ABex System Architecture

Power Bus
Analog Bus
Rear Module
PXI-Chassis
Power Supply
ABex Backplane
Terminal Modules
Virginia Panel Interface
Digitizer or Multifunction DAQ Board
DMM/LCR Meter
PXI Switching Matrix
DUT
PXI

A UNIQUE PLATFORM FOR ALL TEST CHALLENGES
PXIe-BASED TEST SYSTEM PLATFORM

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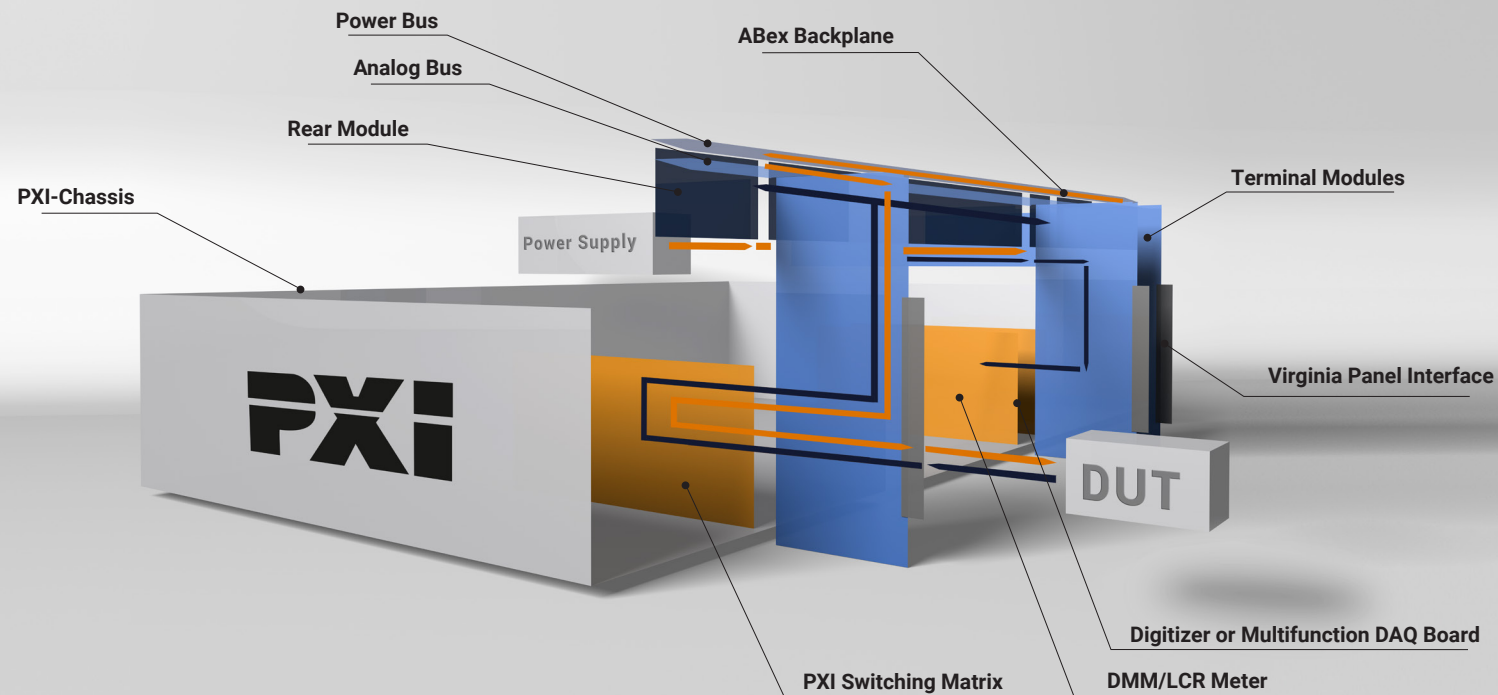
SYSTEM ARCHITECTURE

The ABex expansion enables fully wireless distribution of analog and digital measurement and power signals throughout the entire system. Signals are routed via defined lines with stable impedances. No cables have to be used to connect the DUT with the switching matrices and the required PXI instruments.

The system can be equipped with a dedicated DUT interface, based on high quality Virginia Panel technology. The interface guarantees 20,000 mating cycles.

