Website: www.uniongaincn.com

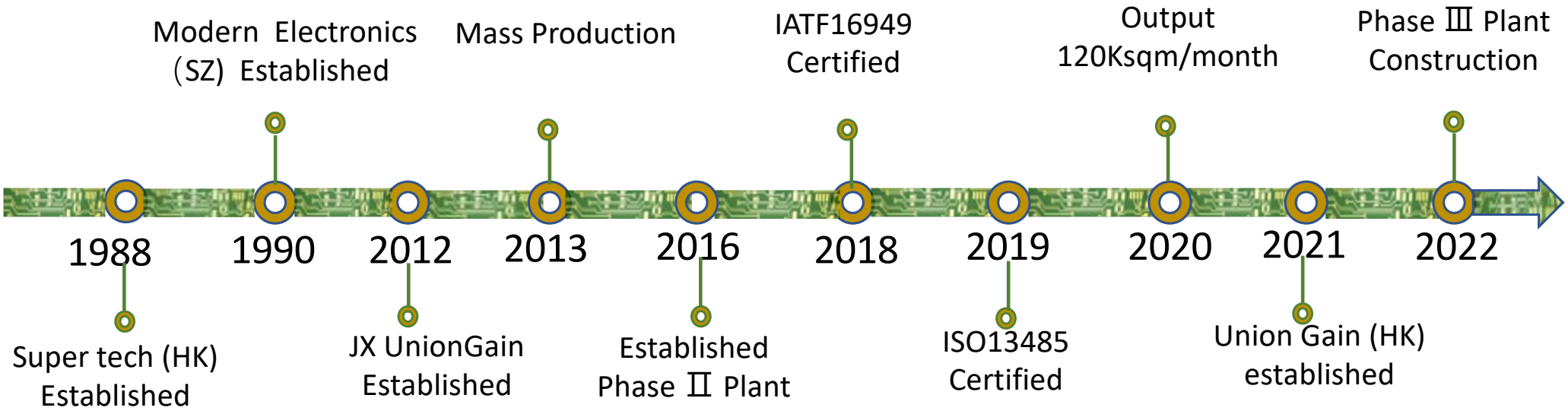
Company Profile

Jiangxi Union Gain Electronics Technology Co., Ltd.

Union Gain Electronic Technology（HK）Co., Ltd

Q3-2022

History


1988
Super tech (HK) Established
1990
Modern Electronics (SZ) Established
2012
JX UnionGain Established
2013
Mass Production
2016
Established Phase Ⅱ Plant
2018
IATF16949 Certified
2019
ISO13485 Certified
2020
Output 120Ksqm/month
2021
Union Gain (HK) established
2022
Phase Ⅲ Plant Construction

About Us

History	• Super Tech Founded in 1988 in HK • Manufacturing facility Jiangxi Union Gain established in 2012 • UG (HK) established in 2021
Product	• Specialize in PCB Product ranges from 2-12L， IMS, 1+N+1 HDI • Total Employees 1000+
Capacity	• Current Monthly Capacity 120k m^2; • Designed Monthly Capacity 200k m^2
Mission	• Take pride in everything we do, our mission is to treat our employees, our stakeholders, our customers and the planet with the utmost respect and best quality service.
Core Value	• Trustworthy , Committed , Attitude and Ethics

