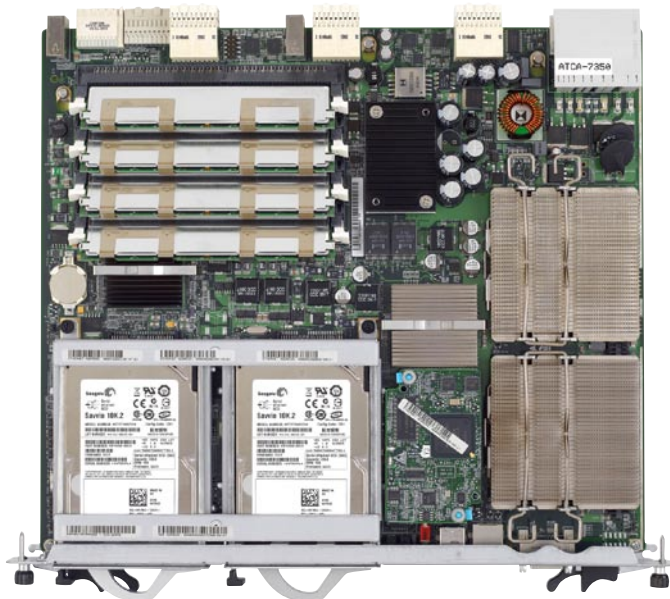# ATCA-7350
AdvancedTCA Processor Blade

The ATCA-7350 server blade is ideal for 32-bit or 64-bit applications requiring powerful multi-core processing performance and high memory capacity

- High performance processor blade with SMP support

- Two, quad-core Intel® Xeon® (2.13 GHz) LV processors

- Up to 32GB main memory

- Multiple software packages including operating system

- PICMG 3.0 Gigabit Ethernet base interface support

- PICMG 3.1, Option 1 and 9 fabric interface support

- Two on-board 2.5" form factor hard disk bays supporting hot swap and RAID 0/1

- Multiple disk options including
  - SAS hard drives
  - SATA drives with extended temperature range
  - Solid state disks

- Designed for NEBS and ETSI compliance

The Emerson Network Power ATCA-7350 is an Intel® based server blade that delivers a combination of performance and flexibility to help drive the successful implementation of next-generation telecom networks. It builds on the AdvancedTCA® (ATCA®) standard to provide the right product at the right time to meet the needs of the telecom industry.

