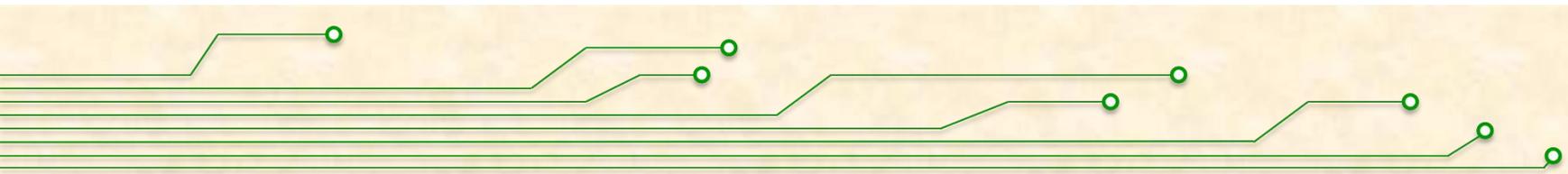


VIVAS GROUP



PCB/PCBA Electronic Manufacturing Services Partner

Welcome !

What can we do

Rigid boards

- Quick Turn PCB & PCB Prototype
- FR-4/Rogers/Taconic /Arlon/Nelco PCB (1-40Layers)
- AL/Copper based PCB
- Special technology: Backplane/HDI/blind& buried/Embedded Capacitance/Embedded resistance/Heavy copper/Backdrill etc.

Flex boards

- Polyimide
- Stiffener (FR4, PI, PET, Steel)
- 1-12 layers
- Rigid-Flex PCB (2-16L)
- HDI Rigid-Flex PCB

