Keysight Technologies
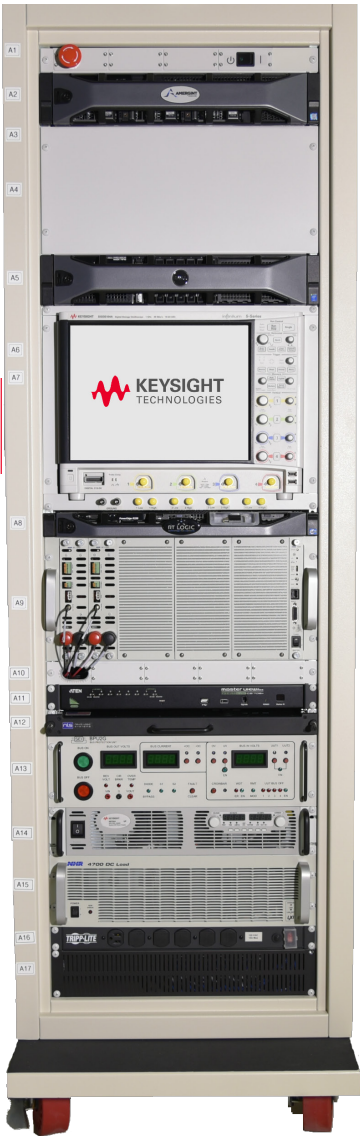# Z2090B-033 Power and Data Bus Test System
Satellite Bus Testing Solution

Technical Overview

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System Description

The Power and Data Bus Test System consists of hardware to provide command and telemetry signals, bit error rate testing, DC power interface, data storage and standard RS422 and IEEE 1553 signal interfaces for satellite panel and unit testing.

System Capability

– Four separate RS-422 Data Interfaces to Unit Under Test (UUT)
– Command, Echo and Telemetry RS-485 Interface
– Four redundant channels MIL-STD-1553B separately configurable as BC, RT, or BM
– CMD and TLM processor with Crypto Control and Status and TX/RX Ternary Command BERT
– 12 channel RS422, 2 channel MIL-STD-1553B data recording
– General purpose relay switching
– General purpose relay driving
– High Voltage Analog Inputs (100 V)
– 30 B, 20 A and Dual 7.5 A Dynamic Loads
– 40 V, 125 A Power Supplies
– 4-channel oscilloscope
– Redundant power supply bus protection and monitoring
– Relay switching of signals to Oscilloscope, Data Recorder

Keysight will tailor the system to specific customer needs

Any test system is only as good as its capability to test specific UUT. Keysight has the expertise, resources and processes in place to match the system to your needs. Our experience along with that of selected partners will ensure that your testing needs are fully met in a cost competitive manner.

