

# Crystal Cube Consulting and Metz International

## Advanced TCA: A Force of One in Telecom & Datacom Applications

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# Advanced TCA: A Force of One in Telecom & Datacom Applications

## Executive Summary

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The telecommunications industry has fallen on difficult times over the last few years, but faces an encouraging future with the advent of Advanced Telecommunications Computing Architecture (ATCA). The slashing of Capital Expenditures (CAPEX), and Operational Expenditures (OPEX) by service providers had a ghastly affect on system OEMs of all tiers.

Advanced TCA is the first open industry specification for carrier grade equipment incorporating high-speed switched fabric technology capable of switching and processing 2.5 Terabits Per Second in a single shelf.

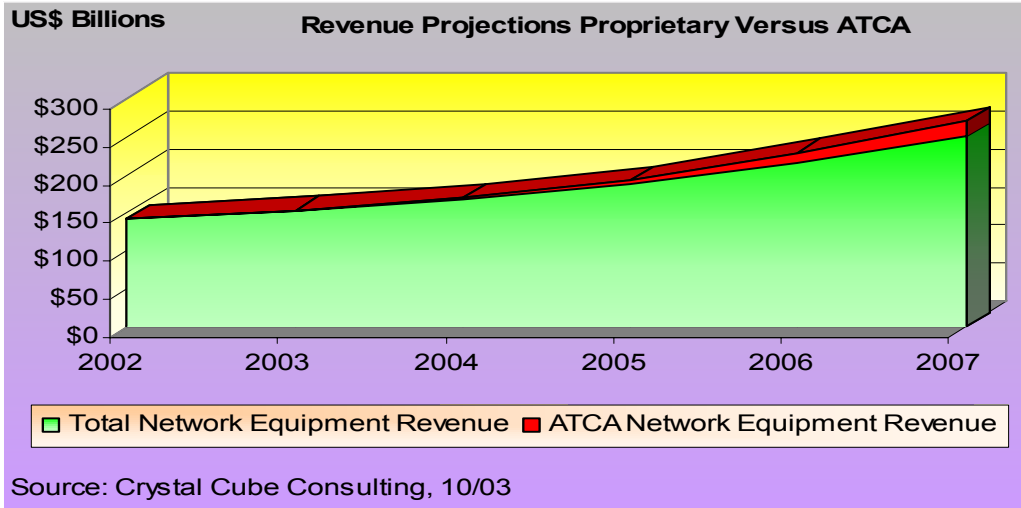
We believe ATCA will be a major driver for raising the telecom industry from the current slump, and fueling future growth – for the entire value chain. ATCA is arguably an ambitious effort, but the move to standards should be a “no brainer.” As the PICMG 3.X series of specifications continue to progress toward standardizing a hardware platform & interconnects, OEMs will be less hesitant to start new design projects due to the direct savings in their development cycles. Standards-based technology plays an essential role, enabling equipment manufacturers to realize substantial cost savings – and service providers to benefit directly from those savings.

The ground swell that Crystal Cube Consulting has observed to date during the development of this report has been much greater than originally viewed. Several major players, such as Intel and Motorola, are much further along than the industry had speculated surprising everyone by the velocity at which the movement towards ATCA has taken place. In our conservative estimate, as illustrated in the revenue chart on the next page, this new ATCA standard has the potential of generating in excess of \$20 billion dollars by year end 2007. Our report includes a nine-page section, forecasting in detail, each telecommunications networking equipment segment with revenue projections through 2007.

We believe the largest potential market that ATCA will first support through solutions provided by the Telecommunications Equipment Manufacturers (TEM's) will be wireless infrastructure, including edge and core solutions. The 2.5G to 3G markets specifically

