6TL *fast*ATE YAV90070 power module

General description

VPC G12 on a 6TL-19

The importance of a reliable Mass interconnect interface on a Functional test system is largely recognised and accepted in the market. It provides for each tester a more reliable, standard, modular and flexible interface independent of the measurement instrumentation selected for the test system. The VPC 90 series Mass Interconnect Solutions are widely used and accepted as the major standard for universal test systems.

One and only unwanted side effect of this is the added wiring and cabling needed to connect the Mass Interconnect Interface (MIC) with your instrumentation. This creates additional signal lengths with all it possible side effects like cross-talk, added resistance and capacitance between adjacent signals. It also adds to the complexity of your wiring diagrams and schematic diagrams making fault finding more difficult.

Wiring between Instrumentation and VPC G12.

This is one of the many issues you encounter when developing a test system. With 6TL's *fast*ATE technology minimizing system wiring is one off the many issues that are addressed, making it

possible for engineers to develop a test system in a more efficient and reliable way, saving up to 70% in time in the entire test system development and build process.

6TL's *fast*ATE Technology has been developed not only to minimize internal system wiring but to make building test systems in general much more efficient, using intelligent building blocks.
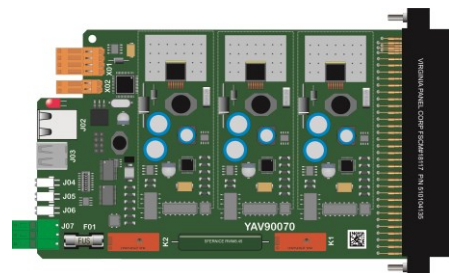
More on *fast*ATE technology can be found on the 6TL's website;
https://www.6tlengineering.com/6tl/fastate/

One perfect example is 6TL's new YAV90070 Power module.

The YAV90070 *fast*ATE power module is an innovative solution to bring a regulated and programmable power supply from inside the test system to immediately behind the test system interface. The YAV90070 has a VPC MIC connector mounted on the front of the board enabling it to be placed directly inside the VPC 90 series MIC interface. This approach saves a lot of rack space needed for normal 19" programmable power supplies where now we can use a simpler,

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lower cost, fixed power supply, as an input to the *fast*ATE YAV90070 power module.

This enables engineers to integrate programmable power supplies inside compact base test solutions like the *fast*ATE 6TL-08 compact test platform.

More information on this system on our website; www.6tlengineering.com/producto.asp?id=593

The *fast*ATE YAV90070 power module contains the three most common and wanted subsystems in general purpose automatic test systems:

1. Conditioned AC input with relay control for a "soft start" of the Unit Under Test (UUT), detecting a short circuit in the UUT before it and/or the spring loaded probes gets damaged.

2. A triple DC isolated programmable power supplies, providing the typical most commonly used power for a UUT.

    a. To power Logic circuits with voltages ranging from 1.5 to 6V with a maximum current off 6 Amp, controlled by an optical isolated microcontroller.

    b. Two isolated programmable outputs ranging from 5 to 20V, 6A that can be connected in series to reach voltages from + 5VDC to + 40VDC , or in parallel maintaining the symmetry of the two outputs and the currents are added up to reach a maximum of 12A independent of the programmed voltage.

       Configuring one or the other can be done easily from inside the fixture by simply placing jumpers in the Interchangeable Test Adapter (ITA) connector module.

3. A direct connection from the ITA to two passive or active loads that might be installed inside the test system.
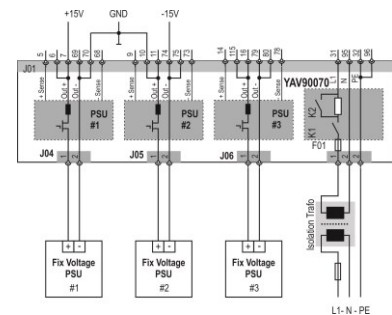
As an extra the YAV90070 also provides a four wire link from the MIC connector interface to the back of the board to be able to contact directly an external DMM or fixed power supply. A connector is present that can be hard wired to the emergency circuitry or ITA engagement switch in the VPC G12 MIC receiver, removing the power from the fixture in case ITA is being removed during test or the emergency button is pushed.
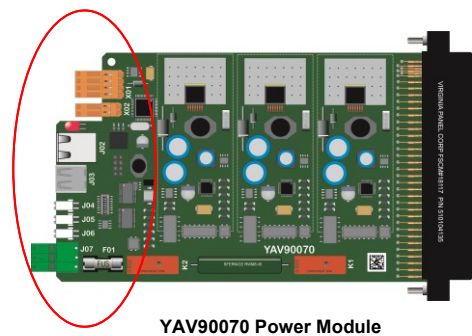
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The microcontroller of the YAV90070 has Ethernet, USB and CAN bus connections. It can act as a LAN to CAN gateway, passing commands received through Ethernet to CAN to address other *fast*ATE modules that might be present in your MIC receiver interface or test system without the need for an additional CAN interface in your system controller.

The USB port is only for internal use and will be used for firmware updates.

Controlling the YAV90070 can be done through Ethernet or Canbus.