With two quad-core Intel® Xeon® processors, the ATCA-7350 processor blade delivers the highest processing performance in an ATCA form factor. The PICMG 3.1 compliant fabric interface provides ten Gigabit Ethernet (10Gbps) capability for applications requiring higher network throughput in the backplane. The blade provides Gigabit Ethernet (1Gbps) interfaces to the PICMG® 3.0 base interface and the PICMG 3.1 fabric interface in a dual star configuration. Several other network configurations are also available.
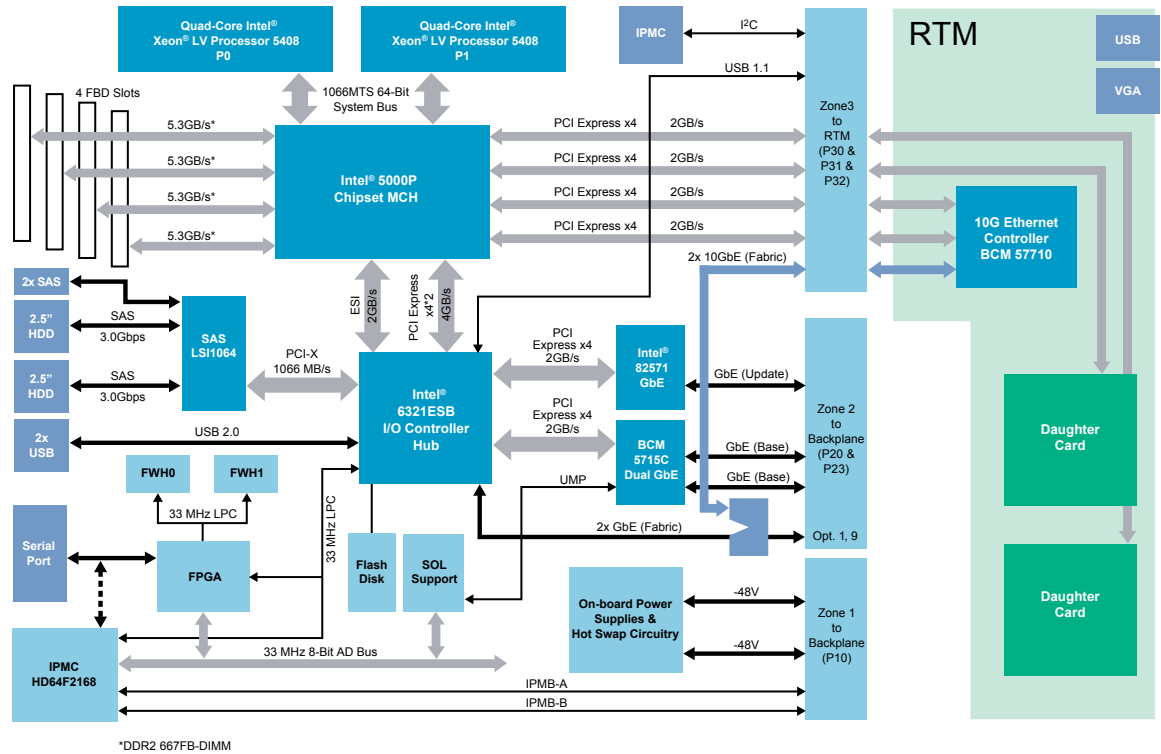
An array of main memory options, and two local mass storage options add to the performance and flexibility of the ATCA-7350 processor blade.

RoHS
Pb 5/6
SOLDER EXEMPT

AdvancedTCA®

EMERSON™
Network Power

ATCA-7350 Block Diagram

Standard Networking Support

The ATCA-7350 processor blade provides PICMG 3.0
base interface connectivity in a dual star configuration
using standard Gigabit Ethernet (GbE) technology.
The PICMG 3.1 fabric interface features both dual
10Gbps (option 9) and dual 1Gbps (option 1) Ethernet
capability. Note that for 10Gbps fabric interface
support the RTM is required. Several rear transition
module (RTM) configurations are available depending
on application requirements providing:

- Two GbE interfaces, optionally up to eight GbE
  interfaces
- Support for PICMG 3.1 option 9 (redundant, 10Gbps)

Processor Complex

Surrounding the quad-core processors is an array of
high performance components that combine to form
a powerful processor complex. Features include:

- Intel® 5000P memory controller
- Intel® 6321ESB I/O controller

- Intel® 82571EB Gigabit Ethernet controllers
- Broadcom BCM 5715C Gigabit Ethernet controller
- Broadcom BCM 57710 10 Gigabit Ethernet controller
- LSI Logic LSI1064 SAS controller

Software Support

The ATCA-7350 blade can be configured with a variety
of software offerings, from firmware-only to fully
integrated and verified software operating environ-
ments.

Firmware-only blade-level support is offered for
customers taking on the integration and verification
responsibilities. It provides all the boot and IPMC
firmware required for an ATCA blade.

SUPPORTED OPERATING SYSTEMS

- Red Hat RHEL 5.3 certified
- Wind River PNE 2.0

2

Emerson ATCA blades can be configured with optional software that includes Basic Blade Services. When integrated in the Emerson ATCA Centellis™ 2000 platforms, the ATCA-7350 comes complete with, and is verified with, Wind River PNE 2.0. This distribution comes with all Linux Support Packages (LSPs) to support Emerson ATCA blades as well as user applications. Basic Blades Services (BBS) software is provided to enable a set of ATCA hardware and software components into a fully integrated and verified telecom platform - the Centellis 2000 platform. This platform is ready for customers HA middleware and application environment.

