Simply Turn your Modular Instrumentation into a Flexible, Reliable ATE with 6TL Engineering.

Are you looking to develop your own Automatic Test Equipment using NI instrumentation and Software?

Then 6TL Engineering is a good partner to consider. To design an Automatic Test Systems (ATE) for use in a production environment is not an easy task. Having a PXI rack with Modular instrumentation and a powerful software environment like National Instruments LabVIEW and/or TestStand is simply not enough. There are many bears on the road before you can say I have created a Modular, Flexible, Standardized, Cost effective and reliable ATE.

When designing an ATE, one of the first things you need is a housing or Test-rack that has enough internal space to not only hold your PXI rack, power supplies and other instrumentation but also has;

- A reliable Mass Interconnect interface to prevent contact failures during the entire life of your ATE and provide a reliable quick connect and disconnect interface between the universal ATE and your Test Adapters.
- Has an Ergonomic design with, if needed, adjustable height features and cooling fan speed control for noise reduction, transport belt, a pusher and lifter in case off in-line ATE systems and easy application changeover.
- A MMI (Man Machine Interface) control panel to communicate with the operator and with your network for performance monitoring and remote service tasks capabilities including safety relays and emergency circuitry.
- CE, EMC and low energy design with under program control mains-switching for all instrumentation.
- Monitoring solution to monitor, guard and report the status of your test system, temperature and power in- and output fluctuations, current consumption and the overall functioning of your ATE.

Would it not be nice to have any size test platform, off-line or in-line configured and build-up efficiently in the exact same way as configuring your PXI Rack, using the same software tools and modularity?

With the 6TL Engineering modular concept this is possible. From SmartFixture to full in-line ATE using always the same building blocks. Each 6TL base ATE platform from the 6TL-10 up to the 6TL-32 are delivered including our MMI control unit, a UPS, PC/keyboard/mouse, monitor, I/O Board a **VPC 90 series Mass Interconnect Interface**, documentation and CE certified.


S6 (6 Module MIC)


G12 (12 Module MIC)

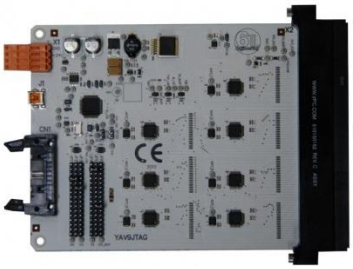

G12x (18 Module MIC)


9025TR (25 Module MIC)

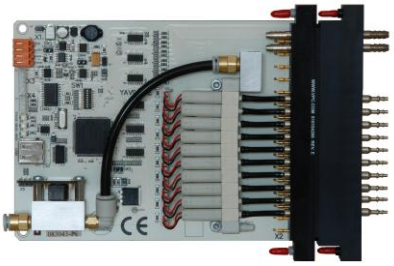
9025 (25 Module MIC)

MMI (Man Machine Interface) the Heart of each test platform. The 6TL MMI provides all standard features you always need, and many more in a test system under LabVIEW control through CanBus. Features like safety circuitry with emergency stop, start/stop buttons communication with the operator and colour LCD display with all relevant information on the status of your entire test system. The MMI also provides power to all CanBus controlled 6TL Engineering modules, Featured Key, Navigation Buttons, Fan Control, temperature and power monitoring with programmable alarm levels, switched and un-switched power outlets, programmable I/Os inputs for a Light curtain, foot pedal, extra emergency buttons, Light tower, thermocouples, LAN network, etc.

YAVmodules under CanBus control acting as complete Subsystems. YAVmodules are developed by 6TL Engineering to make it possible to build up your ATE in a more cost efficient way. All YAVmodules communicate with LabVIEW through CanBus. Many YAVmodules have the VPC Mass Interconnect Interface directly mounted to the board, eliminating the needed cables between the PXI or other instrumentation and the Mass Interconnect Interface. YAVmodules are available as **Pneumatic Subsystem** (YAV90PNE) providing pneumatic control to your UUT like any other LabVIEW controlled instrument. As **LED Detection Subsystem** (YAV90CLR) providing a solution with 16 optical input channels to measure light intensity and colour under LabVIEW control. In combination with our fiber optic heads you can detect LED colour and intensity on every DUT without the need for any additional hardware. **Boundary Scan & High Speed I/O Subsystem** (YAV9JTAx) providing virtual BS pins and High speed I/O in your ATE, compatible with JTAG, XJTAG, Goepel and other providers of Boundary Scan Solutions.



YAV9JTAx



YAV90PNE

YAV90CLR

Minimizing additional wiring in your Test system.

Next to the many advantages of using a Mass Interconnect Interface (MIC) there is one un-wanted side effect; you have to add Cabling between the instrumentation and the MIC, This is adding complexity to your system schematics, wiring diagrams and even worse, creating longer signal paths. Therefore minimizing the amount of cabling is not only saving cost and shortening signal paths but also simplifies the final documentation. 6TL engineering has a range of special YAVmodules complementary to the NI-PXI range of instrumentation for High Voltage switching, In-Fixture RF Switching, General Purpose Switching etc. that do not need any cabling, as they fit directly into the front of the VPC Mass Interconnect Solution. Communication between the YAVmodules and all other 6TL Engineering modules is done using the CanBus.

YAVmodules in the back of a Mass Interconnect interface connected through Canbus. (No additional wiring)