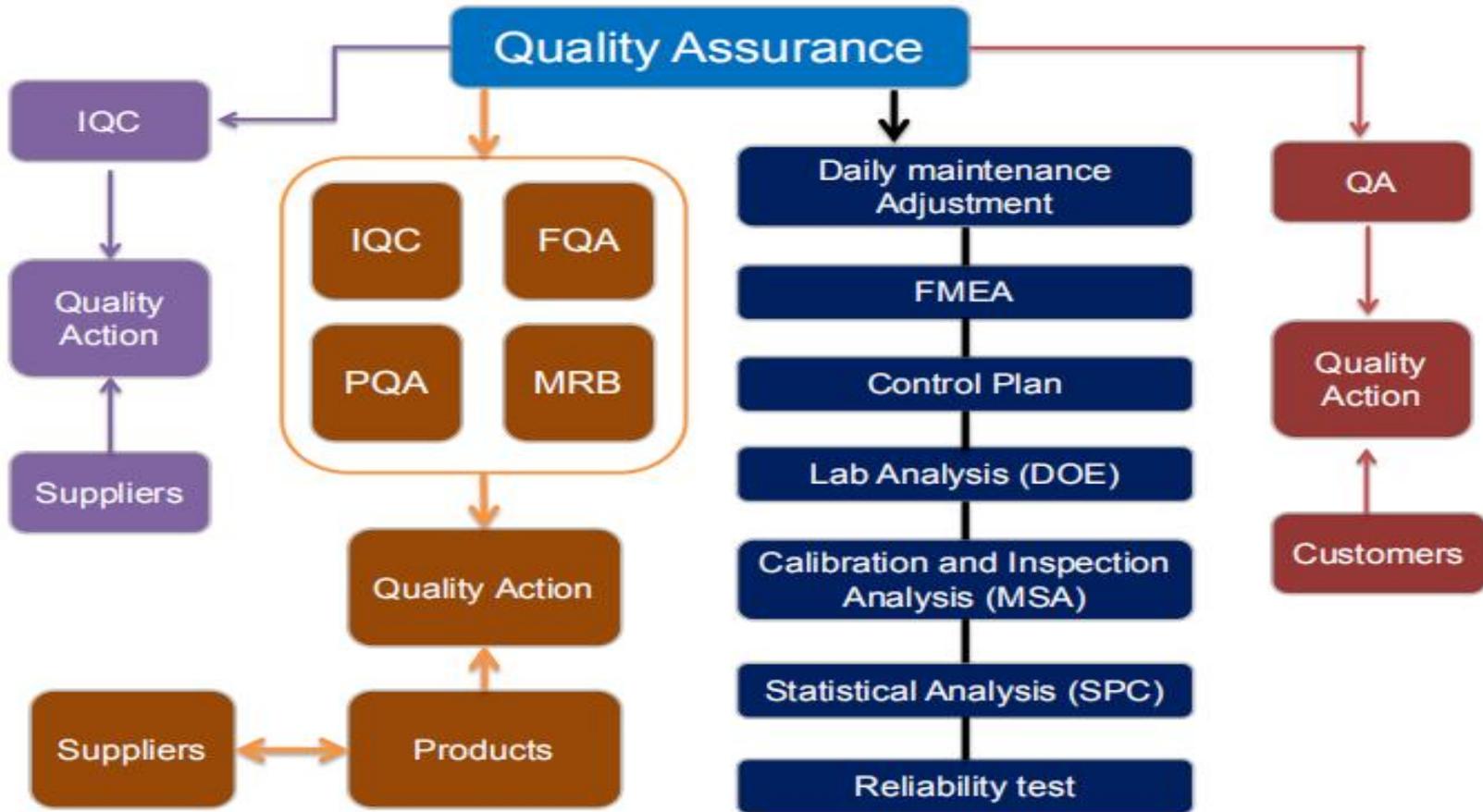
PCB Assembly

- R&D / OEM/ODM
- SMT (8 SMT Lines)
- DIP (2 DIP Lines)
- Box build (2 Assembly Lines + 2 Testing lines)
- Component purchase
- PCBA Testing
- Aging testing
- Conformal coating

