

# COMPUTING

## AXP1440-D

### Bladed Server Chassis for Defense

#### Data Sheet

*The AXP1440-D ATCA chassis is specifically designed to address the unique requirements of the defense industry*

- Architected for high availability applications
- Ruggedized for harsh environments
- PICMG 3.7 Release 1.0 compliant thermal performance
- Up to 350W per blade power distribution
- Redundant shelf management and alarms
- 12 payload & 2 switching slots with rear transition module capability for each slot
- PICMG 3.0 ATCA mechanical formfactor and power/cooling design
- PICMG 3.1 ATCA high performance switch fabric capable of 1, 10, and 40Gbps operation

The AXP1440-D is a COTS ATCA® bladed server chassis with ruggedized features appropriate for shipborne or other defense applications. There is a rich, multi-vendor ecosystem of COTS ATCA blades ranging from servers to storage to FPGA.

#### Benefits

- Bladed architecture for scalability, minimized cabling and ease of maintenance
- Strong ecosystem of COTS blades allows the platform to be easily configured for a range of applications & upgraded as new technologies become available
- Reinforced metalwork and a blade securing mechanism allow systems to be deployed in rugged environments



**Advanced TCA®**

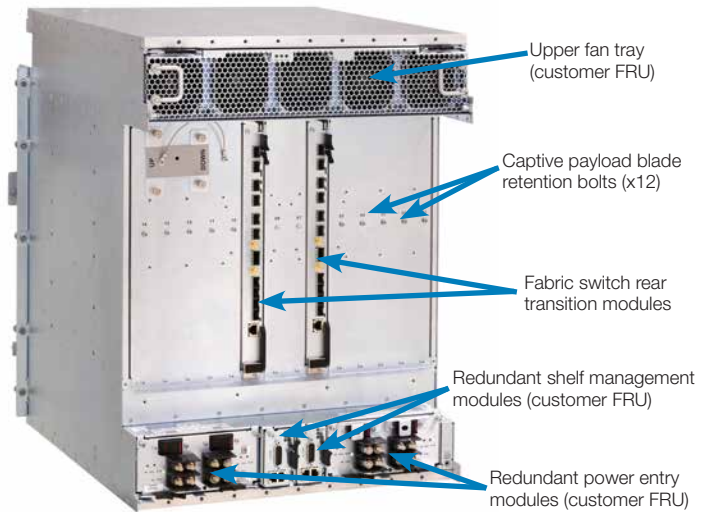
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EMBEDDED TECHNOLOGIES

## Enclosure

- 14 blade slots each with rear transition module (RTM) slots for the switch blades
  - Two switch/system manager slots
  - 12 8U payload slots for application blades
- 40/10/1G-capable backplane delivering up to 80G fabric bandwidth to each slot
- Dual shelf managers and alarm modules
- Front Alarm Display Panel (ADP)
  - Two COM ports (one for each shelf manager)
  - Telco alarm indicators (PWR, Minor, Major, Critical)
  - Alarm reset
  - Telco Alarm interface (dry relay contact, DB-15)
- Front-to-rear cooling
  - Redundant fan trays – one bottom fan tray, one top fan tray
- Cable Management System with hole pattern for cable lock-down
- 0.5 inch top and bottom plates to accommodate hardened extended slide rail mounting for access to rear of chassis
- Reinforced side panels and stiffeners for superior performance under vibration
- Captive spring-loaded screws extend through the backplane to further secure blades in the system and reduce connector wear
- Captive front 19" rack mounting screws
- Enclosure Dimensions & Weight
  - 599 mm high x 483 mm wide x 547 mm deep
  - Weight: 56.2 kg / 124.0 lbs.
- Operating Environment
  - Operating temperature range (DC): -5°C to 55°C @ 90% non-condensing humidity
  - Storage temperature range: -40°C to 70°C @ 95% non-condensing humidity

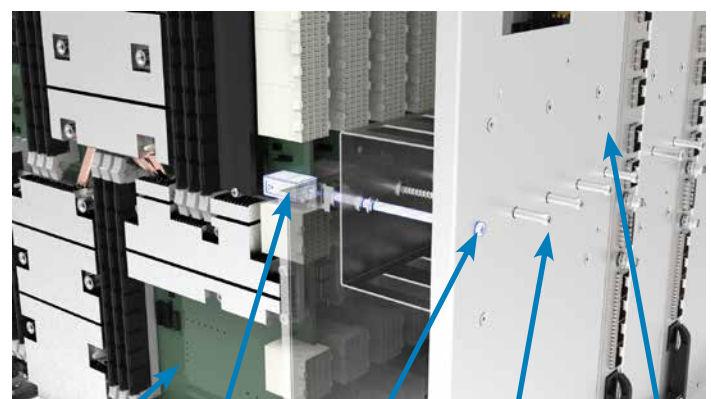
## Rich Content Ecosystem

- Intel® Xeon® based server blades with storage options
- High availability, high performance storage blades
- High throughput packet processing blades based on Cavium Octeon or Intel Architecture processors
- 40G & 10G switching blades with system control functionality



