ATCA7365 SystemPak

Application Ready Mobile Computing Platform

ELMA
Your Solution Partner

The High Performance multiprocessing capability of Elma's fully integrated ATCA platforms provides the processing power to meet Comm on the Move requirements, such as Datacenter Virtualization and network centric applications in rugged environments.

Description

The ATCA7365 is a high performance Open Standards ATCA COTS based system that is transportable in rugged ground environments. It is designed to address compute-intensive requirements like signal processing, voice and video processing, and high data rate streaming applications. Mounted in a tough lightweight transit case satisfying rugged non-operational capabilities of MIL-STD Transportation requirements and drop test, the system is designed to operate inside the transit case in a controlled environment (3°C - 37°C) which is suitable to a wide array of military ground applications.

The ATCA7365 features three Emerson ATCA 7365 blades each with two, six-core Intel Xeon (E5645) processors for unparalleled concurrent processing capability. The system delivers 10 Gigabit Ethernet switching capability for high speed data links in support of its exceptional computing power. With 96 GB of DDR memory per blade, and 1.2 TB of storage capacity, the ATCA7365 addresses the needs of most any compute-intensive application.

Benefits

- High bandwidth/compute performance in a transportable, rugged configuration
- Provides a high performance, software virtualization environment
- System is delivered fully integrated, tested, and verified under Linux
- As part of Elma's SystemPak family of pre-integrated platforms, this application-ready system provides program risk mitigation, and reduces overall development costs

Standard Configuration Includes:

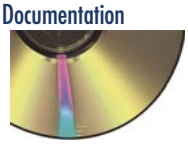
The ATCA7365 model number S11A8A6YIMXYLN comes as a ready to run unit with:

- Elma Type 11A, 6U, 6-Slot chassis
- Fully replicated mesh backplane
- Single system management card (Provision for dual)
- Three ATCA-7365 processor blades, each with dual 6-core Intel® Xeon® processors
- One Model S201 Carrier card with (4) 300GB SAS HDDS
- One Model F125, 10 GE fabric switch blade with RTM
- Redundant cooling
- Redundant power supplies
- Optional Red Hat Enterprise Linux, 64 bit OS
- Optional virtualization software configurations

ACT/Technico™ brand of Embedded Computing Products

I/O

Design & Documentation



Chassis

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Standard Configuration Components

ATCA-7365 Dual Core Intel Architecture Processor Blade

- High performance Intel® Architecture processor blade with two 6-core Intel® Xeon® processors (E5645 - 2.4 GHz)
- 96GB main memory
- Designed for Commercial ATCA in a temperature controlled environment
- On-board solid state disk at SATA, 32GB
- Red Hat RHEL 5.5 certified
- VMware ESX/ESXi 4.0 certified
- Option 9 (1/10 GbE) ATCA fabric interface

ATCA S201 Storage Blade

- ATCA storage blade with four (4) mid-size AMC slots
- 1.2 TBs of storage per blade
- Hardware-based RAID 0, 1 and 1 EiSCSI target and NAS file sharing
- SAS and SATA media support
- Diskless boot support PICMG 3.0 and 3.1, option 9 compliant

ATCA F125 Fabric Switch

- PICMG® 3.0 compliant base interface switch
- PICMG 3.1, Option 1, 9 fabric interface switch (1G/10G)
- 2 10G Ethernet, SFPP Fabric interface ports available via front panel, 6 via RTM
- 2 10G Ethernet, SFPP Basic interface ports available via front panel
- 4 1G Ethernet, SFP Basic interface ports available via RTM
- Single AMC site
- SRstackware is a comprehensive software solution for the Emerson ATCA switch
- Dual star configuration

System Management Card

- Conforms to PICMG 3.0 & PICMG 2.9
- Monitors activities within the system via the Intelligent Platform (through redundant IPMB for PICMG 3.0)
- Accepts and logs events posted by any intelligent FRU in the shelf (reflecting exceptions in temperatures, voltages, etc.)
- Supports redundant System Management when required
- Integrated watchdog timer supporting auto fail over in systems configured with dual system managers

6U Chassis with 6 Horizontal AdvancedTCA Slots

- Type 11A AdvancedTCA rackmount enclosure PICMG 3.0 compliant
- Overall dimensions: 6U high x 84T wide x 16" deep
- 6 slot front card cage to accommodate 8U x 280mm AdvancedTCA boards
- 6 slot rear I/O card cage to accommodate 8U x 70mm AdvancedTCA boards
- Provision for dual System Management Cards
- Side to side cooling with push and pull dual fan trays
- Power input provision for dual supply and two 1,200 W power supplies
- Mesh topology backplane compliant to PICMG 3.0 Rev 1.0 specification

ARO619-2749 Rugged Transit Case

- Up to 16 anti vibration mounts for a range of payload weight and dimensions
- Superior 'sway space' between inner frame and outer case to prevent contact with outer container
- Outside dimension: 16.4" x 23' x 31.3"
- Frame depth: 19"

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Environmental Specifications

- Operating Temperature: 3°C to +37°C operating
- Humidity: 5% to 95% non-condensing operating and storage
- Operating Vibration: .25gs (5Hz to 500Hz), 3 axes, operating
- Drop test shock: two drops at 36”

Optional Configuration Components

Elma Electronic offers a wide range of embedded products to help you build a system capable of meeting your requirements. Consider the following options and work with one of our Embedded Computing Architects to help you build the system you need using the Custom Configuration Key on the back page.