Quality Assurance



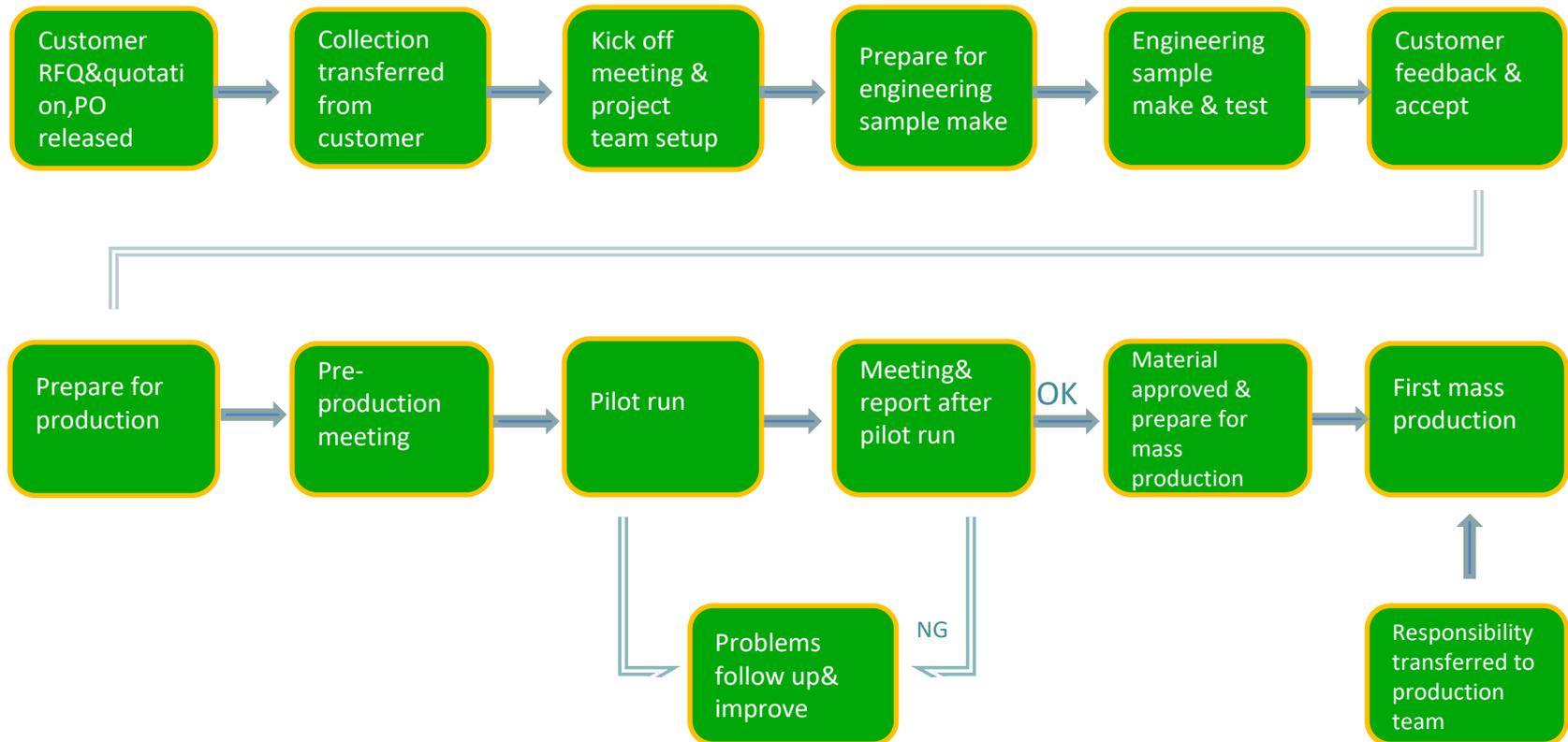
Quality Assurance Flow Chart



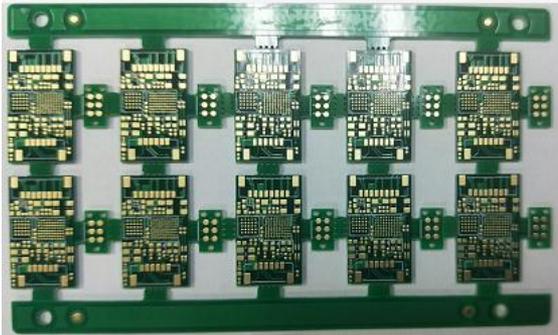
Quality Assurance



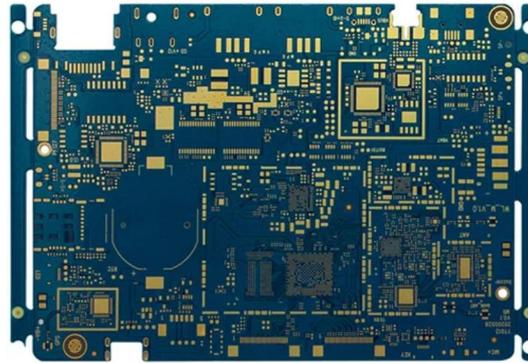
New Product Introduction Flow Chart



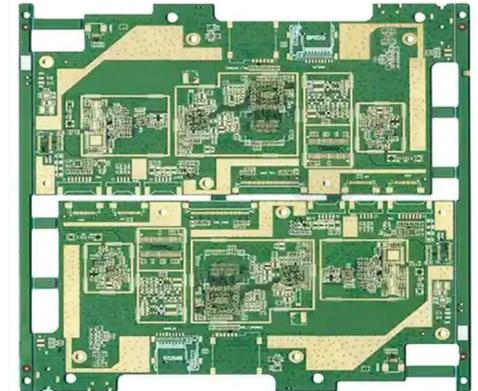
Rigid Boards



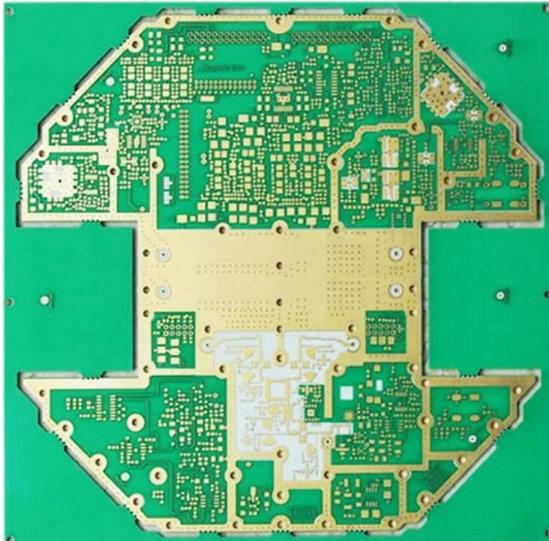
8Layers, HDI 3+2+3 ELIC, 3.5/3.5mil, VIP



