Focus On EMS More Than 10 Years

Weller Technology Co., Limited

PRESENTATION

Confidential | Copyright © WellerPCB · All Rights Reserved

Contents

Confidential | Copyright © WellerPCB · All Rights Reserved

Focus On EMS More Than 10 Years

Who We Are?

Located in Shenzhen, China

15+ Year's Experience and Knowledge in PCB Manufacturing

6+ Year's Experience in PCB Assembly Field with 4 SMT Lines and 200 People

Direct Manufacturing Service Not A Broker.

Have Been Working with European and American Customers Since 2003

What We Do?

PCB Fabrication (2-50 Layers, Prototype to Mass Volume)

PCB Assembly (BGA and QFN Assembly, Fine Pitch Components Insertion)

Components Sourcing (Cost Down by BOM Optimizing and 100% Original Brand)

Mold Injection (Plastic Injection Molding, Metal Stamping Service)

Combined Strength, Turnkey Solution

Who Working With Us?

Cooperation Partners

intel®
SARIAN SYSTEMS
NOTE™ YOUR MANUFACTURING PARTNER
NORTEL

ELMA Your Solution Partner
EXFO Telecom Test and Service Assurance
Digi Your M2M Solutions Expert
DELTA TAU Data Systems Inc.

zollner
kontron
GMS GYPSUM MANAGEMENT & SUPPLY, INC.
PHILIPS sense and simplicity

SVI
FLEXTRONICS
ONEACCESS NETWORKS
ams

Business Introduction

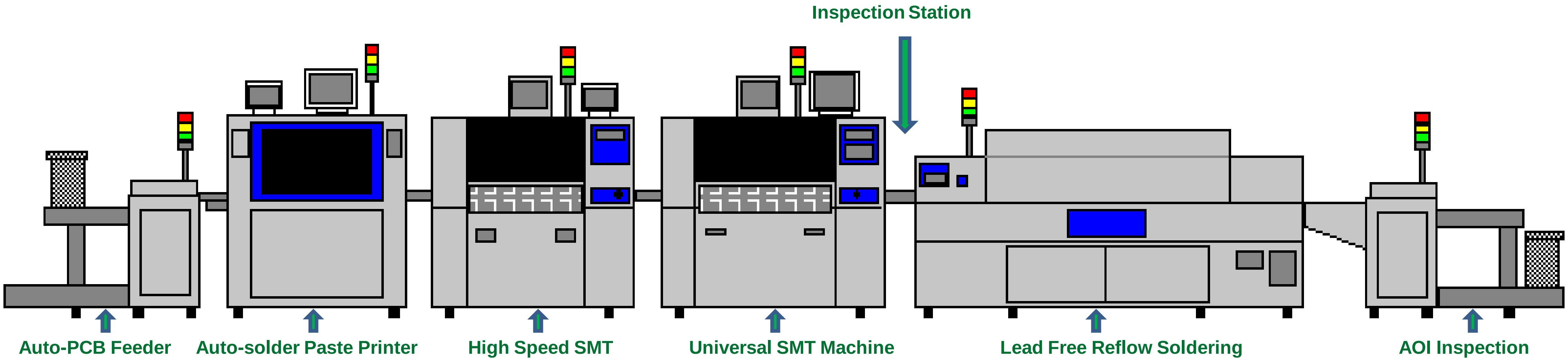
PCB Assembly

PCB Assembly

- SMT And Through-Hole Assembly
- Fine Pitch Component Insertion
- Lead-Free Assembly
- BGA And QFN Assembly
- One-Stop PCB Assembly
- BGA X-Ray Inspection
- Prototype PCB Assembly
- Automated Optical Inspection
- PCB Assembly In Low Volumes
- PCB Testing For Functionality