Rear of chassis

Modified alignment blocks have been designed to adapt standard ATCA payload blades to the ruggedized ATCA chassis. This allows special integrated bolts in the system to tightly secure the payload blade to the backplane, which increases the system's operational shock and vibration performance and helps prevent wear on connector contacts during operational vibration while retaining the hot swap functionality of ATCA. These modified alignment blocks can work with any ATCA payload blade available in the ecosystem.



Cutaway of side of the chassis

## 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
	ETS 300-132-2 Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)
	ETSI Operation, ETS 300 019-2-3, Class 3.1 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
	Industry Canada ICES-003 Class A
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.
RoHS/WEEE compliance	DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 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)



Ordering Information	
Part Number	Description
AXP1440-D	ATCA shelf - 14 slot, 19, 13U, 40G, PP SHMM - All redundant FRUs included – Silver. Reinforced top, bottom, sides, bolted FRUs
CENT-4440-R20-01	(1) AXP1440, (1) ATCA-F140 with full software package
CENT-4440-R20-02	(1) AXP1440, (2) ATCA-F140 with full software package
Optional Platform Products and FRUs	
ATCA-F140-D	40G ATCA switch blade with one AMC site (filler included) and optional SATA storage, fastener
RTM-ATCA-F140	RTM for the ATCA-F140 with SFP/SFP+/QSFP sockets
PRAMC-7311	Mid-size AMC with Intel Core i7-2655LE processor, 2.2GHZ, 4GB DDR3
PRAMC-7311-16GB	Mid-size AMC with Intel Core i7-2655LE processor, 2.2GHZ, 16GB DDR3
ADP1440-D	Alarm display for AXP1440
SERIAL-MINI-D2	SERIAL CABLE - MICRO D SUB CONNECTOR TO STANDARD DB9 for use with ADP1440 Alarm Display
LFT1440	Lower fan tray module for AXP1440, AXP141x - Silver, 50 micro inch ver
UFT1440-D	Upper fan tray module for AXP1440, AXP141x - Silver, fastener
PEM1620-C06	Power entry module for AXP1620, AXP1440, AXP141x - Silver, 60 micro inch ver
SAM1620-D	Shelf manager module for AXP1620, AXP1440 - Silver, fastener
CABLE/RJ45/DSUB/6E	ADAPTER CABLE - RJ45 TO DSUB9 FEMALE (SERIAL CABLE FOR CONNECTION TO SAM1620/SAM640 SHELF MANAGER)
AXP-F-FILL-PANEL	Blank filler panel, AXP1620, AXP1440, AXP1410 – Front
AXP-R-FILL-PANEL	Blank filler panel, AXP1620, AXP1440, AXP1410 – Rear
KIT-R-FASTEN-SCREW	Long rear fastener screw replacement for rugged AXP1440-XX
Guide Blocks to Adapt Ecosystem Boards for Use with AXP1440-D	
ATCA-GDBL-BL2BP-2P	Rugged guide block, ATCA blade to backplane, 2 pin
ATCA-GDBL-BL2BP-3P	Rugged guide block, ATCA blade to backplane, 3 pin

## The Artesyn Experience

Artesyn has over 30 years of experience serving the defense and telecommunications industries and has hundreds of thousands of products deployed in the world’s communications networks and defense systems. With that long experience comes a deep understanding of our customers’ requirements for on-time, consistent and high quality product coupled with excellent customer support. We deliver on all counts from our own world-class factory and seasoned support experts.

We’re very flexible and agile. We recognize that you may need your system to have your own unique branding. No problem. We’re used to that. We have services that allow you to define the look and feel that’s consistent with your company’s branding and aesthetic standards. Our flexibility isn’t just limited to look and feel. Integration services, unique support requirements, longevity of supply, drop shipments and many more services are designed to make it easy to do business with us and quick for you to get to market and deploy smoothly.

### SOLUTION SERVICES

Artesyn Embedded Technologies 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.

### WORLDWIDE OFFICES

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