



# ATE FOR PCB TESTING

## About the Client

The client is India's leading air conditioning and commercial refrigeration company. The company has a immense production land, producing various models across many production lines, which use modern, stat-of-the-art manufacturing equipment to ensure that the products have consistent quality and reliability.

## Summary

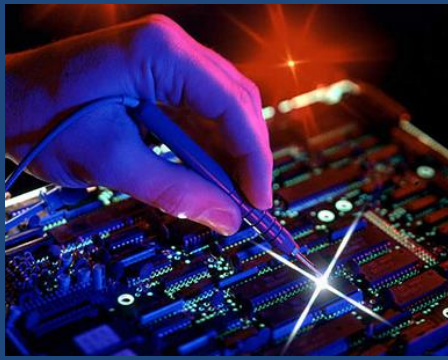
Automatic Testing Equipment for PCB Testing has been developed for controller PCBs used in HVAC machines. Customer wanted a system which can precisely analysis and perform tests faster than their current testing system. Optimized Solutions has designed a complete automatic solution which can test various PCB models. The Solution includes test configuration, auto/manual testing, report generation, data storage, firmware uploading and printing barcode.

## The Challenge

To meet the supply without compromising quality delivered to customer, it is mandatory for the companies to upgrade to new technology with improvement in processes. System of controller PCBs is heart of modern HVAC machines. The client has different testing setups to test various PCB models. One person can test only one type of PCB at a time because testing setup requires user actions as well as monitoring of the test. The setup includes many user actions for verification of test which could be mistaken due to human errors. Skilled manpower is used for testing and validation of PCBs. Establishing new testing process with minimum costs to validate their processes and arrive at the most optimum solutions.

## Our Solution

Optimized solutions has developed a most favorable solution considering all primary requirements of client, as well as future possibility of PCB Testing. Optimized solutions has designed an ATE for PCB models so that user perform test various PCB on single ATE. By doing that optimized solutions has achieved space constraints as well as reduction in cost by reducing material used for different test setups.



## INDUSTRY

Air Conditioning and  
Commercial  
Refrigeration

## KEY CHALLENGES

- Reducing PCB testing time
- Lessening manpower
- Visualization of Test

## SOLUTION

- Single ATE for various PCB Model
- Requires Minimal Observation during Testing
- Continuous monitoring and displaying of acquired data

## BENEFITS

- 2x speed increment in testing a PCB
- 2x reduction in manpower
- 4x reduction in space required for setup
- Elimination of defective PCBs in the earlier stage

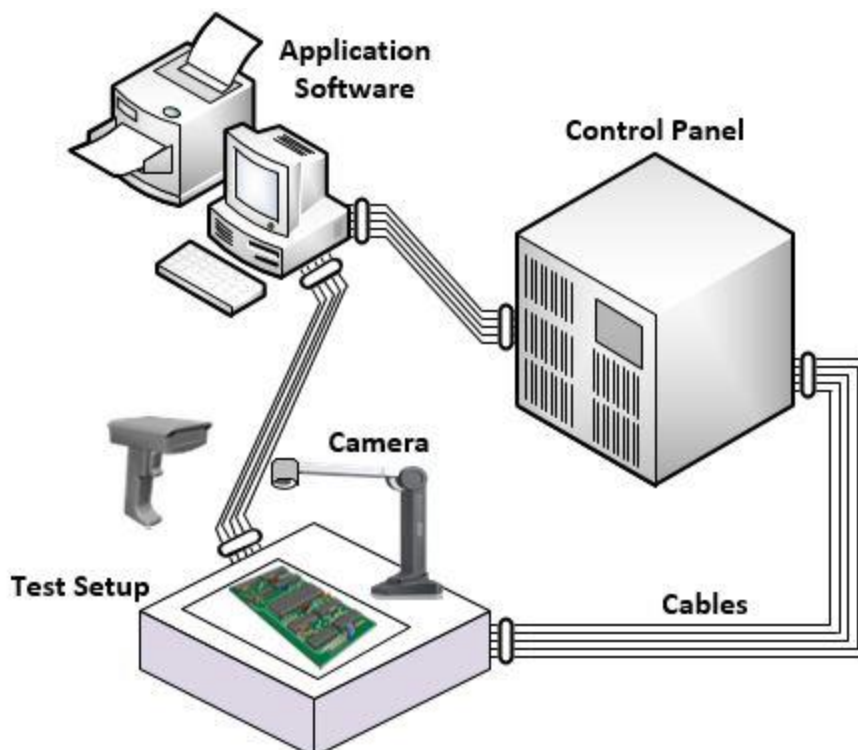


Optimized Solutions has also reduced the test time by developing software which enables software to utilize processor to its full extent. Software has been developed on platform which uses G programming and enables parallel execution of various tasks. Also the platform features many inbuilt library for serial data communication, Image processing and data displaying, which speed up the development process and helps to deliver ATE timely.

The application software also enables user to visualize various test and to take action upon results of the test. User can run application software in automatic as well as manual testing mode, which enables efficiency and productivity of user.



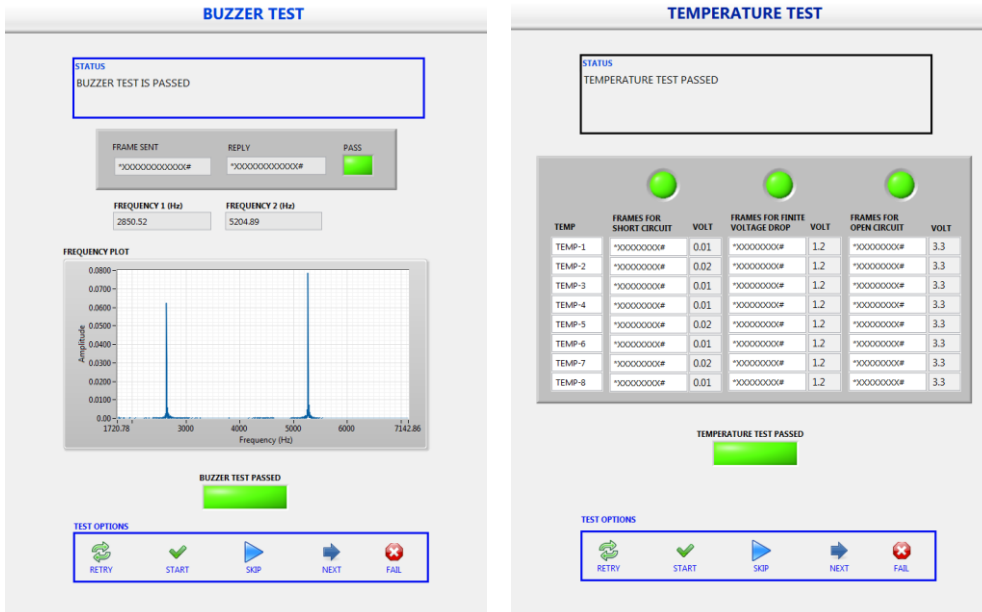
ATE ensures quality of PCB being tested and emphasizes on defect prevention incorporating users actions whenever required. ATE has been designed with consideration of safety standards.





## Benefits

With the implementation of ATE for PCB testing the most important and significant contribution has been in the quality and productivity front, enhanced value addition, reduction in time consumed by testing a PCB, reduction in skilled manpower and also it fits in compact space. The solution provided by OSPL has succeeded in effective upgradation of its technology.



## Benefits against Alternatives

- Other solutions may have multiple test setups and multiple GUIs for different PCBs which will take more space, time for testing and will even cost more.
- By reducing the human interaction the probability for error goes down exponentially.

## Our Value Addition

- The client required an customized, efficient , accurate solution which is something OSPL always strives upon making us a perfect fit for the client.
- Having an expertize of highly qualified engineers which are always eager for a challenge makes Optimized Solutions the go to company for a different and complicated task such as this one.