

# COMPUTING

## Centellis® 4440 Telecom Platform

### Data Sheet

*The Centellis® 4440 40G ATCA system is specifically designed to address the unique carrier-grade requirements of the telecommunications industry*

- Architected for high availability applications
- Advanced platform management software
- CP-TA B.4 compliant thermal performance
- Up to 350W per blade power distribution
- DC power versions pre-certified for NEBS Level 3
- Redundant shelf management & telco 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 Centellis® 4440 telecom platform is architected to be a high availability platform suited to application acceleration and advanced networking with a rich ecosystem of blades and software that enable it to be deployed in a range of applications from security appliances to session border controllers to content optimization. Many configurations have been pre-certified for NEBS Level 3 saving both certification cost and time-to-market.

### Benefits

- Bladed architecture for scalability, minimized cabling and ease of maintenance
- Application-ready configurations shorten time-to-market
- Pre-certified for NEBS Level 3 saves time-to-market & testing costs and ensures the platform is carrier grade
- Strong ecosystem of off-the-shelf or custom blades allows the platform to be easily configured for a range of applications & upgraded as new technologies become available



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## Rich Content Ecosystem

- Platform management and diagnostics software suite
- Advanced load balancing and packet classification software
- Intel Xeon-based server blades with storage options
- High throughput packet processing blades based on Cavium Octeon or Intel Architecture processors
- Voice & video media processing and transcoding based on Texas Instruments and Octasic DSPs
- 40G & 10G switching blades with system control functionality

## Flexible Application-Ready Configurations

Off-the-shelf enabling technology lets you focus on your application

- Security Appliance / Deep Packet Inspection
  - Up to 12 Cavium Octeon or Intel Architecture blades for deep packet inspection
- Session Border Controller
  - Up to 12 Intel Architecture blades for application processing
  - Voice and video transcoding blade options, capable of, for example, up to 192 streams of MPEG/CIF to H.263 at 30 frames per second
- Content Optimization
  - Up to 12 Cavium Octeon or Intel Architecture blades capable for example of processing up to 50 million packets/sec per Octeon blade

## System Management

System Services Framework (evaluation license included) provides an easy way to set up and manage an Artesyn platform with an attractive web browser-based graphical user interface, command line interface or XML interface.

- Automated system inventory of hardware and system software elements
- Platform monitoring and management including sensors, alarms, events, hotswap status, FRU information, power, cooling, and shelf management

- Graphical monitoring of platform parameters including:
  - Several temperature readings
  - Voltage readings
  - Fan levels
- Firmware upgrade for all blades
- Linux OS services management
- Configuration of SRStackware switch management and protocol software
- Blade and systems diagnostics
- Security and access control including system user account management and user authentication
- Ability to integrate additional functionality through packages from Artesyn or 3rd parties

## Enclosure

- 14 Blade slots each with rear transition module (RTM) slots
  - 2 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
- Enclosure Dimensions & Weight
  - 573 mm high x 449 mm wide (not including mounting ears) x 544 mm deep
  - Weight: 39.7 kg / 87.5 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

## Fabric Switch

Centellis 4440 includes redundant 40G Ethernet ATCA-F140 switch blades providing the communications fabric. The switch blades also include the system management functionality (additional information can be found here)

- ATCA 1G, 10G, 40G fabric switch interface in dual star topology
- Integrated Linux-based software package for system & switch management
- Customization options with AMC site, disk bay and telecom clocking function
- Available FlowPilot load balancing software
- Face plate interfaces
  - Service processor interface via 1G Ethernet (RJ-45) and RS-232 serial
  - Base interface via 1G/10G Ethernet (SFP+) ports
  - Fabric interface via 1G/10G and 40G Ethernet ports (SFP+ and QSFP+)
- Telecom Clock interfaces
- Blade Services Software
  - Carrier Grade Linux based on Wind River Linux
  - Firmware Upgrade Facility
  - Hardware Platform Interface (HPI) to manage platform elements configured for multi-shelf management support
  - SRstackware switching software including switch chip initialization, configuration, management as well as a full suite of L2 and L3 protocols

## 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)



## The Artesyn Experience

Artesyn has over 30 years of experience serving the telecommunications industry and has hundreds of thousands of products deployed in the world's communications networks. 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.

Artesyn strives to speed our customers' time to revenue and make your development process as easy as possible. For example our System Services Framework software is designed to make the configuration of your system painless by automatically inventorying all the system hardware and software elements, allowing you to

configure switches and payload boards as well as monitor and diagnose hardware and software behavior, all from a simple graphical user interface enabling access to a single shelf or multiple shelves locally or remotely. All these features and experiences are supported globally with local system architects and FAEs to keep you on schedule.

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.

### Ordering Information

Part Number	Description
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
<b>Optional Platform Products</b>	
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
SW-WR-PRAMC-7311	Single blade BBS for WRL 3.0 software license for use with PrAMC-7311, with CD media
SFP-CO-RJ-45	1G Small Form-factor Pluggable (SFP) - copper - RJ-45 connector
SFP-MM-SX-LC	1G Small Form-factor Pluggable (SFP) module - 850NM, SX, LC connector
SFPP-MM-SR-LC	10G Small Form-factor Pluggable Plus (SFPP) module - 850NM, SR, LC connector
SFPP-SM-LR-LC	10G Small Form-factor Pluggable Plus (SFPP) module - 1310NM, LR, LC connector
SFPP-MM-SR-LC-DR	10G Small Form-factor Pluggable Plus (SFPP) module - dual rate, 850NM, SR, LC connector
SFPP-CO-RJ-45-3M	10G Small Form-factor Pluggable Plus (SFPP) Direct Attached Copper (DAC) cable - 3 meters
CABLE-OPT-F102-5M	Optical cable for multi-mode, SFP and SFPP connections (5M)
QSFP-40G-SR4-MODULE	40G QSFP+ MODULE - 40GBASE-SR4 - 850NM - FOR MULTIMODE FIBER - MTP (MPO) CONNECTOR
CABLE-COP-QSFP-3M	40G QSFP+ Direct Attached Copper (DAC) cable - 3 meters
CABLE-OPT-QSFP-5M	Optical cable for multimode, QSFP+ connections, 2x MTP (MPO) connectors - 5 meters
CABLE-B-OPT-QSFP-5M	Optical break-out cable for multimode, 1x MTP (MPO) connector, 8x LC connectors - 5 meters
SFP-FILLER	EMI & dust plug for SFP and SFP+ receptacles
QSFP-FILLER	EMI & dust plug for QSFP+ receptacles
AXP-F-FILL-PANEL	Blank filler panel, AXP1620, AXP1440, AXP1410 - Front
AXP-R-FILL-PANEL	Blank filler panel, AXP1620, AXP1440, AXP1410 - Rear
ACC/CABLE/SER/DTE/6E	MicroDSUB-9 to DSUB-9 serial adapter cable for shelf manager front access ALREADY INCLUDED IN PLATFORM CORE PRODUCTS
CABLE/RJ45/DSUB/6E	RJ45 to DSUB-9 serial adapter and cable for shelf manager rear access
RJ45-DSUB-ATCA	RJ45 to DSUB-9 serial adapter cable for ATCA-F140 serial console

## 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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