



PCB Assembly

In addition to our considerable expertise in electromechanical assembly, a key element of our manufacturing business is PCB assembly.



Our PCB assembly services are primarily focussed on customers requiring high technology, high mix, low to medium volume, complex, PCB assemblies. Quality, flexibility and value are key reasons why our customers choose JJS Manufacturing as their preferred pcb assembly partner. Our procedures and processes are all approved to BS EN ISO9001 2008 and workmanship standards adhere to IPC-A-610. Using traditional electronics assembly methods and employing many years of experience, the JJS team carries out manual assembly of conventional technology PCBs in prototype, small, medium and larger volumes.

With our extensive SMT assembly resources we are also equipped to work with all surface mount packages including BGA, Chip Scale (CSP) and passive down to 01005. We consistently achieve a high level of placement accuracy, solder joint integrity and quality.

Whilst our core electronics skills relate to the assembly of PCB's and final product, we also have considerable expertise regarding design related issues.



State-of-the-art equipment and processes

JJS Manufacturing utilises leading-edge equipment from Mydata, DEK and BTU with integrated features such as process monitoring and controls to optimise SMT production and achieve consistently high yield. Our SMT lines produce complex and fine pitch SMT boards using sophisticated process techniques including the use of a wide range of substrates including FR4, Polyimide, PTFE, Flexi-Rigid and metal backed laminates. In support of our 100% right first time goals, JJS Manufacturing uses Automated Optical Inspection (AOI) equipment, in-line, shop floor data capture work stations, BGA inspection and rework facilities and moisture sensitive controls.

JJS has considerable expertise assembling PCBA's with BGAs, including single and double sided boards with multiple BGA and uBGAs. As part of our standard manufacturing process we X-Ray and under body inspect BGAs in order to ensure that our processes are perfectly set up.

IPC-A-610 2 & 3 Assembly

Our 'Industrial' customers require us to build to IPC-A-610 Class 2, whilst for others in the 'high reliability sectors' of aerospace, medical, oil and gas etc we provide boards built to Class 3. Similarly, we standardise on solder and fluxes throughout our manufacturing process but still have the flexibility to use high reliability solder on specific assemblies.

We have trained experts in Six Sigma to optimise process parameters and have company-wide training covering a variety of quality enhancement tools and techniques in order to ensure that we consistently achieve the highest levels of quality and service.

Why JJS?

- Flexible capacity management - fast turnaround prototyping to production
- Automatic stencil printers with built in automatic optical inspection achieve accurate and consistent solder paste printing
- All common PCB substrate materials are populated, including FR4, Polyimide, PTFE, Flexi-Rigid and metal backed laminates
- Intelligent feeders for fast changeovers and off-line setup for optimal flexibility and efficiency with low volume, high mix solutions
- Our SMT PCB processes are fully supported by experienced IPC trained technicians using the latest technology for process set up and verification.
- Placement capabilities: 01005, QFP, BGA and uBGA
- Solder paste reflow is carefully profiled and processed using BTU 8 zone convection ovens
- Aqueous clean and no clean processes
- Conformal coating with UV inspection stage
- DfX capabilities (Design for Procurement, Design for Manufacture, Design for Test)
- Extensive board-level test capabilities including AOI, flying probe and boundary scan, Plus in circuit (ICT) programming, fixture design, manufacture and test.
- Functional testing, with test jig design and build capability
- World Class electro mechanical capabilities to ideally complement PCB assembly capabilities

Our extensive PCB Assembly expertise incorporates:

- Critical evaluation of customer designs throughout the formal NPI process, encompassing design for manufacture (DFM), design for test (DFT) and opportunities for cost reductions etc.
- Conventional electronics assembly
- Surface mount assembly
- Total test development capability

Find out more

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