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VENTURE ELCTRONICS CO., LTD.

Your Total PCB Solution

PCB Design & Layout

- Schematic Design Service
- PCB Layout Service
- PCB & BOM Reverse Engineering Service

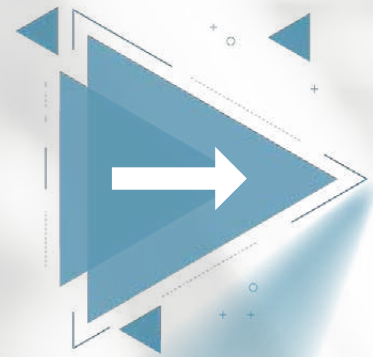
PCB Fabrication

- Rigid, Flex, Rigid-Flex PCB
- Quick Turn Around & High Mix Low Volume

PCB Assembly

- SMT and Through Hole Assembly
- Parts Management
- Functional Testing & Conformal Coating

Company Profile



Why Choose Us

- Online instant quote without hidden cost.
- Quick turn service with 24 hours build time.
- Over 10 years experience with trusted capability.
- Professional and thoughtful technical support
- Free DFM Review (Design for Manufacturing)
- 100% quality guarantee, offer free re-do if needed

Venture Electronics is built to meet customer support every day of the year (24/7/365), located in Shenzhen, China. We offer CAD Design, quick turnaround, small quantity & large-scale PCB, and PCB assembly and cable assembly services all under one roof. We're committed to improving the prototype through production processes for design engineers from quote to delivery, and we are dedicated to providing a total solution that will help customers bring their projects to market on time and on budget.



PCB Design & Layout

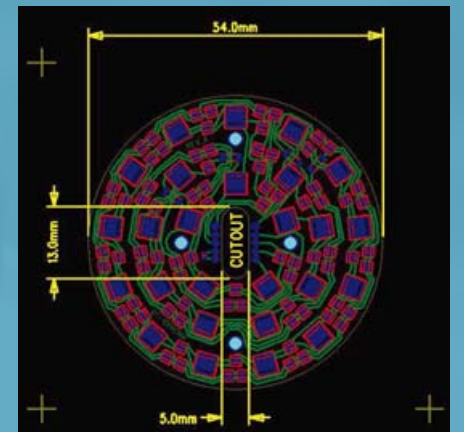


VENTURE ELECTRONICS is recommended and considered as an important partner in customer's PCB design process, is able to meet customer's very tight PCB Design & Layout schedules.



- | | |
|---|--------------------------------|
| • Co-Design Service | • Schematic Design Service |
| • PCB Layout Service | • Cost Down Consulting Service |
| • One Stop Turn-Key Service | • Test Jigs & Debug Service |
| • PCB & BOM Reverse Engineering Service | |

Min.trace width: 2.5mil
Min. vias: 6mil(4mil Laser drilling)
Min. BGA spacing: 0.35mm
Max. High-speed signal: 40GBPS
HDI Highest layer: 22L
Min. trace spacing: 2.5mil
Max. Layer: 48L
Max. BGA Pin: 3600pin
Fastest delivery time: 6H/item
HDI Highest layer order: 14L arbitrary order HDI



- Products types: Data communication products, Optical network products, Multimedia products, Network products, Medical products, Industrial control products, etc.
- Chip types: Network processing series, Intel server series, Freescale PowerP-C Series, Samsung ARM series, DDR3 & DDR4 series, etc.
- Design software: Cadence Allegro\ORCAD, Mentor WG\PADS Protel99\Altium Designer(AD)
- MCU Decryption, CPLD Decryption, SPLD Decryption, PLD Decryption, IC Decryption and Chip Decryption, and PCB & PCBA reverse engineering.

PCB Fabrication

We Provide

- Rigid, Flex, Rigid-Flex bannel
- Embedded resistors, connector pins and capacitors
- Matal-cored PCB, Heavy Copper PCB
- High-Density Interconnect, Blind and buried viahole

High Lights:

- 2 hours rapid response: Enquires and consultation responded within 2 hours
- Full QTY Regular orders on time delivery over 90%; Full QTY Expedite orders on time delivery over 99%
- 10 years experienced PCB manufacturing services team
- Complete materials including stock special materials made by world's top companies such as Rogers, Isola, Nanya, Arlon, Taconic, Ventec, Dupont, Tellon, Panasonic, Berquist, etc.
- In an effort to offer our customer complete PCB solutions with best price and service, our factory not only manufacture PCB in our own house, but also cooperate with China top PCB manufacturer for very complicated boards.
- We provide expedite services for both prototype and volume production:
Fastest prototype 1L to 8L: 24 hours
Fastest volume production (within 100m2) 2L to 6L: 72 hours
- We offer flexible payment terms: Prepayment, Payment after delivery, Monthly Payment. You can also let us know about your usual way of payment, we will try best to meet your requirements if needed.

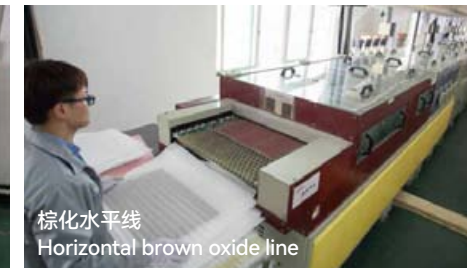
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PCB Manufacturing Main Equipment



AOI
AOI both inner&outer layer



棕化水平线
Horizontal brown oxide line



金相显微镜
Metallurgical Microscope



钻机
Drilling machine



全自动字符喷墨机
Automatic Character ink printer



锣板机
Routing machine



垂直电镀线
Vertical plating line

PCB Fabrication:

Prototype PCB Manufacturing Capability

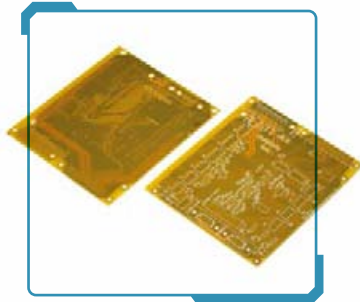
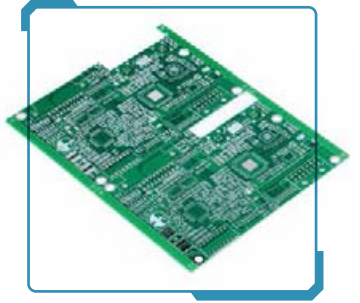
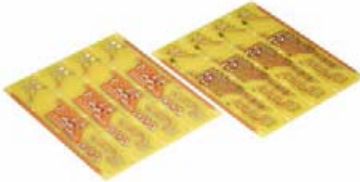
Alternative processes are available through our network of fully approved sub-contractors.

