

## ATCA-F125

### 10G AdvancedTCA Switch Blade

#### Data Sheet

#### *High density, cost-effective 10G switch blade design for AdvancedTCA® platforms*

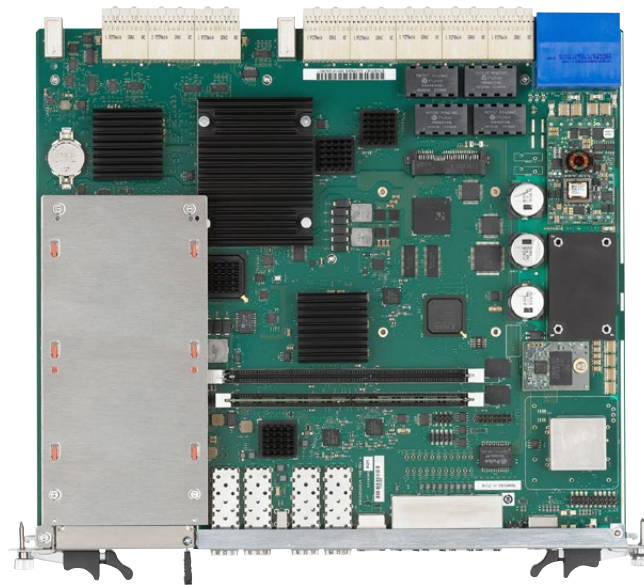
- PICMG® 3.0 compliant base interface switch
- PICMG 3.1, Option 1, 9 fabric interface switch (1G/10G)
- Single AMC site
- Optional SATA HDD or SSD
- Optional Telecom clocking support
- Integrated software package
- Designed for NEBS/ETSI compliance

The ATCA-F125 from Artesyn Embedded Technologies is a high density, cost-effective 10G switch blade providing the networking infrastructure for Artesyn Centellis® 4410 platforms. This product is ideal for creating network edge telecom applications with cost sensitive moderate bandwidth requirements. Combining several ATCA® functions within a single blade design optimizes slot usage helping end users to reach best Centellis 4410 platform price/performance ratio values.

Optional functions include telecom clock generation and distribution, SATA based drive devices (HDD or SSD) and an AdvancedMC™ (AMC) site for general processing and/or packet processing functions.

Different configuration options allow for maximum external I/O via 1G and 10G Ethernet interfaces at the front panel and/or at the optional Rear Transition Module.

A powerful on-board service processor executes all L2 and L3 switch functions, blade setup and hardware platform management functions independent of any processor AMC and/or SATA drive installed. This allows full, 100% utilization of the AMC based processor for end-user applications.



**AdvancedTCA®**

## Hardware

### SERVICE PROCESSOR

- NXP® QorIQ® P2020, dual-core processor, 1.0 GHz

### MEMORY

- Up to 4GB ECC-protected SDRAM, via (2) DDR3 memory DIMMs
  - Factory default – 2GB
- 64MB boot flash (NOR), dual-bank architecture
- 2GB application flash (NAND), via eUSB
- 16MB CPU reset-persistent memory

### COUNTERS/TIMERS

- Four (4) 32-bit programmable timer/counters
- Watchdog timer

### BASE AND FABRIC INTERFACES

- Dual star configuration
- PICMG 3.0 base interface switching – Gigabit Ethernet (1.0Gbps)
- PICMG 3.1, Option 1, 9 fabric interface – Gigabit Ethernet (1.0Gbps, 10Gbps)

### AMC SITE

- Single AMC slot
- Mid-size AMC (AMC.0, AMC.1, AMC.2 and AMC.3 compliant)

### STORAGE BAY

- Single hard drive device (HDD) bay
- Direct mount installation
- Standard SATA interface
  - Default configuration – P2020 service processor via SATA bridge
  - Optional configuration – connection to AMC, port 2

### FRONT PANEL INTERFACES

- Service processor
  - 1G Ethernet, RJ-45
  - RS-232 serial, RJ-45
  - USB 2.0

- Base interface
  - 2x 10G Ethernet, SFPP
- Fabric interface
  - 2x 10G Ethernet, SFPP
- Telecom clock interfaces
  - 5x Inter-shelf interfaces, RJ-45
  - 1x Master/Slave interface, RJ-45
- 2x BITS/SSU interfaces, RJ-45

### REAR TRANSITION MODULE (RTM)

- RTM-ATCA-F125
- Base interface
  - 2x 10G Ethernet, SFPP
  - 4x 1G Ethernet, SFP
- Fabric interface
  - 6x 10G Ethernet, SFPP

