

## AXIe Development Tools Debut at Autotestcon

By [Larry Desjardin](#), [Modular Methods](#)

Two new vendors of AXIe products, Elma Electronic and Hiller Measurements, announced powerful development tools for the AXIe modular instrument standard at Autotestcon 2013. The tools are designed to help vendors and system integrators quickly develop and deploy AXIe instruments and systems.

“Until now, developers who wished to take advantage of AXIe capabilities faced significant development and learning curve hurdles,” said Von Campbell, chairman of the AXIe Consortium. “With the tools and products coming from Elma Electronic and Hiller Measurements, vendors and users can now focus on their unique circuitry and software, as much of the platform engineering is taken care of for them.”

[Elma Electronic](#), a well-known vendor of AdvancedTCA<sup>®</sup> products and platforms, is now offering AXIe products. For chassis developers, Elma Electronic has developed an AXIe IPMI (Intelligent Platform Management Interface) Shelf Manager card with redundant IPMB (Intelligent Platform Management Bus). The shelf manager’s system monitoring features include power management, cooling control, event sensor logging, electronic keying, and module hot-swap monitoring.

For module developers, Elma has developed an IPMI controller mezzanine card that fits onto a standard AXIe or AdvancedTCA-based (ATCA-based) module. This card allows users to quickly deploy the required IPMI functionality, freeing their engineers to focus on the unique added value of their designs.

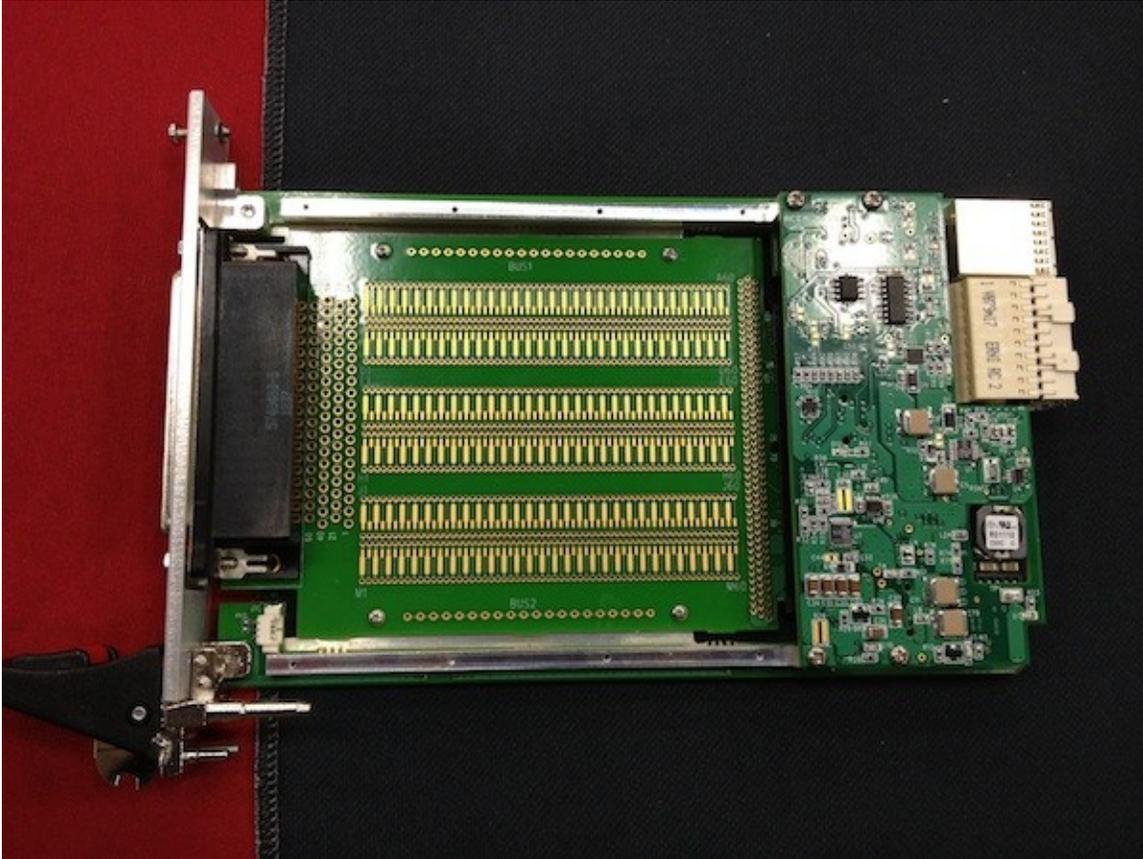


**Figure 1** shows the Elma IPMI controller surrounded by other components. Less than the size of a dime, the controller delivers IPMI functionality for newly developed modules.

“IPMI and IPMB bring robust management capabilities to AXIe and AdvancedTCA, but developers shouldn’t have to become IPMI experts to implement their designs,” said Ram Rajan, V.P. of Engineering for Elma. “With our expanding set of AXIe products and tools, they won’t have to, and can therefore focus on delivering value to their customers.”

Elma also announced a shelf manager, a critical component for chassis developers. At the show, Elma stated that they would be developing other AXIe products, and hinted strongly that this includes backplanes and chassis.

For AXIe module developers requiring a more turnkey development environment, [Hiller Measurements](#) is releasing the MiAXIe<sup>®</sup> AXIe Development System. Similar to their MiPXIe<sup>®</sup> System, the product provides the hardware and software interfaces for an AXIe module that can be quickly adapted to a customer’s application. In its initial release, Hiller Measurements offers the MiAXIe<sup>®</sup> System as a design service, with a standard hardware development kit scheduled for release in 2014.



**Figure 2** shows the MiPXIe development kit from Hiller Measurements, for the development of custom PXI modules. The MiAXIe, focused on AXIe development, is similar, but allows significantly more board area for custom developments. Users develop custom electronics that are placed in the breadboard area between the faceplate in the front and the AXIe interface to the rear.

Jeff Olsen, V.P. of Sales & Marketing at Hiller Measurements, notes the importance of this capability in aerospace and defense applications. “The recent introductions of high fidelity AXIe sources and receivers highlight the need for a flexible development environment to accommodate custom signal conditioning and up/down conversion. Similarly, legacy systems fielded in VXI can be ported to AXIe to address obsolescence in a cost effective and low risk fashion. MiAXIe<sup>®</sup> is the ideal approach to address these needs.”

The need for a migration path from VXI is an interesting aspect of these tools. VXI has been a mainstay of mil/aero test systems for many years, but new development has slowed. AXIe, as the “big brother” to PXI, offers an interesting alternative that delivers PXI software compatibility, but the large board format desired by many system integrators and equipment vendors. AXIe modules are approximately 14% larger than VXI modules, and many times larger than PXI modules.

Another potential market for the development tools are end users wishing to deploy custom electronics within their test or data acquisition systems. This includes custom signal conditioning, load cards, switching, and DUT (Device Under Test) specific features. AXIe chassis range from 2 slots to 14, and supply the needed infrastructure (power, cooling, triggering, and communication) for system integration, leaving the user to focus on their unique circuitry. A

large format envelope gives the end user the board space to quickly design and deploy their desired circuitry.

The development tools from both companies are expected to be available in autumn of 2013.

\*AdvancedTCA is a registered trademark of PICMG.