Open Modular Computing Specifications

PICMG is the leading specification development organization in the embedded computer market.

AdvancedTCA® • CompactPCI® / Serial • COM Express®
MicroTCA® / AMC • SHB Express™ • HPM • PCI-ISA
Why Join PICMG?

• Early access to key technology
• Participate in specification development
• Leverage PICMG promotions & marketing efforts
• Develop relations with thought leaders and suppliers
• Gain visibility and leads from your products and content on the PICMG Web site
• Low-cost membership – Affiliates join for as low as $1000*

*2017 price, subject to change
Markets

Our diverse membership allows PICMG to develop compelling specifications in multiple markets. PICMG technologies are widely used in a broad swath of industries including industrial automation, military/aerospace, transportation, communications, test/measurement, physics/research, energy, medical, and more!

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Current Specifications

A member-driven organization, PICMG participants combine expertise from over 150 members to create cutting-edge innovations. Whether the design requires high-speed, compact size, rugged form factor, or hardware platform management, PICMG has combined these attributes for popular specifications.

- AdvancedTCA®
- CompactPCI®
- COM Express®
- MicroTCA®
- AdvancedMC®
- CompactPCI® Serial
- SHB Express™
- HPM
- PCI-ISA
Open Source vs. Open Specification

The Open Source groups such as Open Compute™, Raspberry Pi™, etc., tend to focus on specific product designs where even the Gerber files, schematics, and mechanical drawings are included. This lends itself to monochrome, commodity products with little differentiation.

Open specification/open standard groups on the other hand focus on common interfaces for interoperable products rather than finished products. Multiple vendors contribute to the base definitions and interfaces, but the implementation can vary greatly. Many applications require a lot of I/O and processor differentiation, so the open standards/specification route is often greatly preferred. There are also benefits of scalability, multi-vendor interoperability, and a broad ecosystem of proven products by utilizing open specification architectures.
PICMG- Unprecedented Success

PICMG technologies have been at the forefront of embedded computing technology for almost 25 years. It is the only open standard embedded computing organization to have a technology reach over $1 billion in revenue/year size. Here are just a few examples:

- **COM Express** is the most popular computer-on-module specification. It continues to grow in a wide range of applications with its compact size, scalability, and versatility.
- **AdvancedTCA** reached over $1.0B in 2010 in largely Communications applications and continues to expand its presence in Defense and High Energy Physics markets.
- **CompactPCI Serial** is gaining momentum in Transportation, Industrial, and other markets. There are also ruggedized versions that are an excellent fit for a low-cost, high performance Mil/Aero system.
- **MicroTCA/AMC** are very powerful small form factor specifications providing superior SWaP solutions in mission-critical applications. The specifications continue to expand in Comm/Test, Mil/Aero, High-Energy Physics, and Research/Lab applications.
- **CompactPCI** was used in 2004 on the Mars Rover. The system was expected to only be usable for a few months in the harsh environment. The rugged CompactPCI system is still collecting data today!

Components Enable Our Specifications

The high-performance embedded computers that our members develop cannot be built without components. Many of PICMG’s members make the piece-parts of an assembly. This includes connectors, discreet ICs, processors and chipsets, PCBs, mechanical hardware, and much more.
What’s New, What’s Next

Although the specification work is membership driven, PICMG leadership shares market trends and broad specification ideas with its members. The group is working to develop the next generation of compact, rugged, and high speed designs for a breadth of applications. Here are a few specifications that are new, currently in draft or in the exploratory discussion phase.

- **CompactPCI Serial for Space**
- **100G AdvancedTCA**
- **40G MicroTCA and AMC.2**
- **COM Express updates**
- **MicroTCA and AdvancedTCA for Physics updates**
- **Industrial IoT**

Add your company to this list of members and join the leaders in your industry!

Visit picmg.org/membership-account/membership-levels/ to see the different membership levels and low cost.
Next Stop
Internet of Things
Industial Automation
Military
Aerospace
Medical
Transportation
Research
Physical Communications

Jump on board the PICMG Express!

Open Specifications
Commercial | Industrial | Rugged
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