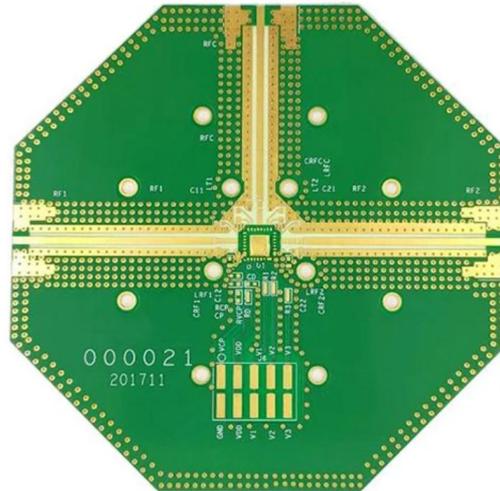
6Layers, 3/3 mil/ ENIG, VIP



10Layers, Medical device PCB



Rogers 4003 PCB, TG280 high temperature resistant PCB



4Layers, RO4350B + FR4 high frequency hybrid PCB



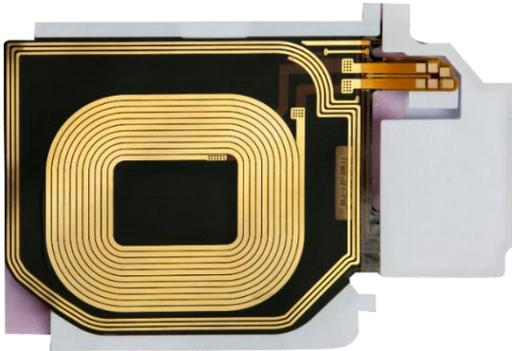
10 layers, HDI PCB (3+4+3), FR-4 Tg170, ENIG, Half-Holes