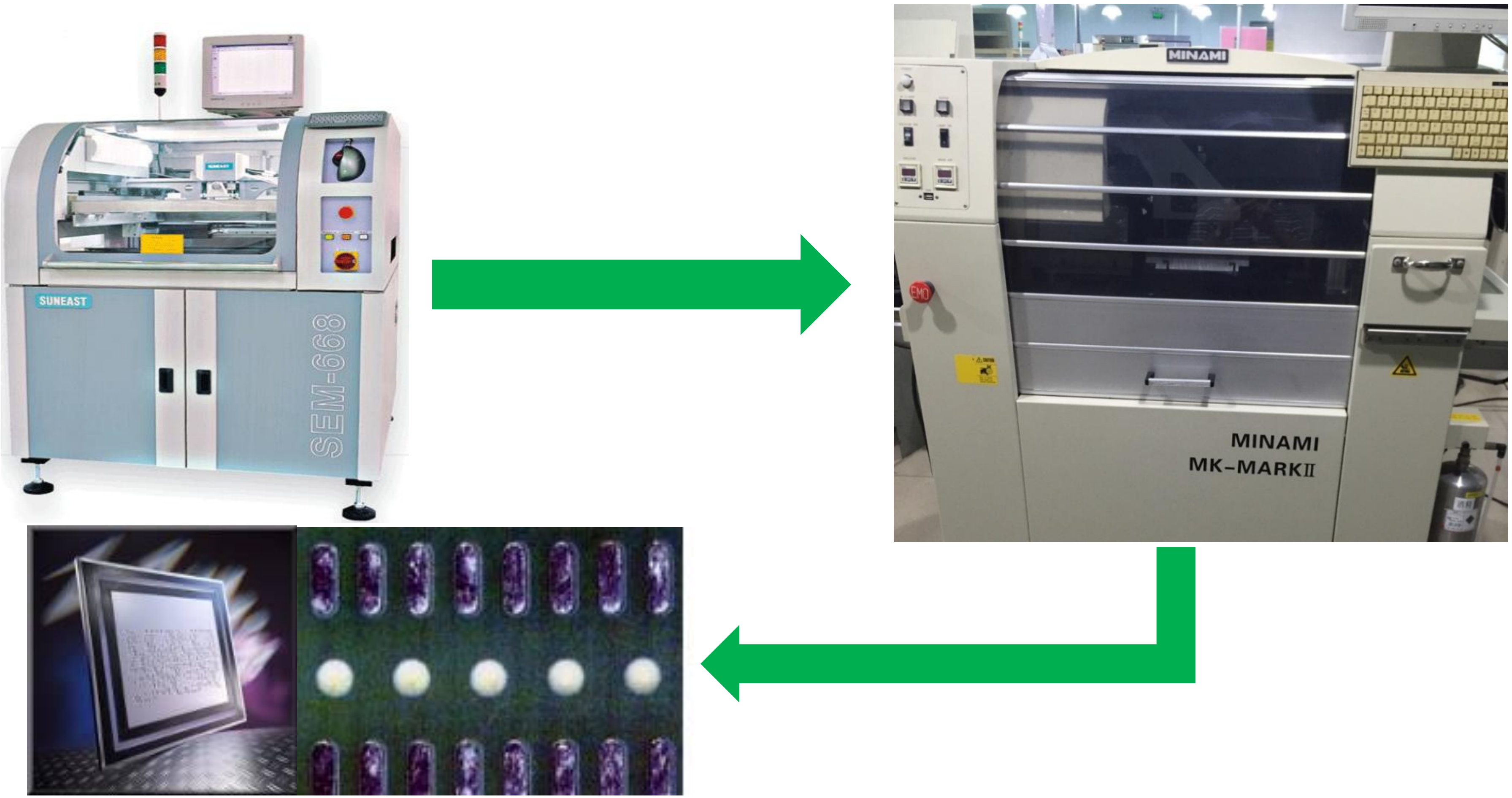
PCB Assembly

Completely Auto-Assembly Process



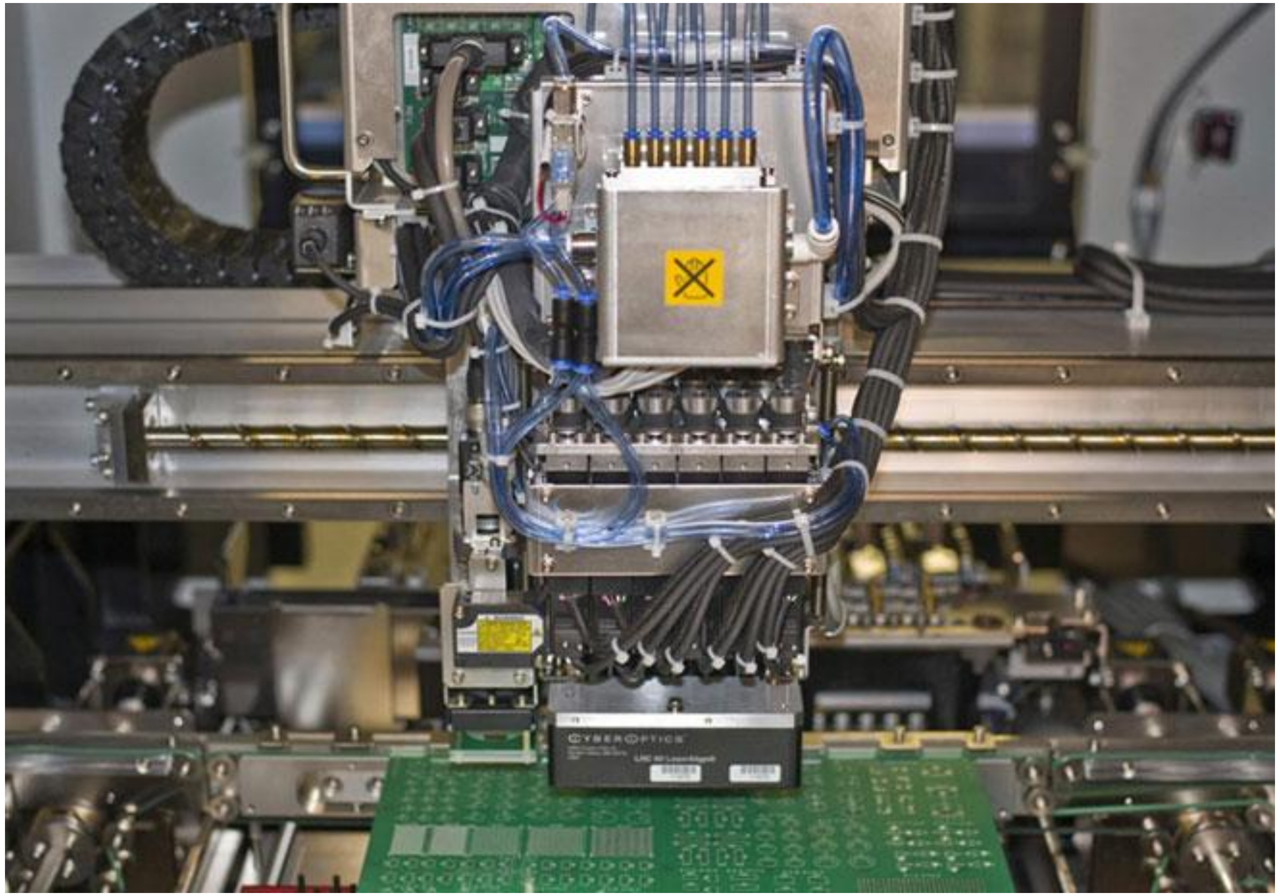
PCB Assembly

Crucial Equipment of PCB Assembly



PCB Assembly

Crucial Equipment of PCB Assembly



PCB Assembly

Lead Free Re-Flow Soldering Process

A

B

PCB Assembly

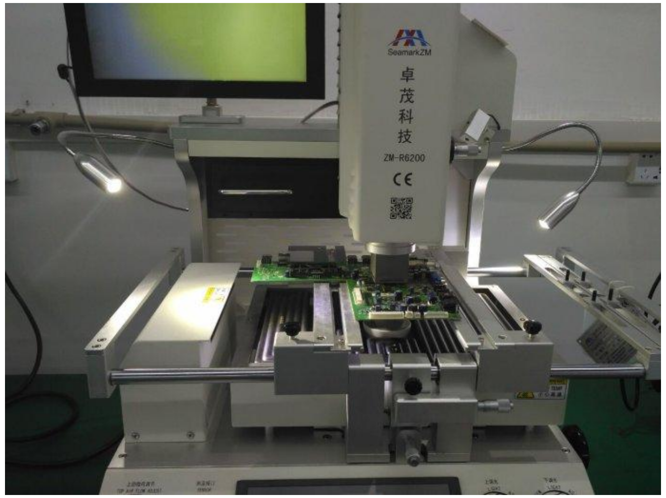
Crucial Inspect Instruments

Automatic Optical Inspection

Automated X-Ray Inspection

First Article Inspection Instrument

BGA Repair Machine



ALL IN HOUSE

PCB Assembly

DIP Assembly Line

DIP Assembly Line A

DIP Assembly Line B

DIP Assembly Line C

PCB Assembly

SMT Assembly Capability

No.	Item	Capability
1	Board Size	2"*4"-18"*20"
2	Board Thickness	0.5-4.0mm or Less
3	SMT Component Size	1.0*0.5mm-74*74mm
4	Component Qty.	Up to 6500 SMD/Board
5	IC Pitch	0.3mm (12mil)
6	BGA /CSP	Pitch 0.35mm
7	Board Complexity	SMT/PTH/Boxbuild
		Single/Double Sides Reflow
8	Glue	Yes
9	Nitrogen Reflow/Wave	Yes
10	Process	Clean/No Clean/Lead Free
11	Baking Oven	Yes

PCB Assembly

Products Index (1)

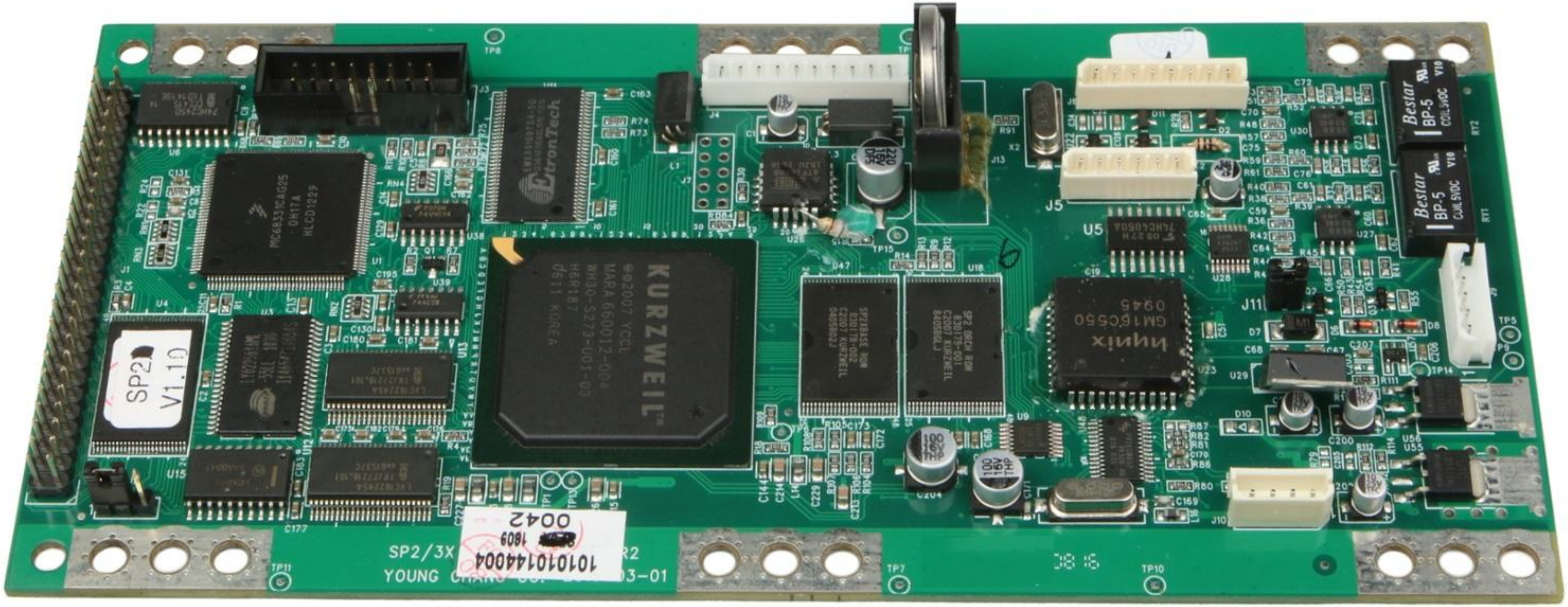
Net Sever Application

Industrial Control Application

RF Application

PCB Assembly

Products Index (2)



PCB Fabrication

Confidential | Copyright © WellerPCB · All Rights Reserved

PCB Fabrication Capability

R&D Roadmap

Item	2017	2018	2019	2020
Layer	36	50	60	60
Max. Board Size	34"*24"	40"*24"	45"*24"	48"*24"
Max. Board Thickness	315mil	354mil	394mil	472mi
Min. Board Thickness	15.7mil	15.7mil	15.7mil	15.7mil
Min. Core Thickness	3mil	3mil	3mil	3mil
Max. Copper Thickness	Inner Layer: 6OZ	Inner Layer: 8OZ	Inner Layer:10OZ	Inner Layer: 12OZ
Min Line Width/Space	Inner Layer: 6OZ	Inner Layer: 8OZ	Inner Layer:10OZ	Inner Layer: 12OZ
	3mil/3mil	2.5mil/2.5mil	2.0mil/2.0mil	1.0mil/1.0mil
Min CNC Drilling Size	6mil	4mil	4mil	4mil
Min Laser Drilling Size	4mil	3mil	3mil	3mil
Aspect Ratio	15:01	18:01	20:01	20:01
Impedance Tolerance	±5%	±5%	±5%	±5%
HDI Ability	3+N+3	4+N+4	5+N+5	6+N+6
Heat Sink	Mass Production	Mass Production	Mass Production	Mass Production
Rigid-Flex	Mass Production	Mass Production	Mass Production	Mass Production
Embedded Capacitance	Mass Production	Mass Production	Mass Production	Mass Production
Embedded Resistance	Mass Production	Mass Production	Mass Production	Mass Production
IC Substrate	Prototye	Mass Production	Mass Production	Mass Production

PCB Fabrication

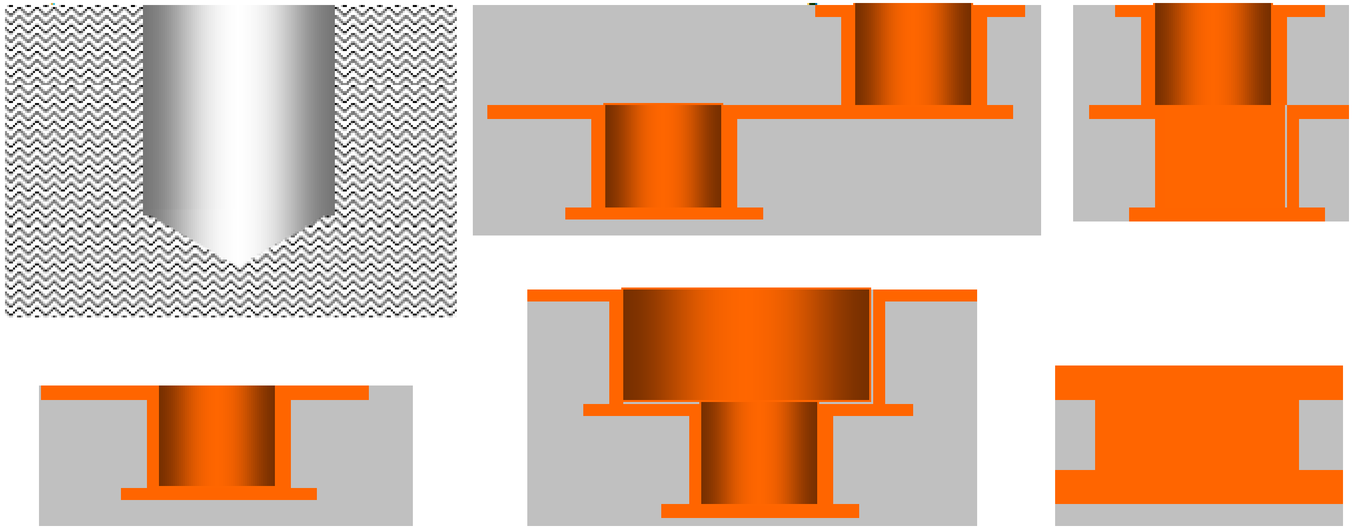
Volume Capability

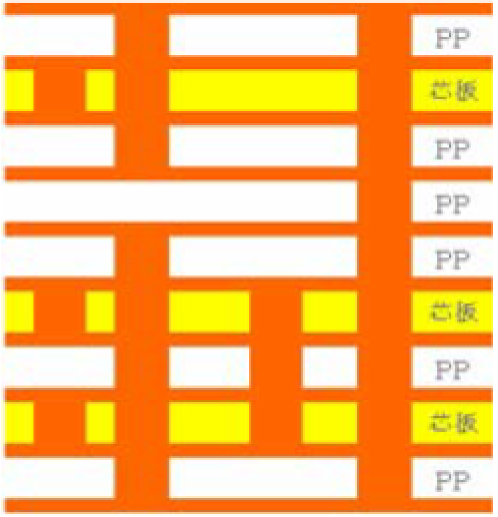
- **Heavy Copper: 3, 4, 5, 6 OZ (All Layers)**
- **HDI: Laser/Mechanical Drill**
- **High Layer Count: 1-50L**
- **Backplane**
- **SBU PCB Board**
- **Hybrid Material (Rogers+FR4)**
- **Special Technology PCBs** [Silver Filling, Heat Sink (Copper and Aluminum Base), Resin (Conductive/Non-Conductive) Filling, HF PCB, RF PCB (PTFE, Rogers, Nelco, Getek, Ceramic)]
- **Leading Edge Technology**
  - 50 Layers PCB
  - Embedded Resistance PCB
  - Embedded Capacitance & Resistance PCB
  - IC Substrate PCB

PCB Fabrication

HDI Capability

- Track Width/Space: 3/3mil
- Aspect Ratio: 1:1
- HDI Steps: 3 + N + 3
- (Incl. Stack Via Hole And Cross Via Hole)
- Mechanical Drill
- Mechanical Back Drilling