Basic Blade Services include:

- Hardware Platform Management including local IPMC, LED, EKeying and blade extraction software
- Firmware upgrade utility
- Local management access (SNMP, CLI)

RELEVANT STANDARDS

- Linux Foundation
- Service Availability Forum™ (SA Forum)
  - ▴ Hardware Platform Interface (HPI) – Rev. B
  - ▴ Application Interface Specification (AIS) – Rev. B

For more information on the Centellis 2000 platforms, please refer to the Centellis 2000 datasheets.

Rear Transition Modules

Optional RTMs are available to support different I/O configurations.

RTM-ATCA-7350 includes:

- Two (2 or 4) Gigabit Ethernet interfaces (optional)
- One (1) monitor interface
- One (1) USB 1.1 management interface
- Two (2) Fibre Channel interfaces 2Gbps (optional)

RTM-ATCA-7150 supports:

- Up to eight (8) Gigabit Ethernet interfaces (optional)
- One (1) monitor interface
- One (1) USB 1.1 management interface
- Up to four (4) Fibre Channel interfaces 2Gbps (optional)

Intelligent Platform Management Control

The ATCA-7350 uses the Renesas HD64F2168 processor, as the intelligent platform management controller (IPMC). The IPMC is a management subsystem providing monitoring, event logging, and recovery control. The IPMC serves as the gateway for management applications to access the platform hardware. Features include:

- Compliance with PICMG 3.0
- Rollback capability if an operational BIOS or IPMC image upgrade failed
- Firmware upgradable from IPMI interface (IPMB)
- Support for serial port redirection over LAN interface

Hardware

PROCESSOR

- Two quad-core Intel® Xeon® LV 5408 (2.13 GHz) processors
- Frontside bus – 1,066 MT/s
- 12MB L2 cache (per processor)
- 64-bit mode extension (EM64T)
- SMP support

MEMORY

- Intel® 5000P memory controller
- 2, 4, 8, 16 and 32GB memory configurations supported
- 1.0MB primary boot flash, dual bank architecture
- Embedded flash disk, 1GB

COUNTERS/TIMERS

- Real-time clock
- Programmable watchdog timer

BASE AND FABRIC INTERFACES

- Dual star configuration
- PICMG 3.0 base interface compliant, Gigabit Ethernet (1.0Gbps)
- PICMG 3.1 fabric interface compliant, Gigabit Ethernet
  - ▴ PICMG 3.1, Option 1 – Single, redundant Gigabit Ethernet pair (1.0Gbps)
  - ▴ PICMG 3.1, Option 9 – Single, redundant 10 Gigabit Ethernet pair (10Gbps) *

* Requires presence of RTM-ATCA-7350

EXTERNAL INTERFACES

- Front panel
  - ▲ 3.0Gbps SAS (2)
  - ▲ Serial, RJ-45 (1)
  - ▲ USB 2.0 (2)
- Rear transition module
  - ▲ USB 1.1 (1)
  - ▲ Monitor interface (1)
  - ▲ Gigabit Ethernet interfaces (2 or 4), optional
  - ▲ 2.0Gbps Fibre Channel interfaces (2), optional

POWER REQUIREMENTS

- Dual-redundant –48V rail
- Input range: 39.5 – 72 VDC
- Power consumption: 150W typical, 200W max.

THERMAL CHARACTERISTICS

- Operating range: –5° C to 55° C

RELEVANT BLADE SIZE

- 8U form factor, 280 mm X 322.5 mm, single slot

RELEVANT STANDARDS

- PICMG 3.0 (form factor, IPMI, base interface, hot swap, RTM)
- PICMG 3.1, Option 1, 9

