



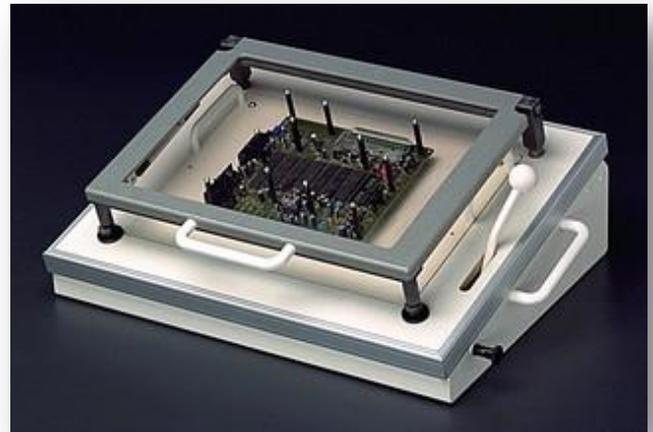
ESCATEC launches a Dedicated Standalone Functional Tester design service

Heerbrugg, Switzerland – 25 February 2015 -- There are many stages to creating and making a new product from the initial concept through to selling to the customer, but the stage that is often overlooked is test. A product designer will typically think that testing is a matter for the manufacturer and never consider incorporating features specifically to facilitate testing. Yet, Design for Test can save both time and money for the overall project, in particular for the increasingly complex final step of testing all the functionalities of the product.

The basic checks, such as are the right components are used in the right places, are solder joints are sound, etc., are easy and routine to do with a range of standard equipment such as Automatic X-ray Inspection (AXI) and Automatic Optical Inspection (AOI) without needing anything special for testing to be designed into the PCB.

The next step is Standard Functional Testing. This requires a range of equipment that checks that the components are functioning correctly and fortunately this is fairly straightforward as there are off the shelf test products available such as those from Keysight. It is easy to match the required function test with a standard piece of test equipment.

However, the last stage is the most complex. As products have increased levels of features, it is important that these are properly tested. This requires the design of a Dedicated Standalone Functional Tester, which ESCATEC is now providing as a design service. Creating this can be even more complex than designing the product, as it is a one-off design that has to be perfect. Each solution is unique to the product and precisely matched like a key to a lock, requiring skill and experience in thinking outside the box to try and design for the unexpected.



The design of the Tester should ideally be started at the same time as the design of the product so that they can evolve in tandem with changes in one being reflected in the other. Failure to do this means that the cost of creating a Dedicated Standalone Functional Tester becomes much greater than it could have been. And worse, it may be impossible at this late stage to test some parts of the circuit as there is no way to access them.

Having built the Tester, it needs to be tested to make sure that it is working correctly and is able to check all the functions of the device. To do this, a “golden unit” is used, which is a product sample that is known to work correctly from the R&D and previous testing stages plus manually performed functional testing. This is used to develop the test programme for the tester that will automatically test the products. The tester is then used on a hundred products to ensure that it gives consistent results with any abnormalities checked to see if it is the product or the Tester that is the cause. This enables Gauge Repeatability and Reproducibility used to determine the amount of variability in the Tester. This is an important part of being able to provide high quality control. The Tester data forms part of on-going data analysis of faults that enables First Time Yields to be continuously improved to reduce production costs by eliminating faults as soon as they are spotted.

The aim of the Tester is to simulate real life usage of the product, which requires an in-depth understanding of functions and range of operations of the product. Unfortunately, in real life, this is often done by completely different teams working for different companies, i.e. a design house and a contract manufacturer. ESCATEC has a holistic approach as all stages from contract design services to manufacturing are done in-house so that knowledge is shared and each stage is done by people who understand the needs of all the other stages. This integrated Design for Excellence approach has resulted in ESCATEC becoming one of the leading contract design and manufacturing companies in Europe.

ESCATEC

The ESCATEC Group provides fully-integrated electronic and mechatronic design and manufacturing solutions to assist customers in achieving success in their market. Its one-stop solutions and best-in-class service enable companies around the world to operate more profitably, sustainably and efficiently. Founded in 1984, its history is full

of innovation, which made it a first choice partner for many European and North American OEMs. The Swiss-owned company perfectly blends Swiss business philosophy and attention to quality, precision and detail with the advantage of low-cost, mass-volume manufacturing capabilities in its Asian factories.

Further information about ESCATEC, one of Europe's leading providers of contract design and manufacturing services: www.escatec.com enquiries@escatec.com

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