Flex PCB Boards



2L Flex PCB

Application: Mobile Phone battery charger, resistance control +/- 10%



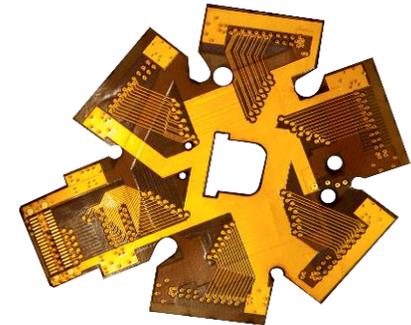
1L Flex PCB with PI stiffener

Application: Automotive product



4L Flex PCB

Application: Industry Control
Blind via hole



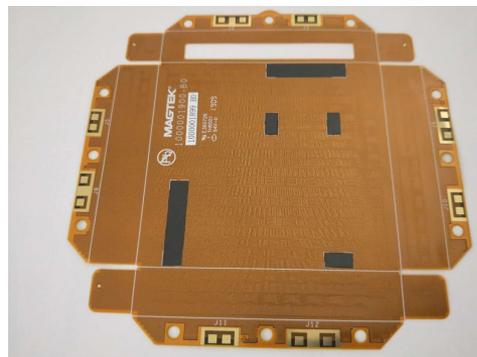
2L Flex PCB

Application: Industry Control, FR4 stiffener for whole panel



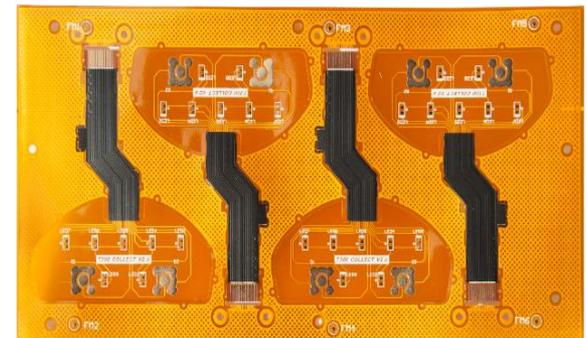
2L Flex PCB with PI stiffener

Application: Credit card reader



4L Flex PCB with hard gold plating

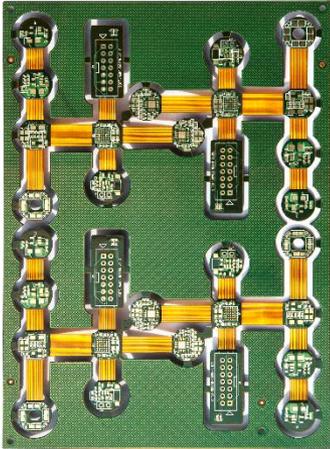
Application: Consumer electronics



Rigid-Flex boards



6L Rigid-flex PCB
Application: Consumer Electronics



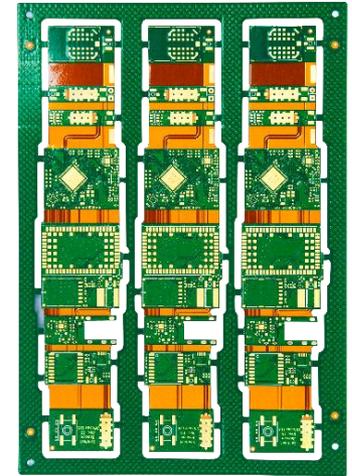
4L Rigid-flex PCB
Application: Consumer Electronics



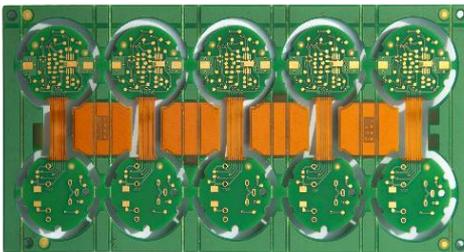
4L Rigid-flex PCB
Application: Consumer Electronics



4L Rigid-flex PCB
Application: Consumer Electronics



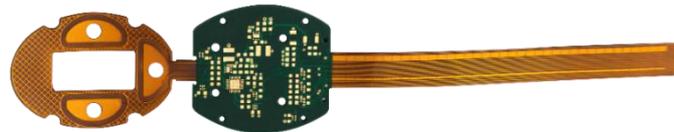
2L Rigid-flex PCB
Application: Industry Control



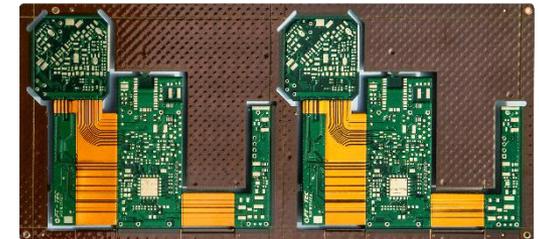
10L Rigid-flex PCB
Application: Industry Control Buried via hole



4L Rigid-flex PCB
Application: Industry Control



6L Rigid-flex PCB
Application: Industry Control



Typical Products – PCBA Main Boards

Medical



Power Control



Industry



Smart home



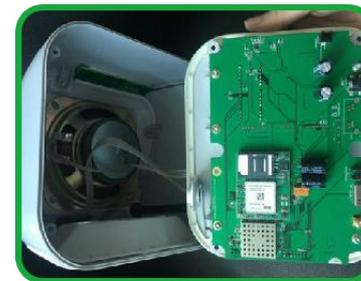
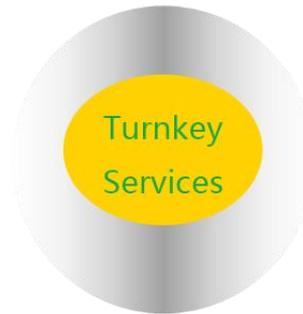
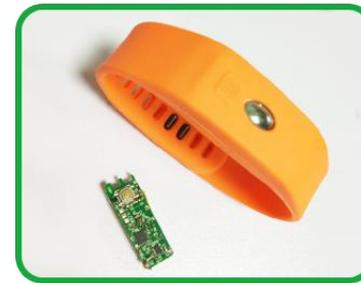
Network Control