PCB Prototype Features	Capability
Quality Grade	Standard IPC 2-3
Number of Layers	1 - 32 layers
Order Quantity	1pcs +
Material	Rigid: FR2, CEM-1, CEM-3, FR4 (standard - halogen free - high performance) including: ShengYi, Iteq, Elite Materials Corp., NanYa, Kingboard, Grace, TUC, Meteorwave
	Flex: PI, PET Including: Taiflex, Dupont FR & AP, Panasonic, ShengYi, Doosan. Hanwha, SF305
Material	Metal Core: Metal Core Aluminum based material Including: Bergquist MP, HT & CML, ITEQ T-Lam, Laird TLAM SS Taiflex, Dupont FR & AP, Panasonic, ShengYi, Doosan, Arlon, Ventec and suggested local material brand(for detail pls contact our sales)
Board Size	Maximum 610 x 1200mm(24" X 47")
Board Thickness	Rigid PCB : 0.15mm - 10 mm
	FLEX PCB: 0.05mm - 0.16mm
Copper Weight	1.0oz - 15.0oz
Inner Layer Copper Weight	0.5oz - 12.0oz
Min Trace/Space(track/gap or width/space)	2mil/2mil (0.05mm/0.05mm)
Solder Mask Color	Green, White, Blue, Black, Red, Yellow or others
Silkscreen Color	White, Black or others
Surface Finish	ENIG/ GF / OSP / IAg / HASL (lead) / HASL (Leadfree)/ Plating Au/Ni/ Immersion Sn / GF+OSP / GF+HASL/ OSP+ENIG / IAG+GF/Isn+GF
Min Drilling Hole Diameter	mechanical : 0.1mm
	laser : 0.05mm
NPTH Hole Size Tolerance	±0.025mm
PTH Hole Size Tolerance	±.003" (±0.08mm) - ±.006" (±0.15mm)
Surface/Hole Plating Thickness	20µm - 30µm
Aspect Ratio	20:1 (board thickness: hole size)

PCB Fabrication:

Rigid PCB Manufacturing Capability

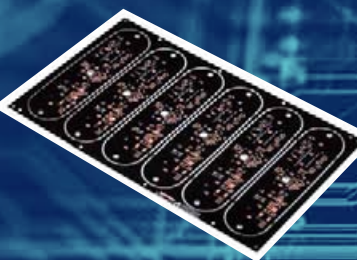
Rigid PCB Feature	Parameter (in)	Parameter (mm)
Layers	1-30>	1-30>
Max Board Size	24" x47"	610 x 1200mm
Min Board Thickness - 1-2 (layers)	4mil	0.1mm
Min Board Thickness - 4 (layers)	10mil	0.25mm
Min Board Thickness - 6 (layers)	16mil	0.4mm
Min Board Thickness - 8 (layers)	16mil	0.4mm
Min Board Thickness - 10 (layers)	32mil	0.8mm
Min Board Thickness - 12 (layers)	40mil	1.0mm
Min Board Thickness - 14 (layers)	48mil	1.2mm
Min Board Thickness - 16 (layers)	54mil	1.4mm
Min Board Thickness - 18 (layers)	62mil	1.6mm
Min Board Thickness - >20 (layers)	62mil	1.6mm
Board Thickness Range	14 - 276mil	0.35 - 7mm
Max Copper Thickness	15oz	525um
Min Line Width / Space	2mil / 2mil	0.05 / 0.05mm
Min Hole Size	3mil	0.075mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±3mil	±0.075mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.075mm
Aspect Ratio	18:01	18:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 0.7%	<= 0.7%
Flammability	94V-0	94V-0
Impedance Control	±5%	±5%
HDI Capability	Any Layer	Any Layer



PCB Fabrication:

Aluminum & Metal Core PCB Manufacturing Capability

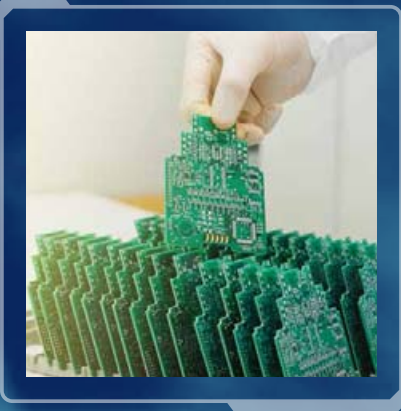
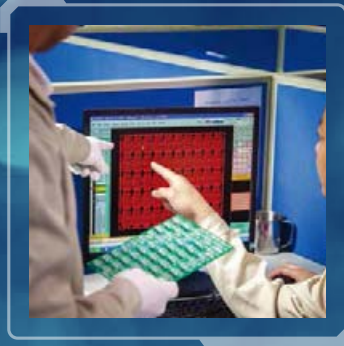
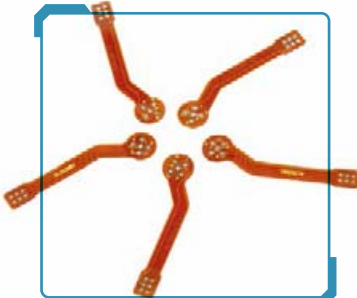
Aluminum PCB Feature	Parameter (in)	Parameter (mm)
Layers	1 - 6	1 - 6
Max Board Size	24" x 70"	609.6 x 1800mm
Min Board Thickness - 1-2 (layers)	16mil	0.4mm
Min Board Thickness - 4 (layers)	20mil	0.5mm
Min Board Thickness - 6 (layers)	24mil	0.6mm
Board Thickness Range	16 - 157mil	0.4- 4mm
Max Copper Thickness	15oz	525um
Min Line Width / Space	4mil / 4mil	0.1 / 0.1mm
Min Hole Size	20mil	0.5mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±4mil	±0.1mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.08mm
Aspect Ratio	6:01	6:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 0.75%	<= 0.75%
Flammability	94V-0	94V-0



PCB Fabrication:

Flexible PCB Manufacturing Capability

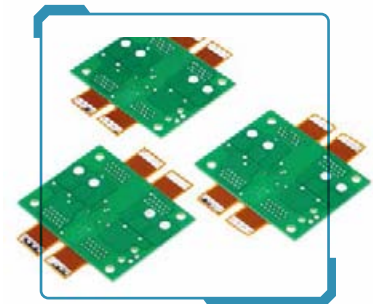
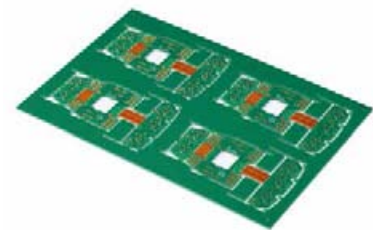
Flexible PCB Feature	Parameter (in)	Parameter (mm)
Layers - Flex	1 - 6	1 - 6
Layers- Rigid	4 - 30>	4 - 30>
Max Board Size	24" x 40"	609.6 x 1016mm
Board Thickness Range	4 - 12mil	0.1 - 0.3mm
Min Line Width / Space	2mil / 2mil	0.05 / 0.05mm
Min Hole Size	3mil	0.075mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±3mil	±0.075mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.075mm
Aspect Ratio	18:01	18:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 0.7%	<= 0.7%
Flammability	94V-0	94V-0
Impedance Control	±5%	±5%



PCB Fabrication: .

Rigid-Flex PCB Manufacturing Capability

Rigid Flex PCB Feature	Parameter (in)	Parameter (mm)
Layers - Flex	1 - 6	1 - 6
Layers - Rigid	4 - 30>	4 - 30>
Max Board Size	24" x 40"	609.6 x 1016mm
Board Thickness Range	14 - 276mil	0.35 - 7mm
Max Copper Thickness	5oz	175um
Min Line Width / Space	2mil / 2mil	0.05 / 0.05mm
Min Hole Size	3mil	0.075mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±3mil	±0.075mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.075mm
Aspect Ratio	18:01	18:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 0.7%	<= 0.7%
Flammability	94V-0	94V-0
Impedance Control	±5%	±5%
HDI Capability	Any Layer	Any Layer

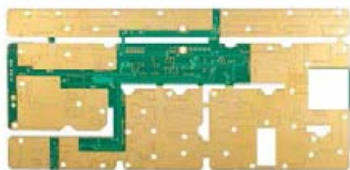


PCB Fabrication:

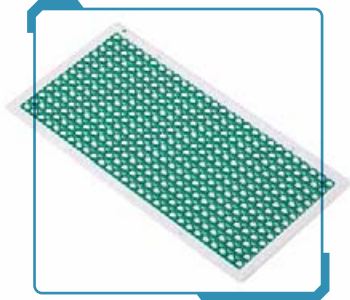
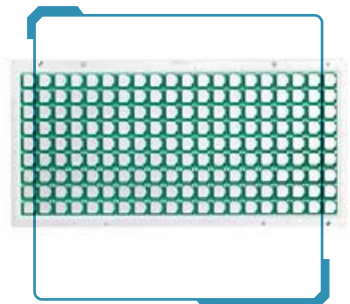
High Frequency PCB, RF PCB Manufacturing Capability

Ceramic PCB Manufacturing Capability

RF PCB Feature	Specification
Layers Counts	1-20 layers
Materials	Low loss / low Dk, higher performance FR-4, PPO, Teflon, hydrocarbon / ceramic filled
Highlights	Controlled impedance, low loss materials
Profile method	v-score, Routing
Dielectric thickness	0.1mm - 3.0mm
Copper weights (finished)	½ to 6 ounce
Minimum track and gaps	0.075mm / 0.075mm
Maximum dimensions	580mm X 1010mm
Metal core thickness	0.4-2mm post bonded
Surface finishes available	HASL (Lead-free), OSP, ENIG, Immersion tin, Immersion silver



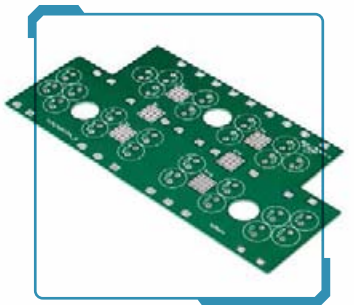
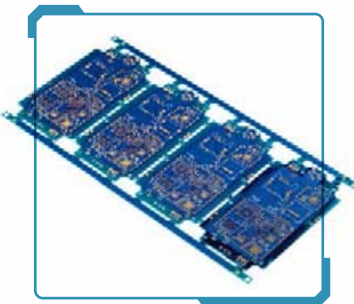
Ceramic PCB Feature	Parameter (in)	Parameter (mm)
Layers	1 - 6	1 - 6
Max Board Size	24" x 40"	609.6 x 1016mm
Min Board Thickness - 1-2 (layers)	14mil	0.35mm
Min Board Thickness - 4 (layers)	16mil	0.4mm
Min Board Thickness - 6 (layers)	20mil	0.5mm
Board Thickness Range	14 - 276mil	0.35 - 7mm
Max Copper Thickness	5oz	175um
Min Line Width / Space	2mil / 2mil	0.05 / 0.05mm
Min Hole Size	6mil	0.15mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±4mil	±0.1mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.075mm
Aspect Ratio	8:01	8:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 3%	<= 3%
Flammability	94V-0	94V-0
Impedance Control	±7%	±7%



PCB Fabrication: HDI PCB & Thick (Heavy) Copper PCB Manufacturing Capability

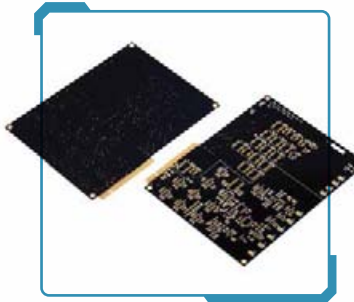
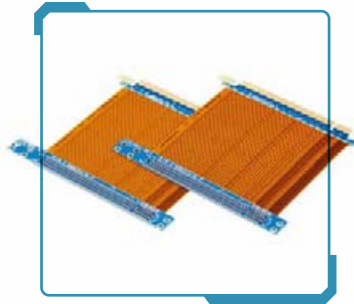
HDI PCB Feature	Technical Specification
layers counts	4-30 layers
HDI builds	1+N+1, 2+N+2, 3+N+3,4+N+4, any layer in R&D
Materials	FR4, Halogen free FR4, Rogers
Copper weights (finished)	18µm – 70µm
Minimum track and gap	0.075mm / 0.075mm
PCB thickness	0.40mm – 3.20mm
Maximum dimensions	610mm x 450mm
Surface finishes available	OSP, Immersion Gold(ENIG), Immersion tin, Immersion silver, Electrolytic gold, Gold fingers
Minimum mechanical drill	0.15mm
Minimum laser drill	0.1mm advanced

Thick Copper PCB Feature	Specification
Layers Counts	1-32 layers
Materials	FR-4 (All Tg Ranges), Teflon, Ceramic, Metal Core
Finished Thickness	.020" – .275"
Solder mask color	Green, Blue, Red, Black, Clear & White Solder Masks & Legend Inks
Minimum soldermask Clearance	6 mil
Minimum solder Dam Width	5.5 mil
Maximum Copper weights (finished)	16oz
Minimum drilling bit hole size	.012"
Maximum Hole Aspect Ratio	30:01:00
Controlled impedance	±10%
Surface finishes available	HASL(Hot Air Solder leveling), Immersion gold(ENIG), Immersion silver



PCB Fabrication: Gold Fingers PCB Manufacturing Capability

Gold Fingers PCB Feature	Parameter (in)	Parameter (mm)
Layers	1 - 30>	1 - 30>
Max Board Size	24" x 40"	609.6 x 1016mm
Board Thickness Range	14 - 276mil	0.35 - 7mm
Max Copper Thickness	15oz	525um
Min Line Width / Space	2mil / 2mil	0.05 / 0.05mm
Min Hole Size	3mil	0.075mm
PTH Dia. Tolerance	±2mil	±0.05mm
NPTH Dia. Tolerance	±1mil	±0.025mm
Hole Position Deviation	±3mil	±0.075mm
Outline Tolerance	±4mil	±0.1mm
S/M Pitch	3mil	0.075mm
Aspect Ratio	18:01	18:01
Thermal Shock	5 x 10Sec @288	5 x 10Sec @288
Warp & Twist	<= 0.7%	<= 0.7%
Flammability	94V-0	94V-0
Impedance Control	±5%	±5%
HDI Capability	Any Layer	Any Layer



PCB Fabrication:
Material –Copper Clad Laminate (CCL) List

Material Type	Tg	Product	Manufacturer
Aluminium	130	T-111	Totking
Aluminium	170	92ML	Arlon
Aluminium	185	HPL-03015	Bergquist
Aluminium	105	T-Lam 6061+ 1KA10	Laird
Aluminium	120	KW-ALE	Kinwong
Aluminium	140	DST-5000	Doosan
Aluminium	140	T-Lam 5052 + 1KA04	Laird
Aluminium	170	VT-4A2	Ventec
Aluminium	105	ML1KA	Laird
Aluminium	105	SS1KA	Laird
Aluminium	105	T-Lam - Alco 6061+ 1KA04	Laird
Aluminium	105	TLam SS 1KA06	Laird
Aluminium	110	TCP-1000	Bergquist
Aluminium	120	KW-ALS	Kinwong
Auminium	130	CML-11006	Bergquist
Aluminium	130	IT-859GTA	ITEQ
Aluminium	130	SA115	Shengyi
Aluminium	130	SA120	Shengyi
Aluminium	140	SAR15	Shengyi
Auminium	140	SAR20	Shengyi
Aluminium	150	HT-04503	Bergquist
Auminium	150	HT-07006	Bergquist
Auminium	150	HT-09009	Bergquist
Aluminium	165	SSLLD	Laird
Aluminium	168	SSHTD04	Laird
Aluminium	168	SSHTD06	Laird
Aluminium	170	92ML Dielectric	Arlon

PCB Manufacturing Main Equipment

Material Type	Tg	Product	Manufacturer	Material Type	Tg	Product	Manufacturer
Aluminium	170	VT-4A1	Ventec	FR-4	180	185HR	Isola
Aluminium	90	LTI-04503	Bergquist	FR-4	180	I-Speed	Isola
Aluminium	90	LTI-06005	Bergquist	FR-4	180	TU-752	Taiwan union
Aluminium	90	MP-06503	Bergquist	FR-4	150	NPGN-150	Nanya
CEM-1	110	S3110	Shengyi	FR-4 + BT Epoxy Resin	180	G200	Isola
CEM-1	130	KB-5150	Kingboard	FR-4	130	GA-140-LL	Grace
CEM-3	130	DS-7209	Doosan	FR-4	130	KB-6150	Kingboard
CEM-3	130	R1786	Panasonic	FR-4	130	Tlam SS 1KA	Laird
CEM-3	128	S2155	Shengyi	FR-4	133	R-1755E	Panasonic
CEM-3	130	CEM-3-98	Nanya	FR-4	135	DE104ML	Isola
CEM-3	130	KB-7150	Kingboard	FR-4	135	DS-7405	Doosan
CEM-3	130	S2600	Shengyi	FR-4	135	H140-1 / FR-4-74	HuaZheng
CEM-3	132	S2130	Shengyi	FR-4	135	IT-588	ITEQ
CEM-3	135	CEM-3-09HT	Nanya	FR-4	135	KB-6160	Kingboard
CEM-3	140	R-1786	Panasonic	FR-4	135	KB-6160A	Kingboard
Ceramic	250	RO4500	Rogers	FR-4	135	KB-6160C	Kingboard
Embedded Capacitance	120	C0614	3M	FR-4	135	R1755C	Panasonic
Embedded Capacitance	120	C1012	3M	FR-4	135	S1130	Shengyi
Embedded Capacitance	120	C2006	3M	FR-4	135	S1155	Shengyi
Epoxy PTFE	210-240	N4350-13RF	Nelco	FR-4	135	S1600	Shengyi
Epoxy PTFE	210-240	N4380-13RF	Nelco	FR-4	140	FR-4-86	Nanya
FR-1	130	KB-3150N	Kingboard	FR-4	140	FR-402 / IS402	Isola
FR-4	140	MTC-97	Grace	FR-4	140	IT-140	ITEQ
FR-4	155	DE156	Isola	FR-4	140	KB-6164	Kingboard
FR-4	170	IS420	Isola	FR-4	140	LYCCL-140	LongYu
FR-4	170	NPGN-170R (HF)	Nanya	FR-4	140	NP-140TL	Nanya
FR-4	170	TU-862 HF	Taiwan Union	FR-4	140	NY-1140	Nanya

PCB Fabrication:
Material -Copper Clad Laminate (CCL) List

Material Type	Tg	Product	Manufacturer
FR-4	140	S1141	Shengyi
FR-4	140	TC-97	Grace
FR-4	145	ELC-4765	Sumilite
FR-4	145	IT-150TC	ITEQ
FR-4	148	R-1566(W)	Panasonic
FR-4	150	250HR	Isola
FR-4	150	254	Isola
FR-4	150	EM-285	Elite Material
FR-4	150	EM-825	Elite Material
FR-4	150	GA-150-LL	Grace
FR-4	150	GW1500	GoWorld
FR-4	150	IS400	Isola
FR-4	150	IT-158	ITEQ
FR-4	150	IT-158TC	ITEQ
FR-4	150	IT-258GA	ITEQ
FR-4	150	KB-6165	Kingboard
FR-4	150	NP-150R	Nanya
FR-4	150	NP-150TL	Nanya
FR-4	150	TU-668	Taiwan Union
FR-4	150	TU-742 HF	Taiwan Union
FR-4	150	TU-747 HF	Taiwan Union
FR-4	155	N4000-7	Nelco
FR-4	155	NP-155FR	Nanya
FR-4	155	NP-155FTL	Nanya
FR-4	155	NY-2150	Nanya
FR-4	155	S1000	Shengyi
FR-4	155	S1000H	Shengyi

Material Type	Tg	Product	Manufacturer
FR-4	155	S1150, S1150G	Shengyi
FR-4	160	TU-662	Taiwan Union
FR-4	170	EM-320	Elite Material
FR-4	170	EM-370	Elite Material
FR-4	170	EM-827	Elite Material
FR-4	170	FR-406	Isola
FR-4	170	GA-170-LL	Grace
FR-4	170	KB-6167	Kingboard
FR-4	170	NP-170R	Nanya
FR-4	170	NP-170TL	Nanya
FR-4	170	S1165	Shengyi
FR-4	170	S1170	Shengyi
FR-4	175	370 Turbo	Isola
FR-4	175	EM-827/ EM-827B	Elite Material
FR-4	175	IT-180	ITEQ
FR-4	175	IT-180A	ITEQ
FR-4	175	N4000-11	Nelco
FR-4	175	N4000-6	Nelco
FR-4	175	NP-175TL	Nanya
FR-4	175	NP-180R	Nanya
FR-4	175	S1000-2M	Shengyi
FR-4	175	TU-722	Taiwan Union
FR-4	176	R5725 Megtron 4	Panasonic
FR-4	180	370HR	Isola
FR-4	180	FR-408	Isola
FR-4	180	IS410	Isola
FR-4	180	KB-6168	Kingboard

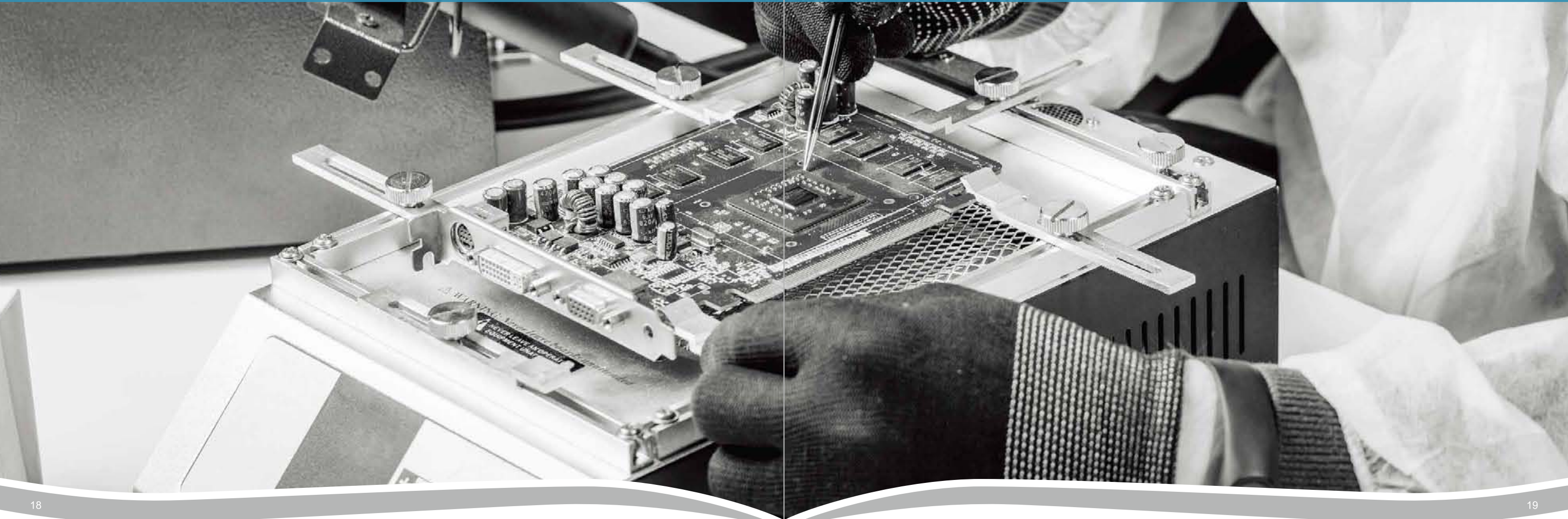
Material Type	Tg	Product	Manufacturer
FR-4	180	Megtron R-5715	Panasonic
FR-4	180	N4000-12	Nelco
FR-4	180	S1000-2	Shengyi
FR-4	180	Theta 100	Rogers
FR-4	180	TU-768	Taiwan Union
FR-4	180	VT-47	Ventec
FR-4	185	N4000-29	Nelco
FR-4	190	FR-408HRIS	Isola
FR-4	200	FR-408HR	Isola
FR-4	200	IS415	Isola
FR-4	210	N4000-13	Nelco
FR-4	210	N4000-13EP	Nelco
FR-4	210	N4000-13SI	Nelco
FR-4	210	N4103-13	Nelco
FR-4	210	S1860	Shengyi
FR-4	225	IS620	Isola
FR-4	250	Arlon 85N	Arlon
FR-4	250	VT-901	Ventec
FR-4	260	N-7000	Nelco
FR-4	280	RO3010	Rogers
FR-4	280	RO4003C	Rogers
FR-4	280	RO4350	Rogers
FR-4	280	RO4350B	Rogers
Polyimide	260	P95 & P25	Isola
Polyimide	N/A	FR9111	DuPont
Polyimide	N/A	THKD101020JY	Taiflex
Polyimide	185	LF9121	DuPont

PCB Fabrication:
Material -Copper Clad Laminate (CCL) List

Material Type	Tg	Product	Manufacturer
Polyimide	220	AP-9111	DuPont
Polyimide	220	AP-9121R	DuPont
Polyimide	220	AP-9131	DuPont
Polyimide	250	35N	Arlon
Polyimide	250	85N	Arlon
Polyimide	250	FR9111	DuPont
Polyimide	320	X-0505ES-N2	ThinFlex
Polyimide	340	RF775	Panasonic
Polyimide	343	RF770	Panasonic
Polyimide	N/A	CMT300XMM1	Grace
Polyimide	N/A	SF201	Shengyi

Material Type	Tg	Product	Manufacturer
Polyimide	N/A	SF202	Shengyi
Polyimide	N/A	SF302	Shengyi
Polyimide	N/A	SF305	Shengyi
Polyimide	N/A	THKS050513	Taiflex
Polyimide		ThinFlex-A	ThinFlex
Polyphenyl E-Glass	180	Getek	Isola
PPO Blend Resin	185	Megtron 6	Panasonic
PTFE (Ceramic filled)		RO3003	Rogers
PTFE - Glass	280	TLP-5	Taconic
PTFE	250	RT5880 (Duroid)	Rogers

Material Type	Tg	Product	Manufacturer
PTFE Ceramic filled		AD350A	Arlon
PTFE Coated Ceramic	315	RF-35	Taconic
PTFE Coated Ceramic		CLTE-XT	Arlon
PTFE E-Glass	200	DiClad 880	Arlon
PTFE E-Glass	210	TLX-8	Taconic
PTFE E-Glass	210	TLX-9	Taconic
PTFE	N/A	N9350	Nelco
PTFE/Woven Glass	210	250GT	Arlon
Stainless Steel	110	KW-ALS	Kinwong
XPC	100	KB-1150	Kingboard



PCB Assembly: Main Equipment

Venture Electronics offers turn-key PCB assembly services in prototype quantities or low-volume to mid-volume production runs. We handle the whole process including: ordering all the components, PCB manufacturing, PCB assembly, testing and final shipment. We are capable of assembling BGA, Micro-BGA, QFN and other leadless package parts.



PCB Assembly: Service

- | | |
|---------------------------------|--|
| • 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 Assembly testing for functionality and Conformal Coating |

Parts Management

Venture Electronics has a well-established, effective component sourcing system for low cost electronic assembly. A dedicated team takes care of your PCB components procurement and parts management. We offer:

- | | |
|------------------------------------|--------------------------------------|
| • Kitted PCB Assembly | • Material Inventory Management |
| • Sourcing Your Hard-To Find Parts | • Part Crosses and Substitutions |
| • Unique Global IC Sources | • Parts Incoming Check |
| • IC Programming | • Electrical Characteristic Analysis |
| • Quick BOM Pricing in 24 hours | • Lowest Surcharge Rate |

IC Programming

Venture Electronics offers IC programming service in its state of the art electronics assembly facility. IC programming will be performed before the chips are mounted on the board. We support various package types including:

- | | |
|---------------|--------------|
| • DIP, SDIP | • QSOP, SSOP |
| • TSSOP, PLCC | • QFN, MLP |
| • BGA, CSP | • SOT |
| • SOP, MSOP | • TSOP |
| • QFP, MLF | • DFN |

Functional Testing

Venture Electronics offers Functional Testing (FCT) with its turn-key assembly services. Functional testing usually is performed after the circuit boards are assembled and AOI & visual inspections are finished.

- | | |
|------------------------------|----------------------------|
| • Functional testers | • Test software |
| • Design For Assembly | • Functional Testing (FCT) |
| • AOI & visual inspections | • The DFA report |
| • Avoid assembly issues | • Embedded system testing |
| • Correct component failures | • Troubleshooting program |

PCB Assembly: Capability

Item#	Item Name	PCB Assembly Capabilities
1	Lead Time	Our service ranges from 8 - 48 Hours for prototype and small volume PCB assembly projects. Since each project complexity is different, our turn-time starts from the time that all the components, PCB files (Gerber files/other PCB files, etc.), Centroid (Pick & Place PNP file, or XY Data or files in other formats), BOM, and all the other necessary data or documents/images/photos are ready, then we start our assembly work.
2	kitted(Consigned)	Our Kitted PCB Assembly requires you supplying all the components and ship to us.
	Partial Kitted	Our Partial Kitted PCB Assembly service means you offer the main components, and we source the rest components for you, and returned you assembled boards. We will ask for your approval on every details of the components concerning price, quality and availability.
	Turn-key	Our Turn-key PCBA service is based on our world wide network of components sourcing. We source from reliable suppliers such as Digikey/Mouser/TME/Element 14 and also local authorised distributors. We will always ask for your approval before making any decisions on equivalent components.
3	Assembly Options	We offer Surface Mount (SMT) Assembly, Thru-Hole (THT) Assembly, hybrid of both(Mixed Assembly), BGA & QFN Assembly and Kit Assembly, with single or double-sided placement, Fine Pitch Component Insertion.
4	Types of Solder	We offer both leaded and lead-free (RoHS Compliant) PCB assembly services for our customers.
5	Stencils	We use laser cut stainless steel stencils to ensure high reliability for fine pitch and Ball Grid Arrays (BGA) components.
6	Minimum Order	Any Qty. Our minimum order qty is 1 pcs. We specially focused on prototype (1-10pcs), small batch(10-100pcs) assembly and low volume PCB (100-500pcs) assembly
7	Component Size	Passive Component: we can handle passive components as small as 03015, 01005, 0201, 0402.
		BGA: We have the ability to handle Ball Grid Arrays (BGA) of 0.35mm pitch with X-ray testing.
8	Component Package	Fine Pitch Components as small as 0.38mm fine pitch parts.
		We accept parts in Reels, Cut Tape, Tube & Tray, Loose Parts and Bulk.

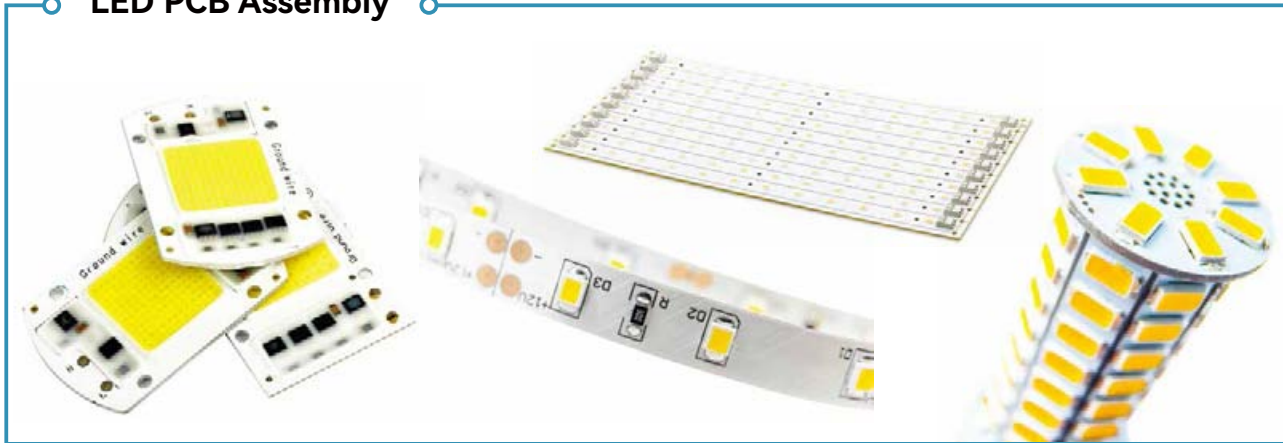


Item#	Item Name	PCB Assembly Capabilities
9	Board Dimension	Min Board Size: L50mm x W50mm (Boards smaller than this size need to be panelized) Max Board Size: L774mm x W710mm
10	Board Shape	We can assemble boards in Rectangular, Circular and any Odd Shapes. For PCB shapes other than rectangle, pls panelize the bare PCBs (printed circuit boards) in an array, and add break-away fields at the two longer paralleled edges of the panelized boards, in this way boards can be assembled by the machine, our engineers can help you with PCB panelization if needed.
11	Board Type	We can assemble Rigid Boards (FR4, CEM. .etc), Metal Core (Aluminum, Copper) Boards, Flex Board (Flex PCB), Rigid - Flex Board (Rigid - Flex PCB)
12	IC Programming	DIP, SDIP QSOP, SSOP TSSOP, PLCC QFN, MLP BGA, CSP SOT SOP, MSOP TSOP QFP, MLF DFN
13	Inspections	Visual inspection: general quality check.
		X-ray Inspection: checks for BGAs, QFN and bare circuit boards.
		AOI Testing: checks for solder paste, 0201 components, missing components and polarity.
14	Functional Testing	Functional testers Test software Design For Assembly Functional Testing(FCT)
		Avoid assembly issues Correct component failures Trouble-shooting program
		Functional test will follow your test procedures

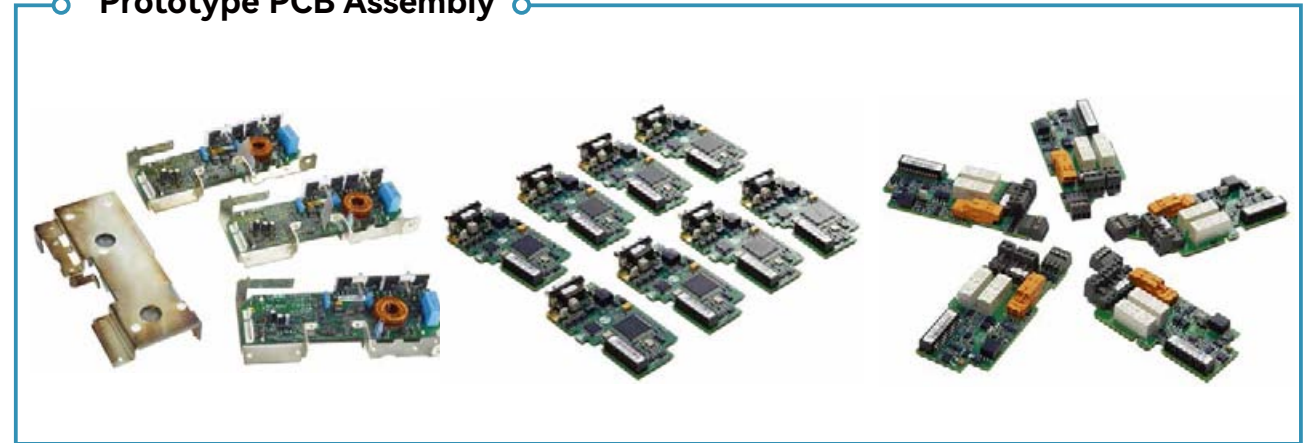


PCB Assembly: Product Gallery

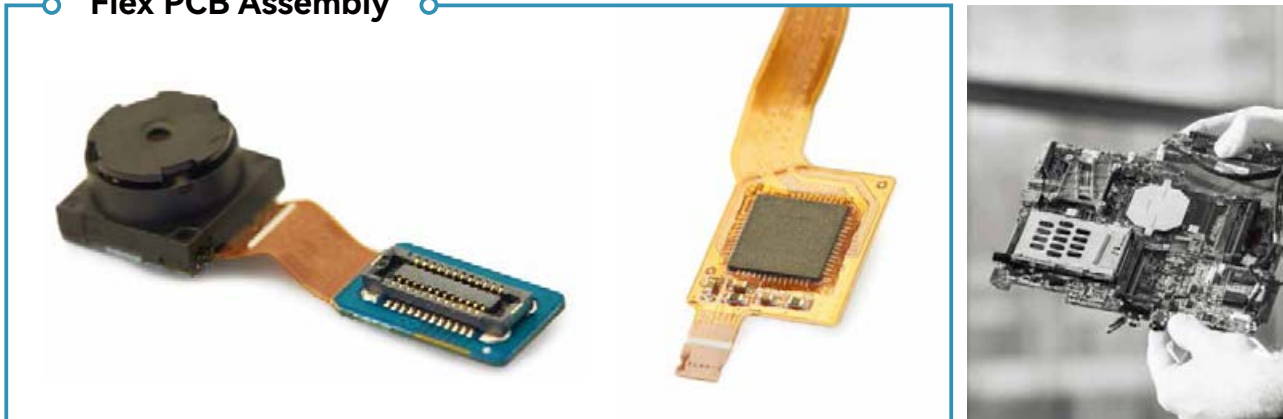
LED PCB Assembly



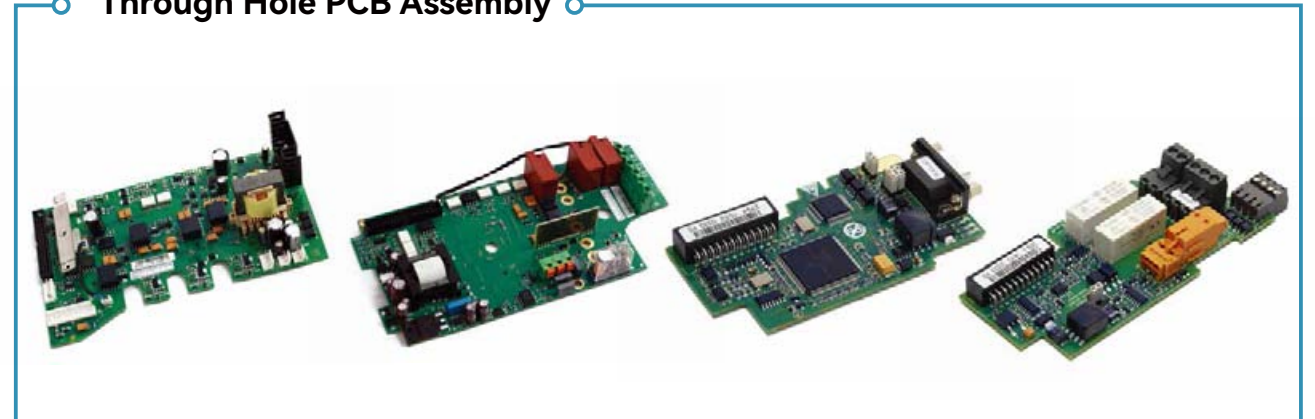
Prototype PCB Assembly



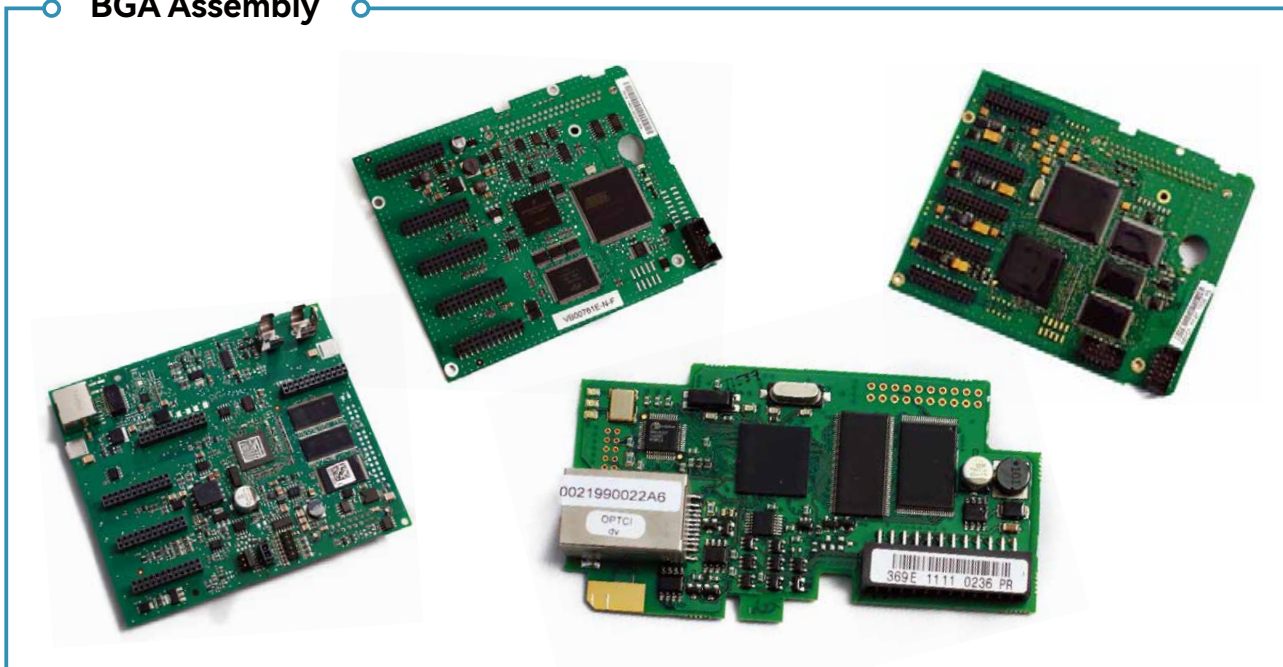
Flex PCB Assembly



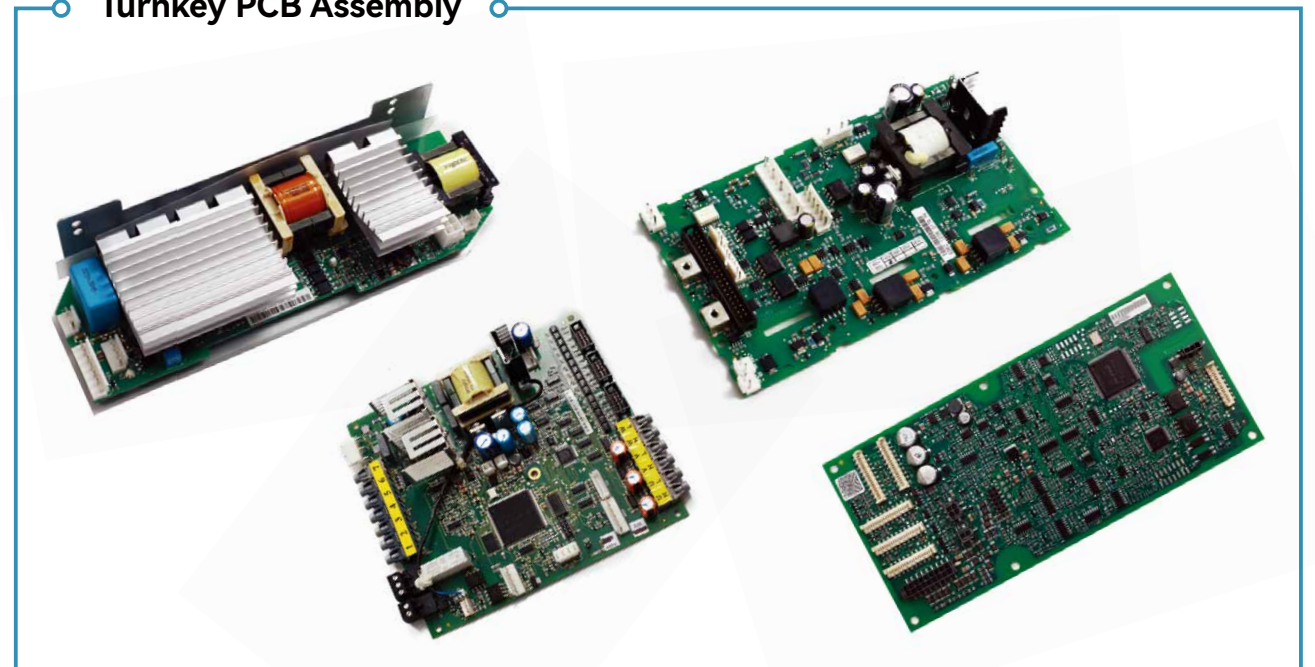
Through Hole PCB Assembly



BGA Assembly



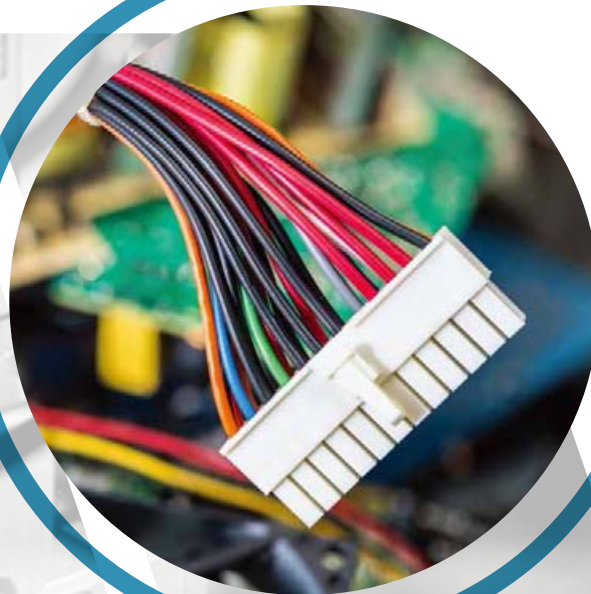
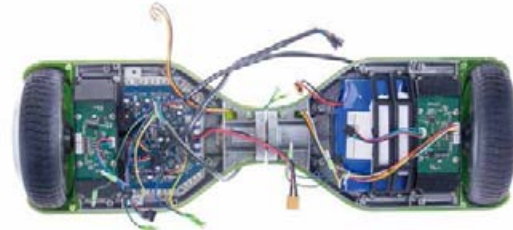
Turnkey PCB Assembly



PCB Assembly: Cable Assembly

Venture Electronics supplies custom cables for specific applications based upon customer design and print requirements. We can assist with cable and connector selection, layout and manufacturing techniques, and computer aided design (CAD).

We also provide short-run manufacturing prior to mass production along with all aspects of the manufacturing process, including soldering, termination, wrapping and testing. Through our very formal quality assurance and testing processes Venture Electronics ensures the quality of all manufactured products.



PCB Assembly: Membrane Switch

Venture Electronics supplies the electronic identification products which include nameplates, decals, graphic overlays, and membrane switches.

Our capabilities include digital printing, automatic and semi-automatic screen printing, prototyping, inspection, production assembly, in circuit and functional testing, RF/EMI shielding, embossing, texturing, hard coating, graphic design and development assistance, top and sub surface printing. Tactile, non-tactile, polydome, embedded LED's, and backlit graphics are available along with multiple termination options.

Materials include polycarbonate, polyester, aluminum and all various types of adhesives for different membrane switches and overlay constructions. Computerized pre-press design through finishing with soft-tool option for prototyping. Industries served include medical, computer, telecommunications and OEM industries.

Pls feel free to contact our sales and our technical engineering team will contact you in regards to your current project.

