4 layer PCB prototype manufacturer

Jing Hongyi PCB (HK) Co., Limited, located in Shenzhen, China, has a PCB prototype rapid production plant in Baoan District, Shenzhen City. It is a professional manufacturer of 1-12 layer multilayer PCB prototypes, such as **4 layer PCB** prototypes, **6-layer PCB prototypes**, **8-layer PCB prototypes**, special TG170 circuit boards, TG180 circuit boards, Rogers **high-frequency circuit boards** and small and medium batch PCB production and assembly services.

In order to help customers shorten product development time and gain market competitive advantage, we provide extremely fast PCB manufacturing services for global customers, R&D units, engineers, individuals and SMEs customers.

Our factory has imported a series of advanced automatic production and testing equipment from home and abroad, such as CNC drill, automatic plating line, exposure machine, AOI testing machine, high-speed flying needle testing machine, to ensure that the efficiency of each link is constantly improved.

The process capability is constantly improved, and has a professional engineer and production team. Through UL, TS16949, ISO 9001, ISO 14001 certification. The company fully implements ISO 9001 quality system certification, and fully implements ROHS certification standards. For many years, the company has been committed to staff training, quality management, production control.

By virtue of its excellent fast delivery capability, super-value price and perfect quality assurance system, it has won the recognition of the vast number of customers.

Our customers are all over the world, including mainland China, Hong Kong, the United States, Canada, Brazil, Australia, Germany, Japan, India, Italy, Spain, UK, Poland, Singapore, Ukraine, and other countries and regions

with the United States, Germany, Italy, Japan, and other high-end imported production equipment.

4-layer PCB application scenario

Communication equipment: CDMA equipment, switches, access

networks and other broadband transmission equipment, etc.

Power equipment: power monitoring equipment, power dispatching equipment, high frequency switching power supply, etc.

Network equipment: network server, router, VDSL, etc.

Computer equipment: industrial computer, computer motherboard, etc.

Medical Devices: Nuclear Magnetic Resonance Imaging, CT, Color Doppler Ultrasound, Various Monitors, etc.

Military science and technology: aerospace, military, radar and other military products

Consumer Electronics: Digital Camera, MP3, Automotive Electronics, etc.

4-Layer PCB Design

There are some potential problems in the design of 4-layer PCB. Firstly, the traditional four-layer circuit board with 62mil thickness, even if the signal layer is in the outer layer and the power and ground layer are in

the inner layer, the distance between the power layer and the ground layer is still too large.

If the cost factor is the first, the following two alternatives to the traditional four-layer PCB can be considered. Both schemes can improve the performance of EMI control, but only when the density of components on board is low enough and the area around the components is large enough to place the required copper clad power supply.

In the first scheme, the outer layer of PCB is grounding layer, and the middle layer is signal/power layer. The power supply on the signal layer is wired by a wide line, which can make the path impedance of the power supply current low, and the impedance of the signal microstrip path low. From the perspective of EMI control, this is the best 4-layer PCB structure available. The second scheme is that the outer layer is the power supply and the connecting layer, and the middle layer is the signal layer. Compared with the traditional four-layer PCB, the improvement of the scheme is smaller, and the interlayer impedance is as poor as the traditional four-layer PCB.

In order to validate and test your design and products, you need

prototype manufacturing services.

Manufacturing Process of Four-Layer Circuit Board

Manufacturing process: Cutting→Inner Pattem Image→AOI→Brown Oxide→lamination→pressing→drilling→PTH→circuit→Electroplate→etching→Solder Mask→Silkscreen→surface Finishing→shape→E-test→FQC→FQA→Vacuum packing

Four layers PCB prototype manufacturing need to provide information formats: GERBER file, POWERPCB file, PROTEL file, PADS2007 file, AUTOCAD file, ORCAD file, PcbDoc file, and printing process information.

Board thickness (mm): 0.4, 0.6, 0.8, 1.0, 1.2, 1.6, 2.0, 2.5, 3.0, 3.2, etc.

Base Material: epoxy glass fibre board (FR-4), CEM-1, CEM-3, aluminum substrate, ceramic board, Rogers high frequency board, BGA packaging board, blind buried orifice board, impedance board, thick copper foil board and other special metal circuit boards

Surface finishing: hot air leveling (HASL), full plate nickel-gold plating, gold-plated fingers, lead-free tin spraying, electroless gold plating, anti-oxidation treatment (OSP), etc.

Surface ink: green, white, black, red, yellow, Matt ink and other types and colors of photosensitive ink

If it involves special plate thickness and ink, please let us know.

At present, our total production capacity is 50,000 square meters, with an average daily delivery of more than 2,000. PCB prototype: Accelerate shipment 12-24 hours, routine 3-4 days; small batch: 5 days or so.

Looking forward to the future, Jing Hongyi PCB (HK) Co., Limited will continue to focus on providing PCB prototype and small and medium-sized batches of high-quality and fast services to create greater value.

We sincerely look forward to cooperating with you.