SOFTWARE SUPPORT

The ABex based systems are programmed using software tools provided by vendors of PXI instruments. Signal routing to the backplane and all additional terminal module functions are programmed using ABex API functions and individual test panels. Common programming languages, including NI LabVIEW, NI TestStand, C++ and C, are used for test program generation. For fast and easy editing of signal routes, a switch routing management solution is available.

Konrad Technologies offers support and services worldwide.

ABex® Analog Bus Extension for PXI

ni Platinum Partner
VEHICLE RADAR TEST SYSTEMS

ni Platinum Partner
RF AND WIRELESS

Konrad Technologies
Global Deployment & Service
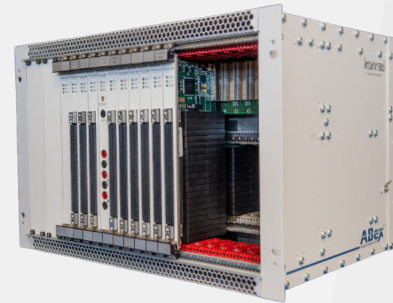**sales@konrad-technologies.de**

ABex

UNIVERSAL HIGH-DENSITY TEST PLATFORM
ANALOG BUS EXTENSION FOR PXI

ICT, FCT, ISP, Boundary Scan, JTAG, ISP, RF-Test, Semiconductor-Test, HIL-Testing, Reliability and Validation Testing

Overview

The Konrad Technologies ABex (Analog Bus Extension for PXI) is a PXIe-based test system platform that extends to accelerate productivity, development throughput and time to market. Applicable in various industries and technological fields, this platform covers complex test challenges anywhere on the production line. Due to its flexible system architecture with an analog bus backplane and terminal modules, the platform allows the integration of technology specific extensions and extremely short system set up times, which result in a reduction of total system cost.

Many Models **One Test Platform**

Pin Count

LEON Inline Flex Cell

LEON Inline Tiny Cell

LEON Tower

LEON Station

LEON Bench

LEON Desktop

LEON Fixture

Volume

FEATURES

- **Fully compatible with PXI and PXIe instruments**
- **Software-based signal routing between PXI instrumentation**
- **Cableless connection to Virginia Panel connectors and test fixtures**
- **Analog bus expansion for PXI (4, 8, 18 slots)**
- **30 analog lines**
- **Signal level up to 100V**
- **Power bus for supplying ABex modules**
- **Easy signal switching via high level programming language**
- **Integrated PXI/PXIe hybrid backplane**
- **Highly parallel test possible (i.e. ICT with up to 16 test heads)**
- **Includes analog switching bus and support power for terminal modules**
- **Rear modules available for specific extensions**
- **Common interface**

BENEFITS

- **Short setup and development time**
- **Complete elimination of internal cabling**
- **Extended functionality for PXI and PXIe modules**
- **Easy extension of standard instruments with specific electronic (terminal module)**
- **FPGA-based software defined instruments**
- **Fast integration of non-PXI devices**
- **Excellent signal quality**
- **Universal high-density test platform**
- **Universal and reliable DUT interface**
- **Extensive software support (LabVIEW, TestStand, C++)**
- **Less debugging (graphical switching)**
- **Easy reuse for different applications**

ABEX BASED TEST SOLUTIONS

The Konrad Technologies LEON test systems are built on the solid foundation of PXI, PXIe and National Instruments LabVIEW software, combined with the ABex. The flexibility of the ABex allows the development of test solutions providing customers with efficient sharing of analog and digital resources to reduce development and deployment costs. The solution results in test systems that feature instrument to DUT connectivity that can stand up to the harshest environments.

Ensure quality all down the line with the Konrad Technologies LEON board test systems, built on the innovative Konrad Technologies ABex platform.

Terminal Modules

The bridge between the instrument, bus backplane and DUT interface are the terminal modules. Terminal modules use high quality relays to access all lines of the bus backplane and are software controlled via a central ABex controller. Many popular instruments are currently supported, including popular instruments such as the National Instruments (NI) PXI-407x DMM series, NI PXI scopes, NI M or X series multifunction DAQ boards or Konrad Technologies multifunction instrument PXI-501. New instruments can be developed as well using the ABex Development Kit.