



Product Brief
PSA-100
ATCA AMC Carrier Switch Blade
Rev 0.7

Summary:

The JumpGen Systems PSA-100 is the Fujitsu AXEL X2 10 Gigabit Ethernet switch based AMC carrier board in a single slot ATCA form factor. The board supports 3 Mid-Size B+ AMC bays, each with two 10GBase-KX4 Fat Pipe and two 1000Base-KX Base interfaces. As a build option four SFP+ or SFP cages can be installed instead of the AMC B1 bay. The PSA-100 provides six 10GBase-KX4 Fabric Channel and six 1000Base-T Base Channel interfaces to the ATCA backplane. Therefore, the PSA-100 will function as an AMC Carrier Node Board in any ATCA Chassis or as an AMC Carrier Hub Board for Dual Star or Full Mesh ATCA backplanes supporting 7-slots or less. Please refer to the block diagram for detailed configuration.

Features:

10 Gigabit Ethernet Switch	Fujitsu MB86C69RBC (AXEL X2) 5 th Generation 26-Port 10 Gigabit Ethernet Switch <ul style="list-style-type: none"> • 520Gbps aggregate throughput • Integrated SerDes • Pin-to-pin switching latency of 300nS (including SerDes) • On-chip Multi-port Stream Memory and buffer management • Cut-through, Priority queues and Jumbo Frame support for high-performance cluster • Extended VLAN (up to 64) for Logical Partitioning • Dedicated GMII switch management port • Supports unmanaged L2 switching
Switch Management Processor	Intel next-generation System-on-Chip (SoC) processor EP80579 <ul style="list-style-type: none"> • 600MHz, 1066MHz, and 1200MHz core speed available • Integrated Memory Controller Hub (MCH) • 1-4GByte 72-bit ECC DDR2 memory running up to 800MHz • 2-4 GB SSD mass storage • SSD and PXE boot support • Serial console redirection
AMC Bays	Three Mid Size B+ AMC Bays <ul style="list-style-type: none"> • Two 10GBase-KX4/1000Base-KX auto negotiable interfaces on AMC Fat Pipe Lane[4:7] and Lane[8:11]

	<ul style="list-style-type: none">• Two 1000Base-KX interfaces on AMC Common region Lane[0] and Lane[1]• Rotational Lane[2] and Lane[3] routing scheme for flexible storage support• A configuration option is provided where the B1 AMC Bay can be replaced with 4 Cages for SFP+ (10Gbps) or SFP (1Gbps) front panel interfaces connecting directly to switch
aTCA Backplane Interface	<ul style="list-style-type: none">• Six 1000Base-T ATCA Base Channel interfaces• Six 10GBase-KX4/1000Base-KX auto-negotiable Fabric Channel interfaces
Environmental	<ul style="list-style-type: none">• Operating temperature: 0 to 55 °C• Humidity: 0 to 95% (non-condensing)• Power Consumption: 80W Max without AMCs

Block Diagram:

