

A-3000

Highly Available, Next-Generation ATCA Communications Systems



UNICOM Engineering's A-3000 is a robust 3U 2-slot 19" enterprise data center and carrier-grade AdvancedTCA (ATCA) communications platform. It features a standards-based, open architecture designed for secure, high-throughput central office and enterprise applications, including IP Multimedia Subsystem (IMS), Internet Protocol Television (IPTV) subsystems and 4G wireless applications. Fully integrated with chassis, cooling, power distribution and shelf management, the A-3000's low profile makes it optimal for distributed control plane functions, low-density subscriber areas, edge networking and routing, as well as host of other specialized applications. It can also host single board computers and blades currently running in other ATCA platforms and reduce solution footprint.

Features and Benefits

High Availability

- NEBS Level 3 and ETSI compliant for high availability
- Provides dual redundant DC Power Entry Modules (PEM) or AC Power Supply Units (PSU) for maximum uptime
- Dual shelf managers monitor the system components, including fans and power modules/units to maximize uptime

Performance

- Supports the latest multi-core computing blades
- Scalable from 1 to 2 compute blades in a single 3U platform
- Built-in GE switches for non-blocking base channel switching
- Fabric connections of up to 40 Gb each, wide range of fabric protocols are supported including PCIe, Gigabit Ethernet, Infiniband, and Rapid I/O
- Front-to-rear cooling designed to support CP-TA B.4 thermal capability

AT A GLANCE

Expansion

- Two (2) slots for 8U ATCA blades
- Two (2) slots for 8U RTMs
- Two (2) User Cards slots

Fabric

- The Fabric Channel 1 of the two blade slots are directly connected via a 4x Serdes connection supporting 4x 10 GbE or 40 Gigabit Attachment Unit Interface (XAU)
- Fabric Channel 2 of slot 1 is connected to User Card 1 and Fabric Channel 2 of slot 2 is connected to User Card 2.

Power

- Dual redundant AC PSUs or DC PEMs are installed from the front and independently hot swappable.

Cooling

- Fault-tolerant, front-to-rear cooling
- Front-to-rear cooling designed to support CP-TA B.4 thermal capability





A-3000 AC Power, Rear View



A-3000 DC Power, Rear View

A-3000 technical specifications

Chassis

- 3U chassis for 19" racks
- Two (2) slots for 8U ATCA blades
- Two (2) slots for 8U RTMs
- Two (2) user cards slots
- Two (2) slots for Shelf Mgr. Boards (ShMB)
- **Dimensions:** 132 mm (5.19") H x 445 mm (17.5") W x 420 mm (16.5") D

Optional ATCA Blades and Associated RTMs

- Intel Xeon 5600/5500 Series, 6-core/quad-core processor compute modules
- Dual Xeon 5600/5500 series 6-core/quad-core processor compute modules
- Dual Cavium OCTEON 16-core packet processors
- Storage Blade

Shelf Management

- Redundant cards, rear serviceable
- Remote access to shelf and FRUs for inventory management, alarming, and control
- HPI-B based remote access via C-library
- SA Forum compliant protocol: SAI-HPI-B.01.01
- SA Form compliant ATCA mapping: SAIM-HPI-B.01.01-ATCA

User Card Slot

- Designed to support addition of user-specific functionality
- Two (2) slots for custom cards in chassis rear
- PCB size approx. 110 mm (4.33") x 70 mm (2.76") with a 20 mm (.8") front panel
- Direct connection to the Backplane:
 - Redundant -48V
 - Redundant IPMB and IPMC power
 - Redundant CLK1, CLK2 and CLK3
 - One fabric channel to one ATCA blade

Backplane

- Dual star base channel routing
- Base channels are connected to Base Hubs implemented on the ShMB
- Update channels (10 x 3.125 Gbps)
- Fabric channel 1 of the two ATCA slots are direct connected to each other
- Fabric channel 2 of ATCA slot 1 is connected to User card 1
- Fabric channel 2 of ATCA slot 2 is connected to User card 2
- Synchronization clocks

Cooling

- Speed-controlled fan trays with thermal sensor for front blade and RTM cooling
- Fault-tolerant design covering the loss of a single fan
- CP-TA class B4 cooling performance
- Front and rear maintainable fan trays with front air filter

Power Distribution

- Rear redundant DC or AC power connectors
- Front installed, independently hot-swappable and replaceable AC power supply units (PSUs) or DC power entry modules (PEMs)
- Power infrastructure capable of supporting up to 350 Watts/slot
- Working DC voltage levels: -40V to -70V
- Working AC voltage levels: 90-250V

NOTE: These specifications should be viewed as preliminary and final specifications may vary.

Support and Maintenance Services

UNICOM Engineering offers a variety of support and maintenance service programs to ensure high availability, rapid response, effective troubleshooting, fast parts replacement and 24-hour support.


Please visit www.unicomengineering.com/supportservices for more information.

 sales@unicomengineering.com

 unicomengineering.com

 twitter.com/UNICOMEng

 facebook.com/UNICOMEng

 +1 800.977.1010

 linkedin.com/company/unicomengineering