

### KEY FEATURES

- Four PMC, XMC or PrPMC sites
  - Dedicated PCI-X @ 133MHz per Module
  - PCIe x4 lanes for XMC
- 32 lane PCIe switch
  - PCIe expansion via front panel with fiber or copper interface
  - Expansion to another ATC103 or to a AMC103, ATC104, ATC105, ATC106, ATC107, ATC108, or PCI103
- An external host may configure the bus via the PCIe upstream port
- 17-port managed layer two GbE switch
- PICMG 2.15 PMC/PrPMC 10/100/1000 Ethernet routed to the Gigabit switch
- Allows the PCIe root complex to be on any PMC or external source via front panel or rear
- RoHS compliant

The ATC103, integrates four PMC/XMC/PrPMC sites onto a single Advanced Telecommunication Computing Architecture (AdvancedTCA) node carrier. The ATC103 allows for integration of readily available PMC, XMC and PrPMC modules into the AdvancedTCA environment.

The ATC103 provides four sites that can accept any PMC, XMC or PrPMC module. The PMC103 brings three of the PMC J4 I/Os to the front panel. One of PMC J4 I/Os is routed to Zone 3 of the ATC103. For PMC modules that route their GbE to their J4 connector, the ATC103 routes these connections directly to the onboard GbE switch.

The module has a 32-lane PCIe switch divided into eight ports of x4 lanes each. The ATC103 can be connected to additional ATC103, ATC104, ATC105, ATC106, ATC107, or ATC108 carrier boards or the AMC103 or PCI103 to increase the number of I/O slots via PCIe fiber or copper expansion interconnects. This PCIe expansion is available through the front or the rear.

The ATC103 can be configured as a Shelf Manager or a Node board. As a Shelf Manager, the ATC103 eliminates the need for other shelf managers resulting in reduced total system cost.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

**AdvancedTCA®**

# ATCA Carrier for PMC/XMC/PrPMC

## SPECIFICATIONS

| Architecture         |   |  |
|----------------------|---|--|
| Physical             | Dimensions  | Width: 12.687in. (322.25 mm)   |
|                      |   | Depth: 11.024 in. (280 mm)   |
| Type                 | ATCA Carrier  | PMC, XMC and PrPMC modules   |
| Standard             |   |  |
| PMC                  | Type  | PCI-X @ 133Mhz per PMC slot  |
| XMC                  | VITA 42.3   | XMC.3  |
| Module Management    | IPMI  | IPMI Version 2.0   |
| PCIe                 | Lanes   | 32-lane switch   |
| PICMG                | ATCA  | PICMG 3.0 R2.0   |
| Gigabit Ethernet     | Managed Layer 2   | 17-port managed layer two switch with 802.1QVLAN, 802.1p QoS, 802.x MAC security, DHCP, RSTP, etc.                             |
| Configuration        |   |  |
| Power                | ATC103  | 18W without PMC/XMC/PrPMCs   |
|                      |   | Up to 150 watts is available for the PMC/XMC/PrPMCs  |
| Rear I/O             | Via Zone Three  | PMC site 1 routes the PMC I/O signals to Zone 3  |
|                      |   | Three PCIe x4 are routed to the rear for expandability.  |
|                      |   | PCIe Lane Good LED   |
|                      |   | Two 10/100/1000 Ethernet from the Gigabit Ethernet switch  |
|                      |   | Link/Activity for the Gigabit Ethernet ports   |
|                      |   | IPMI Debug port  |
|                      |   | IPMI 10/100 Ethernet   |
| Front Panel          | Interface Connectors  | Three high-density connectors for the PMC J4 user I/Os<br>PCIe expansion via fiber or copper                                   |
|                      | LEDs  | IPMI Management Control<br>PCIe Lane Good  |
|                      | Mechanical  | Hot Swap Ejector Handle  |
| Environmental        | Temperature   | Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFM)<br>Storage Temperature: -40° to +90° C |
|                      | Vibration   | 1G, 5-500Hz each axis  |
|                      | Shock   | 30Gs each axis   |
|                      | Relative Humidity   | 5 to 95 percent, non-condensing  |
| Software Support     | Operating Systems   | Linux, Windows, Solaris and VxWorks  |
| Other                |   |  |
| MTBF                 | MIL Spec 217-F > 185,000 Hrs.   |  |
| Certifications       | Designed to meet FCC, CE and UL certifications where applicable   |  |
| Standards            | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards   |  |
| Compliance           | RoHS and NEBS   |  |
| Warranty             | Two (2) years   |  |
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# ATCA Carrier for PMC/XMC/PrPMC

