PRESS RELEASE

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The new 6TL36 test handler introduces the RF test into automated production lines

6TL Engineering is pleased to announce the launch of their brand-new test handler, the 6TL36, the first system on the market integrating RF tests into production lines. In addition, its modular approach offers the possibility of adding more test stations into a production line to work coordinated and in parallel to reduce test cycle times.

As an evolution of the 6TL33 model, the first real modular test handler able to chain systems, 6TL Engineering has developed the new 6TL36 as a high-end solution to the latest challenges set out by the IoT and the manufacturing of connected products. Electronic devices are increasingly integrating more radio frequency communications, such as Wifi or Bluetooth, and the 6TL36 test handler is the perfect answer for a quick, safe and effective production test offering high reliability results.

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55dB RF isolation at 6GHz

The new 6TL36 test handler is able to perform to a device under test all the common electronics production tests (MDA, ICT, Functional Test and Boundary Scan), but it can also integrate a radio frequency shielding box providing an attenuation of 55dB/6GHz, meaning that Radio Frequency tests in the line can also be performed.

With these capabilities, the 6TL36 test handler is presented as the "best fit option" to test in-line any product with any technology, including those featuring wireless protocols.

High performance electronics production test

The 6TL36 platform is designed to be installed in production lines with a modular conception: up to six test handlers can be integrated together in series forming a group to meet manufacturing volume needs.

This flexibility is achieved thanks to an independent traceability system controlling the assignment of each PCBA arriving to the group of handlers to the most appropriate module.

On the other hand, each test handler of the group works independently. It has its own power supply and its own controller to run the test sequences, so if any fault would occur to a single test handler it is possible to disconnect it without interfering the full operation of the group.

Creating an advanced ATE out of a test handler with unique features

The new 6TL36 platform offers many other advantages in terms of implementation of international standards, process automation and production flexibility:

- Compatibility with SMEMA and Hermes communications protocols. SMEMA controls the interconnection of the machines in the same line, sending information on the status of each platform. The new Hermes protocol, whose development is participated by 6TL, moves forward to the Industry 4.0 for connected factories, offering more data about each connected machine and the PCBs of the line, improving traceability and information obtained from every piece.
- High dynamics transport systems with belt speeds up to 2m/s and handling time under 2 seconds, giving as a result very short transfer times.
- Automatic adjustment of the line conveyors width. The width of the PCBA's transport belts in the entire test line are adjusted automatically according to the product to be tested.
- Automatic process of PCBAs assignment and placement. An independent controller is responsible of the process to allocate the PCBAs into each machine. An industrial PC in each test handler runs the test sequence, which can be implemented in many different languages (LabVIEW, TestStand, Visual Basic, C#, ATEasy etc.).
- When the 6TL36 is equipped with the 55dB/6GHz shielding box, each new product to be tested will only need a set of plates to be adapted into the test handler. The shielding box will then become a part of the test handler, which means substantial recurrent savings. The product dependent test fixture can be easily and safely exchanged in less

than 2 minutes and it is not needed to neither turn off the test handler nor restarting the system to complete this operation. Former 6TL33 test fixtures do also fit into the new 6TL36 handler.

- The PCBA is set into the test position without any physical stopping method, neither as part of the test handler nor as part of the test fixture, meaning less maintenance (it is not needed to adjust the test handler to test a new product and there is much less wear of the conveyor belts thanks to avoiding the friction of the PCBAs against the belt while stopping).
- The test handler supports the installation of a third conveyor for the return of trays, allowing that both PCBAs and finished products can be tested with these test handlers (maximum height of product 90mm).

More about 6TL Engineering

Building and designing a test system for electronics is something to think deeply about. Many engineering challenges must be overtaken to finally achieve the best option to test your products.

Over the last 30 years, 6TL Engineering has developed an extensive know-how and a valuable expertise in every aspect related to the manufacturing of ATEs.

FastATE is how we call the technology we use to produce our ATEs, which in the end means standardized, reliable, true modular and flexible systems. Thanks to our approach all the recurrent engineering issues and tasks involved in the process of designing an ATE are solved, resulting in much less engineering time spent to create the appropriate test solution to perform flawlessly in the demanding production floor.

FastATE from 6TL is the key technology to create your modern ATE. Together in cooperation, we will provide the best test solution for electronics in record time.

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