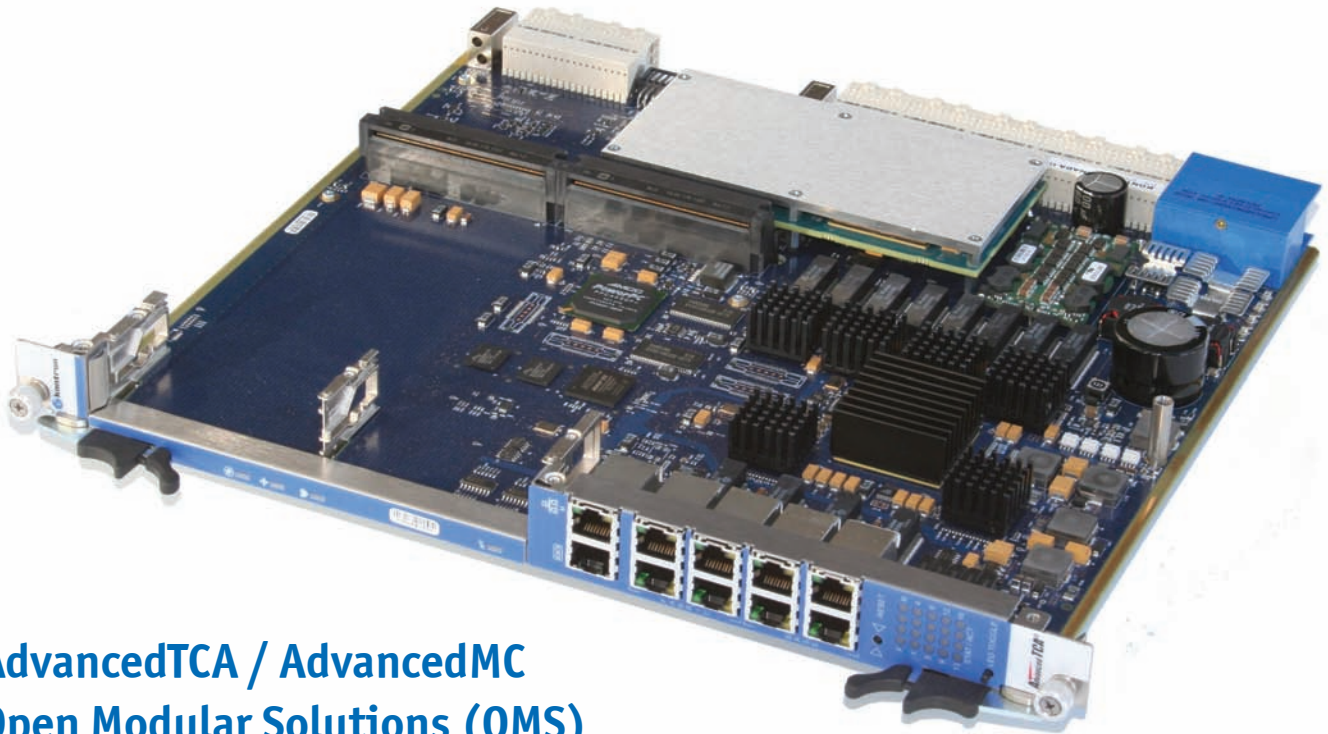


# ➤ AT8901

AdvancedTCA®

## AdvancedTCA Base Hub board with dual AdvancedMC support



### AdvancedTCA / AdvancedMC Open Modular Solutions (OMS)

#### Highly Flexible Entry-level Base Hub

The Kontron AT8901 is an AdvancedTCA Base Hub board that is PICMG 3.0 and 3.1 compliant. Built to support two Mid-Size or Full-Size AdvancedMC modules, the AT8901 is the ideal entry-level hub platform that provides maximum design flexibility.

#### Full Redundancy and High Availability

Suitable for dual-star configurations in 14- and 16-slot systems, the AT8901 is hot swappable, supports full redundancy, Layer 2 / 3 protocols (option for Layer 4), and provides flexible Gigabit Ethernet uplink options via front panel and RTM.

#### AdvancedMC-Everywhere integration for customization

With the support for two AdvancedMC modules, the AT8901 enables cost-optimised customization for a wide assortment of application requirements. The AT8901 may be enhanced by various AdvancedMC modules, such as processing (acting as the system controller which saves one AdvancedTCA slot); HDD as mass storage device; and I/O GbE inter-link to enable multi-shelf AdvancedTCA systems.

#### IPMI Support

The AT8901 switch board supports an intelligent hardware management system, based on the Intelligent Platform Management Interface Specification (IPMI) 1.5. The hardware management system provides the ability to manage the power, cooling and interconnect needs of intelligent devices, to monitor events and to log events to a central repository.