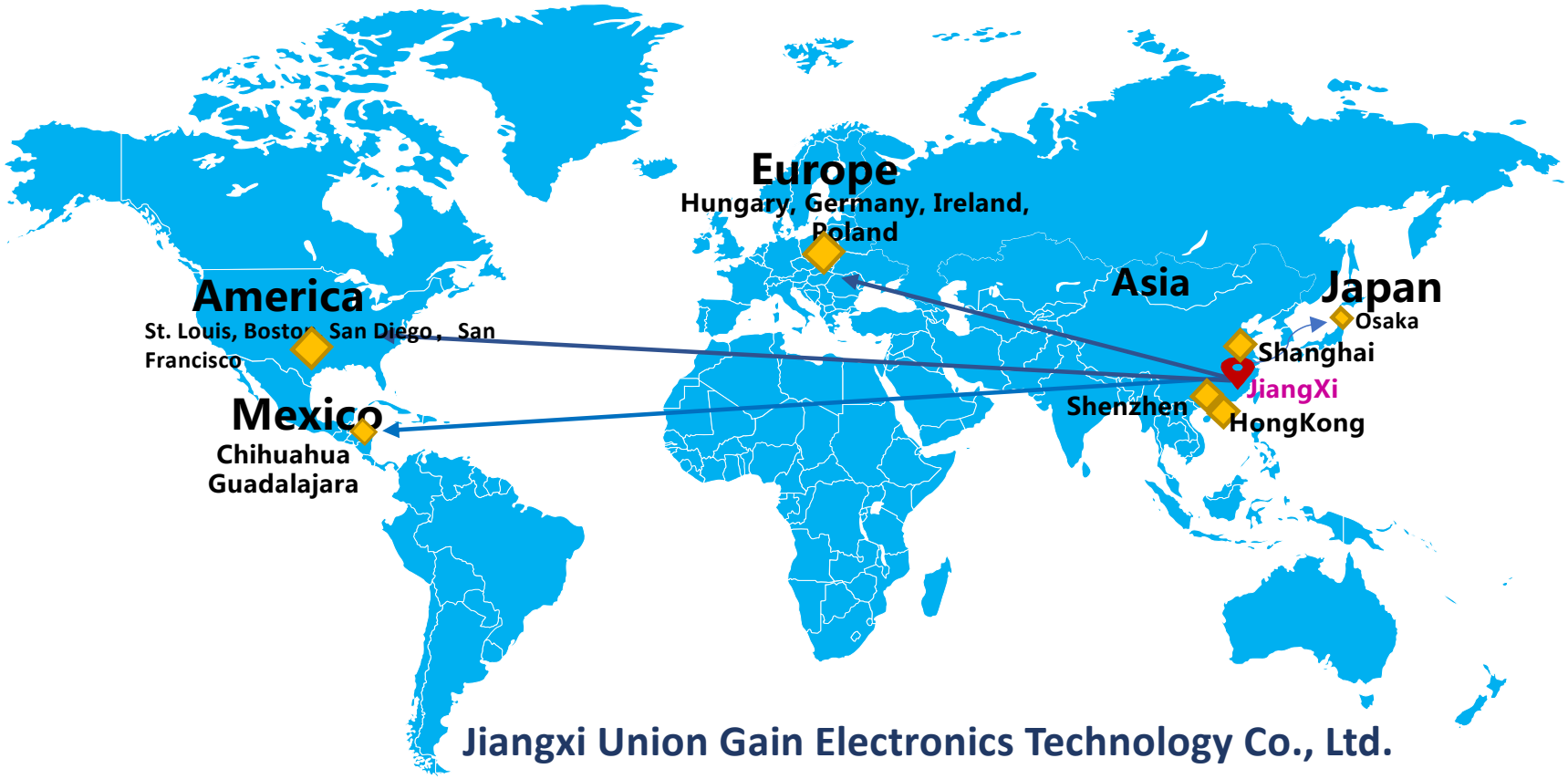
Factory Land Area 177,000 sqm

- Phase Ⅰ Plant
- Phase Ⅱ Plant
- Phase Ⅲ Plant
- Wastewater Treatment Station
- Dining Hall &Dormitory
- Copper Regeneration Site

Expansion —Phase III Plant

Invested RMB 600M for the Phase III plant,which is strategically planned to achieve higher efficiency and automatic production.
New Plant with 280m x 110m x 2.5(2.5 floors) = 77000m^2 floor area.
Schedule to begin build on Q3-2022 and begin production on Q4-2024.

Our Global Reach



Sales Office

Factory

2Hours flight
Shanghai Airport to Nanchang Airport

2 Hours drive
Nanchang Airport to Nancheng

4Hours trip
Shanghai Station to Nanchang/ Yingtan station

Jiangxi Union Gain Electronics Technology Co., Ltd.

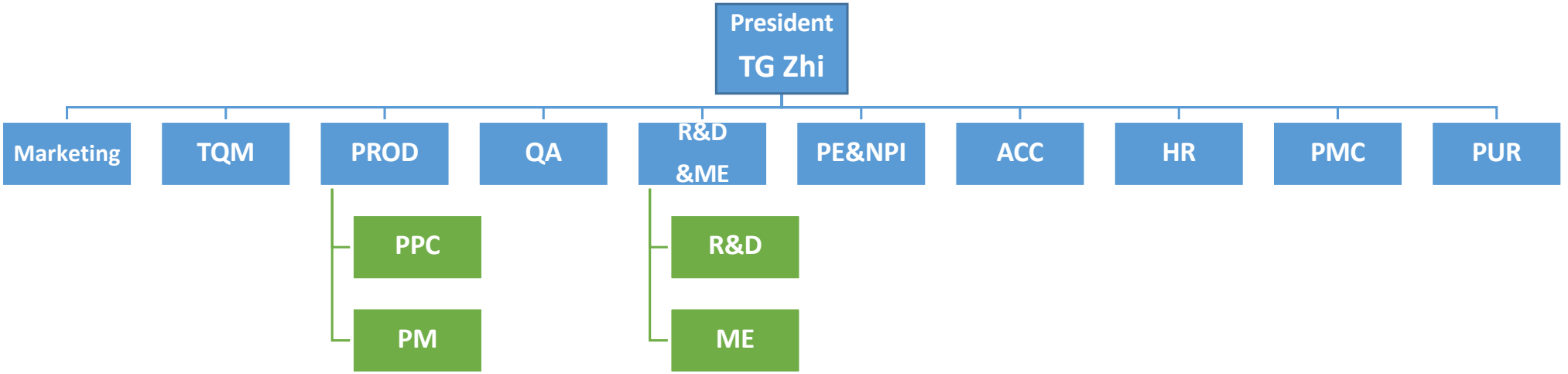
Address: Hedong Industrial Park, Nancheng County, Fuzhou City, Jiangxi Province, China

Union Gain Electronic Technology (HK) Co., Ltd.

Address: Rm 26, 4/F, Blk B, Profit Industrial Building,1-15 Kwai Fung Crescent, Kwai Chung, NT, Hong Kong

Tel: 852-24161315 Fax: 852-24112961

Management


President
TG Zhi
Marketing
TQM
PROD
QA
R&D &ME
PE&NPI
ACC
HR
PMC
PUR
PPC
PM
R&D
ME

SWOT Analysis

Strengths

- Technical Capabilities. More than 20years PCB Management and Engineering skills.
- Strong Cash Flow
- Focus on Capacity and Technology

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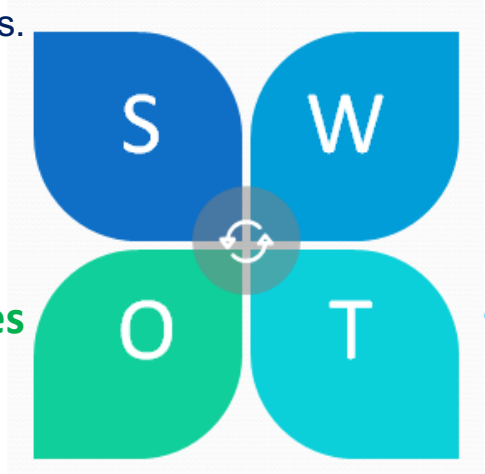
Opportunities

- **Health products increasing demands.**
- **Automated facilities favors customer increase demands**