PCB Fabrication

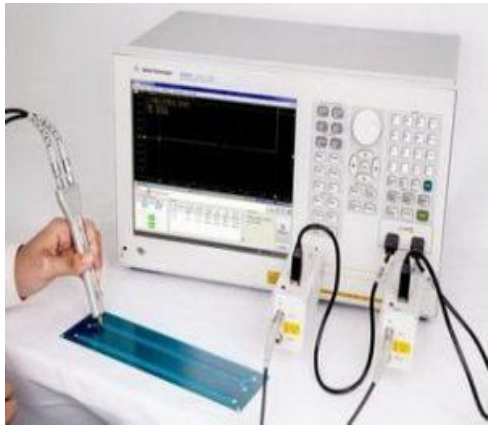
Normal Capability Features

- Layers: 1-50
- PCB Thickness: 15.7mil to 394mil
- Copper Thickness: 1/3OZ to 6OZ, The Copper Foil
- Material: FR4, Rogers 4350B, 4350C, 6003, Alron, Getek, Plyclad 370HR, MEGTRON 6, ISOLA, Nelco (N4103-13), Hitachi, Matsushita, Aluminum Base, Copper Base
- Surface Finishing: HAL Lead-Free, ENIG (2u" Based IPC-4552), Immersion Ag, Flash Gold, Gold Finger, OSP, Entek, Carbon Ink, Peelable Mask
- Solder Mask Color: Green, Red, Yellow, Blue, Black, White, Matte Finishing; Raw Material Brand: Taiyo PSR4000
- Silkscreen Color: Black, Yellow, White; Raw Material Brand: Taiyo PSR4000
- Outline and Profile: Routing, Punching, V-Cut, Edge-Plated,
- Single Ended Impedance (+/-5%) and Differential Impedance Control (+/-8%)
- HDI with Laser Drilling, Stack-Via Holes

PCB Fabrication

Crucial Production Equipment 1

Genesis 2000 Station



Impedance Tester

Pre-cleaning Dry Film

X-Ray Drilling

Universal Electrical Test

S.E.S. Line Schmid

PCB Router Machines

PCB Roller Coating

PCB Fabrication

Crucial Production Equipment 2


Auto PTH Line


PCB Roller Coating


Precleaning Solder


Post Etch Punch


PCB Copper Plating


PCB Routing Machine


Exposure Workroom


Immersion Gold Process

Confidential | Copyright © WellerPCB · All Rights Reserved

PCB Fabrication

Crucial Production Equipment 3


Flying Probe Test


Laminate Pressing


PCB Drilling Process


Oxide Replacement


Laminator Dry Film


Exposure ILS Bacher


Dry Film Exposure


PCB Mylar Remover

Confidential | Copyright © WellerPCB · All Rights Reserved

PCB Fabrication

Crucial Production Equipment 4


Developer Solder


Deburring Machine


Developer Dry Film


D.E.S.Line Schmid


CO2 Laser Drilling


Auto V-cut Machine


Automatic Filling


A.O.I. Machines

PCB Fabrication

Production Key Equipment For HDI PCB Board 1

Class 1000 Clean Room with Auto Alignment Exposure Units and LDI

PCB Fabrication

Production Key Equipment For HDI PCB Board 2

Automatic Lay Up and High Capacity Lamination Press with Auto-Loading

PCB Fabrication

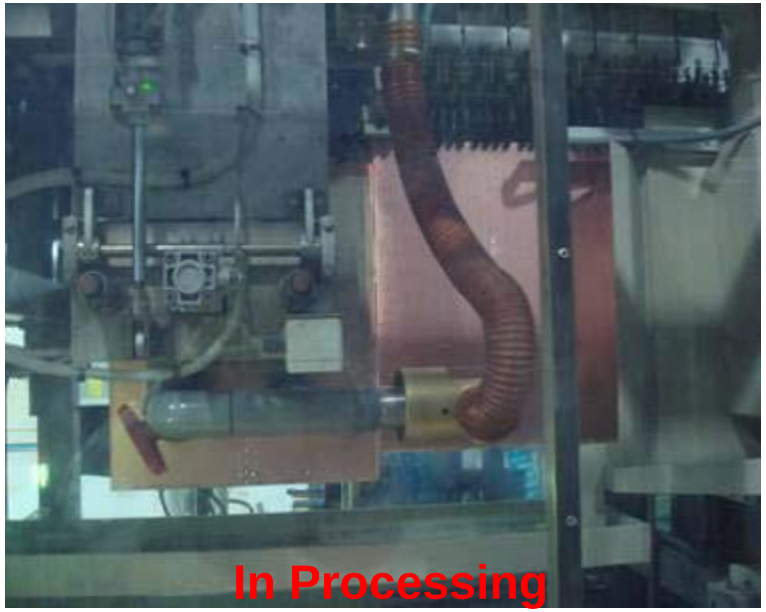
Production Key Equipment For HDI PCB Board 3

New Generation Of CO^2 Laser Drilling Machines

PCB Fabrication

Production Key Equipment For HDI PCB Board 4


Horizontal Cu Plating Line

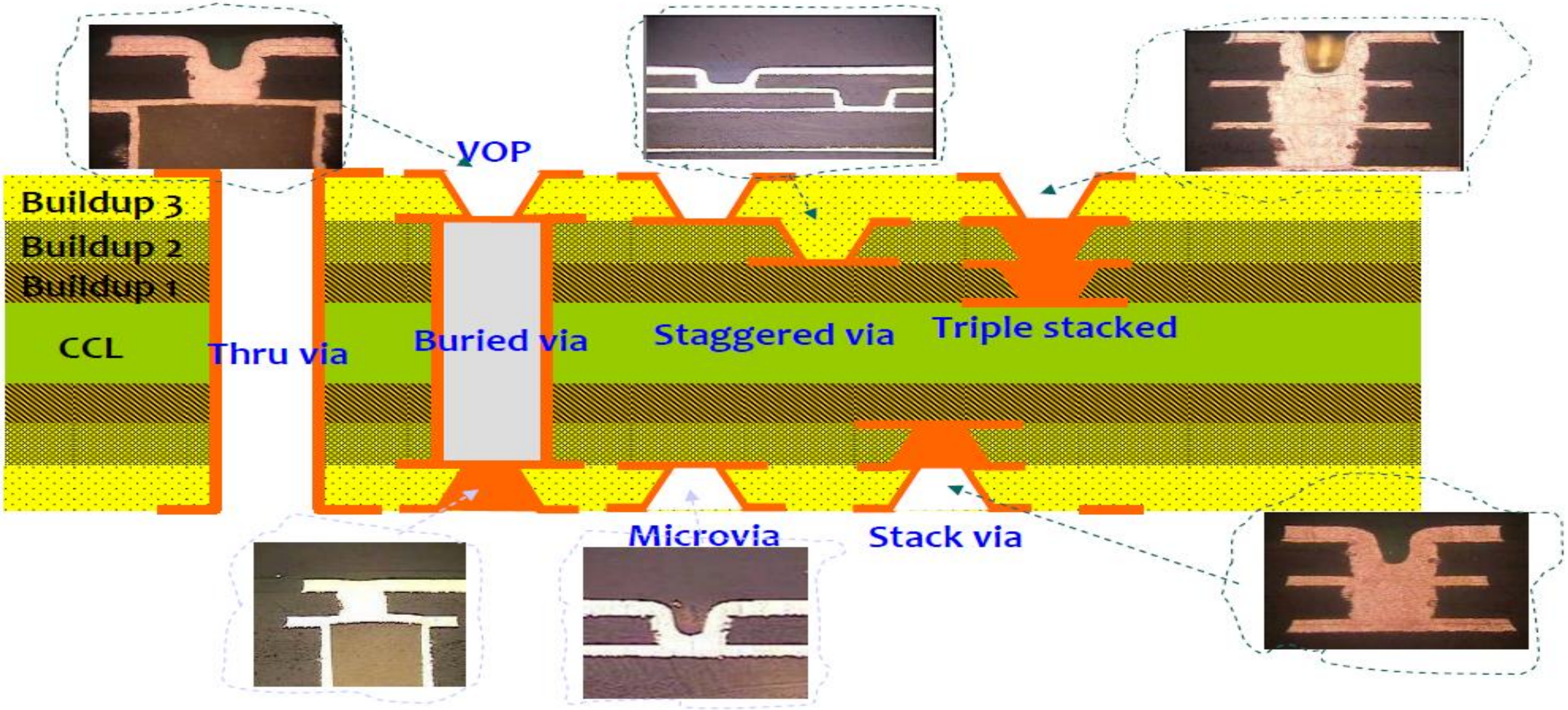

In Processing


VCP Line

Good HDI Cu Plating Solution With Horizontal Copper Plating Line Plus Vertical Continuous Plating Line

PCB Fabrication

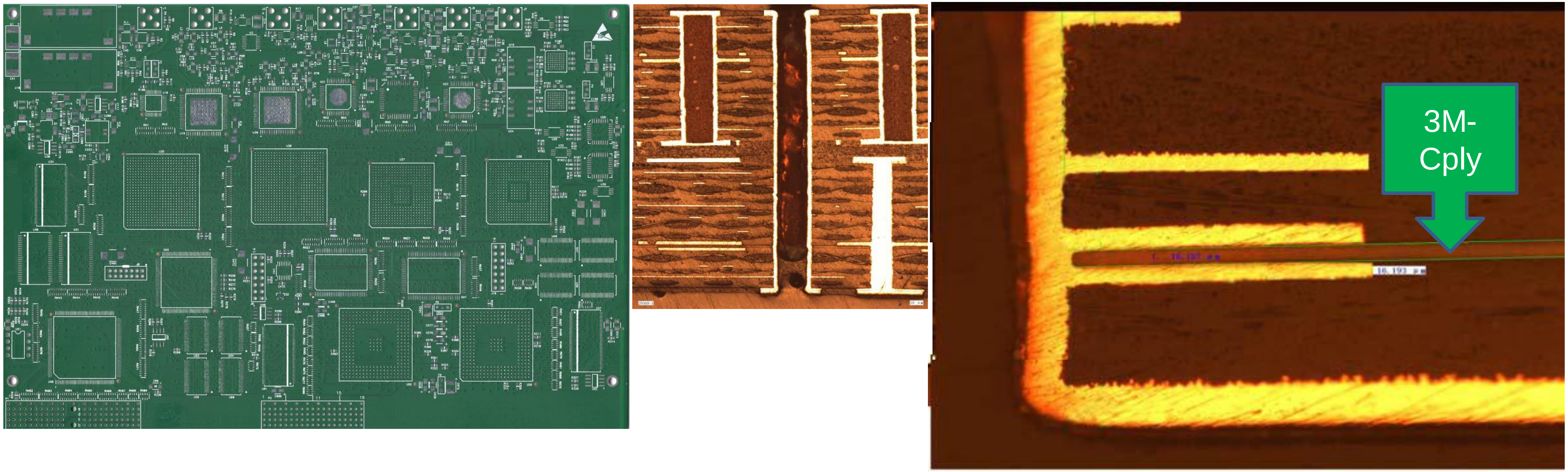
Build-Ups For HDI PCB Board



All The Structure As Above Are Available For Mass Production

PCB Fabrication

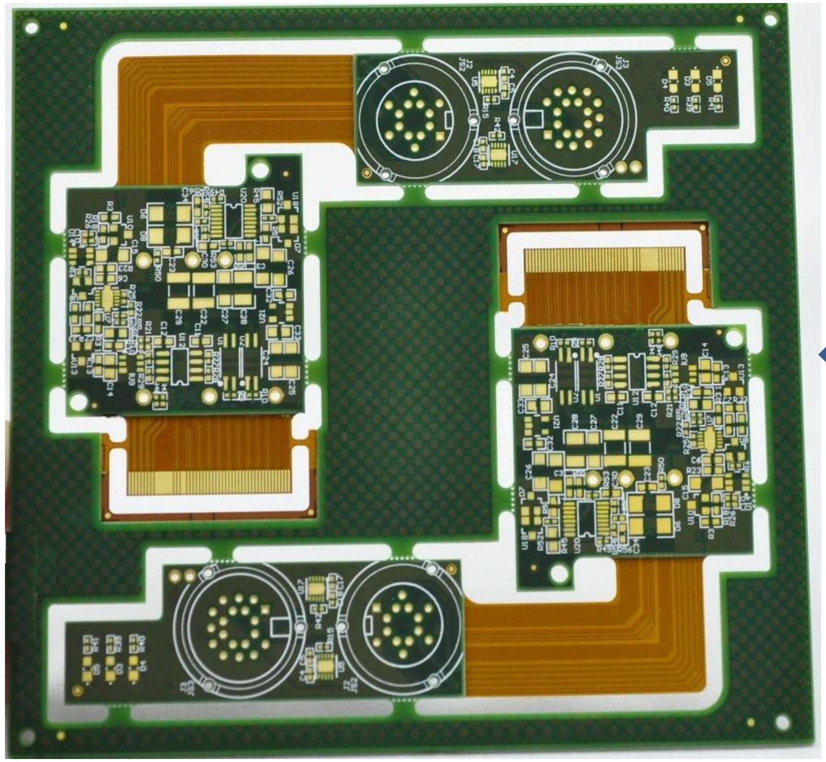
Products Index (1)



