



# Kitron

Your ambition. Our passion.

## Test Development

Testing is an essential part of quality assurance of the manufactured products. Kitron's test development provides full turnkey test solutions with optimal combination of test coverage and cost. Over the last 30 years, Kitron has offered a wide range of test development projects, covering all of Kitron's market sectors: Defence/Aerospace, Energy/Telecoms, Industry, Medical devices and Offshore/Marine.

We continuously update the test methods available in the market and advance the development of testing and test philosophy. Kitron is a key member of the Nordic Test Forum (NTF), giving us access to leading international experts in our field.

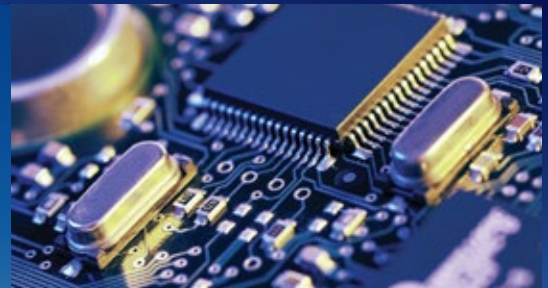
**Test Strategy** | The test strategy needs to be developed in the early product development stages and be based on available equipment. When creating a testing strategy, Kitron takes into account many aspects of the product, including its design, the complexity of the boards and many other factors. Kitron offers a test strategy for the optimal test coverage at the lowest total cost for the customer.

- Design for testability analysis, - Test requirement specification, - Test coverage analysis, - Other control and quality measures, - Apply the right test methods to the most cost efficient product level to achieve the optimal test coverage.



**SATS functional test** | Kitron develops state-of-the-art test systems for automated testing in production. SATS is our standard test platform for functional tests, developed to meet the most common test requirements and is easy to maintain and cost effective for our customers.

- Board level tests - box build tests - system level tests
- Advanced capabilities for measurement and stimulation with slots for optional extra instrumentation
- Flexible business model with option to rent the SATS test station for the actual time used during the test of the product



**ICT** | Kitron offers an ICT (in-circuit test), which is a powerful tool for printed circuit board testing. As most faults on a board arise out of the manufacturing process and usually consist of short circuits, open circuits or wrong components, in-circuit testing catches most of the problems on a board. These can easily be checked using simple measurements of resistance, capacitance, and sometimes inductance between two points on the circuit board.

By using ICT, it is possible to undertake a very comprehensive printed circuit board test, ensuring that the circuit has been manufactured correctly and has a very high chance of performing to its specification.



**Flying Probe** | Kitron offers flying probe testing, which, due to its flexibility, low development costs and short development times, is ideally suited to prototype applications and areas where small volume production is undertaken. Rather than having a comprehensive fixture for a given PCB assembly that can access all the required nodes via a "bed of nails", a flying probe testing system uses a generic board holder, and one or more probes moves across the board accessing individual nodes under software control, locating and pinpointing defects such as solder shorts, open connections, faulty components etc. Many tests are performed without power applied to the device under test, thus avoiding most conditions that could damage an assembly.



**Boundary scan** | Kitron offers boundary scan, which has become an essential tool used for testing boards in development, production and in the field. It enables much of a board to be tested with minimal access and is now widely used for testing electronic circuits at all stages of their life.

Since some forms of test require access either in terms of bed of nails fixtures, while others need to probe a variety of places on the board, boundary scan offers a unique solution to many test requirements. In view of its flexibility, the technique is widely used and a powerful tool in both development and production applications.

