

Alliance Partner Network

FastATE Technology: Build your ATE Systems Using Modular Blocks

About 6TL

6TL, headquartered in Barcelona, Spain, and with systems deployed in more than 30 countries, has over 30 years of expertise delivering solutions for the electronics test market.

6TL has redefined the way ATE integrators build their systems. Using commercial off-the-shelf (COTS) hardware and software blocks, integrators can shorten project delivery and build cost-effective, reliable solutions.

“The flexible and modular 6TL test system concept makes it easy for us to design and implement turnkey test systems to our customers. 6TL is a great partner for CIM and adds a lot value to our solutions.”

– Morten Pedersen,
CIM Industrial Systems A/S
Gold NI Alliance Partner

Today's test engineers need to focus on product testability and test processes; they are managing several projects in parallel, most likely on a tight schedule. But above all, to determine the best ATE architecture, they must consider its hidden maintenance costs, the true modularity of the system, and its long-term maintainability.

With 6TL's FastATE technology, test engineers do not have to address the recurrent tasks of every project since an 6TL module already completes most of these tasks for them. This module is a high-level block that covers one needed recurrent function of the ATE.

Thanks to this approach, test engineers and ATE integrators can:

- Design their ATEs with a proven architecture perfected by feedback from multiple customers in a variety of industries
- Significantly reduce engineering costs
- Provide simple yet highly powerful and scalable systems that can meet present and future needs
- Standardize the ATE while maintaining enough flexibility for addressing nonstandard needs
- Create their test bench documentation almost instantly
- Achieve shorter time to market due to the maximum reuse of COTS components



“With all of our production outsourced, it is difficult to ensure the best test quality in our providers. We adopted the customized 6TL-22 RF platforms last year. Since then, we have improved our test quality (providing further test capabilities to our RF products), flexibility (allowing us to change products between platforms with no cost), control (better traceability of tests results and time), and autonomy in test development thanks to LabVIEW and 6TL module integration.”

– Jordi Rifà,
Process Engineer,
JCM Technologies

Hardware Features

ATEs based on 6TL technology are built by stacking high-level modules into a test rack or into the rack mass interconnect interface, which minimizes installation time. Each module covers a recurrent function of ATE design.

The system controller manages the modules through the CAN bus; therefore, the only wiring inside a 6TL ATE is the CAN bus connection (4-pole cable), which links all the distributed high-level modules. This drastically shortens integration and documentation time.

The platform offers a variety of plug-and-play modules (the full catalog can be found online at ni.com/6TL.)

One is highlighted below.

Traditionally, ATE engineers had to buy Festo-like valves and electronics I/O as well as pressure sensors to build a pneumatic control system. Selecting these components and guaranteeing that they work together is not a simple task and prone to error. The YAV90PNE provides within a single module all the needed functionality as described below:

- 10 three-way pneumatic valves to directly control 10 simple or 5 double-effect cylinders
- 12 inputs for position sensors to cover typical pneumatic I/O needs
- Pressure sensor to control the air inlet pressure level
- NI LabVIEW drivers and API for all modules
- Available NI TestStand custom step types
- Test system resources monitoring with Phi6 software.



6TL Engineering is a Silver Alliance Partner in the National Instruments Alliance Partner Network which includes more than 700 companies worldwide who provide solutions based on the NI approach to graphical system design.

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