- PICMG 3.0 and 3.1-compliant base interface (GbE) switch
- Non-blocking layer 2 / 3 switching /routing
- Advanced Level 3, IPv4 & IPv6
- Options for QoS support and Jumbo Packet line rate switching
- 4x GbE uplinks on front panel
- Two Mid-Size OR Full-size AdvancedMC slots for customisation
- GbE connections to AdvancedMC slots
- Supports 14- and 16-slot AdvancedTCA shelves
- IPMI v1.5 support

If it's embedded, it's Kontron.



## ► Technical Information

### Processor and Memory

- IBM PowerPC® 405 32-bit RISC processor core operating up to 400MHz with 16KB I- and D-caches
- PC-133 synchronus DRAM (SDRAM) interface
- 40-bit interface serves 32 bits of data plus 8 check bits for ECC applications

### Ethernet

- Broadcom fifth generation of StrataSwitch/StrataXGS product line
- 24 10/100/1000 Mbps Ethernet ports
- Line-rate switching for all packet sizes and conditions
- On-chip data packet memory and table memory
- Advanced Fast Filter Processor (FFP) ContentAware classification
- Advanced security features in hardware
- Port-trunking and mirroring supported across stack
- Advanced packet flow control:
- Head-of-line-blocking prevention
- Back pressure support
- Standard compliant 802.1ad provider bridging
- IEEE 1149.1 (JTAG) boundary scan

### Base Interface (PICMG 3.0)

- Non-blocking layer 2 / 3 switching
- 1 x GbE connection to one AMC slot

### Project Customization with AdvancedMC Slots - Mid-Size / Full-Size

- Processor-AMC
- Storage-AMC
- I/O - AMC

### Interfaces on front panel

- 4 X 10/100/1000Base-T Uplinks for Base Interface (B1-B4)
- 1 X 10/100Base-T Management
- 1 X RS232 Management
- 8 RTM Channels from each AMC Slot
- Storage interface for HDD or Flash mass storage (SAS/SATA/FC) from each AMC Slot

### Interfaces to ATCA backplane

- Zone 2 connectors
- Base channel 1: 1/2 x Ethernet to ShMC(s) (10/100/1000Base-T)
- Base channels 2-16: 1 x GbE (1000Base-T)
- CLK 1/2/3 A/B
- Update Channels: 4 x GbE (1000Base-BX)
- Zone 1 connector
- Power
- IPMB A
- IPMB B

### Board Management

- Based on IPMI 1.5
- FRU Management
- Sensors (Voltage, Current, Temperature, Fuse)
- Status and Alerting
- Hot Swap
- Electronic Keying of Base Interfaces

### Management and Protocols

- Management via SNMP, TELNET, CLI
  - In-band
  - Out of band via Ethernet or RS232
- IPMI version 1.5
- Ethernet/Bridging protocols include
- Link aggregation (802.3ad)
- VLANs (802.1Q)
- Spanning tree (802.1D, 802.1w)
- Flow control (802.3x)
- GVRP, GMRP

### Physical & Environmental

- Size: Single slot ATCA board
- Power: 50W typical without AMCs

### Mechanical

- 8U form factor mechanically compliant to PICMG 3.0 and 3.1
- 2 Full-Size or Mid-Size AMC Slots
- 280 mm x 322 mm (11.024" x 12.677")
- 1,8 kg

### General Compliances

- The AT8901 conforms to the following specifications:
- PICMG 3.0 AdvancedTCA Base Specification, Revision 2.0, and 3.1
  - AMC.0 AMC Base Specification
  - D0.96 of AMC.2 Revision 1.0 Gigabit Ethernet
  - D0.9d of AMC.3 Revision 1.0 Storage
  - IPMI v1.5 Intelligent Platform Management Interface Specification

### Environmental

	Operating	Storage and Transit
Temperature*:	0 °C to 55 °C	-40 to +70°C / -10 to 158°F*
Humidity*:	15%-90% (non-condensing) at 55°C (131°F)	15%-90% (non-condensing) at 55°C (131°F)
Altitude*:	4000 m (13,123 ft)	15,000m / 49,212 ft
Shock*:	30G/11 ms half sine	50G, 170 inches/second trapezoidal
Vibration*:	5 to 100Hz: 1G @ 0.25 Octave/minute	5 to 50Hz: 0.5G @ 0.1 Octave/minute

\*Meet or exceed

Targeted MTBF is 150,000h @ 30°C, calculations based on Bellcore/Telcordia SR-332 Issue 1

## ► Corporate Offices

### Europe, Middle East & Africa

Kontron AG  
Oskar-von-Miller-Straße 1  
85386 Eching/Munich - Germany

Tel.: +49 (0)8165 77 0  
Fax: +49 (0)8165 77 279

sales@kontron.com

### North America

Kontron America  
14118 Stowe Dr  
Poway, CA 92064-7147

Tel.: (858) 677-0877  
Fax: (858) 677-0898

sales@us.kontron.com

### Asia Pacific

4F, No. 415, Ti-Ding Blvd.,  
Sec.2, NeiHu District  
Taipei, Taiwan 114

Tel. +886-2-2799-2789  
Fax +886-2-2799-7399

sales@kontron.com.tw