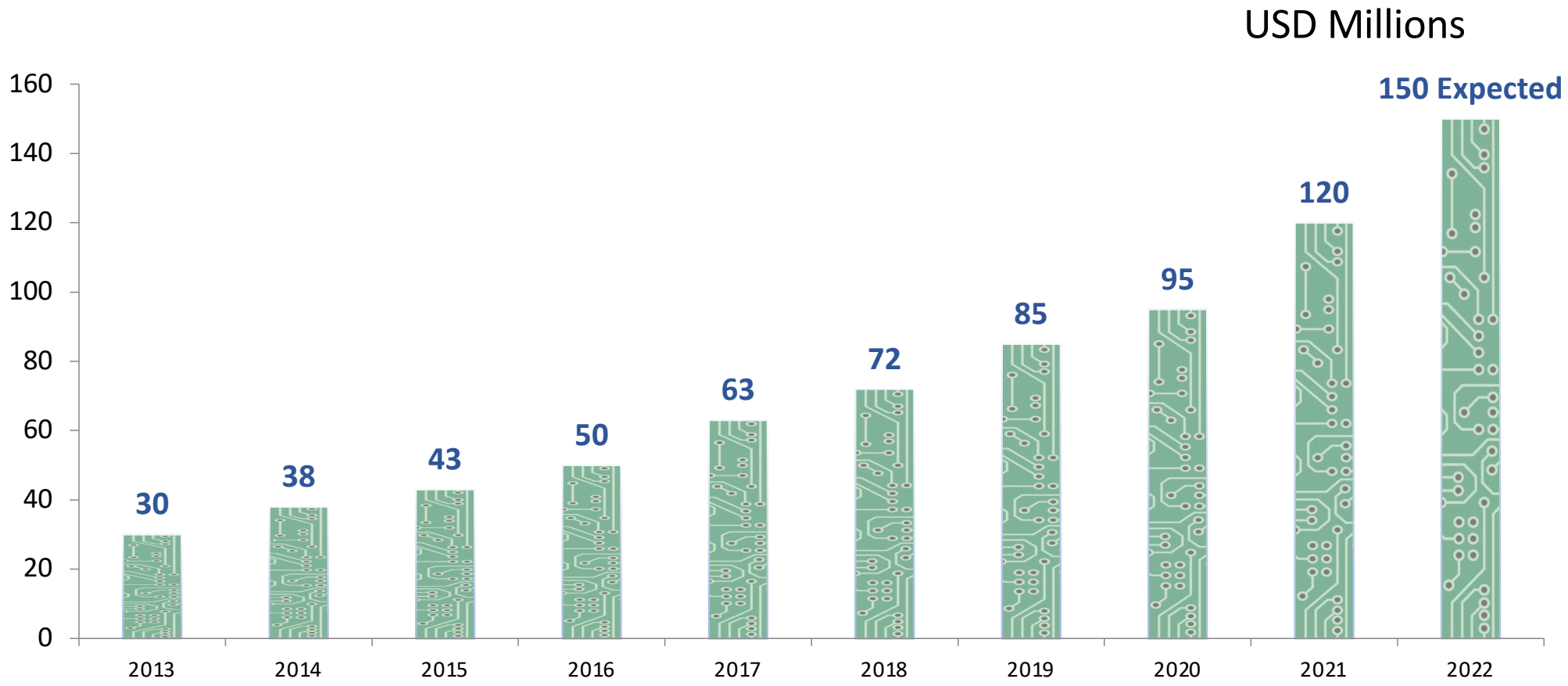
Weakness

- **Due to increasing competitors with price below the market price, hard to adjust.**
- **Fully automated lines not economical to support high mix low volume demand.**

Threats

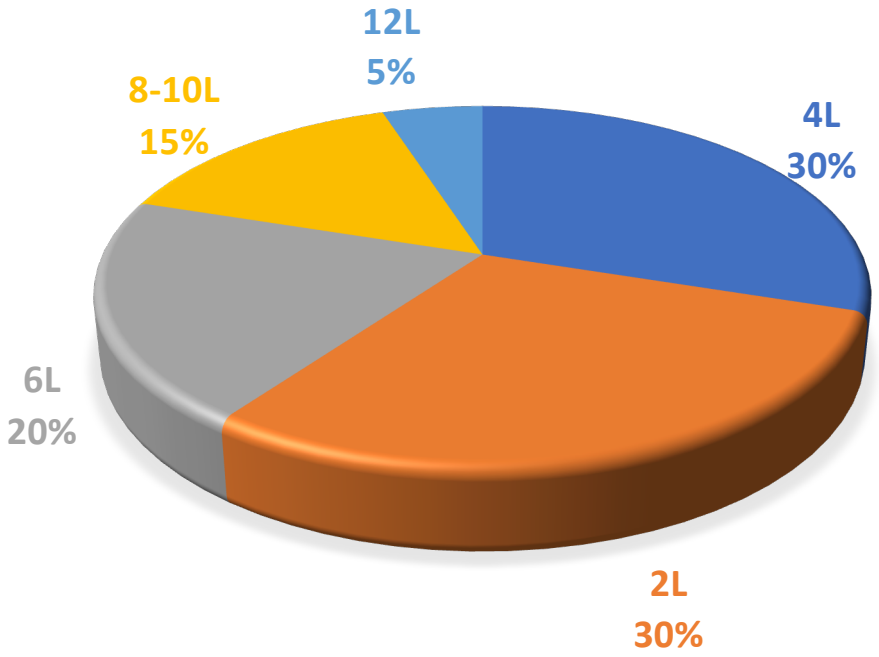
- **Due to pandemic and semiconductor shortages, automotive growth slows down**

Sales Revenues

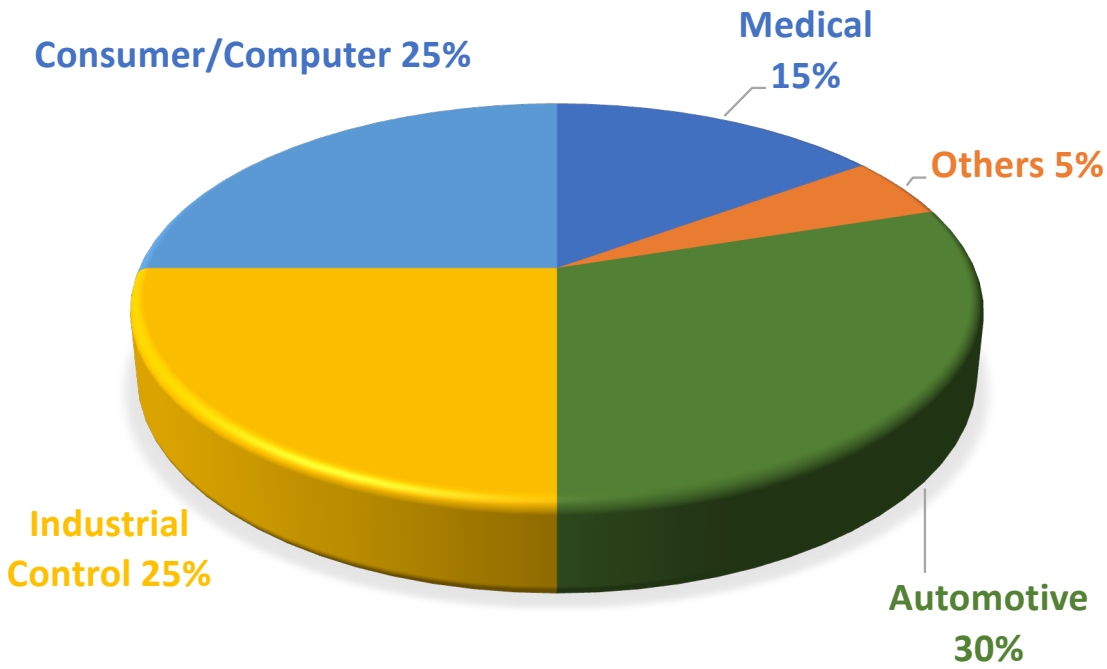


Layers and Product Categories

LAYERS



PRODUCTS



Our Strategic Partners

Medical	Automotive	Consumer and Computer	Telecom and Industrial
Insulet Corporation	HELLA	小米 www.mi.com	solaredge
Abbott	LEAR CORPORATION	DIGI	CHANGHONG 长虹
flex Medical Segment	preh	hp	SPEED 凯尔生物识别
JABIL HEALTHCARE	faurecia Coagent	Whirlpool	SENAO
OMRON	KOSTAL	Panasonic	小米 www.mi.com
Panasonic	META SYSTEM	Carrier	LDCX
SANMINA	nexteer AUTOMOTIVE	Honeywell THE POWER OF CONNECTED	Landis+Gyr manage energy better
	BURY	GST	trifo
	长城汽车	UNIVERSAL ELECTRONICS	flex
	BECOM	Kidde	JABIL
	Visteon	PHILIPS 飞利浦	
	HeT Intelligent Control	GREE 格力空调	
	MARQUARDT	Midea	
	HELBAKO Kompetenz in Elektronik		
	HELLA BHAP		
	flex Automotive Segment		
	imi		
	JABIL Automotive Segment		
	yokowo		

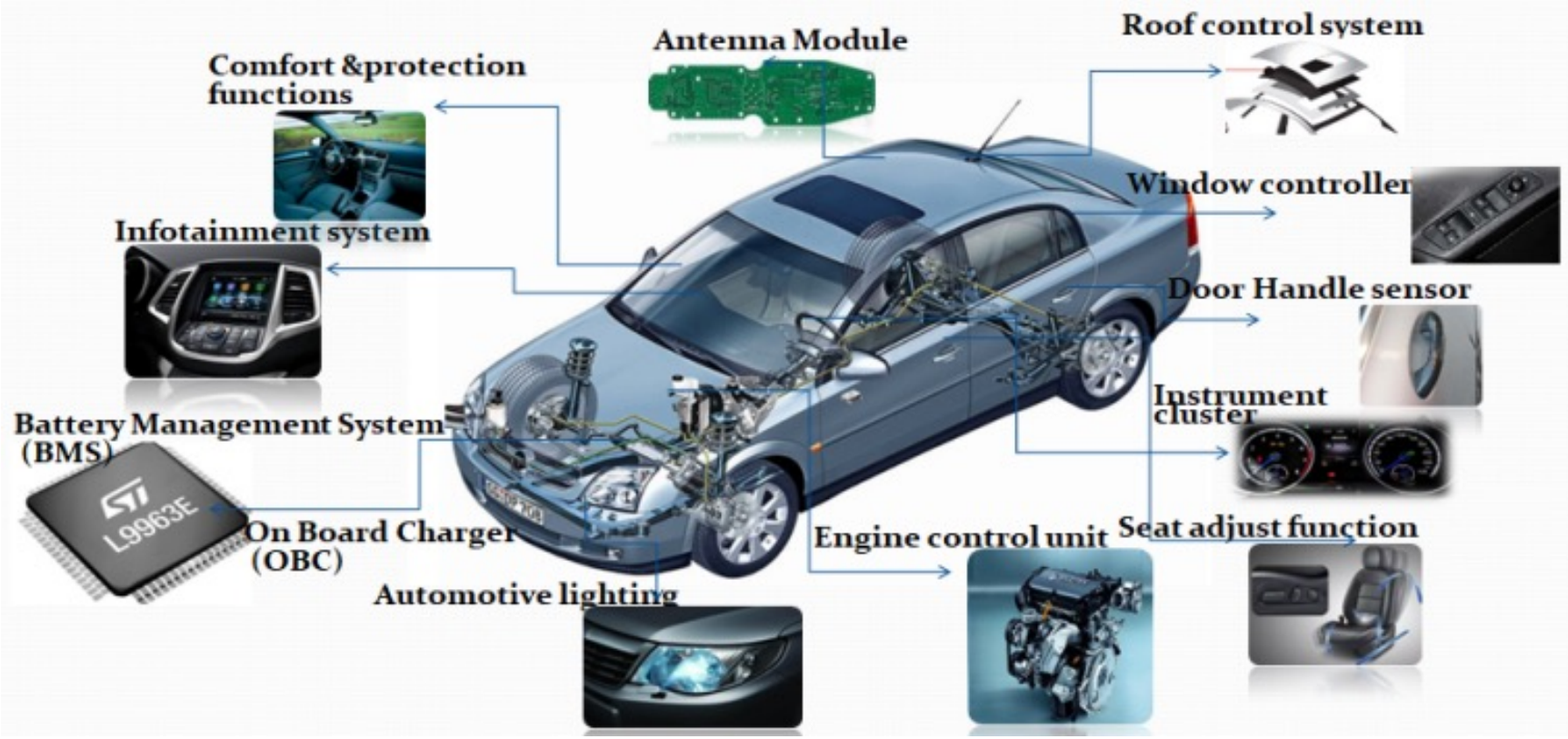
EMS Partners

Our strong support in quality and services facilitate us in developing mutual beneficial cooperation and mutual development with our EMS partners.