Ordering Information

Part Number	Description
ATCA-7350-0GB	ATCA processor blade, two quad-core Intel® Xeon® LV processor (2.13 GHz), 0GB, 10G support, two HDD/SSD slots (RoHS 5/6)
ATCA-7X50-MEM-2G	2GB FBD memory module for the ATCA-7X50 (RoHS 6/6)
ATCA-7X50-MEM-4G	4GB FBD memory module for the ATCA-7X50 (RoHS 6/6)
ATCA-7350-MEM-8G	8GB FBD memory module for the ATCA-7350 (RoHS 6/6)
ATCA7X50-HDD1-SAS	72GB SAS HDD for the ATCA-7X50 (RoHS 6/6) *See Note 1*
ATCA7X50-HDD2-SAS	146GB SAS HDD for the ATCA-7X50 (RoHS 6/6) *See Note 1*
ATCA7X50-HDD3-SATA	80GB SATA HDD (Ext. temp.) for the ATCA-7X50 (RoHS 6/6)
RTM-ATCA-7350	RTM for the ATCA-7350 blade (RoHS 5/6)
RTM-ATCA-7350-GE	RTM for the ATCA-7350 blade with two Gigabit Ethernet interfaces (RoHS 5/6)
RTM-ATCA-7350-2GE	RTM for the ATCA-7350 blade with four Gigabit Ethernet interfaces (RoHS 5/6)
RTM-ATCA-7350-FC	RTM for the ATCA-7350 blade with two Fibre Channel interfaces (RoHS 5/6)
RTM-ATCA-7150-GE	RTM for the ATCA-7150 blade with two Gigabit Ethernet interfaces (RoHS 5/6) *See Note 2*
RTM-ATCA-7150-GE-FC	RTM for the ATCA-7150 blade with two Gigabit Ethernet interfaces and two fiber channel interfaces (RoHS 5/6) *See Note 2*
MEZC-RTM-7150-GE	Mezzanine card with 2 Gigabit Ethernet interfaces (RoHS 5/6) *See Note 2 and 3*
MEZC-RTM-7150-FC	Mezzanine card with 2 Fiber Channel interfaces (RoHS 5/6) *See Note 2 and 3*

Note 1: Limited temperature range if used with enterprise class SAS hard disks.
Note 2: RTMs from the ATCA-7150 blade can be used as an alternative (no 10 Gigabit Ethernet support)
Note 3: Add-ons to the RTM to add Gigabit Ethernet or Fiber Channel interfaces

Regulatory Compliance

Item	Description
Designed to comply with NEBS	GR-63-CORE, NEBS Physical Protection, Level 3
	GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety — Generic Criteria for Network Telecommunications Equipment. Level 3, Equipment Type 2
Designed to comply with ETSI	ETSI Storage, ETS 300 019-2-1, Class 1.2 equipment, Not Temperature Controlled Storage Locations
	ETSI Transportation, ETS 300 019-2-2, Class 2.3 equipment, Public Transportation
	ETSI Operation, ETS 300 019-2-3, Class 3.2 equipment, Partly Temperature Controlled Locations
Designed to comply with Acoustic	ETS-300-753, Equipment Engineering (EE); Acoustic noise emitted by telecommunications equipment
EMC	EN-300-386 Electromagnetic compatibility and Radio spectrum Matters (ERM); telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements, Telecommunication equipment room (attended)
	FCC 47 CFR Part 15 Subpart B (US), Class A
	EMC Directive 89/336/EEC (EU)
	AS/NZS 3548 (Australia/New Zealand), Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
	VCCI Class A (Japan), Voluntary Control Council for Interference by Information Technology Equipment
Safety	Compliance to UL/CSA 60950-1, EN 60950-1 and IEC 60950-1 CB Scheme. Marked with U.S. NRTL, Canadian Safety and CE Mark. Safety of information technology equipment, including electrical business equipment
	ETS 300-132-2 Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)
RoHS/WEEE compliance	DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
	DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on waste electrical and electronic equipment (WEEE)

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

Emerson Network Power.
The global leader in enabling *Business-Critical Continuity*™.

- AC Power
- Connectivity
- DC Power
- **Embedded Computing**

- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls

- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection