

# aTCA-3100 Series

## 24/48-Port AdvancedTCA® Base/Fabric Switch Blade with 10GbE Uplink



The aTCA-3100 series are the 24/48-port AdvancedTCA® base/fabric layer 3 switch blades, based on Vitesse® VSC7310 switch silicon and Intel® 80219 600 MHz XScale® I/O processor.

The aTCA-3100, base switch blade, features 24-port 10/100/1000BASE-T links, including 12 node slots, eight front panel egress RJ45 ports, two ShMC ports, one inter-switch port and one control plane CPU access port. In addition to all the aTCA-3100 features, the fabric switch blade, aTCA-3110 features 24-port 1000BASE-BX links, including 14 PIGMG® 3.1 option one compliant node slot, two front panel egress ports and 8 reserved ports from Rear Transition Module I/O. The aTCA-3120, fabric switch blade with 10 GbE uplink support, features an additional 10Gigabit Ethernet XFP uplink port above the aTCA-3110 feature set. Linux-based operating system runs on Intel® 80219 I/O processor providing a complete development platform for the management of Layer 2/3 packet switching and routing, plus sophisticated standards such as, IEEE 802.1d Spanning Tree Protocol (STP), IEEE 802.1p Quality-of-Service (QoS), IEEE 802.1Q 4096 VLANs, IEEE 802.3ad Link aggregation, Port Mirroring and DHCP services.

## Features

- 24-port Gigabit Ethernet base interface switch
  - Twelve Node ports
  - Eight Egress ports
  - Two ShMC ports, PICMG® 3.0 R2.0 ECN001
  - One Inter-Switch port and 1 Control Plane port
- 24-port Gigabit Ethernet fabric interface switch
  - Fourteen Node ports, PICMG® 3.1 option 1
  - Two Egress ports
  - Eight RTM reserved ports
- 10-Gigabit Ethernet XFP Uplink port
- Vitesse® VSC7310 24-port GbE switch-on-a-chip
- Dynamic and static wired-speed Layer 2/3 switching
- Intel® 80219 600 MHz control plane processor
- Front panel GbE management port and serial console

## Specifications

### Control Plane

Processor	Intel® 80219 XScale® 32-bit I/O processor, 600 MHz
Memory	DDR-200 PC1600 SDRAM up to 1 GByte 64+64 MB on-board dual-bootable AMD S29GL512N flash memory
Bus	32-bit/66 MHz Processor Local Bus 64-bit/66 MHz PCI Local Bus
Management	Front panel 10/100/1000BASE-T (RJ45) ShMC access 10/100/1000BASE-T port Front panel RS232 serial console (RJ11)

### Data Plane

Switch Fabric	Vitesse® VSC7310 24-port GbE switch-on-a-chip
PHY	Vitesse® VSC8244 4-port 10/100/1000BASE-T PHY Vitesse® VSC8224 4-port 10/100/1000BASE-T and 1000BASE-X PHY Marvell® 88X2012 Alaska-X 10-Gigabit serial to XGMII transceiver

### PICMG® 3.0 Interfaces (aTCA-3100/3110/3120)

Node Slots	Twelve 10/100/1000BASE-T base interface channels, for 14-slot systems
Egress	Eight 10/100/1000BASE-T front panel egress ports
ShMC Port	Two 10/100BASE-TX ShMC ports compliant to PICMG® 3.0 R2.0 ECN001
Inter-Switch	One 10/100/1000BASE-T inter-switch link

### PICMG 3.1 Interfaces (aTCA-3110/3120)

Node Slots	Fourteen 1000BASE-BX fabric interface channels, for 14-slot systems
Egress	Two 10/100/1000BASE-T front panel egress ports
RTM	Eight Gigabit Ethernet RTM access ports

### 10 Gigabit Ethernet Uplink (aTCA-3120)

10 GbE Uplink	One 10 Gigabit Ethernet XFP optical transceiver trunk port
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### Mechanical and Environmental

Form Factor	PICMG® 3.0 R2.0 ECN001 AdvancedTCA®
Dimensions	322.25 mm x 280 mm x 6 HP (L x W x H)
Weight	2 kg 4.4 lbs
Operating Temp.	0°C to 55°C
Storage Temp.	-20°C to 80°C
Humidity	5% to 95%, non-condensed
Shock	15 G peak-to-peak, 11 ms duration, non-operation
Vibration	Non-operation: 1.88 Grms, 5-500Hz each axis Operation: 0.5 Grms, 5-500Hz each axis
Power Consumption	aTCA-3120: 86 W
Certification	FCC, CE, CUL, NEBS Level 3 (Design)

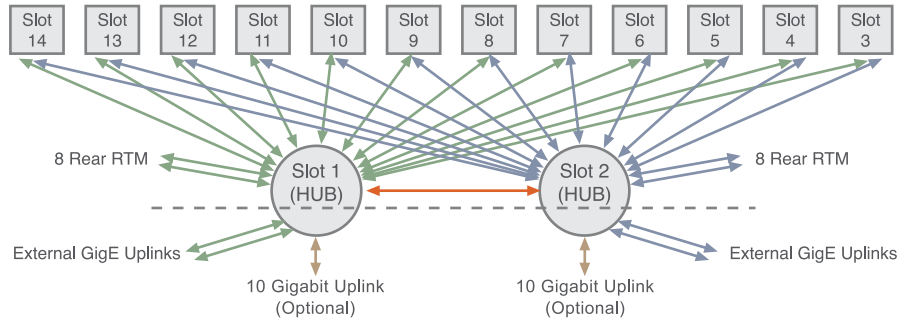
## Ordering Information

aTCA-3100	24-Port AdvancedTCA® Base Switch Blade
aTCA-3110	48-Port AdvancedTCA® Base/Fabric Switch Blade
aTCA-3120	48-Port AdvancedTCA® Base/Fabric Switch Blade with 10-GbE