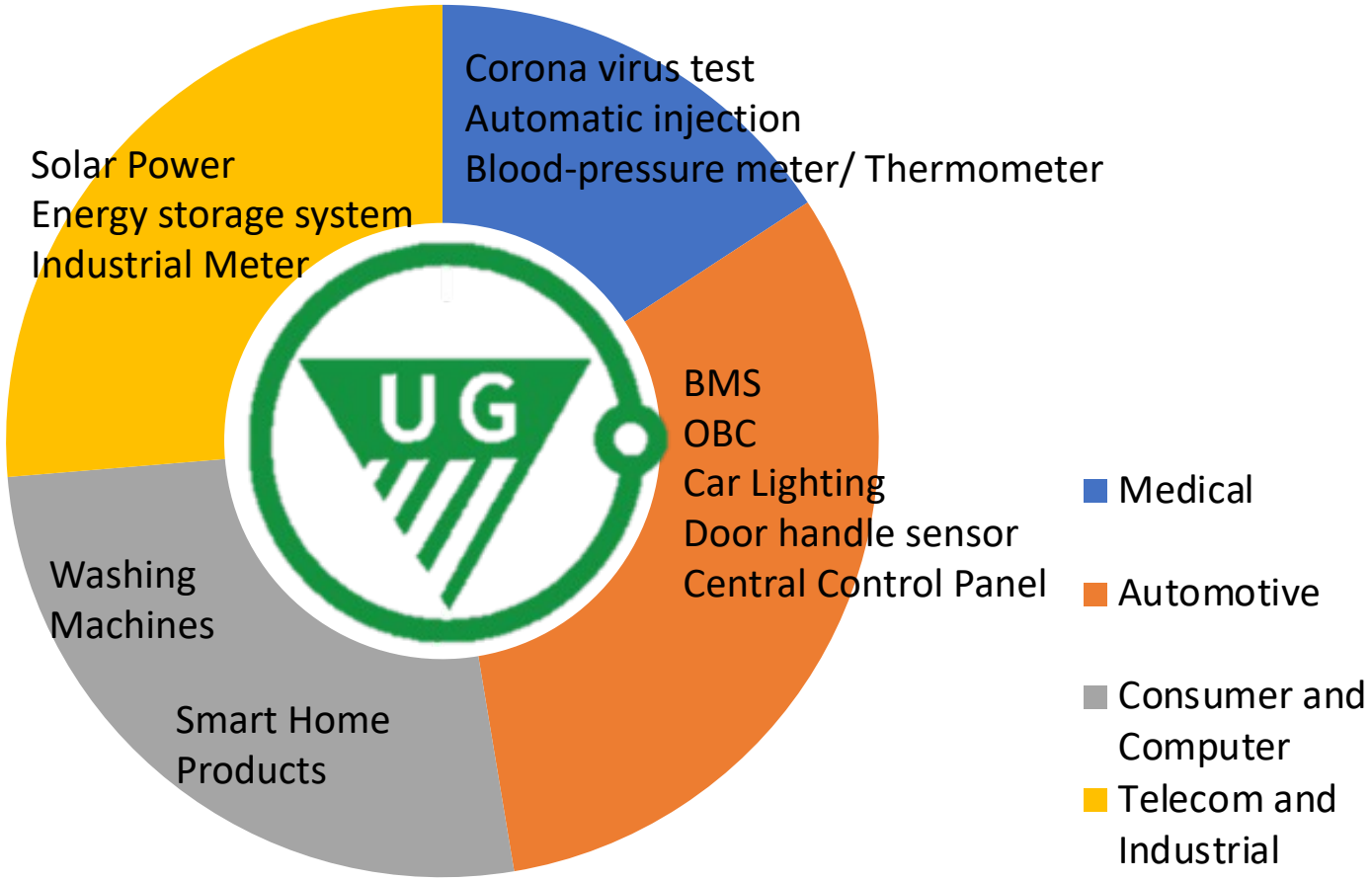
Automotive Vision

- Be the key preferred PCB partner for major Automotive customers, provide customer-oriented service
- Targeting automotive PCBs to represent 30-40% of total sales revenue within 3 years
- Quality first, Zero Defect Philosophy
- Attain outstanding success and sustainable development by consistently complying with Automotive Industry quality requirement (e.g. IATF16949, VDA, AIAG, etc.)

Automotive Applications



Product Applications



Our Technical Capabilities

Item		Standard	Advanced
Layer Count	Max.	12	16
delivery panel size	min	75mm X 75mm	60mm X 60mm
delivery panel size	Max	500mm X 600mm	500mm X 650mm
Board Thickness	Main stream	1.0~2.4mm	0.8~3.0mm
	Capability range	0.5~3.2mm	0.4~3.6mm
Cu Foil	Inner Layer	1/2oz - 5oz	1/2oz – 5oz
	Outer Layer	1/3oz - 4oz	1/3oz - 5oz
Core Thk	Min.	0.075mm （excl. Cu）	0.075mm (excl. Cu)
Mechanical Hole	Drill bit	0.2mm-6.5mm	0.2mm-6.5mm
Minimum milling cutter		0.8mm	0.6mm
Hole Size Tolerance	Plated Through	± 3mil	±2mil (Except for HASL surface)
	Non-Plated Through	± 2 mil	± 1 mil
	Press Fit (non-HASL)	± 2 mil	± 2 mil
Hole Location Tolerance		+/-3mil	+/-2mil
Slot tolerance (PTH)		length: +/-4mil, width: +/-3mil	Length:±3.5mil, Width:±2mil (Except HASL surface)
Slot tolerance (NPTH)		Length:±4mil, Width:±2mil	Length:±3mil, Width:±2mil
Min Plated Barrel Distance (different net)		16mil preferred (CAF resistance)	15mil
Plating Aspect Ratio		8:1	10:1
Board Thickness Tolerance		± 10% or +/-4mil whichever is bigger	±8% or +/-4mil whichever is bigger
Pressing Layer Registration		+/-4.5mil;	+/-4mil;
Single-ended / Differential Impedance		± 10%	± 8%
V-cut Remaining Thickness Tolerance		+/-3mil	+/-2mil

Our Technical Capabilities

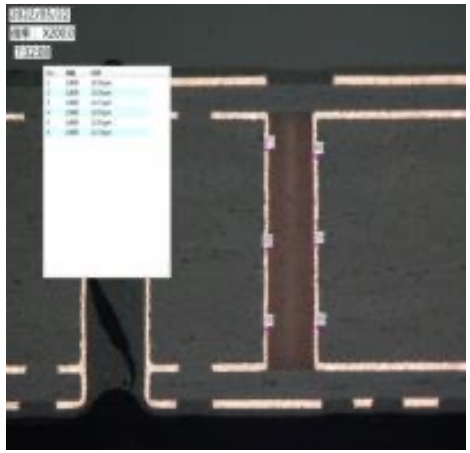
Outline Edge to Edge, Hole to Edge Tolerance		+/-4mil	+/-4mil
Minimum Line Width/Space (Inner Layer)	1/2 oz base Cu	3.5 / 3.5mil	3.0/ 3.0mil
	1 oz base Cu	4.0 / 4.0 mil	3.5 / 3.5mil
	2 oz base Cu	7.0/7.0 mil	6.0/6.0 mil
	3 oz base Cu	9.0/9.0 mil	8.0/8.0mil
	4 oz base Cu	11.0/11.0 mil	10.0/10.0mil
	5 oz base Cu	12.0/12.0 mil	11.0/11.0mil
Minimum Line Width/Space (Outer Layer)	1/3 oz base Cu	3.5 /3.5mil	3.0/3.0mil
	1/2 oz base Cu	4.0 / 4.0mil	3.5 /3.5mil
	1 oz base Cu	6.0 / 6.0 mil	5.0/ 5.0mil
	1.5oz base Cu	7.0 /7.0 mil	6.5/6.5mil
	2oz base Cu	9.0 /9.0 mil	8.0 / 8.0mil
	2.5oz base Cu	10.0 / 10.0 mil	9.0 /9.0 mil
	3oz base Cu	11.0 /11.0 mil	10.0 / 10.0 mil
	4oz base Cu	12.0 /12.0 mil	11.0 /11.0 mil
Trace Width Tolerance		±20%	±10%
Bow & Twist		0.75%	0.50%
Solder Mask Registration		±2mil	±1.6mil
Min test pad size		7mil x 10mil or dia 8mil	8mil x 8mil or dia 7.5mil
Fiducial to Fiducial		+/-3mil	+/-2mil
Depth Control Routing		+/-4mil	+/-2mil
Resin Plugged Vias Aspect Ratio		10:1	12:1

IMS Capabilities

No.	Item	IMS Capability	
		Mass Production	Sample/Development
1	Layer Count	1-2L	1-4L
2	Laminate Supplier	Shengyi,Ventec, Wazam	Shengyi,Ventec, Wazam
3	Metal Substrate Type	Al Base, Cu Base	Al Base, Cu Base
4	Metal Type	AL:1100H14, 5052H34, 6061T6 Cu: C1100, C1220	AL:1100H14, 5052H34, 6061T6 Cu:C1100, C1220
5	Metal Base Type	0.4-3.2mm Al thickness： 0.6mm， 0.8mm, 1.0mm, 1.2mm, 1.5mm, 2.0mm, 3.0mm	0.4mm-3.2mm
6	Insulation Layer Thickness	50-150um	50-200um
7	Hi-Voltage Test (vary according to minimum distance between trace and board edge)(VDC)	0.3mm：Voltage Resistance DC 600V/50UA 0.5mm：Voltage Resistance DC 1000V/50UA 1.0mm：Voltage Resistance DC 1500V/50UA	0.3mm：Voltage Resistance DC 600V/50UA 0.5mm：Voltage Resistance DC 1000V/50UA 1.0mm：Voltage Resistance DC 1500V/50UA
8	Breakdown Voltage (per different material type) (VAC)	4.0Kvac/4mil dielectric thickness	3.0Kvac/3mil dielectric thickness 4.0Kvac/4mil dielectric thickness
9	Min Core thickness	0.1mm	0.075mm
10	Layer Registration	±0.05mm	±0.025mm
11	Inner/Outer Layer Trace Width/Space	0.1/0.1mm	0.075/0.075mm
12	Copper Foil Thickness	HOZ,1OZ,2OZ, 3OZ,4OZ	HOZ,1OZ,2OZ, 3OZ, 4OZ,5OZ
13	Surface Finishing	HAL, Pure HAL,OSP, Immersion Au,Immersion Tin(Copper Base)	HAL, Pure HAL,OSP, Immersion Au, Immersion Tin(Copper Base)
14	Min V-Cut Depth Tolerance	±0.08mm	±0.05mm
15	Min Board Thickness for V-cut	0.6mm	0.4mm
16	Routing Outline Tolerance	± 0.10mm	± 0.8mm
17	Punching Outline Tolerance	± 0.10mm (4mil)	± 0.10mm (4mil)
18	Max Punching Board Thickness	1.8mm	2.5mm

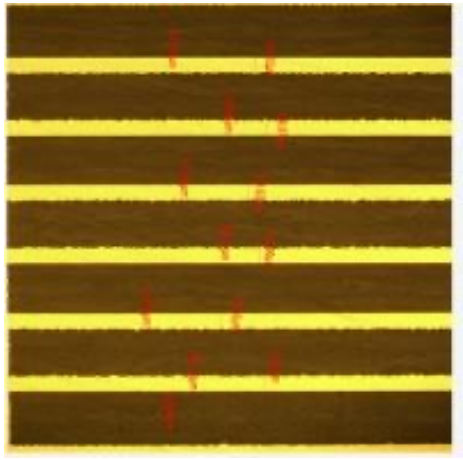
Typical Products

1+N+1 HDI



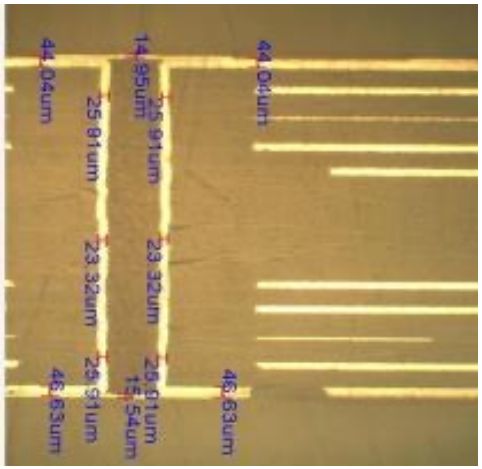
Product Application: Consumer Electronics
Layer Count: 4L
Product Characteristic: 1+N+1 HDI
Board Thickness : 1.00+/-0.1 mm
Finished Copper: 1/1/1/1 oz

