A-13000 R2

Highly Available, High Performance, Next-Generation ATCA Communications Systems

UNICOM Engineering's A-13000 R2 carrier-grade AdvandedTCA (ATCA) platform offers customers a standardized architecture for next-generation communications applications. This product has passed rigorous testing required by today's telecommunication organizations. UNICOM Engineering's ATC system offers scalability and greater than 5-nines (99.999%) availability. The A-13000 R2 shelf features a 40 GbE "KR-Ready" backplane. This allows for 40 Gbps communication across the PICMG 3.1 fabric interface. Using this technology, it is possible to upgrade to 40 GbE capable switch and payload blades in the future without replacing the shelf infrastructure. This is becoming increasingly important as dataplane applications start migrating to ATCA based platforms. Equally important is the power and thermal characteristics of the A-13000 R2 shelf. It is designed to provide power and cooling to support new higher processing ATCA blades up to 300W per blade.

Features and Benefits

High Availability

- Provides dual redundant power inputs for maximum uptime
- NEBS Level 3 and ETSI compliant for high availability
- Dual shelf managers monitor the system components such as the fans and power entry modules (PEMS) to maximize uptime

Performance

- Supports the latest dual 6-core computing blades
- Scale from three to 12 compute blades in a single platform
- Fabric connections of up to 40 GbE each, wide range of fabric protocols are supported including PCle, Gigabit Ethernet, Infiniband, and Rapid I/O

AT A GLANCE

Expansion

- 12 tool-less hot swap ATCA blade slots and two dedicated fabric switch blades slots in a 13U rack mount ATCA system

Fabric

- Wired for Dual Star which connects backplane

Power

- Dual PEMS with 4x4 feed and power-on indicator provides up to 300W per ATCA blade, 30W per shelf manager, and 30W per RTM at -48 V DC

Cooling

- Three redundant hot swap fan trays with two blowers for each
- Air baffles and filler panels installed in empty slots facilitate appropriate cooling to active ATCA boards and are part of the thermal management scheme

![UNICOM Engineering, Inc. A Division of UNICOM Global]
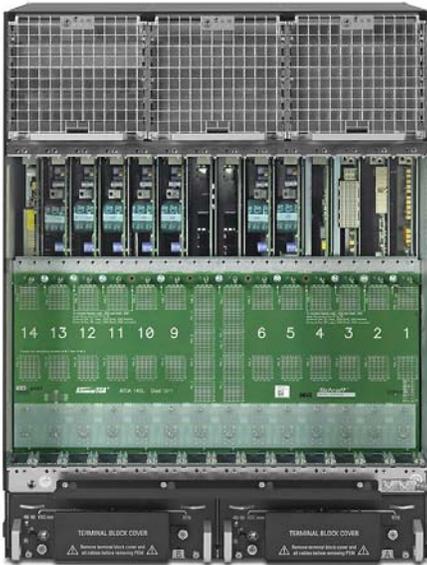
A-13000 R2 technical specifications

A-13000 R2 Rear View

Chassis

- 13U chassis for 19" racks
- HxWxD: 22.5" (571.6 mm) x 19" (482.6 mm) x 20" (506.54 mm) (with cable trays
- Shelf weight completely assembled with fan tray & PEMS: ~ 67.5 lbs (30.6 Kg)

Backplane

- 40GbE "KR-Ready" PICMG 3.1 Rev2
- 14-slot ATCA monolithic backplane
- 12 ATCA Node slots
- Two ATCA Hub slots
- Two dedicated Shelf Manager slots
- Two Power Entry Module (PEM) slots
- Two Chassis Data Modules (CDM) slots
- Dual Star Base & Fabric Interfaces
- Radial Intelligent Platform Management Bus (IPMB)

Cooling

- Three interchangeable fan trays
- Cooling for front boards and RTMs
- Front replaceable air filter
- Cooling capacity: 300W / front boards and 30W / RTM

Shelf Alarm Panel & Alarm Display

- Telco alarms connector
- Three shelf alarm LEDs (MINOR, MAJOR, CRITICAL)
- Three user-definable LEDs (USER1, USER2, USER3)
- Three fan tray alarm LEDs (Left, Center, Right)
- Three fan tray OK LEDs (Left, Center, Right)
- The alarm silence push button
- Two serial console interfaces for both Shelf Managers (RJ45 connectors)

Power Distribution

- Two pluggable hot swap redundant Power Entry Modules (PEMS)
- Four power feeds per PEM
- Power for up to 300W per ATCA blade, 30W per shelf manager, and 20W per RTM at -48 V DC.
- Input voltage range: -40.5 V DC to -72 V DC

Environment

- Ambient temperature normal operating: +5°C to +45°C (41°F to 113°F)
- Ambient temperature transient operating: +5°C to +55°C (41°F to 131°F)
- Operating humidity: +5% to +85%, no condensation

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
- 10 GbE switches

Shelf Management

Dual redundant Pigeon Point 500 Shelf Management Controllers (ShMCs)

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.

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