ATCA Chassis Options

- 2U – 6U horizontal configurations
- 13U Vertical configurations
- 48VDC and 90 – 235VAC options
- Up to 300W per slot cooling
- Shelf management
- Compliant to PICMG 3.0
- Designed to meet FCC and NEBS EMC requirements

High Performance Processor Blades

- ATCA form factor processor blades are available featuring the latest in Intel and Freescale processors
- Wide range of I/O options
- AMC sites provide expansion capability in I/O and storage
- Rear transition modules for rear I/O connectivity to maximize system I/O flexibility

Storage

- Solid state drive based storage for rugged environmental requirements
- Rotating drives up to 750GB or current capacity levels for more benign environments
- PATA (IDE) and SATA drives
- Multi terabyte solutions to fit most application requirements

Ethernet Switches

- Options for separate data, control, signal and storage plane switching
- 1GbE and 10GbE bandwidth available in copper ports or fiber ports
- Rear transition modules for rear I/O connectivity and maximum design flexibility

I/O Options

- Front and rear I/O expansion via Advanced Mezzanine Cards (AMC)
- AMC slots available on most standard ATCA blades
- Gigabit and 10 Gigabit Ethernet ports
- SS7 signaling gateways with T1/E1 interfaces
- Front panel Ethernet and serial management ports and more

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ATCA7365 SystemPak Order Information

To order this configuration, described in the box, please use the order number listed at right.

Description	Order Number
• ATCA 7365 SBC (up to 3) • ATCA F125 10GbE Switch • Type 11 rackmount horizontal chassis • ATCA S201 Storage carrier blade • RTMs for Switch and SBC • AMC based storage • Red Hat Enterprise Linux, 64 bit OS	S11A8AP6YIMXYLN

Custom Configuration Key

Different configurations are possible, although not all options are compatible. Please contact one of our Embedded Computing Architects to discuss specific requirements and learn about other embedded system solutions, or visit our website at www.elmasystems.com.

Integrated System Key

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ - ___ ___ ___ * (16-18 Project Spec.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1,2, 3) System Type
- SAV = ATR Convection
- SAD = ATR Conduction
- SR2 = 12R2
- SR1 = 12R1
- S11 = Type 11
- S12 = Type 12
- S14 = Type 14
- S15 = Type 15
- S32 = Type 32
- S39 = Type 39
- SEF = E-Frame

4) Bus Architecture
- V = VITA
- C = CPCI
- A = ATCA
- M = MTC
- X = No Architecture
- Y = Hybrid
- Z = Custom

5) Board Size
- 3 = 3U
- 6 = 6U
- 8 = 8U
- F = Full size,
- M = Mid size
- Z = Custom

6) BP Bare board
- A = ATCA
- B = CPCI
- C = H110
- E = 2.16
- K = VITA 31.1
- T = VXS
- N = VME64X
- P = VPX
- Q = J1 only
- X = No Architecture
- Y = Hybrid
- Z = Custom

7) Storage
- R = RAIDStor NAS
- E = Eurocard Direct Attached
- P = PMC
- M = Multiple / Combination
- S = HDD mounted on SBC
- T = HDD mounted on RTM
- X = No Storage
- Z = Custom

8) Size
- 1 = 1U
- 2 = 2U
- 3 = 3U
- 4 = 4U
- 5 = 5U
- 6 = 6U
- 7 = 7U
- 8 = 8U
- 9 = 9U
- A = 10U
- B = 11U
- C = 12U
- D = 13U
- E = ½ ATR
- F = ¾ ATR
- G = 1 ATR
- H = 1 ½ ATR
- I = 14U
- Z = Custom

9) RTMs
- N = No
- Y = Yes

10) SBC
- P = PowerPC
- I = Intel
- O = Other
- M = Multiple / Combination
- X = No SBC

11) Switch
- C = Copper ports
- F = Fiber ports
- B = Copper / Fiber
- M = Multiple / Combination
- X = No Switch

12) I/O Mezzanine
- S = SCSI
- R = Serial
- E = Ethernet
- O = Other
- X = No I/O PMC
- M = Multiple / Combination
- Z = Custom

13) Adapters / Carriers
- Y - Yes
- N - No

14) Operating Systems
- V = VxWorks
- L = Linux
- W = Windows
- S = Solaris
- O = Other
- X = No OS

15) Application Software
- Y = Yes
- N = N