Modular Breakout System

For Hardware-in-the-Loop (HIL) Simulation Applications

PRODUCT HIGHLIGHTS

- Combined BoB feature set with the flexibility of an FIU
- Compact, reliable design
- Improved signal integrity
- Modular patch panel optimized for fault insertion

APPLICATIONS

- Hardware-in-the-Loop Simulation
  - For signal monitoring
  - For signal injection
  - To automate faults

Pickering Interfaces, in partnership with OPAL-RT TECHNOLOGIES, have designed a Modular Breakout System that combines a BoB (Breakout Box) feature set with added flexibility and an FIU (Fault Insertion Unit) chassis.

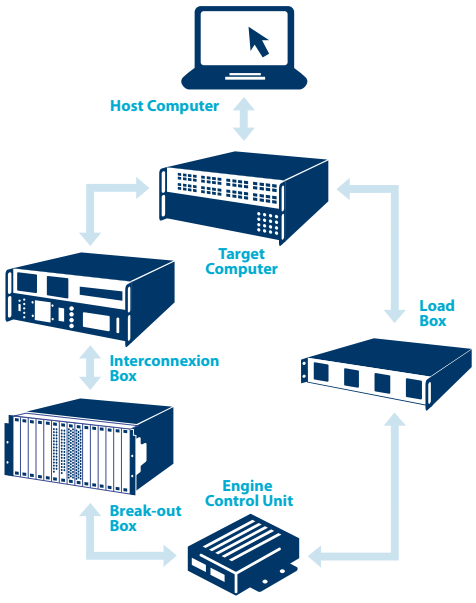
Design to Simplify HIL Simulation Applications

- By mating the FIU chassis directly to the BoB, cabling is minimized, creating a more compact reliable design and improving signal integrity.
- The majority of the BoBs and FIU systems available today are not modular and are fixed in configuration, creating a test solution that is not often ideal.
- Cable configurations that are cumbersome and in many cases expensive.

Benefits

- Offers in the same package BOB and FIU
- Offers a maximum of 518 lines (highest count per racking unit)
- Offers extreme modularity (low current to high current channels, RSM, etc.)
- Low channel count is less expensive
- Can be used with any PXI and LXI chassis offered by Pickering

Typical Automotive Configuration



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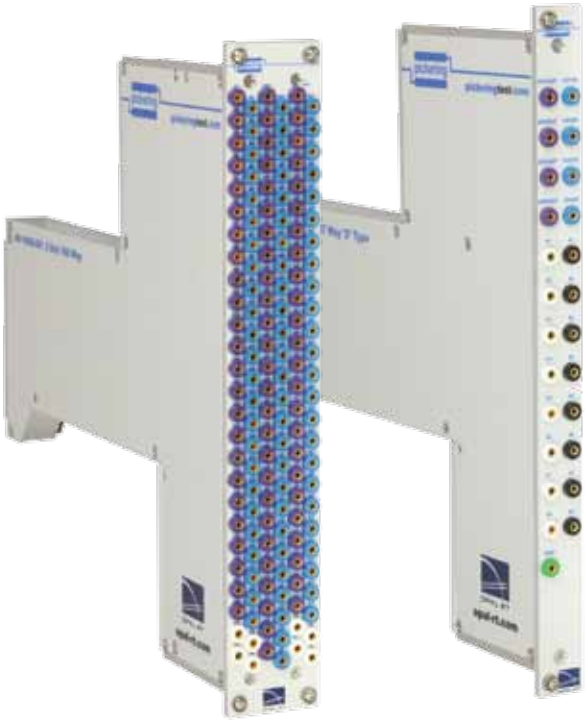
Choices for FIU and Breakout System Requirements

- Take advantage of Pickering's large range of FIU modules.
- Available in different choices for channel count, fault busses, voltage and current.
- Multiple FIU module types can be installed in a chassis.
- Breakout System modules are optimized for each FIU module, so it is as customizable as the FIU system.

Programmable Resistance

Traditional BoB designs feature a manual potentiometer for creating resistive faults. Pickering can automate this process by adding one of our programmable resistance modules to the Breakout System. The module can be controlled manually through a soft front panel as well as programmatically— speeding up a test process and ensuring repeatability.



Field Upgradable

- Breakout System modules and FIU modules can be added and/or replaced by the user.
- The software driver from Pickering supports entire FIU range, so no new software is needed to integrate the new modules.

Breakout System Module Capability

- Voltage and current specifications of the Breakout System module's UUT and simulation ports are matched to the FIU module for which they are designed.
- Front panel terminals are for low voltage (30VAC/60VDC) monitoring purposes only.

New Designs

Pickering is always looking to expand our catalog of FIU and Breakout System options. If you don't see what you need, contact us and we will see if we can accommodate your test requirements.

ABOUT PICKERING INTERFACES

Pickering designs and manufactures modular signal switching and instrumentation for use in electronic test and simulation. We offer the largest range of switching cards in the industry for PXI, LXI, PCI and GPIB applications as well as a full range of supporting cables and connectors. Our products are specified in test systems installed throughout the world and have a reputation for providing excellent reliability and value.

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ABOUT OPAL-RT TECHNOLOGIES

OPAL-RT is the world leader in the development of PC/FPGA Based Real-Time Digital Simulator, Hardware-In-the-Loop (HIL) testing equipment and Rapid Control Prototyping (RCP) systems to design, test and optimize control and protection systems. used in power grids, power electronics, motor drives, automotive industry, trains, aircraft and various industries, as well as R&D centers and universities.

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