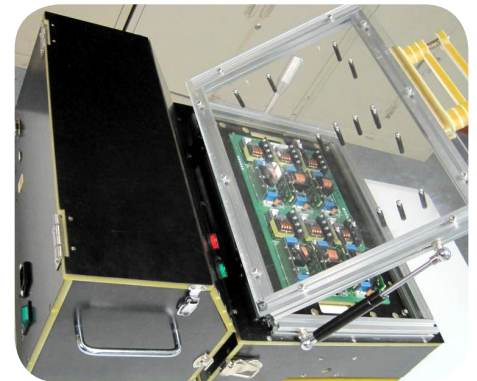
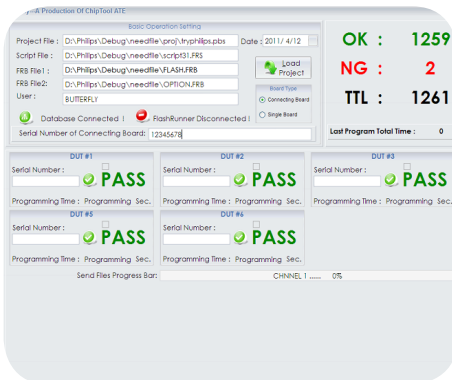


Case Study: Multi-panel programming with FlashRunner Quattro - April 2011



INTRODUCTION

Programming time in production environments is a key factor for many engineers when planning new projects. With many possible alternative products available, a balance between functionality and cost effectiveness is critical. FlashRunner Quattro allows for true parallel In-System Programming, which results in the reduction of overall programming time and delivers a higher Return On Investment for equipment costs for the project.

THE PROBLEM

Our customer, one of the worlds largest electronics companies specializing in consumer electronics and domestic appliances had the requirement to program a panel of six boards in an assembly.

Required features for the solution:

- ISP process with PC based compatibility.
- Minimize overall programming time.
- Programming a panel of boards.
- Easy, reliable and convenient to use and understand for the workers in the production line.
- Programming Barcode ID per board.
- Saving the barcode details, and programming results to a project database.

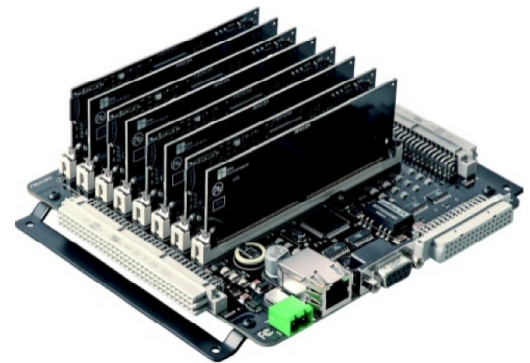
THE SOLUTION

Other ISP systems were not able to satisfactorily program multi-PCB panel assemblies with the given project requirements and those that could took more time than the FlashRunner Quattro which was by far the fastest for the devices in question.

For this application, our customer selected FR04A04 because:

- Programming time with FlashRunner for target microcontrollers was the fastest in test;
- Up to 4 microcontrollers could be programmed at the same time
- Easy integration with ATE
- Previously used SMH FlashRunner solutions had proven to be reliable in their manufacturing environment.

FR04A04 can program 4 boards in parallel, but we needed program 6 PCBs. In order to solve this problem, the assembly was designed with a custom switching relay to program the first 4 PCBs and then the last 2. The custom relay allowed us to use the features of the Quattro to switch between the ISP Lines and the target boards.



CONCLUSION

The resulting solution reduced the investment required and cost 3 times less than programming the boards one by one. The overall result achieved all of the customers' requirements and has been easy to implement. We are very pleased with the result and so is our customer.

About Prosystems

Prosystems Electronics Technology Co. Ltd. Upholds technological innovation and the concept of service excellence for electronic products. We provide ISP solutions, ISP Programmers and development tools.

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