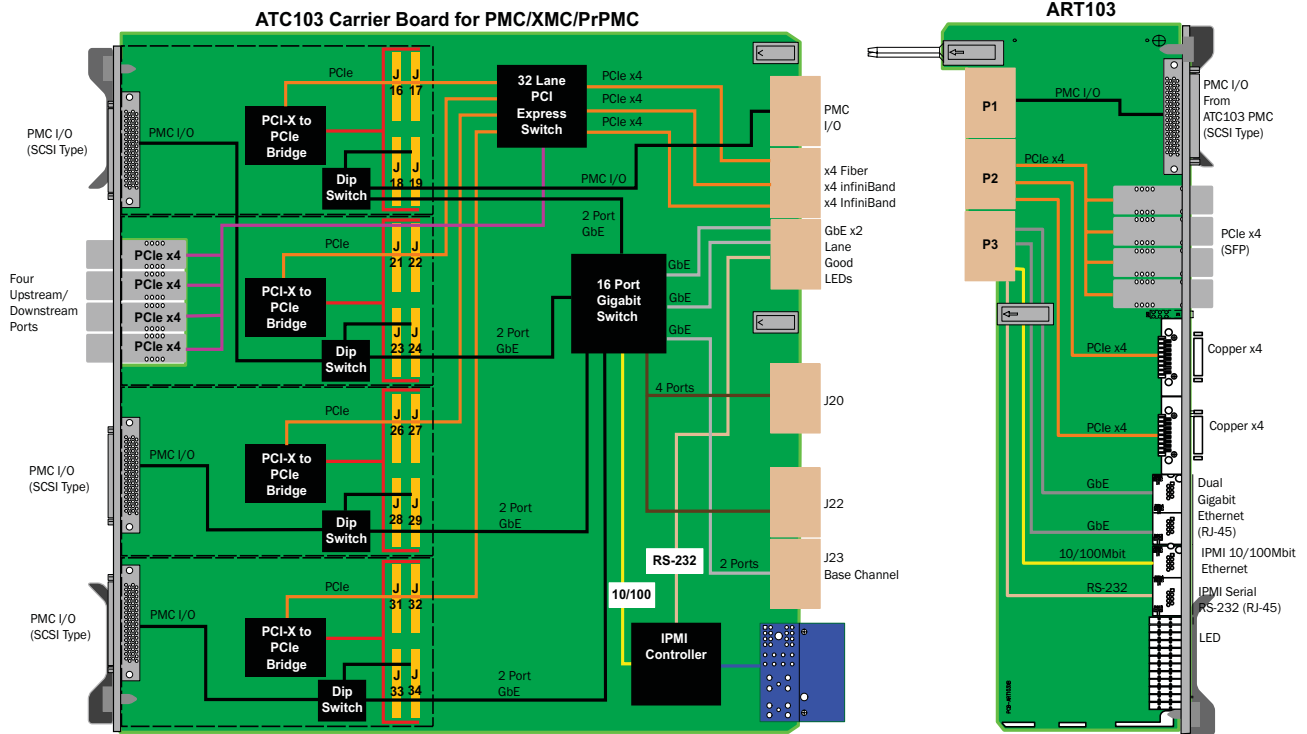


FIGURE 1. ATC103 Functional Block Diagram

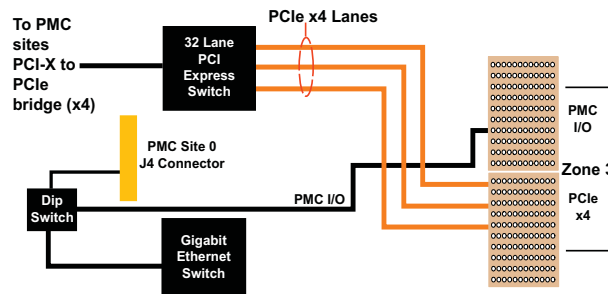


FIGURE 2. PMC Site Routing for I/O to Zone Three

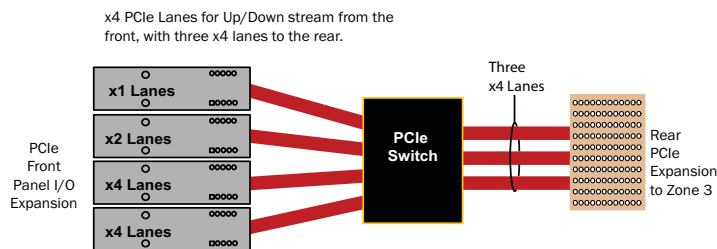
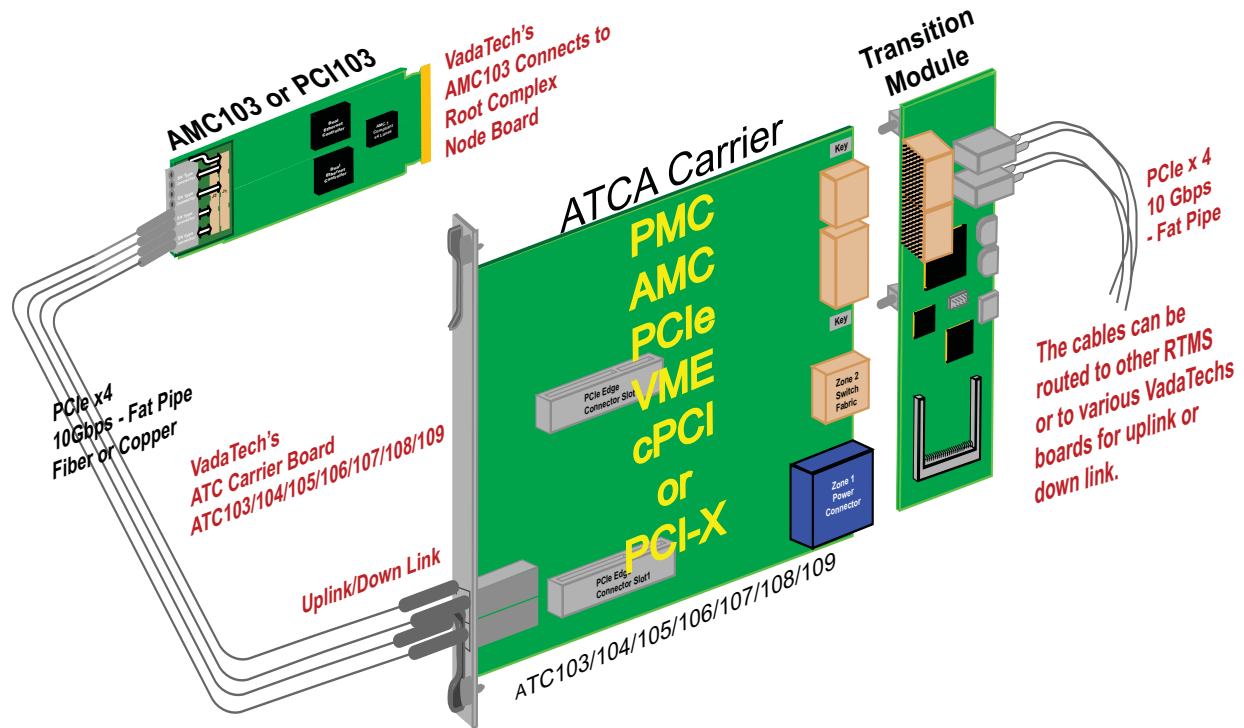


Figure 3. PCIe Routing to the front and rear (Zone three)

# ATCA Carrier for PMC/XMC/PrPMC

**FIGURE 4.** An Example of using the carrier with the PCIe up/down stream ports



## ORDERING OPTIONS

### ATC103 - ABC - D00 - 00J

#### A = Front Panel Upstream/Downstream

- 0 = No load
- 1 = Fiber LC/SX transceivers (850 nm)
- 2 = Fiber LC/LX transceivers (1310 nm)
- 3 = Copper
- 4 = Reserved

#### B = Management Controller\*

- 0 = Node Board
- 1 = Shelf Manager

#### C = PMC Interface

- 1 = PCI-X Only
- 2 = XMC Only

#### D = Upstream Port

- 0 = Front
- 1 = Rear fiber
- 2 = Rear copper
- 3 = PMC/XMC site 0
- 4 = PMC/SMC site 1
- 5 = PMC/XMC site 2
- 6 = PMC/SMC site 3

#### J = Conformal Coating

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic

\*The ATC103 can be purchased as either a Shelf Manager or Node board (contact your Vadatech Sales representative for information).

\*\*Vadatech can design custom Rear Transition Modules (RTM) for this product and any ATCA carrier board with a minimum order and no NRE.

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