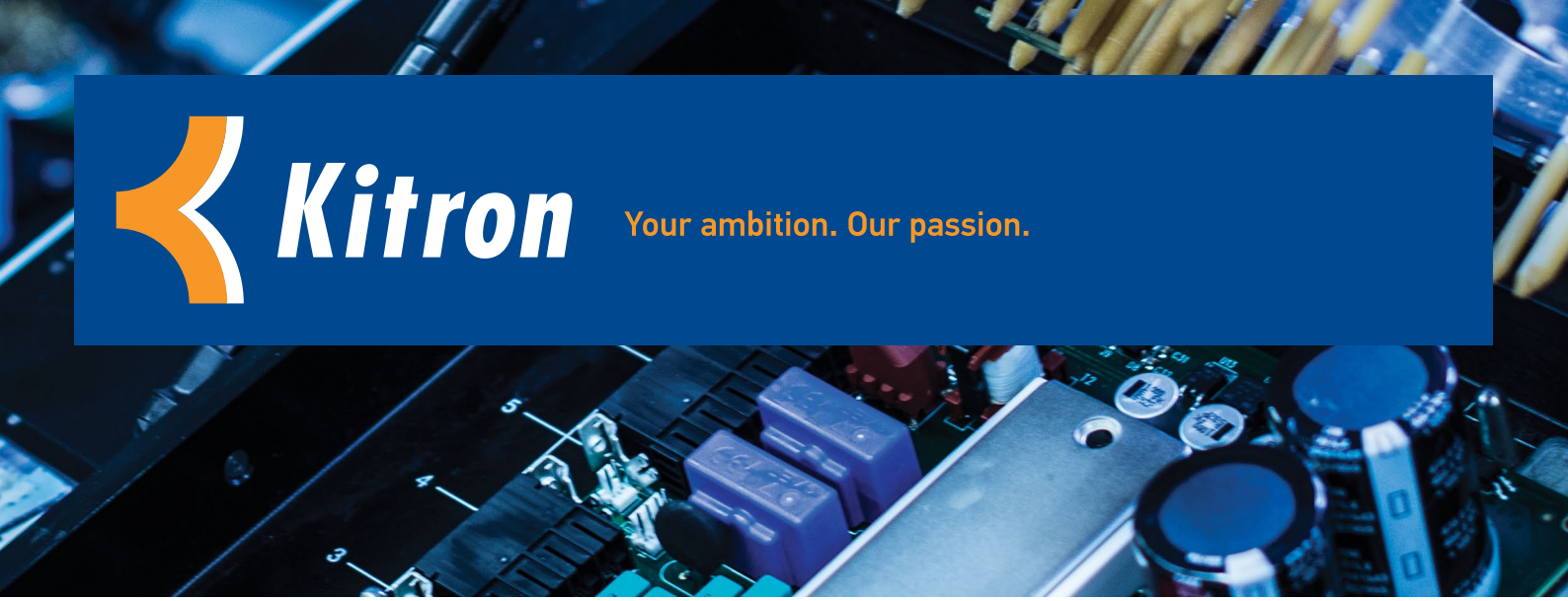

Kitron

Your ambition. Our passion.

ICT – In Circuit Test

During in-circuit tests (ICT), all components or nodes on the PCB are measured. This results in high test coverage of the PCB nodes that are impossible to test in functional tests. ICT also provides a very direct pinpointing of the potentially faulty component for repairs or corrections.

It uses a bed-of-nails test fixture to access multiple test points on the PCB. With sufficient access points to the nodes on the board, ICT can transmit test signals into and out of the board at high speed to perform evaluation of components and circuits.

By pressing the device under test (DUT) against the bed of nails, a reliable contact can be made quickly with hundreds and in some cases thousands of individual test points within the DUT's circuitry. It takes a few weeks to create the ICT bed of nails fixture and develop the test software.

ICT

- Component level bed-of-nails tests on PCBA
- Board-specific bed-of-nails fixtures
- Test of components/nodes
- Can be combined with boundary scan
- Pre-requisite is a board design with access to necessary test points or other physical access

ICT is good at:

- Locating manufacturing defects such as solder shorts, missing components, wrong components, and open connections.
- Performing many tests without power applied to the device under test (DUT), thus avoiding most conditions that could damage an assembly.
- Achieving high test coverage on a PCB by access to all nodes with test points.
- Minimizing test programming effort as the programming consists of software component models and switching test instruments onto each part via a bed-of-nails fixture.