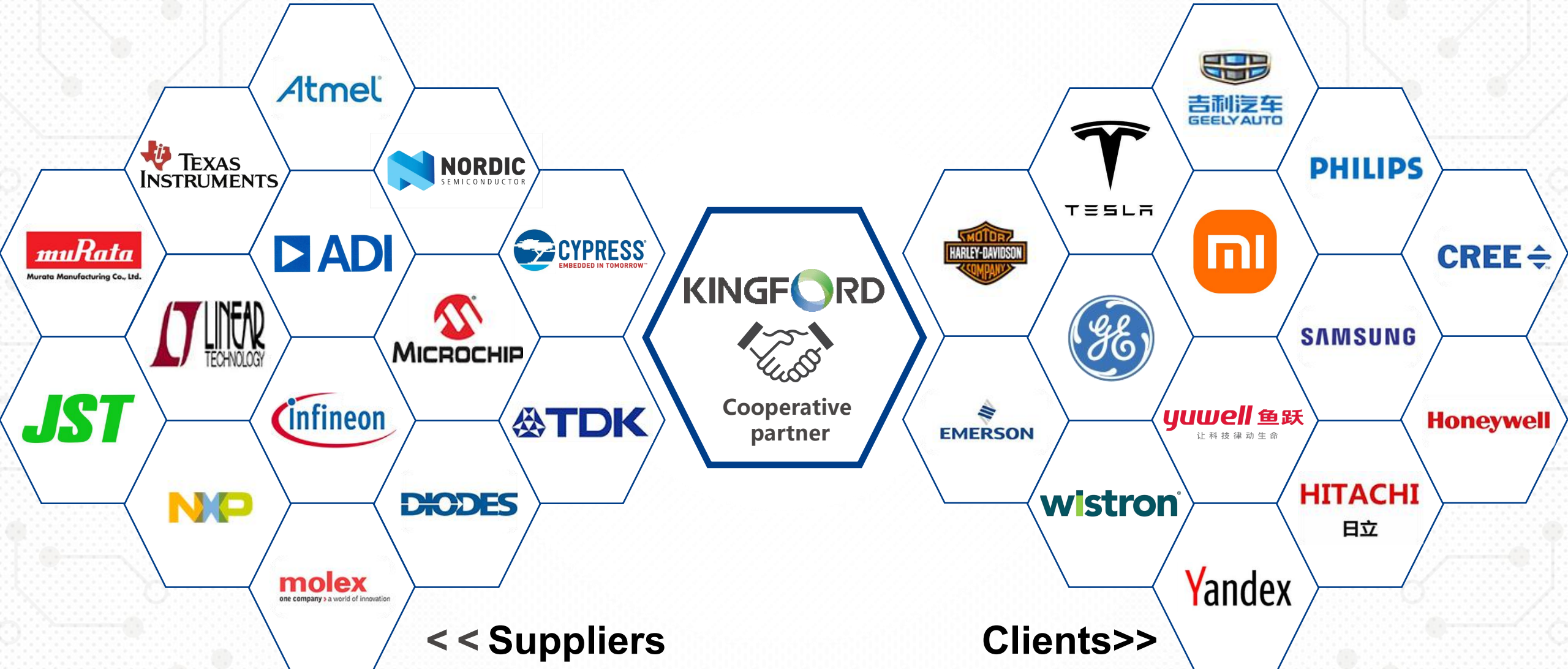
We have a professional and experienced quality and technical inspection team, the process of all links is strictly checked, and we strictly control the quality of products.

4 Fast response service team

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



Co-operative partners



<< Suppliers

Clients>>

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