Automotive



Typical Products - Box-build Products show



Typical Products - Box-build Products show



Automotive



Meters



POS Machine



AI on-off

Typical Products – Medical Devices

HEART RATE SENSOR



*Real-time HRV feedback

*Learn a valuable stress relief technique

*Real-time coaching tips

*Advanced options

*Free On-line platform for users provides many extras



Parts of Major Equipment --- PCB Equipment



- Some of the equipment has a high degree of automation, and some of the production processes have realized unmanned and intelligent production, which provides a strong guarantee for PCB manufacturing and quality.



Auto Laminator



Auto Exposure Machine

Parts of Major Equipment --- PCB Equipment



Auto Array Panel line (Laminating)



Laminating machine (DAH TYAN)

Parts of Major Equipment --- PCB Equipment



Auto Plating line



Auto Spray Coating line

Parts of Major Equipment --- PCB Equipment



Auto Drilling machines (above)



Auto Routing machines (below)

Parts of Major Equipment --- PCB Equipment



Four-Wire Flying Probe Tester

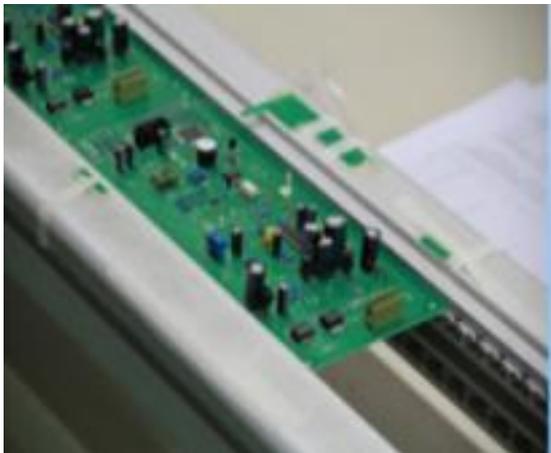


Auto Finished Product Testing machines

Parts of Major Equipment --- PCBA Equipment



Parts of Major Equipment --- PCBA Equipment



Rigid PCBs

Items	2024		2025	
	Sample	Batch	Sample	Batch
Layer	28	20	30	24
Material	FR4: SY, ITEQ, NY, KB, HZ and other full series High-frequency: Rogers, Arlon, Taconic, AGC, Wangling, Relong, FSD and other full series High-speed: Panasonic, TUC, ITEQ, EMC, SY and other full series R/F material: Doosan, ITEQ, Panasonic, Dupont, SY, YNM, TaiFLEX ICS material: Doosan, SY, MGC			
Min.W/S (um)	35/35	40/40	25/25	35/35
Min.hole/pad(um)	100/150	100/200	100/150	100/150
Min.BGA Pad size (um)	50	60	40	50
Min.Pad size (um)	50	60	40	50
Min.Core Thk. (um)	50 (copper-free)	75 (copper-free)	50 (copper-free)	50 (copper-free)
Min.Dielectric Thk.(um)	40	50	30	40

Items	2024		2025	
	Sample	Batch	Sample	Batch
Min. pad spacing (um)	40	50	30	40
Min. solder Bridge (um)	50	75	40	50
Solder opening offset (um)	≤20	≤30	≤10	≤20
Layer to Layer accuracy rating (um)	≤100	≤125	≤80	≤100
Mechanical profile tolerance (um)	±50	±50	±30	±50
Depth control drilling and milling depth tolerance (um)	±50	±50	±30	±30
Through hole thickness to diameter ratio	≤20: 1	≤16: 1	≤25: 1	≤20: 1
tickness difference(um)	±5%	±5%	±5%	±5%
Max board size (mm)	800*620	720*620	800*620	720*620
Finish board thickness (mm)	0.1-5.0	0.3-4.5	0.1-6.5	0.3-5.5
surface treatment	ENIG, Plated gold, OSP, HALS, Immersion tin, Immersion silver, HALS +ENIG, ENIG+OSP, ENEPIG			