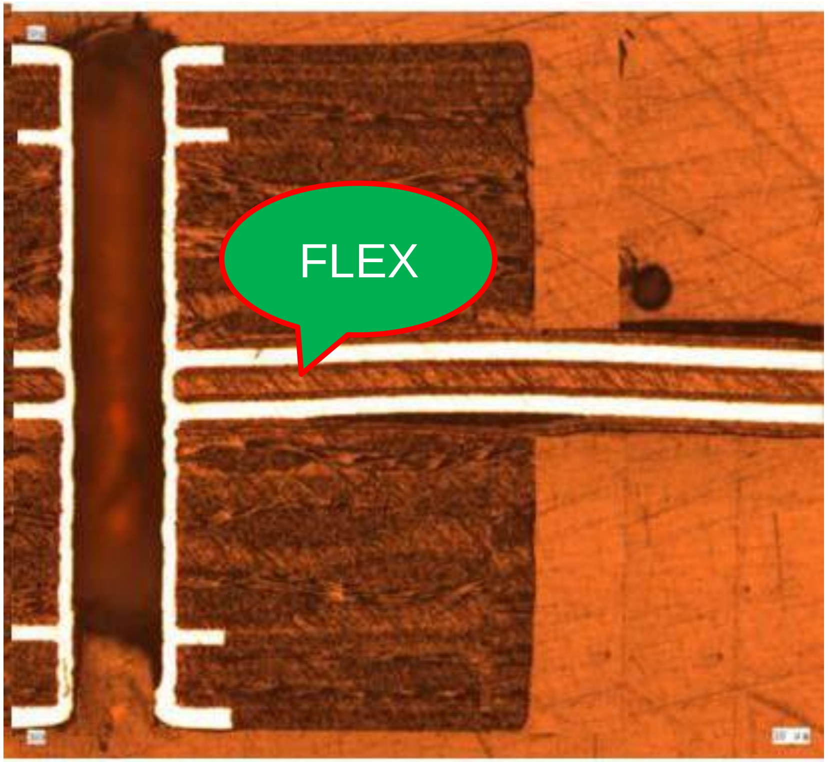
Embeded Capacitance PCB

PCB Fabrication

Products Index (2)

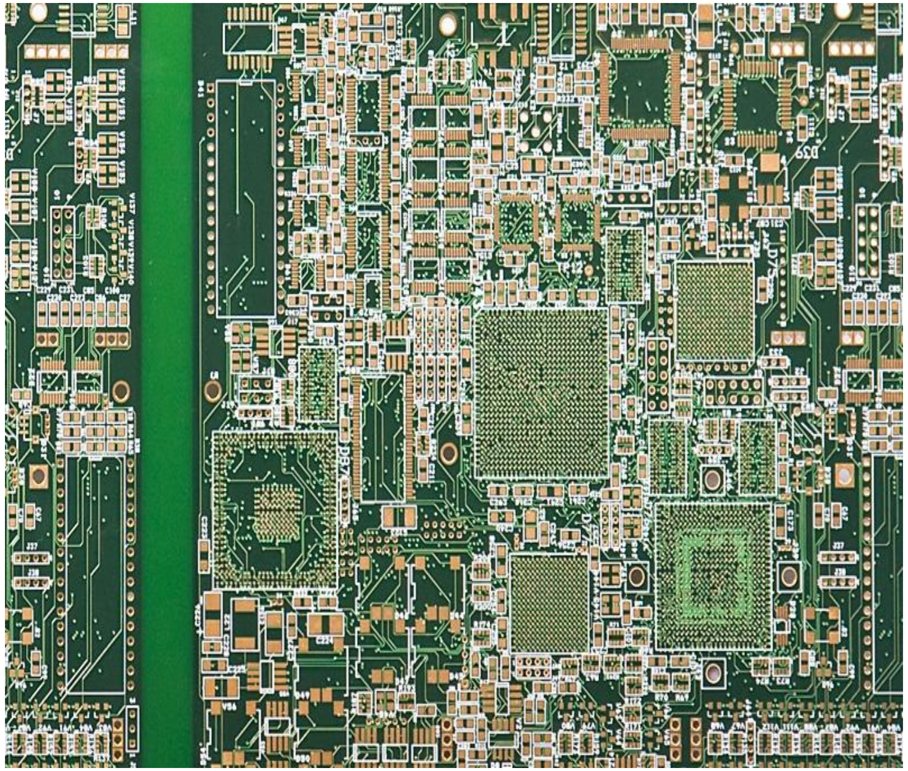


6L（Rigid）+ 2L（Flex）
ENIG: IPC-4552
Thickness: 1.6mm
Material: ISOLA IS410
Hole Copper: 25um

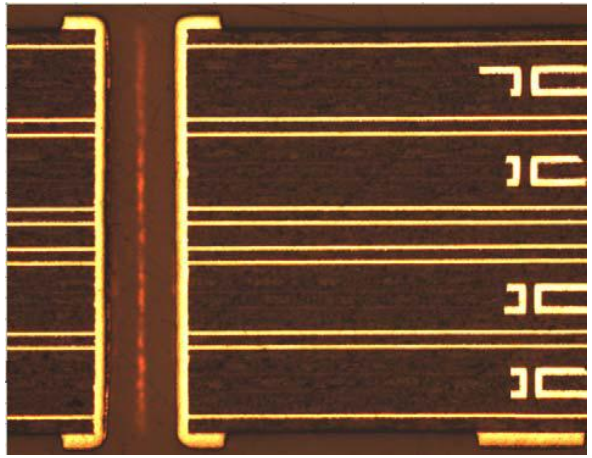


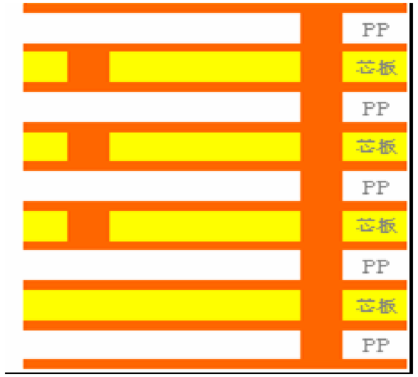
Rigid-Flex PCB

Products Index (3)



24L
ENIG
Thickness: 3.4mm
Core Thickness: 2mil
Hole Size: 12mil
Hole Copper: 25um Buried Via
Copper: 25um
Buried Vias by Machine: L3-L4; L7-L8;L13-L14;L17-L18 Line

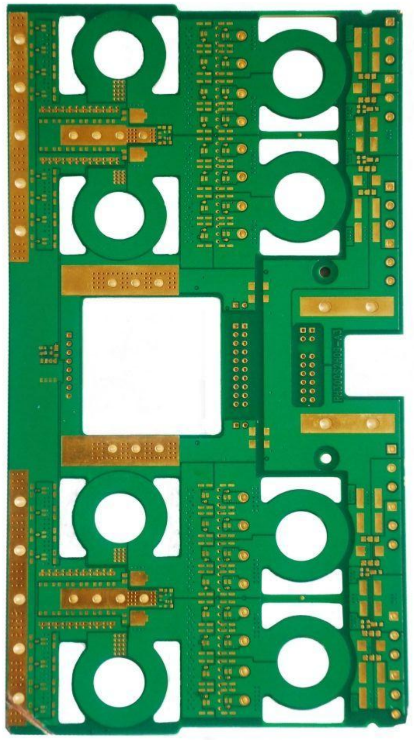




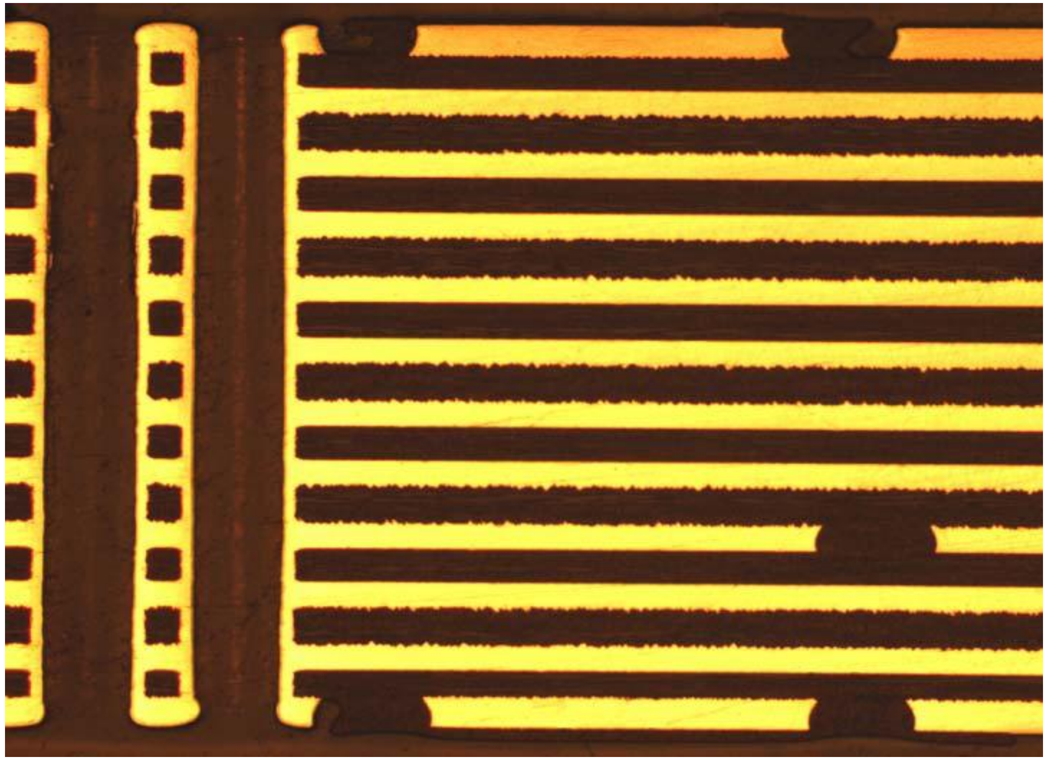
L18 Line Card With Buried Holes

PCB Fabrication

Products Index (4)