### BLADE DIMENSIONS

- 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, Options 1 and 9
- Telcordia GR-1244-CORE [5] (if equipped with Telecom Clock function)
- ANSI T1.101 [9] (if equipped with Telecom Clock function)

### POWER CHARACTERISTICS

- Dual redundant -48V rails
- Input range: -40 VDC to -72 VDC
- Power draw (typical)
  - ATCA-F125-14S: 80 watts
  - RTM-ATCA-F125: 20 watts

### OPERATING ENVIRONMENT

- Operating temperature range: -5 °C to +55 °C @ 90% non-condensing humidity
- Storage temperature range: -40 °C to +70 °C @ 95% relative humidity

## Telecom Clock Characteristics (if equipped)

### TELECOM CLOCK CHIP

- Semtech Tpsync ACS9510

### SUPPORTED CONFIGURATIONS

- Input: BITS/SSU / Output: Backplane CLK 1/2
- Input: Backplane CLK 3 / Output: Backplane CLK 1/2
- Input: Backplane CLK 3 / Output: BITS/SSU

### TIMING REFERENCE

- Traditional signal-based reference as defined by Telcordia GR-1244-CORE [5]

### PERFORMANCE

- Stratum 3

## SRstackware® Software

- Linux-based L2 and L3 switch management software providing a rich selection of features and protocols, e.g.
  - STP/RSTP/MSTP
  - VLAN, VLAN stacking (Q-in-Q)
  - LACP
  - Flow Control
  - Class of Service
  - GARP/GMRP/GVRP
  - SNMPv2, SNMPv3
  - ACL
  - IGMP v1/v2/v3, IGMP snooping/proxy
  - RIPv2, RIPng
  - OSPFv2
  - VRRP
- Multi-shelf capable Service Availability Forum™ Hardware Platform Interface (HPI) support

Regulatory Compliance	
Designed to comply with NEBS	Telcordia GR-63-CORE, NEBS Physical Protection, Level 3
	Telcordia 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, Weatherprotected, not Temperature Controlled Storage Locations
	ETSI Transportation, ETS 300 019-1-2, Class 2.3 equipment, Public Transportation
	ETSI Operation, ETS 300 019-1-3, Class 3.1(E) equipment, Partly Temperature Controlled Locations
	ETSI EN 300-132-2 Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)
	ETS-300-753, Equipment Engineering (EE); Acoustic noise emitted by telecommunications equipment
EMC	ETSI 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
	ECISPR 22, Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
	AS/NZS CISPR 22 (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 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
	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.
CE Conformity	Directive 2004/108/EC, Directive 2006/95/EC

**Ordering Information**

<i>Part Number</i>	<i>Description</i>
<b>Switch Blade Products</b>	
ATCA-F125-14S	10G ATCA hub blade, one AMC slot, and optional storage
ATCA-F125-TCLK3	10G ATCA hub blade, one AMC slot, optional storage, telecom clock Stratum 3
<b>Optional Switch Blade Products</b>	
RTM-ATCA-F125	RTM for the ATCA-F125 with SFP & SFPP receptacles
SFP-MM-SX-LC	1G single form factor (SFP) module - 850NM, SX, LC connector
SFP-CO-RJ-45	1G copper single form factor (SFP) module - RJ-45 connector
SFPP-MM-SR-LC	10G single form factor plus (SFPP) module - 850NM, SR, LC connector
SFPP-SM-LR-LC	10G single form factor plus (SFPP) module - 1310NM, LR, LC connector
SFPP-CO-RJ-45-3M	10G copper single form factor plus (SFPP) modules with molded cable (3M)
CABLE-OPT-F102-5M	Optical cable for multi-mode, SFP and SFPP connections (5M)
PRAMC-7311	AMC with Intel® Core™ i7 processor, 4GB DDR3, mid-size
SW-WR-PRAMC-7311	CD with Wind River PNE 3.0 and Basic Blade Services for the PrAMC-7311, single blade license
PRAMC-7311-16GB	AMC with Intel® Core™ i7 processor, 16GB DDR3, mid-size
HDD-1T-SATA	Direct mount 1000 GB HDD for ATCA-F125 & ATCA-F140, Enhanced Availability – SATA
SSD-480G-SATA-F140-1	480GB MLC Solid State Disk with mounting kit
SSD-960G-SATA-F140-1	960GB MLC 2.5 inch SSD with mounting kit for ATCA-F125 and ATCA-F140

**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.

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