Byte Design Pty Ltd

Printed Circuit Board Design Services

Corporate Profile

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Printed Circuit Board Design Services

What we do

Byte Design Pty Ltd provides design and consultancy services to the electronics industry, specialising in the area of Printed Circuit Board design.

We offer a superior design service, as a viable alternative to in-house PCB design especially at those times when rapid completion is essential or your existing resources cannot cope.

Our expertise has been gleaned from <u>over 30 years in the electronics industry</u>, spanning manufacturing, assembly, testing, quality control, prototyping, R & D and design. Byte Design is staffed by people who know electronics and have worked in the industry both in Australia and overseas. Some of our major acheivements include design projects for:

- Fujitsu Australia Limited,
- British Aerospace Australia (BAE Systems Australia Ltd),
- Redfern Broadband Networks,
- Varian Australia Pty Ltd,
- SecureNet Ltd,
- Invetech Operations Pty Ltd,
- Westinghouse Signals Australia,
- Nokia Australia Ltd.

Keeping abreast of the latest trends within the industry is essential and we regularly attend industry conferences, seminars and training. Byte Design is a corporate member of the Surface Mount and Circuit Board Association of Australia and also a member of the Australasian IPC Designers Council. We support industry certification in the PCB design field and Byte Design director Robert McKechnie was one of the first Australian PCB designers to achieve <u>IPC Certified</u> Interconnect Designer status in 1999.
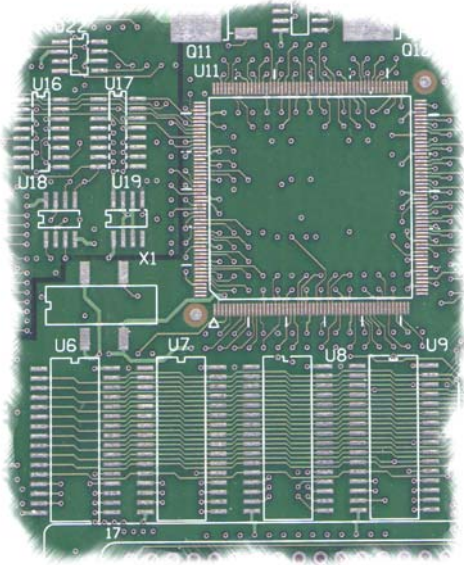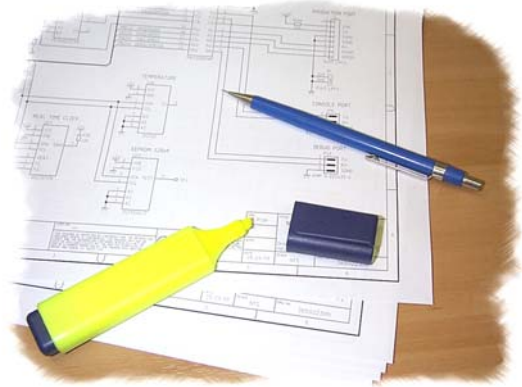
Background

Byte Design was born out of Southern Cross Electronic Services - a business set up by principal Robert McKechnie in 1986 to provide the electronics industry in Melbourne with design and technical support services. In 1993 the business incorporated, to enable further expansion and diversification.

Schematic Capture

Using your libraries, or our own, we can take your sketch and create the schematic ready for PCB layout. We can also create the symbols needed if required. The design file together with a hard copy is supplied after the schematic has been successfully verified and approved.

PCB Design

Our aim is to provide timely PCB design that achieves your design goals, yielding a board that is "right first time" and is economically manufacturable.
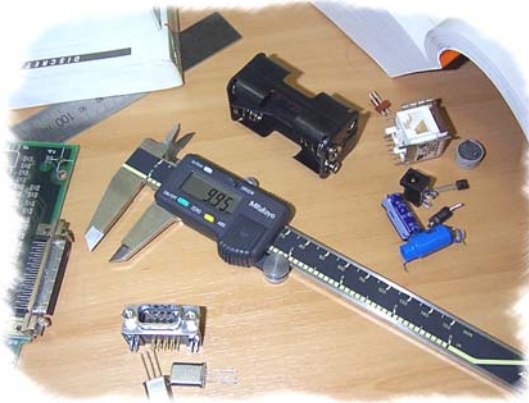
Our design experience encompasses the full technology spectrum; from single-sided, high volume, price-sensitive consumer boards to multi-layer, high density SMD, high-speed, controlled impedance designs. We have successfully completed many high-speed digital and analog, as well as mixed technology designs with through hole and SMD components. We practice Design for Manufacture principles and will liase with your manufacturing and assembly facilities to bring your design to successful completion.

The preferred CAD tool for layout is either Mentor Expedition or Altium (Protel) depending on the complexity of the design. Other CAD tools we have experience with include SATCAM, P-CAD and AutoTRAX, as well as AutoCAD and Microstation, CAM-350 and GerbTool.

We use your design standards or industry standards (IPC, AS etc.) to transform your schematic into a viable PCB design. An initial consultation with your design engineers to gather the necessary design parameters, mechanical constraints and design rules is followed by a preliminary component placement. Once this is approved the board is routed. At all times there is a close working relationship with your design engineers to ensure that the board design progresses smoothly and with total confidence.

Board routing can be either manual, auto-routed or a combination - dependent on the design and your requirements. Design for EMC is a necessity in today's market and we have the latest techniques and CAD tools at our disposal to achieve a "clean" layout.

At completion we provide the finished CAD file, Gerber files and manufacturing documentation as a package ready for board fabrication and assembly.

Library Construction

Byte Design has been involved with the setup and installation of CAD libraries for Fujitsu, British Aerospace, Bandspeed, Keycorp, Redfern Broadband Networks and Westinghouse Signals. The powerful Parts Database methodology used by Mentor Expedition (VeriBest) ensures consistency and integrity of libraries and therefore the designs that use them. Byte Design can help with the maintenance of your libraries including setup, schematic symbol libraries, Part Database Libraries, and PCB cell libraries as well as Protel library construction.

Consulting

We can help flatten the learning curve and minimise the start-up delays associated with a new Mentor Expedition or Protel installation. An existing installation can be reviewed to see where improvements can be made that could boost the productivity of your design department.

Some of the activities Byte Design has performed for our clients include system and equipment requirements review and recommendations, software installation and configuration, documentation of design processes, company standards and work instructions.

Byte Design successfully designed and implemented customisation of VeriBest PCB output to accommodate Fujitsu's manufacturing requirements allowing international manufacture of locally designed electronic telecommunication products.

The Next Step

For more information on how Byte Design can fulfil your PCB design requirements please contact Robert McKechnie (Managing Director).