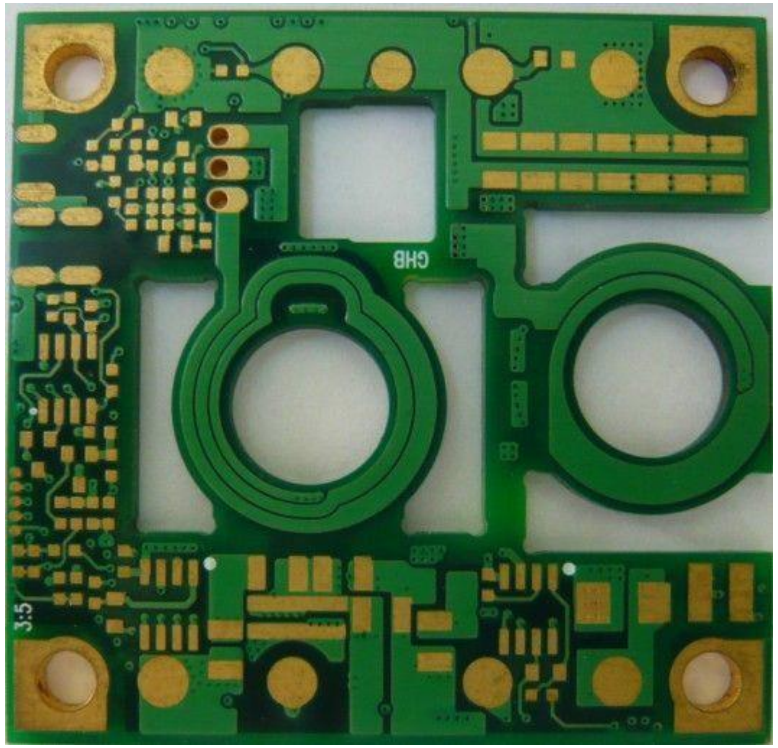
12L
ENIG: IPC-4552
Thickness: 3.2mm
Material: IT180
Hole Copper: 30-80um
Circuit Copper:
3OZ (All Layers)
4OZ (All Layers)
5OZ (All Layers)
6OZ (All Layers)



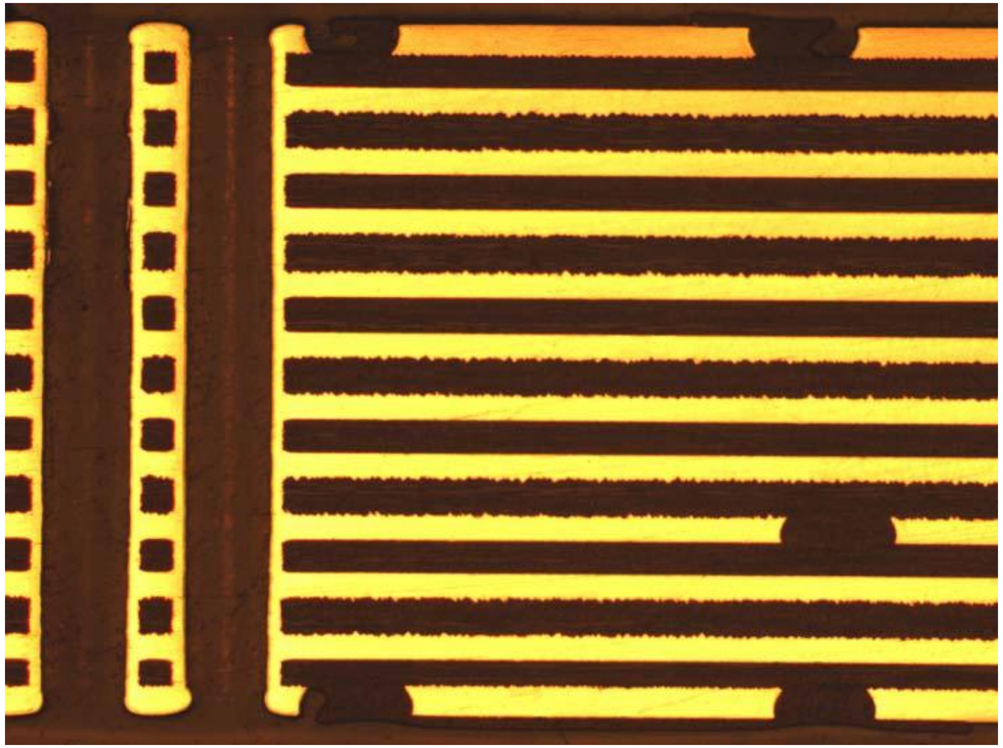
Heavy Copper PCB Board

PCB Fabrication

Products Index (5)



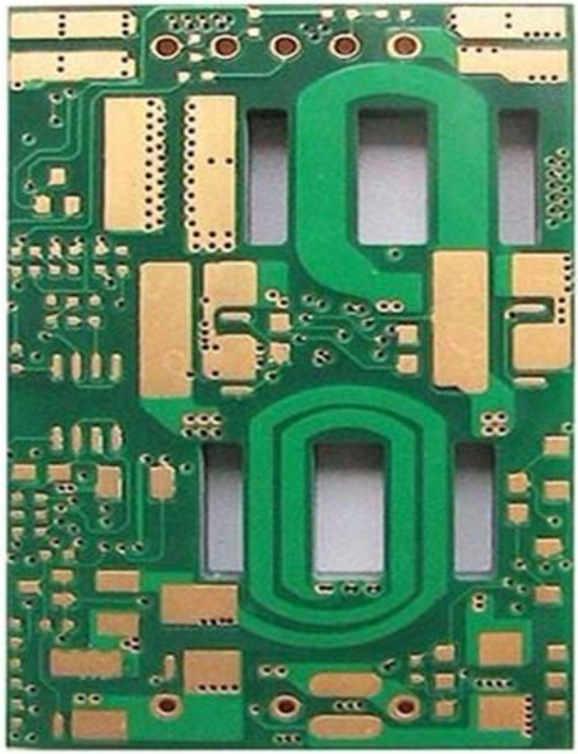
12L
ENIG: IPC-4552
Thickness: 1.80mm
Material: IT180A
Hole Copper: 1.18-3.15um
Circuit Copper:
3OZ (All Layers)
4OZ (All Layers)
5OZ (All Layers)
6OZ (All Layers)



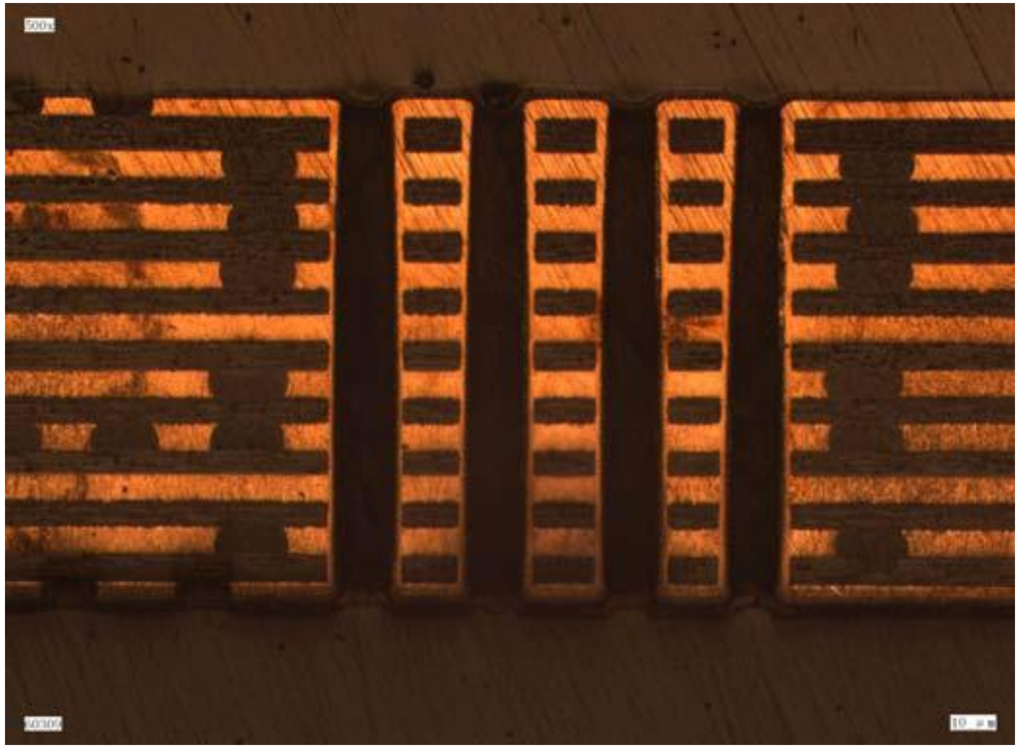
Heavy Copper PCB Board

PCB Fabrication

Products Index (6)



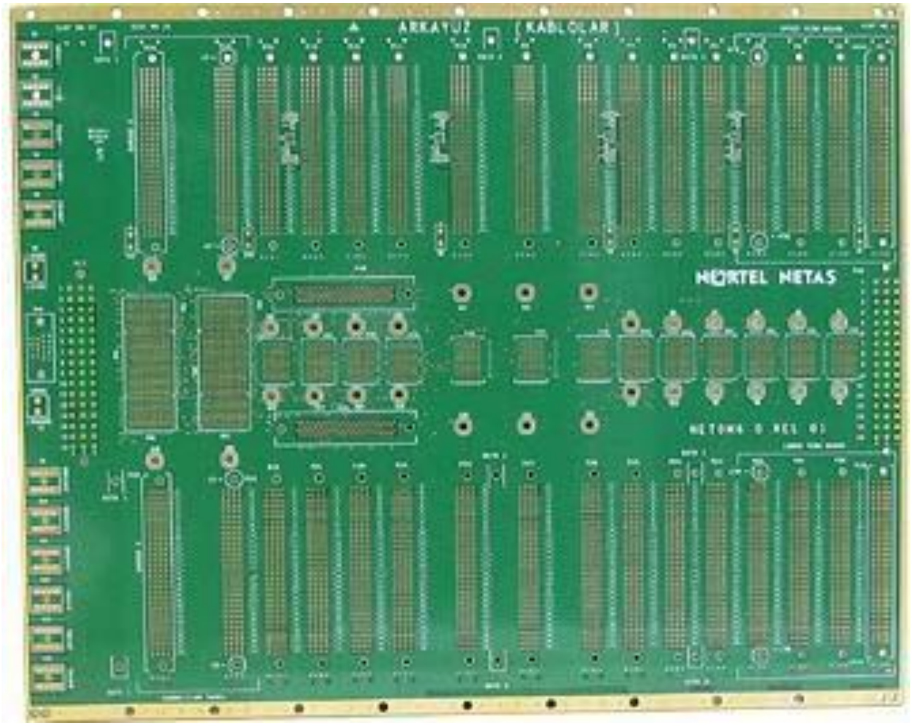
10L
ENIG-IPC4552
Thickness: 98.8mil
Material: IT180
Copper :
4OZ (Inner)
2.6OZ (Outer)



Heavy Copper PCB Board

PCB Fabrication

Products Index (7)