FPC & Rigid-Flex PCB Process Capability

Flex & Rigid-Flex PCB Process Capability (2023)			
Serial	Items	Flex PCB	Rigid-Flex PCB
1	Layers Counts	1- 12 Layers	2-16 Layers
2	Material Type	PI, PET, kapton	PI+FR-4
3	Material Brand	SHENGYI, TAIFLEX, ITEQ, DuPont etc	
4	Stiffener Material Type	FR-4, PI, PET, Steel, Al, Adhesive Tape	
5	Min Board Thickness	1 Layer	0.05mm(2mil)
		2 Layers	0.10mm(4mil) 0.20mm(8mil)
6	Max Board dimension	250*1000mm (9.84*39.37 inches)	
7	Min Trace Width/ Trace Spacing	Copper thickness: 0.5 oz	0.05/0.05mm(2/2mil)
		Copper thickness: 0.5 oz-1oz	0.075/0.075mm(3/3mil)
		Copper thickness: 1oz	0.10/0.10mm(4/4mil)
8	Min Hole Diameter (Mechanical drill)	0.15mm(6mil)	
9	Min Hole Diameter (Laser drill)	0.10mm(4mil)	

10	Min Annular Ring (Outer layers)	1 Layer	0.10mm(4mil)
		2 Layers	0.10mm(4mil)
11	Min Annular Ring (Inner layers)	≥4Layers	0.10mm(4mil)
	Min Annular Ring (Outer layers)		0.10mm(4mil)
12	Coverlay thickness	12.5um, 25um, 50um	
13	Min Coverlay Opening	0.40*0.40mm(16*16mil)	
14	Min Solder mask Opening	0.15mm(6mil)	
15	Min Coverlay Bridge	0.20mm(4mil)	
	Min Solder mask Bridge	0.13mm(5mil)	
16	Via Type	Through Hole, Blind, Buried	
17	Tolerance	PTH Hole	±0.075mm(±3mil)
		NPTH Hole	±0.05mm(±2mil)
		Outline	±0.10mm(±4mil)
		Outside edge to Circuit	±0.10mm(±4mil)
18	Surface finished	ENIG, OSP, Immersion Silver, Immersion Tin, Glod Plating, Gold Plating+ENIG, Gold Plating+OSP	

PCBA Manufacturing Capability

SMT Manufacturing Capability (2023)			
Serial	Item	Manufacturing Capability in process	Manufacturing Method
1	Production size(Min/Max)	50×50mm / 510×460mm	
2	Production board thickness	0.20~6.00mm	
3	Printing solder paste	Support method	Magnetism fixture, Vacuo platform
		Clamping method	Sticking up by vacuo, clamping on both sides ,flexible clamping with sheet, flexible clamping with thick board
		Cleaning Method of printing solder paste	Dry method+ wetting method+ Vacuo method
		Accuracy of printing	±0.02mm
4	SPI	Repeated accuracy of volume	<1% at 3σ
5	Mounting component	Components size	0603(Option) L75mm Connector
		Pitch	0.15mm
		Repeated accuracy of volume	±0.01mm
6	AOI	FOV size	61×45mm
		Test speed(mm ² /Sec)	9150
7	3D X-ray	Shooting angle(degrees)	0-45 degree

DIP Manufacturing Capability (2021)	
1	All plug-in components are tested for errors, omissions and misplacement of components using AOI to strictly control the pass rate of DIP processing.
2	Experienced soldering hands with strict training can control welding speed and quality.
3	According to the production status of PCB Assembly, a temporary storage area with independent identification should be equipped around the pull wire, such as waiting for plug-in area, waiting for maintenance area, waiting for QC inspection area, defective product area, waiting for QA inspection area, etc., to avoid the appearance of mixed boards.
4	Strict IPQC and QA LOT sampling inspection standards to ensure the reliability of DIP processing.
DIP Manufacturing equipment is as follows:	
1	DIP Production lines x 2 sets.
2	AOI Equipment (Used to check DIP): Check for defects in plug-in components and solder joints.
3	Wave soldering x 2 sets.
4	Rear weld pull wire x 36 station.
5	Board washing machine x 1 set