Heavy Copper



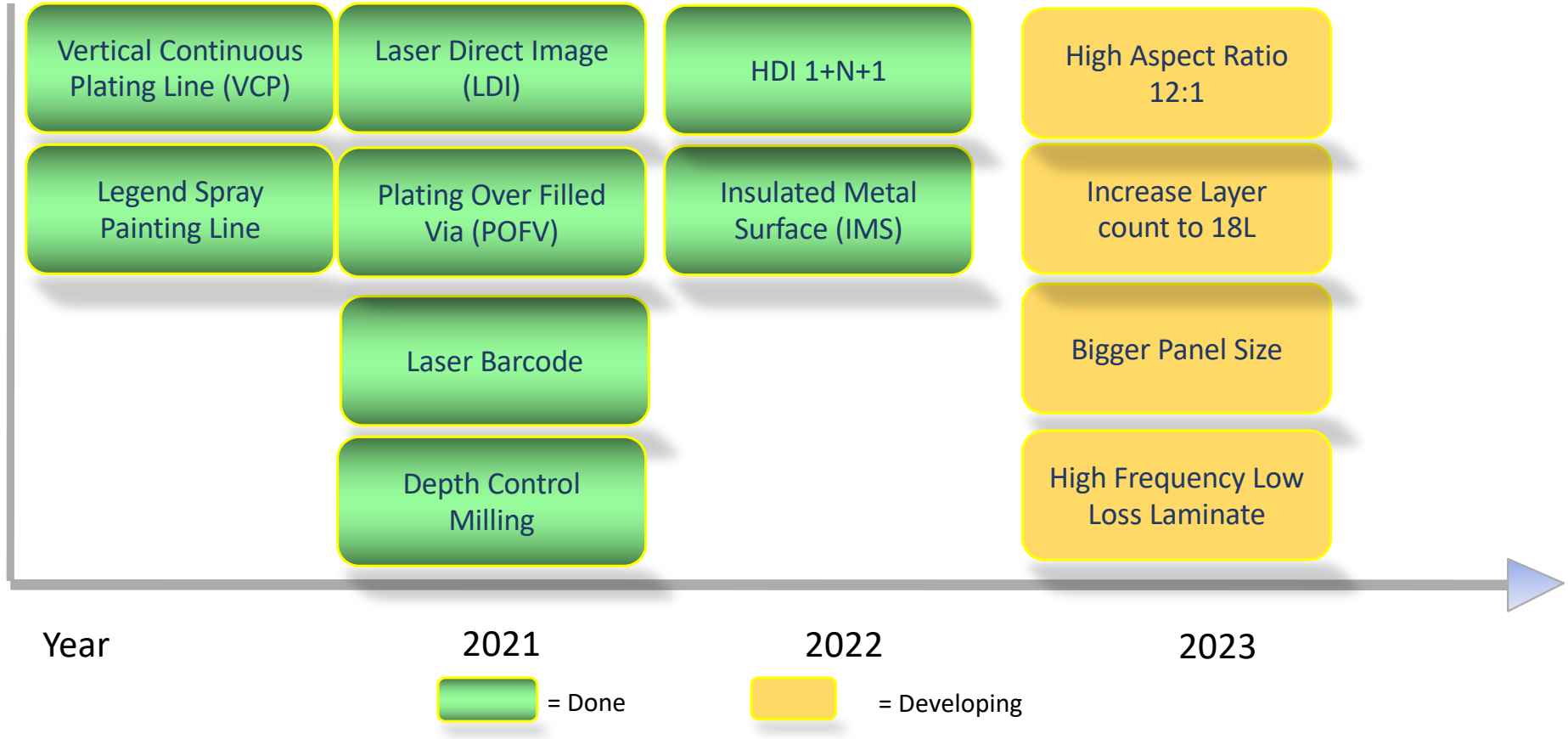
Product Application: Power Supply
Layer Count: 8L
Product Characteristic: Heavy Copper
Board Thickness : 3mm+/-10%
Finished Copper: 2.5/3/3/3/3/3/3/2.5 oz

10 Layer POFV



Product Application: Consumer Electronics
Layer Count: 10L
Product Characteristic: POFV
Board Thickness : 1.6+/-0.16 mm
Finished Copper: 1/1/T/1/1/1/1/T/1/1 oz

Technology Roadmap



Key Laminate and Surface Finishing

Key Laminate Suppliers						
Shengyi	EMC	Ventec	KB	ITEQ	WAZAM	Dekai

Surface finising		Typical Value	Supplier
OSP		0.2-0.6um	Macdermid
Immersion Gold (ENIG)		Au:1-3u", Ni:100-240u"	Chuangzhi technology
Selective ENIG (OSP+ENIG)		Au:1-3u", Ni:100-240u"	Chuangzhi technology
Immersion Silver		0.15-0.4um	Macdermid
Immersion Tin		0.9-1.2um	Macdermid
Flash Gold		Ni:50-300 u", Au:1-3 u"	Umicore
HASL&Lead free HASL		1-40um	SN100C Nihon Superior
Carbon Finger / Carbon Key Pad		7.6um (min)	Peters
Thick Gold Plating /Gold finger		Ni:50-300 u",Au:5-50 u"	Umicore

Reliability Test Equipments

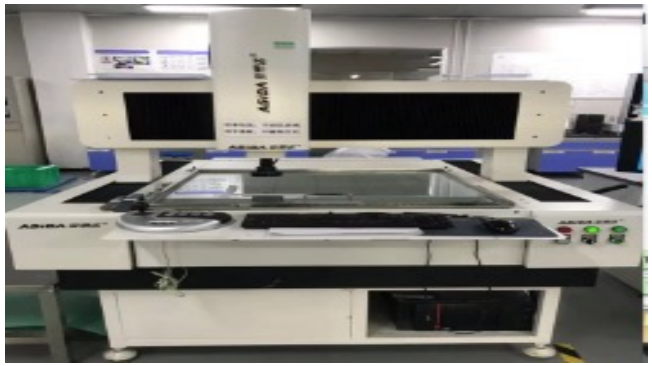
Reliability Test Equipments

SEM Analysis

Ionic Contamination Test

4-wire Test

High Voltage Test



Two Dimensional Test

Hole Counter and Auto Warpage inspection

Key Equipment Facilities

Inner Etching

Lamination

Inner&Outer Online AOI

Drilling

Laser Drilling

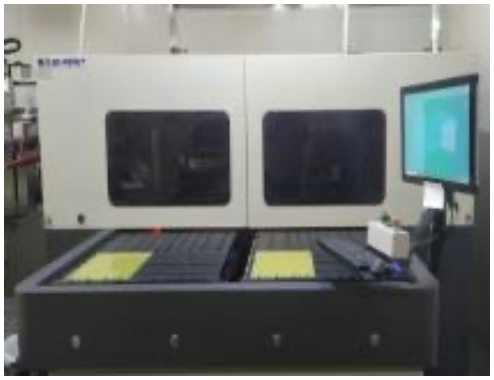
Selective Vacuum Resin Filling

VCP

Laser Direct Imaging (LDI)