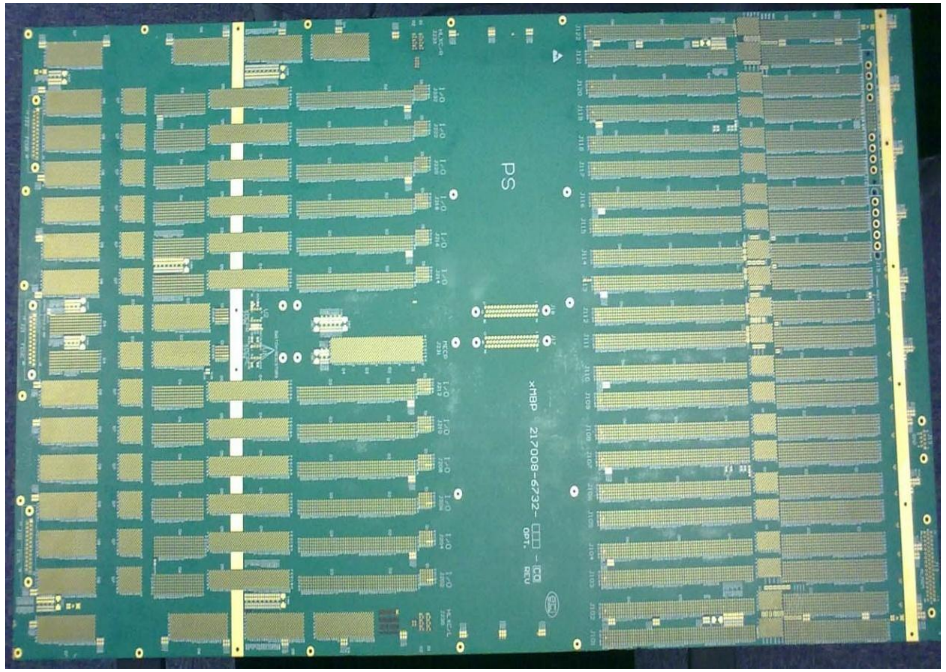


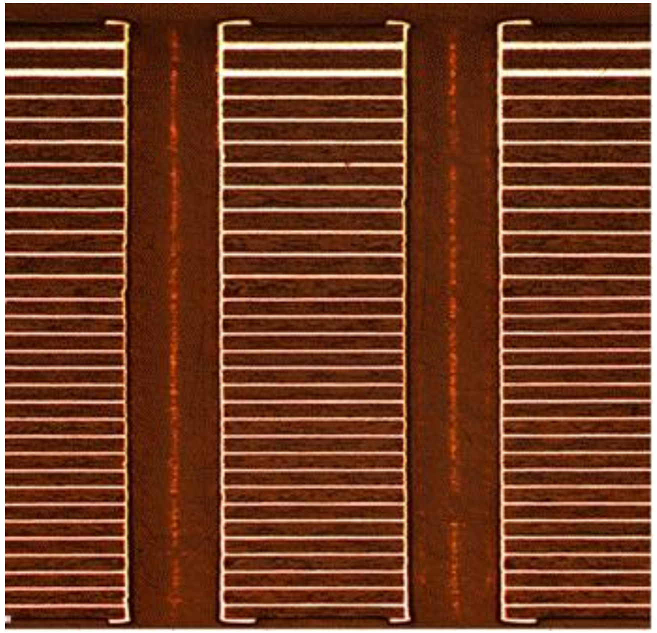
26L
ENIG-IPC4552
Thickness: 4.8mm
Material: High Tg 170
Hole Copper: 25um
Characteristic/Difference Impedance Control: +/-10%
Customer: Nortel Networks

Backplane PCB Board

PCB Fabrication

Products Index (8)



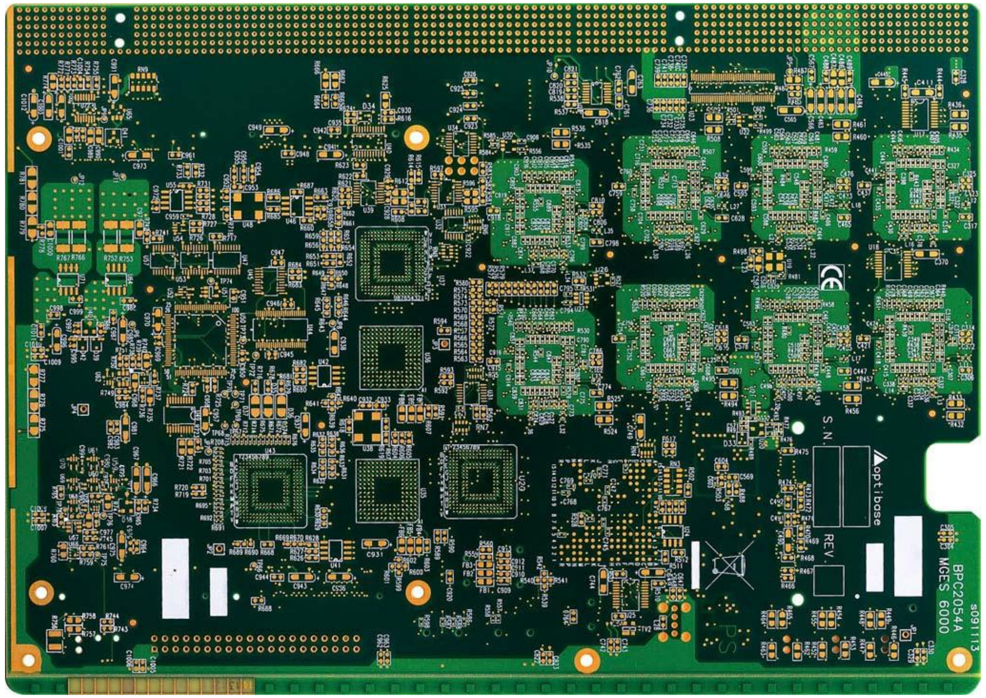


32L
ENIG
Thickness: 5.8mm
Material: Tg170
Size: 470*875(mm*mm)
Hole Copper: 25um

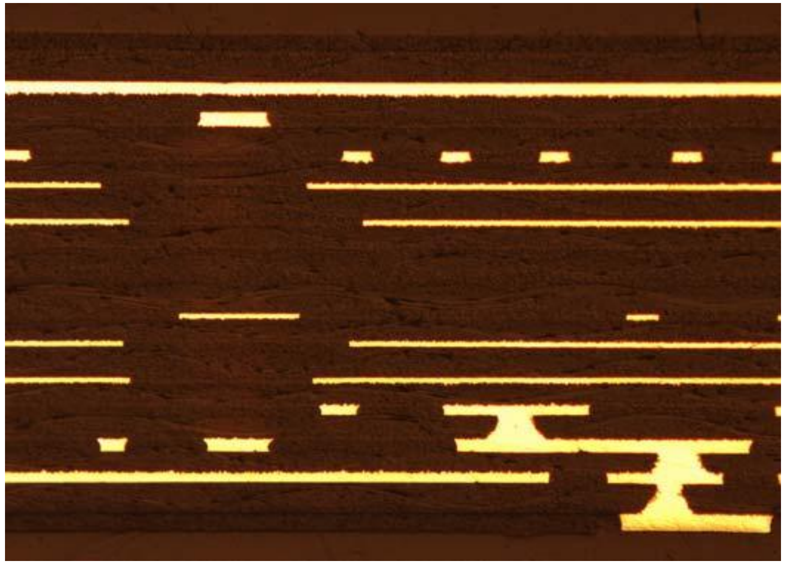
Backplane PCB Board

PCB Fabrication

Products Index (9)



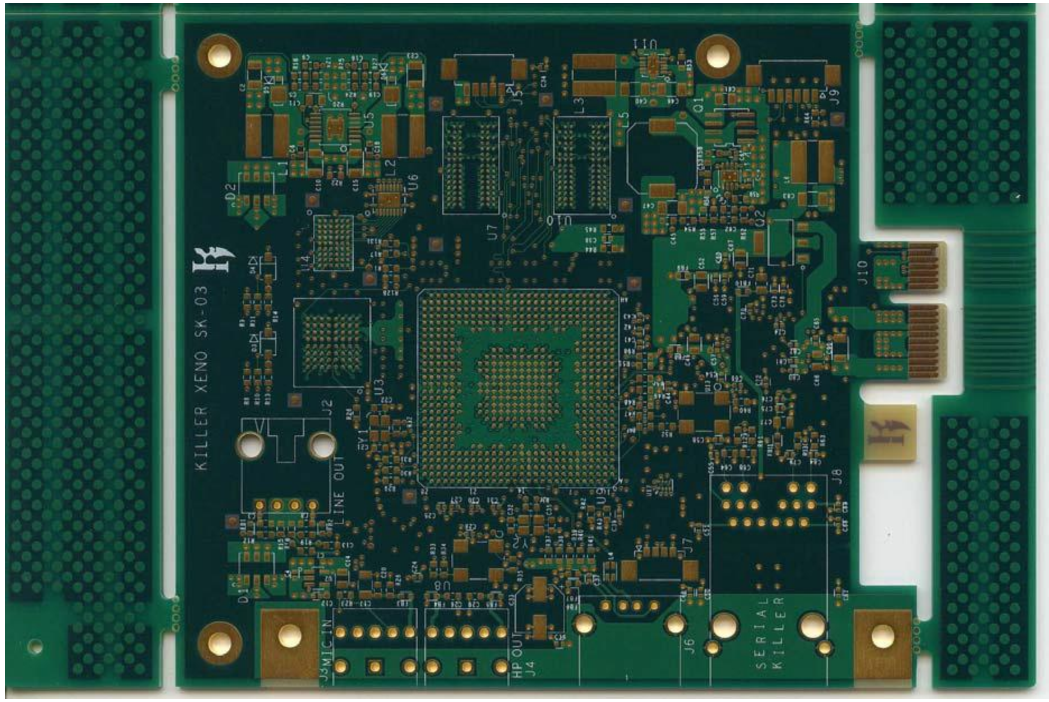
14L
ENIG
Thickness: 126.0mil
Material: IT180A
Hole Copper: 25um



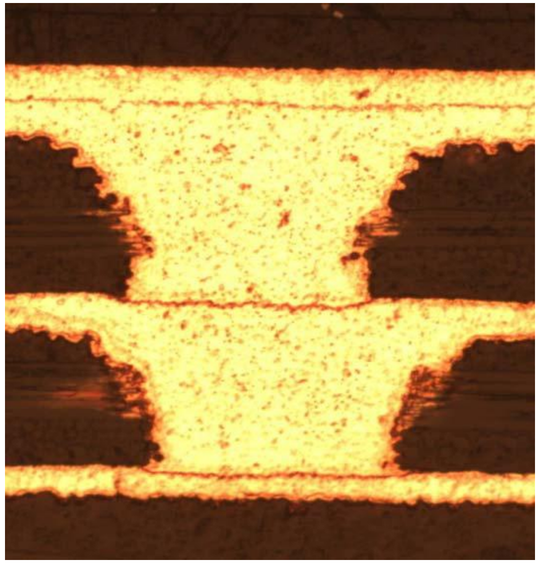
HDI PCB Board

PCB Fabrication

Products Index (10)



