IPC Designer Certification

Course Synopsis and module over view

Premier Solutions, an active member of the IPC Designers Council, and IPC Authorised Training Centre is pleased to offer designers the much coveted IPC Designer Certification Programme.

The entry point to the entire programme is Designer Certification (or sometimes referred to by the name of the resulting qualification - "CID"). It forms part of a comprehensive structured training programme designed to certify your capabilities and provide a progressive development path through to more advanced and specialised courses.

Why Certify?

IPC certification programmes improve individual performance through education and training providing a benefit for both the individual and their employers. Printed circuit board designers deserve the benefits and recognition of certification. Industry trends such as outsourcing and concurrent engineering are elevating the importance of the designer in the manufacture of many of today's electronic products. IPC Designer Certification is a powerful tool in promoting the paramount importance of your work to everyone involved in the production of printed circuit boards and assemblies.

The basis of the course

Based on the leading IPC standards for PCB design Designer Certification reinforces the knowledge gained by professionals over their many years of experience and good working practices. By taking the Designer Certification you will become fully aware of the following documents:-

1. IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits,
2. IPC 2222, Sectional Design Standard for Rigid Organic Printed Boards
3. IPC 2221, Generic Standard on Printed Board Design
4. IPC-D-325 A, Documentation Requirements for Printed Boards, Assemblies and Support Drawings

The programme assesses a designer's knowledge of how to transform a schematic into a reliable rigid PCB design, which can be easily manufactured, assembled and tested. The IPC Designers Council recognises that the most effective designers must have a solid foundation in PCB fabrication and assembly.

Common questions

Who is the course aimed at?

Existing PCB design professionals who need recognition of their skills and confirmation that the knowledge they have gained through experience adheres to widely accepted standards for PCB design

Why qualify - I already know all I need.

This may be true; often PCB designers have learned their trade over many years. After training over 300 experienced PCB designers in the past few years, we have found that in many cases self-taught designers are making mistakes, being inconsistent and often perpetuate the use of bad design practices. Attaining the coveted Designer Certification CID status will ensure that your years of experience are enhanced with a proven knowledge of internationally-recognised techniques.

What do I get if I pass?

On passing the exam, the Certification process allows you to add the initials CID, Certified Interconnect Designer, after your name and you are presented with an official certificate. This is the only formal qualification for PCB design worldwide and as such you should gain great kudos from passing.

How long would you recommend for the self-study period?

A lot depends on your dedication; you could complete the study in about two weeks, so long as you dedicate time to do so. For those who need to study in addition to a regular job we would recommend allowing about 4-6 weeks.

What if I don't feel confident about the exam after I take the workshop?

Don't worry, if at the end of the workshop you feel that you would benefit from some additional study, then you can skip the exam. In this case we would provide you with an exam voucher that you could use to attend the next most appropriate exam.

IPC Designers Council
PCB Designer

IPC PCB Design Certification Center

Premier EDA Solutions Ltd.
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Registered in England, number: 2889888.

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Course format

The Designer Certification Kit includes self-study materials and enrolment in a two-day IPC Designer Certification Preparation workshop. All Designer Certification testing is done at the workshop location shortly after it concludes. The workshop training provides an in-depth view of the principles contained in the examination and is strongly recommended for anyone interested in obtaining the certification. In addition to the above, which is required to maintain the standard of the Designer Certification, Premier provides additional help during the study period via telephone coaching sessions.

The exam

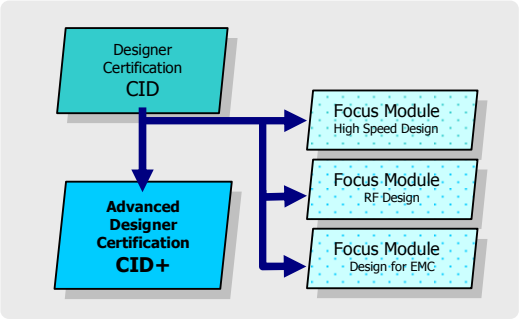
The two-hour examination is in a multiple-choice format. Answer choices are all plausible; therefore, you must indicate the most correct answer. Occasionally, you must indicate the two most correct answers or identify certain characteristics from a diagram. The examination is graded and a review of the test items is conducted on-site. IPC issues and mails the certifications within six weeks after an exam.

Where is the course held?

The majority of the study is done on your own either at work or at home. The workshops and exam are held at our training suite in Stanstead Abbotts, Hertfordshire. We are also able to host IPC Certification workshops/exams on your site. Please see our website for dates of the next course.

Training Roadmap

Designer Certification is the entry point into a structured training programme, which offers a professional development path unrivalled in the industry.



The cost

The cost of the programme, which includes all training materials, the 2-day workshop, the exam and lunches, is £895 (excluding VAT) / delegate.

Find out more

Contact us at the above address or by email to: training@eda.co.uk

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Designer Certification (CID) - Course Objectives

Layout
- Characteristics of Grid Systems
- Purpose of Tooling Holes
- Feature Formed in Copper
- Through-Hole Land & Tolerance Requirements
- Design Differences for SMT vs. Through-Hole
- Interrelated Considerations for Design
- Printed Boards and Printed Board Assemblies Viewing Principles

Electrical considerations
- Schematic/Logic Transformation for Component Arrangement
- Schematic and Logic Symbols
- Functional Electrical Characteristics

Materials
- Copper Clad Laminates

Component requirements
- DIP and SIP Components
- Clinched and Unclinched Leads
- Point-to-Point Wires
- Axial and Radial Lead Mounting Differences
- DIP and Chip Carrier Sockets
- Edge-Board Connectors
- Characteristics of a bus bar
- Jumper Wires
- Purpose of Stiffeners
- Purpose of eyelets
- Differences Between Automatic and Manual Placement
- Non-standard Parts Information

Assembly requirements
- Differences Between Manual and Pick-and-Place SMT Placement
- Considerations for Component Mounting
- Legend and Polarity Markings

Board fabrication
- Board and Assembly Panelization
- Hole Types and Their Tolerances
- Coating and Markings Used on Printed Boards

Physical board characteristics
- Thermal Management for Assemblies
- Thermal Management for Boards

Documentation
- Tolerancing Methods
- Datum Features & Location Principles
- True Positioning Dimensioning Techniques
- Conductive Pattern Location to Datum References
- Plated-Through-Hole Dimensions and Grid Location
- Tooling Hole Location Documentation

Documentation **(cont'd)**
- Datum Symbols and Hole Description
- Documenting Fastening Hardware
- Minimum Drawing Requirements
- Master Drawing Hole and Conductor Description
- Minimum Requirements for Master Drawing
- Artwork Acceptance Criteria

Inspection and test
- Testing and Techniques and Procedures

Reliability
- Reliability Terms and Design Issues

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Terms and Conditions

Course Booking Form

Order form **FAX Back to us on + 44 (0) 1920 872 615**

Company: ..... Tel: .....

Name(s): ..... Email: .....

..... Email: .....

Email: .....

For additional delegates, please use a separate page, or multiple forms.

Please reserve ..... place(s) at your 'IPC Designer Certification (CID)' – 2 day Workshop	Qty	Price *(per delegate)*	Total
Location: ..... **Course Date:** ..... *Registration is at 09:00, the course will start at 09.30 and close at around 16.30*		£895 Workbook Shipping fee £20 UK mainland only	
		VAT at 20%	
		Grand Total	

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Our training courses are governed by a specific set of terms and conditions, which cover a number of important issues like payment and cancellation. Please read these prior to attending the course. Available on request or on our website (www.eda.co.uk).

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