System Hardware

– RS422 IO
– MIL-STD-1553B I/O
– CMD/TLM Processor
– RS422/1553B Data Recorder
– 18 slot PXI chassis
– 16 x 32 two-wire cross-point mux
– Bus Protection Unit
– Power Supplies
– Dynamic Loads
– Relay Switches
– Relay Drivers
– HV Analog Inputs
– Oscilloscope
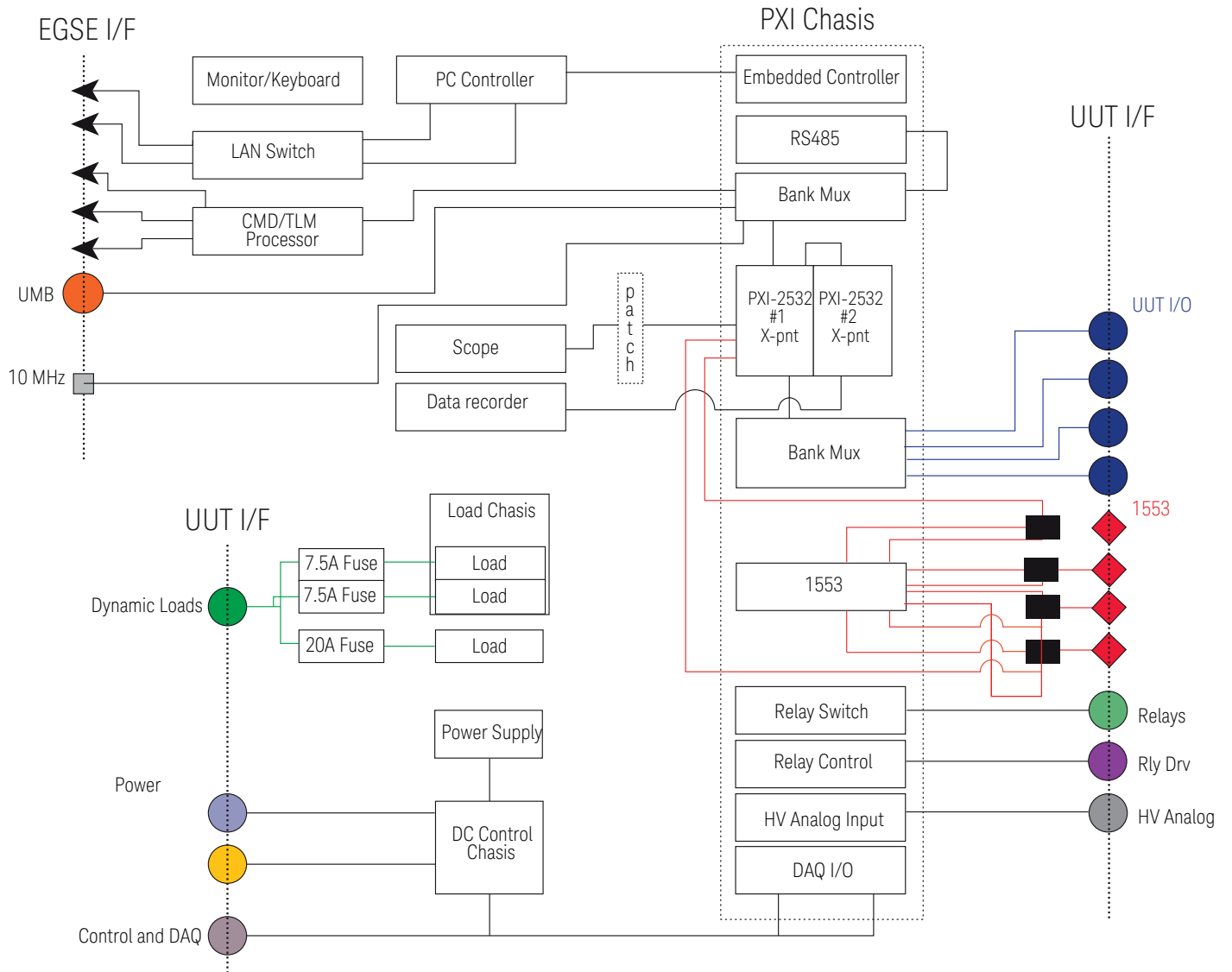– System rack, cabling, controller PC

Rack Hardware

– Keysight 2.6 meter or 3rd party ruggedized rack, PDU and cooling

System Software

The system comes pre-configured with standard Keysight instrument drivers, measurement firmware and Windows 7 Professional™ operating system.

System Block Diagram

System Benefits:

- – This system solution sold under a single part number has capability to supply stimulus, power and measurements for satellite bus testing
- – Power and Data Bus Test is a platform solution customizable to specific requirements – e.g., it can be customized to add additional protocols such as Spacewire
  - – PXI chassis has room to expand to add additional functionality, as needed

Application Assistance:

Keysight's application experts are available to help optimize the system, taking full advantage of the system capability for your unique application.

Operator training is also available to help you get the system into service quickly.
If your application goes beyond the standard system offering described above, Keysight program managers and engineering professionals can help define and implement unique functionality. They ensure that your custom system requirements are implemented successfully.

Support:

Our extensive support resources and services can help you choose the right Keysight products for your applications and apply them successfully.

Support is available for at least five years beyond the production life of the product. Two concepts underlie Keysight's overall support policy: "Our Promise" and "Your Advantage."

Our Promise:

Our Promise means your Keysight test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance and practical recommendations from experienced test engineers.

When you use Keysight equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

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