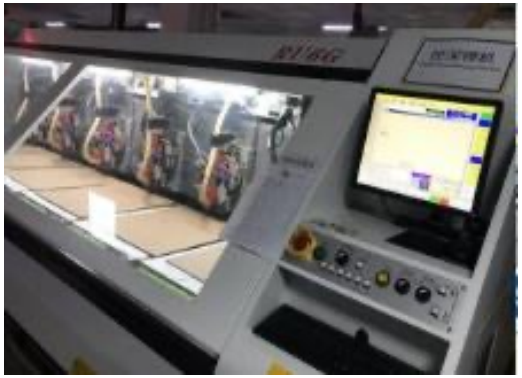
Key Equipment Facilities

3 in 1 Solder Mask Printing



Legend Spraying

Electroplated Cu-Ni-Au



Depth Control Milling

Laser Coding Machine

AVI

Immersion Tin

Deionization Cleaning

Awards

Specialization, Delicacy, innovation Enterprise	CPCA member	IPC member
National Hi-tech Enterprise	Provincial Enterprise Tech Center	IP Model Company in Fuzhou

Quality Standard Certificates

ISO 9001

IATF 16949

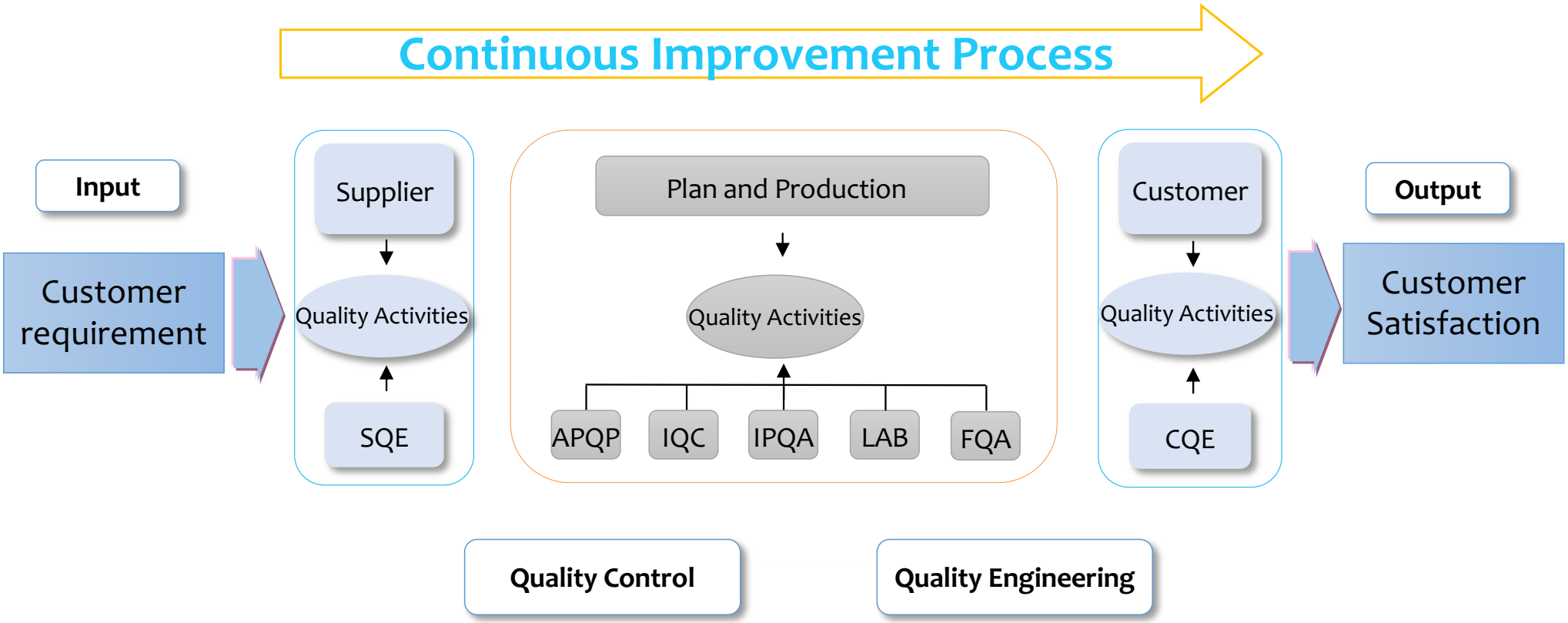
ISO 13485

ISO 14001

ISO 45001
OHSAS 18001

CQC

Quality Assurance Process



Sustainable Development

Environment

- Promoting Renewable Energies
- Licensed Monthly Waste Water treatment capacity is 600K m2/Month
- Build Copper Regeneration site:Recycling Etching chemical 800T/month

Social

- Ensuring employee benefits, wellness and safety.
- Creates equal and inclusive culture, jointly build a future with All staff shared achievement.
- Be humble and responsible to our society.

Governance

- Bound by Code of Ethics and Business Conduct
- Require suppliers to act consistently in accordance with Supplier Code of Conduct.
- Acting with integrity, comply with government laws and regulations

Sustainable Development

Electricity used are from **Renewable Energies： Hydro, Wind and Solar Power.**

Environmental Sustainability - Be Industrial pioneer to develop UG own Solar Power System, schedule to put in use on Q1 of 2023

WHY Union Gain

Manufacturing

Fully Automated Facility
World Class Green Environment
Top of the Line Equipment and Machineries

Engineering

Team of well experienced pcb engineers ready to provide technical support

- Design
- Manufacturability

Sales/Marketing

A full time friendly customer support staff ready to serve you anytime and anyday.

Environmental

Cutting edge technology to ensure to maintain the environmental protection and green factory.

Quality

Zero Defect Mindset.
Fully IPC Trained pcb expert to ensure product quality comes first.

Thank You!
Let's Build a Better Tomorrow Together