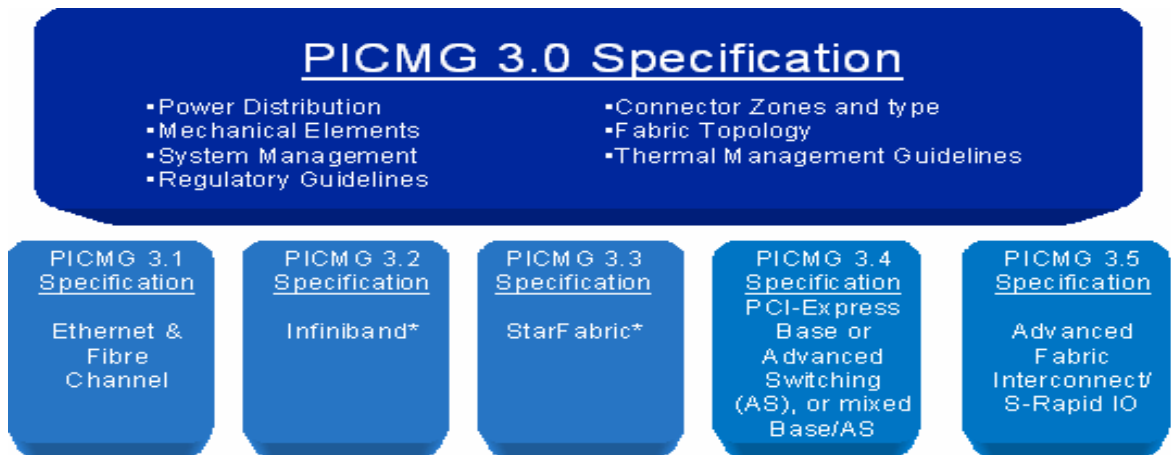
will be the initial focus for the deployment of ATCA, which commands the lion's share of the network equipment market.

**Figure 1. Worldwide Networking Equipment Revenue Versus ATCA Forecast 2002 – 2007**



While some still feel hardware standardization will eliminate the ability to differentiate products, we disagree. This is both a shallow & short-term view – and simply not true. Most tier 1 system vendors will retain their proprietary fabrics & backplanes until the architecture no longer scales to the required performance. The advent of ATCA may even shift the value added proposition to the software domain where it belongs. OEMs & service providers who prosper will capitalize on the open standards to reduce their time to market, and differentiate through software. The flow of that development is illustrated in the diagram shown below.

**Figure 2. PICMG 3.0 Specifications Flow Chart and Diagram**



Source: Advanced TCA, (ATCA and the AdvancedTCA and ATCA logos are trademarks of the (PICMG) PCI Industrial Computers Manufacturers Group) 10/03

The telecommunications industry is beginning to embrace this new economic reality, which could drive growth, both in revenue and profitability. This groundbreaking report from Crystal Cube Consulting (CCC) and Metz International will provide a window to the future applications for ATCA enabled hardware –from silicon to systems. For more information on Advanced TCA, or to purchase the report, please visit our site at [www.metzinternational.com](http://www.metzinternational.com).

**Scheduled release of this groundbreaking report – Monday December 1, 2003.**

- **Regular price:** **\$2295.00**
- **Member discount price:** **\$1895.00**

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- PICMG

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- PICMG 3.2 AdvancedTCA InfiniBand

- PICMG 3.3 AdvancedTCA StarFabric

- PICMG 3.4 AdvancedTCA for PCI Express Architecture

- PICMG 3.5 Advanced Fabric Interconnect / Serial RapidIO

- FSAN Group

- ITU International Telecommunication Union

- IEC International Electrotechnical Commission

IEEE Institute of Electrical & Electronic Engineers  
ETSI European Telecommunications Standards Institute  
RapidIO Trade Association  
Advanced Switching Interconnect Special Interest Group (ASI SIG)  
The HyperTransport Technology Consortium  
Request For Comments  
IETF Internet Engineering Task Force  
Internet Architecture Board (IAB)  
The Internet Engineering Steering Group (IESG)  
Internet Society (ISOC)  
Internet Assigned Numbers Authority (IANA)

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Forecast Methodology

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Telecommunications Equipment Manufacturers (TEM's) Profiles

Alcatel  
Avaya  
Cisco  
Ericsson  
Fujitsu  
Huawei Technology LTD  
Lucent  
Motorola Computer Group  
NEC  
Nokia  
Nortel Networks  
Samsung  
Siemens  
Toshiba  
ZTE

Multiple Supporting Vendors

Artesyn Technologies  
Aurora Technologies  
Bustronic  
CG Mupac  
Cypress Semiconductor  
Diversified Technology  
Elma Electronic  
Force Computers  
Intel  
MontaVista Software, Inc  
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