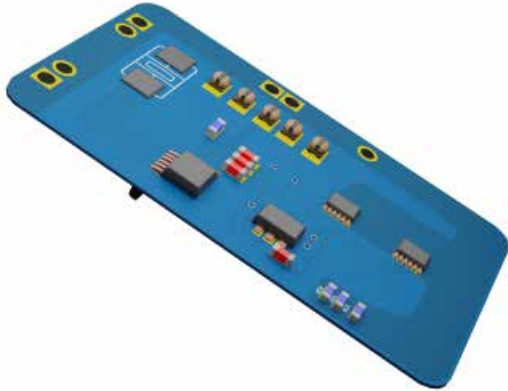


PRINTED CIRCUIT BOARD ASSEMBLY (PCBA)

eLearning courses designed to increase productivity and profits



Learning Made Simple, Visual, and Interactive

The THORS Printed Circuit Board Assembly (PCBA) course introduces learners to the PCBA process, beginning with incoming inspection and laser marking. The course covers common assembly processes such as solder paste printing, component placement, and reflow soldering. Additional processes, including In-Circuit Testing (ICT), depaneling, functional testing, enclosure assembly, and final testing, support complete product realization. Presented in THORS' highly visual and interactive learning format, this course will equip learners to broaden their knowledge of PCBA and its related technologies.

Credit Hours **2.0**

Learning Objectives

- Recognize the initial PCBA processes, such as incoming inspection and laser marking.
- Describe the importance of the solder paste printing process and Solder Paste Inspection (SPI).
- Identify the component placement process and the different types of placement machines.
- Explain the process of reflow soldering and the subsequent Automated Optical Inspection (AOI).
- Understand the processes involved in final assembly and testing, such as In-Circuit-Testing (ICT), depaneling, functional testing, enclosure assembly, and final testing.

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I. PCBA Processes

- Incoming Inspection
- Laser Marking
 - Laser Marking System
 - Laser Marking Location
- Solder Paste Printing
 - Solder Paste Printing Process
 - Solder Paste Inspection (SPI)
- Component Placement
 - Component Placement Process
 - Pick-and-Place Machine
- Reflow Soldering
 - Reflow Oven
 - Temperature Zones
- Automated Optical Inspection (AOI)
 - Automated Optical Inspection (AOI) Process
 - Automated X-Ray Inspection (AXI) Process

II. Final Assembly and Testing

- In-Circuit Testing (ICT)
 - ICT Equipment
 - Key Parameters
- Depaneling
 - Routing
 - Sawing
 - V-Cut
 - Laser Separation
- Functional Testing
- Enclosure Assembly
- Final Testing

