



AdvancedTCA® Extensions for
Instrumentation and Test

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Press Release – For Immediate Release

**AXIe Consortium Announces a New AXIe Specification
for Low-Cost Instrumentation and Switching**

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September 15, 2014 – Niwot, CO. The AXIe Consortium announced a new specification, AXIe-0, suitable for low-cost instrumentation and switching. Titled “Low Cost Instrument and Switch Architecture,” AXIe-0 retains the module size and board area of the current AXIe-1 Base Architecture, while delivering a cost effective platform for vendors and users not needing the full capability of AXIe-1.

Von Campbell, Chairman of the AXIe Consortium and R&D Manager at Keysight Technologies, said “The AXIe-0 specification is part of the ongoing efforts of the Consortium to broaden the use of AXIe. This new low cost instrument and switch architecture enhances cost effectiveness and improves ease of implementation for vendors wanting to take advantage AXIe's space, power, and form factor for products that don't require the high speed data infrastructure. These products include electronic switching, loads, frequency converters, and a wide set of custom functionality designed by system integrators.”

Of particular note is the upward compatibility model of AXIe-0 to AXIe-1. All AXIe-0 modules can be mixed and matched with AXIe-1 modules in an AXIe-1 chassis.

Larry Desjardin, who led the technical working group behind the new standard class, said “From day one our goal was to meet two objectives. The first objective was to create a standard that would significantly lower the cost of modular instrumentation and

switching solutions. Our second objective was complete upward compatibility to AXIe-1. AXIe-0 meets both goals.”

Essentially, AXIe-0 is a subset of the AXIe-1 specification. It uses LAN for communication to each module, and all modules appear as LXI instruments to system software. Non-ASCII communication and use of the AXIe trigger bus enables high-speed switching and triggering, either with other AXIe-0 products, or with AXIe-1 modules in a combined system. Creative choosing of functionality has allowed significant backplane, power, and management cost savings.

Key applications enabled by AXIe-0 include large switching systems, RF Interface Units for aerospace and defense, and custom modules developed by system integrators and end users. With AXIe offering the same slot width and large board area as VXI, AXIe-0 is an ideal transition platform for VXI depot test applications, or any instrumentation requiring the large module size. AXIe-0 retains the same scalability of AXIe-1, ranging from small horizontal 2-slot chassis to large 14-slot systems.

"Elma is excited about the cost advantages of AXIe-0", proclaimed Ram Rajan, VP of Engineering at Elma Electronic. "Our internal analysis shows AXIe-0 to deliver cost savings even when compared to the smaller PXI form factor. Elma will work with any vendors or end users interested in adopting AXIe-0."

"AXIe-1.0 has provided a great platform for high performance instrumentation in a modular form factor - such as the high-performance signal generators from Giga-tronics" said Mark Elo, VP of Marketing for Giga-tronics, "AXIe-0 now gives us the opportunity to meet exact customer needs, allowing for complimentary capability such as RF Interface and Switching Units."

Lauri Viitas, General Manager at Guzik Test and Measurement, stated, "We look forward to the availability of AXIe-0 signal conditioning modules, such as down-converters, to extend our AXIe digitizing capabilities past X-band."

"ADLINK supports the extension of AXIe into low cost instruments and switching", said Roy Wan, Chief Director of Measurement and Automation at ADLINK. "The increased availability of AXIe products will allow more opportunities to deliver focused solutions to the marketplace."

About the AXIe Consortium

A preliminary AXIe-0 specification may be found on the [AXIe Consortium](#) website. AXIe is an instrumentation standard based on AdvancedTCA (ATCA) with extensions for instrumentation and test. The mission of the AXIe Consortium is to provide an open standard that creates a robust ecosystem of components, products, and systems for general purpose instrumentation and semiconductor test. AXIe leverages existing standards from PXI, LXI and IVI.

[AXIe Consortium membership](#) is open to all vendors who agree with the stated goals and intend to provide solutions to the marketplace.

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