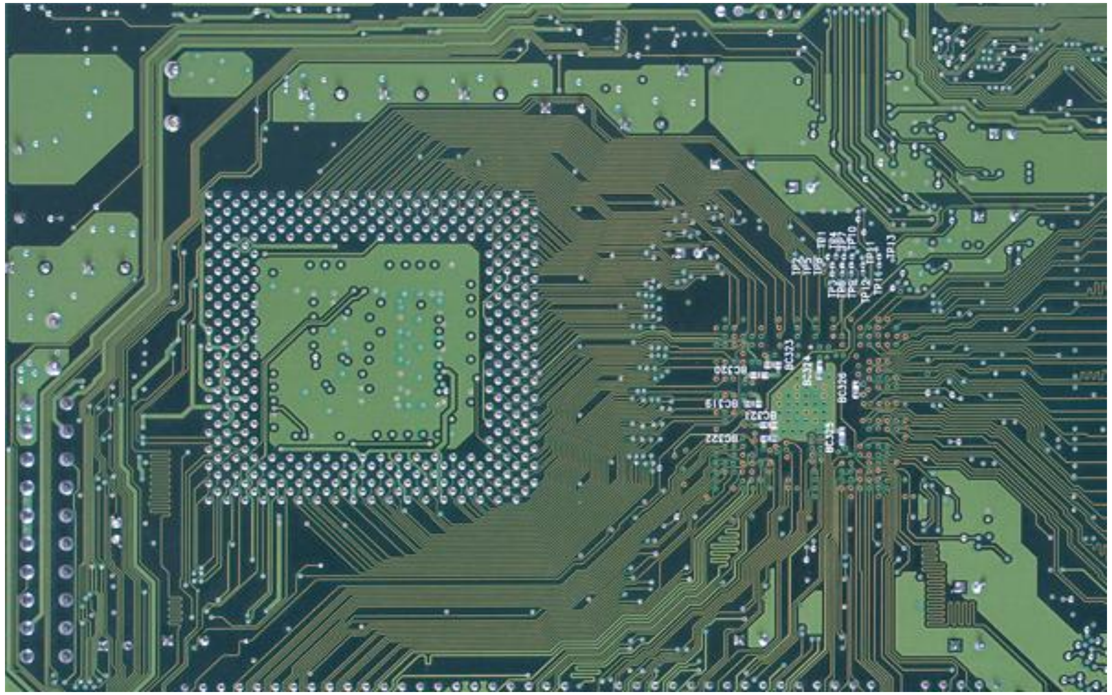
Laser Drill
Copper Plating

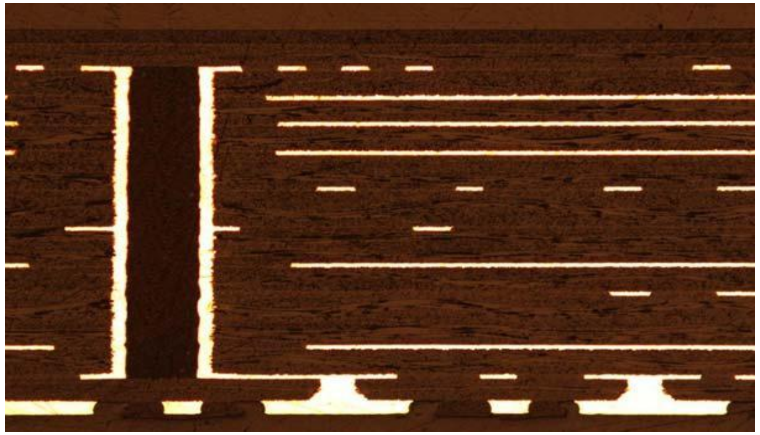


HDI PCB Board 2+8+2

PCB Fabrication

Products Index (11)



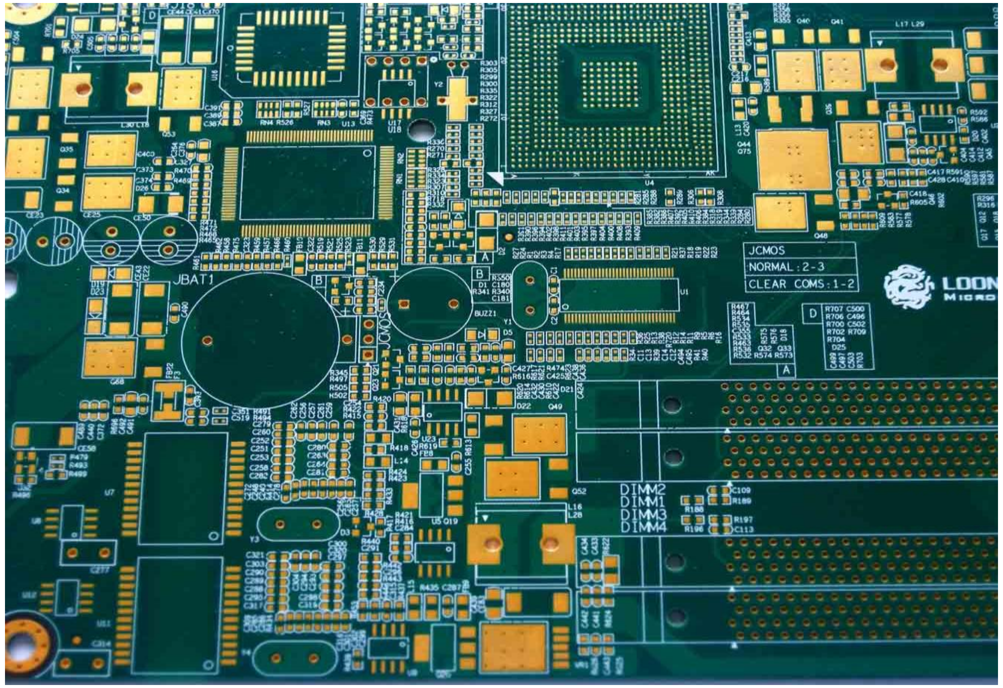


12L
ENIG: IPC-4552
Thickness: 63.0mil
Material: S1000
Hole Copper: 25um

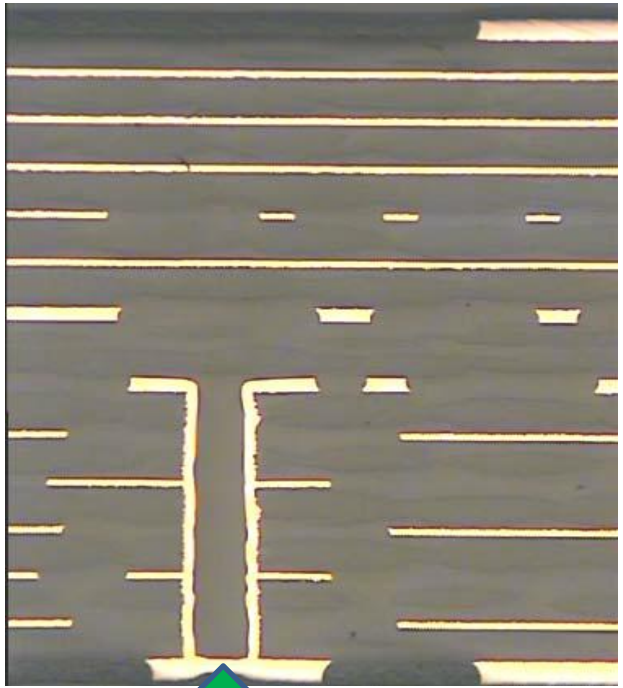
HDI PCB Board

PCB Fabrication

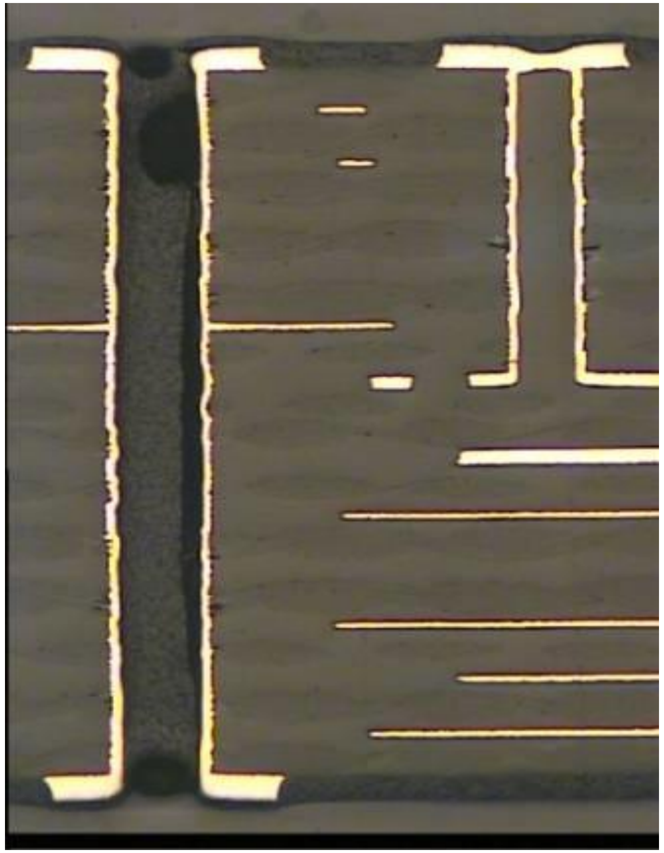
Products Index (12)



Mechanical Blind Holes

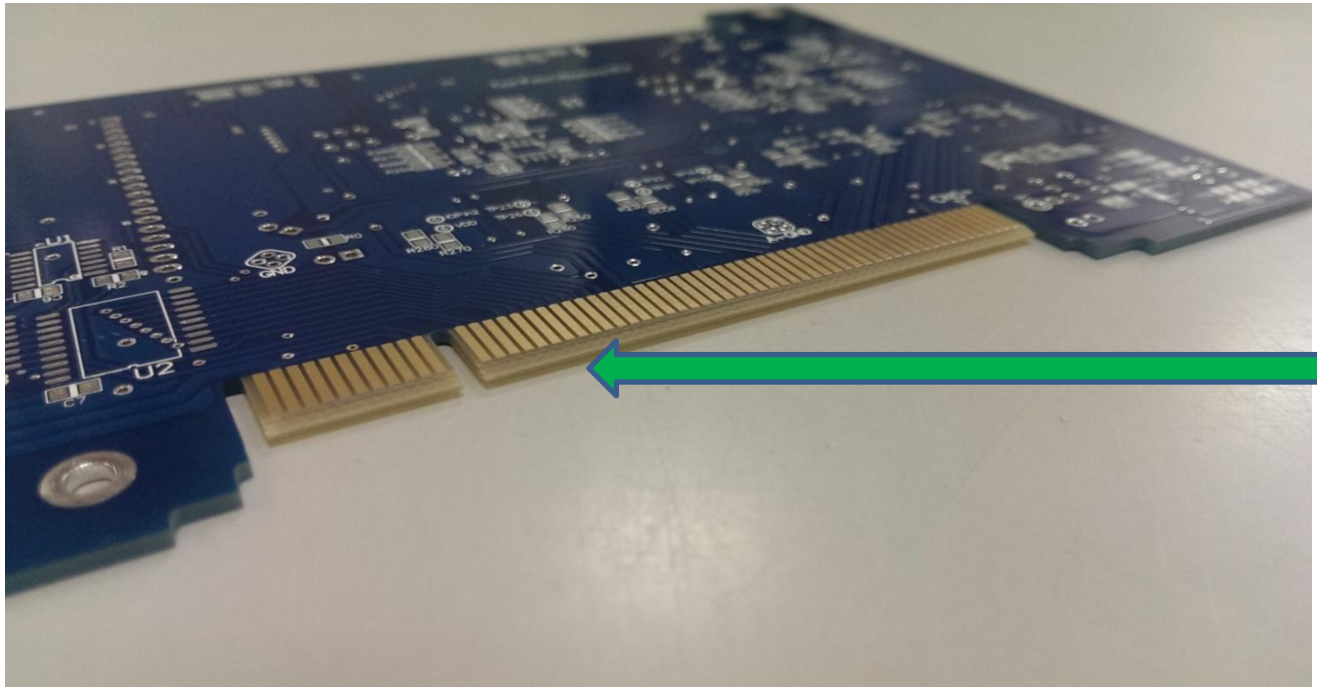


Resin Filling



PCB Fabrication

Products Index (13)