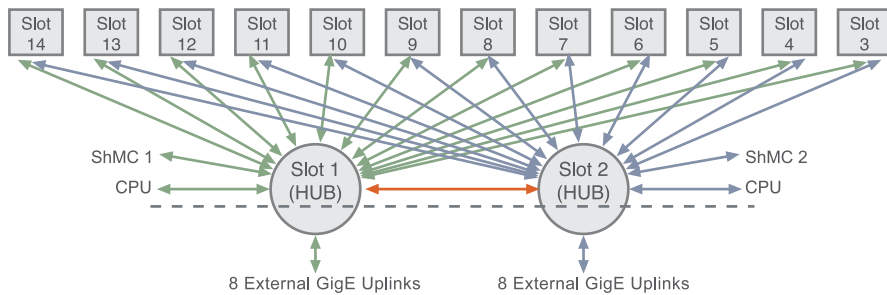
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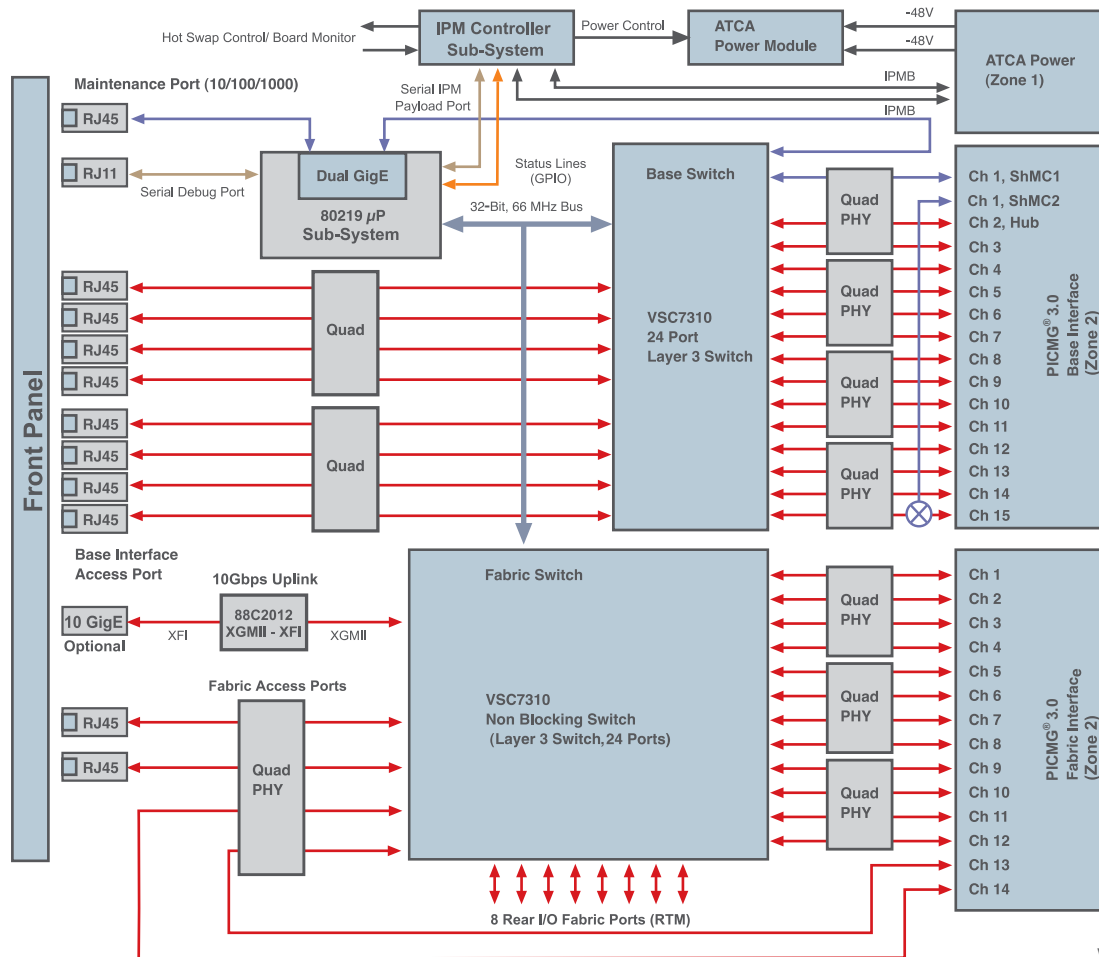
## 14-Slot Backplane Dual-star Fabric Interface Logical Slot Routing



## 14-Slot Backplane Dual-star Base Interface Logical Slot Routing



## Block Diagram



1  
AdvancedTCA  
Products

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6U cPCI  
SBC

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6U cPCI  
Platforms

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3U cPCI  
SBC

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3U cPCI  
Platforms

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SBC & IMB

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Industrial  
Chassis

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Computer  
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Network  
Security  
Appliances

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Panel PC

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IPC  
Accessories