Key Equipment Parameter

Picture	Brand	Type	key parameter & capability
	Desen	DSP1008	PCB Size: min : 50*50mm ,max: 400*340mm; PCB Thickness : 0.5-6.0mm; Repeat positioning Accuracy: +/-0.008mm; Printing accuracy : +/-0.02mm; Cycle Time : 9s
	Yamaha	YS12*2	PCB Size:min: 50*50mm,max: 510*460mm; Mounter Accuracy : absolute accuracy: +/-0.05mm/chip. Repeat Accuracy : +/-0.03mm/chip Component range : 01005~32mm Component type : 120 (convert to taping 8mm max) Mount speed : 36000CPH (optimal condition)
	Yamaha	YS12	PCB Size: min:50*50mm,max: 510*460mm Mounter Accuracy :absolute accuracy: +/-0.05mm/chip. Component range : 01005~45*100mm Component heigh : 15mm Component type : 48 (convert to taping 8mm max) Mount speed : 2000CPH (optimal condition)
	Hao Bao	HS0802	Dimension :5310*1353*1496mm PCB range :50-400mm hot zone(quantity): each 8set between top&bottom PCB heigh (max): each 25mm between top&bottom Hot zone length : 3121mm Cooling zone (quantity): 2set (cold air internal recycle)
	Omron	VT-RNSII	PCB Size : min: 50*50mm ,max: 333*255mm Camera : 3CCD Image resolution :10,15,20um Component quantity (inspection): 10000/PCB (max) Standard inspection time: 250ms/image

WHY VIVAS GROUP?

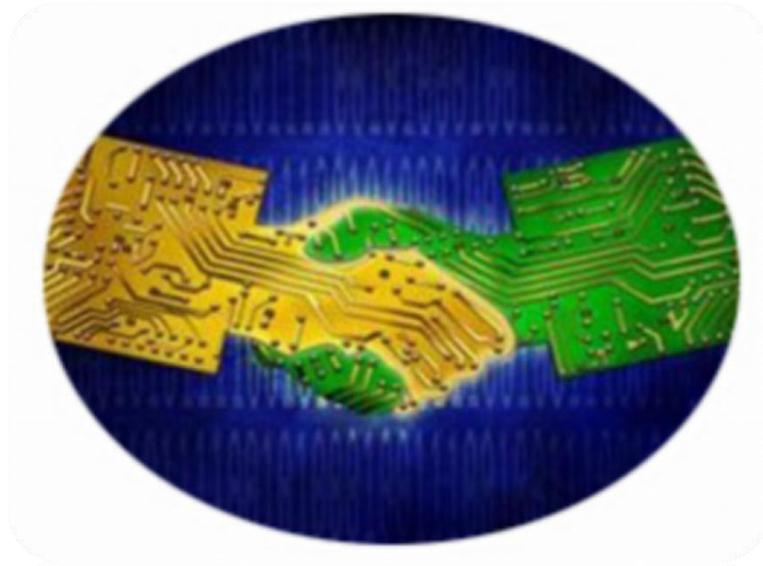


- 1) One-stop manufacturing service (PCB/FPC/Rigid-flex PCB/PCBA/Box-build)
- 2) Design Support (from PCB design to finished product, Over 8 years of experience in European and American markets, various PCBs and PCBAs have been designed and manufactured)
- 3) Guarantee 100% accord with IPC - 6012 - C, the IPC - A600H IPCII standards, IPC-610F;
- 4) Competitive price;
- 5) Fast quotation;
- 6) With a very technical team of more than 12 years experience to support;
- 7) Pre-production technical support and lifetime after-sales.

Global Logistics



- Close to perfect inventory management system
- Strictly implement FIFO
- Quick turn around to HK
- Global export experiences by forwarder & different couriers with account open for years.



Thanks for your time!



VIVAS

CONTACT US TODAY TO DISCUSS YOUR PROJECT AND DISCOVER HOW VIVAS GROUP CAN BE YOUR TRUSTED PARTNER IN PCB AND PCBA MANUFACTURING EXCELLENCE!