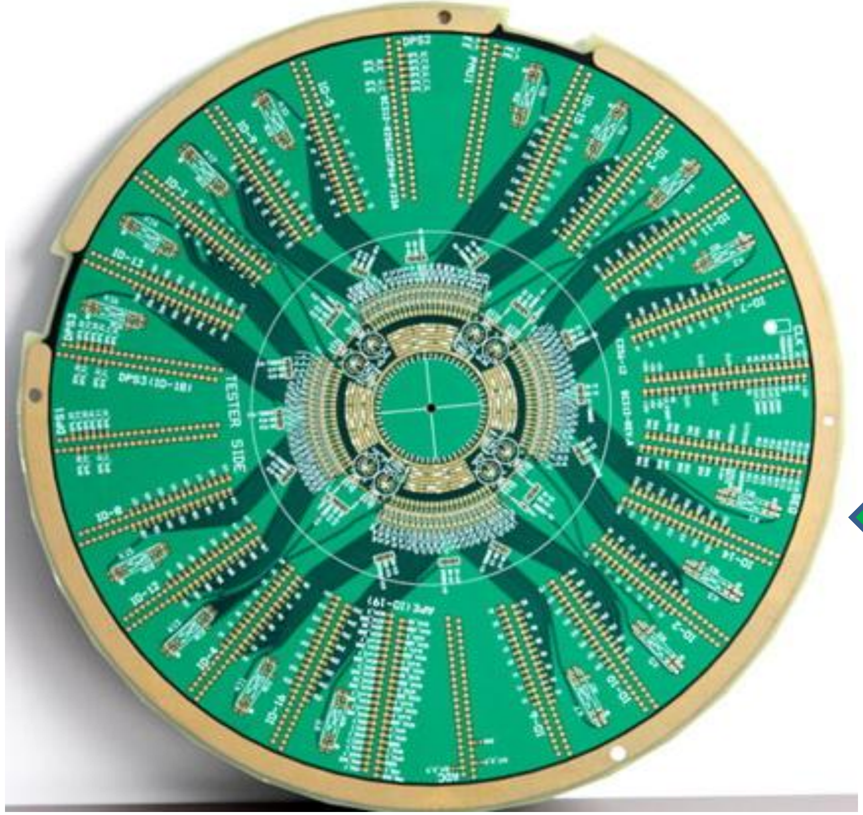
6L
Thickness: 1.6mm
ENIG: 2u” + Hard Gold on Gold Finger 30u”
Special Process:
Gold Finger Beveling the Board in Panel

Internal Bevel Process

Gold Finger PCB

PCB Fabrication

Products Index (14)



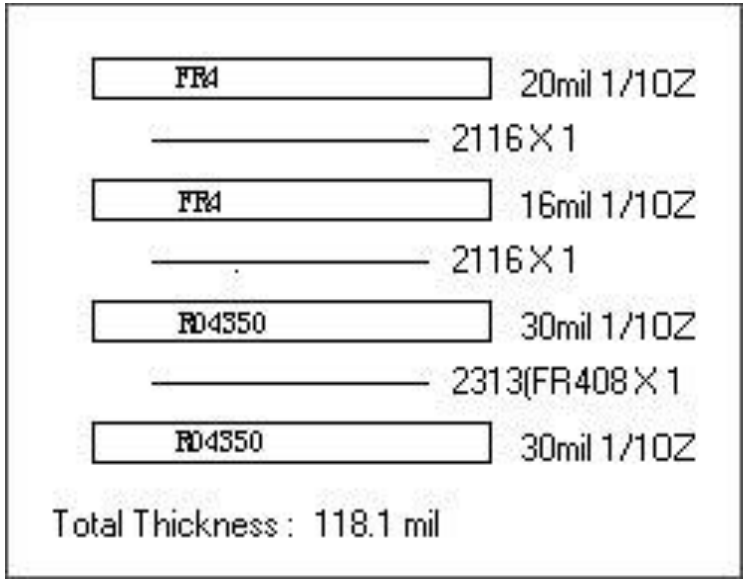
Layers: 12
thickness: 5mm
Surface: Immersion Gold
Min. Hole: 0.5mm
Max. Aspect Ratio: 10:1

IC Test PCB Board

PCB Fabrication

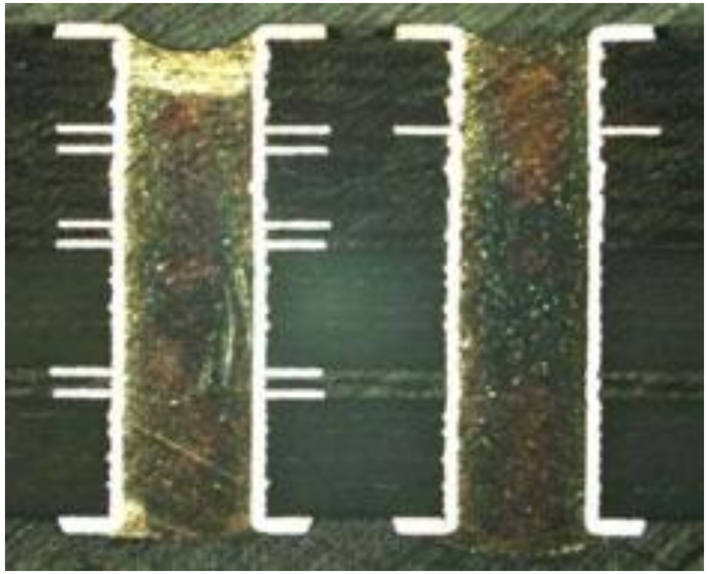
Products Index (15)

Rogers/FR4 Hybrid PCB Board



FR4 20mil 1/1OZ
2116X1
FR4 16mil 1/1OZ
2116X1
RO4350 30mil 1/1OZ
2313(FR408X1
RO4350 30mil 1/1OZ
Total Thickness : 118.1 mil

Layer Stackup



Micro-Section

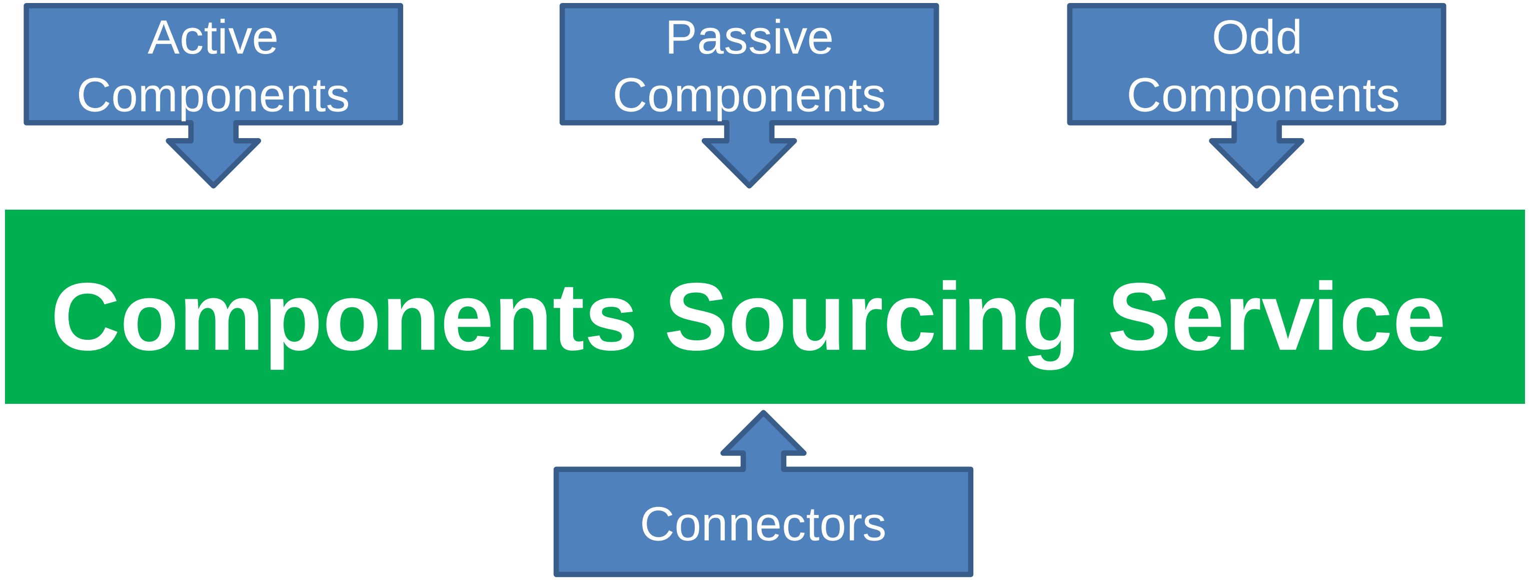
Business Introduction

Components Sourcing

Components Sourcing

Components Sourcing Service:

Customized supply chain programs that can streamline your manufacturing, and can provide 30% - 50% cost savings.



Active Components

Passive Components

Odd Components

Components Sourcing Service

Connectors

Components Sourcing

Reference Strategic Components Suppliers

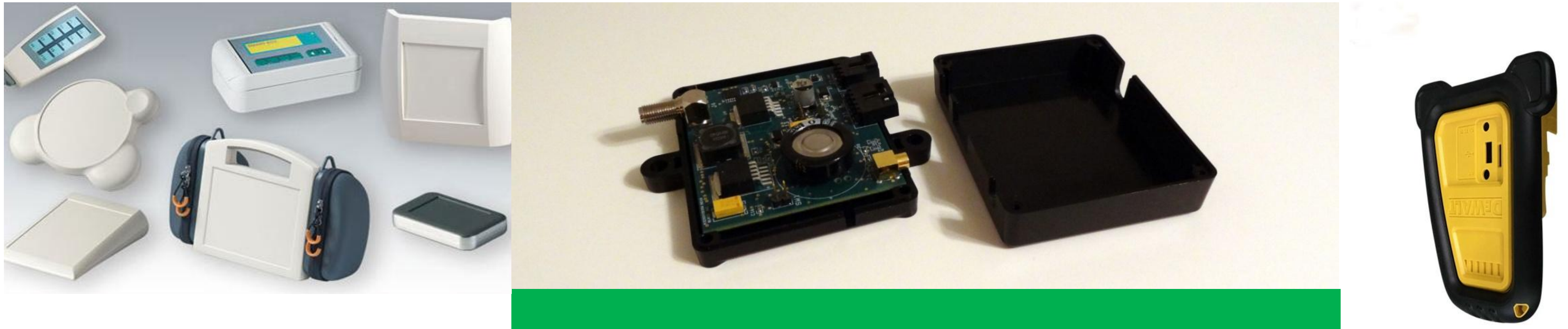
MOUSER ELECTRONICS	Digi-Key ELECTRONICS	Atmel®	MICROCHIP
chip 1 stop®	NXP	muRata	ST STMicroelectronics
WE WÜRTH ELEKTRONIK	verical an arrow. division	UniOhm	element14
TEXAS INSTRUMENTS	SULLINS CONNECTOR SOLUTIONS	molex®	Amphenol ICC

Exactly More Than Above

Business Introduction

Mold Injection Service

Mold Injection



Mold Injection Service

Mold Injection

Mold Injection Production Tour

MOLD WORKSHOP

INJECTION WORKSHOP

WELLER Technologies™
Focus On EMS More Than 10 Years

Mold Injection

Mold Injection Production Tour

Wire Walking Machine

CNC Workshop

Mirror EDM Processing Workshop

Contact Us:

How To Contact US

Weller Technology Co., Limited
Tel: 86 755 2828 2776
Fax: 86 755 2828 2076
E-mail: service@wellerpcb.com
Web: www.wellerpcb.com
Add: Taiyuan Baiwannian Industry Park, Huamei Road, Baishixia East, Fuyong Town, Bao’an District, Shenzhen, China. P.C. 518103