Product Brief

PSA-111 ATCA AMC Carrier
10G Unmanaged Switch Card

Rev 0.8

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Summary:

The JumpGen Systems PSA-111 is the Fulcrum FM3224/FM4224 10 Gigabit Ethernet switch based AMC carrier board in a single slot aTCA form factor. The board supports up to 3 Mid-Size B+ AMC bays, each with two 10GBase-KX4 Fat Pipe and two 1000Base-KX Base interfaces.

Optionally, two SFP+ interfaces are available on the front panel when used in a 2 AMC bay configuration.

The PSA-111 provides four 10GBase-KX4 Fabric Channel and five 1000Base-T Base Channel interfaces to the aTCA backplane. Therefore the PSA-111 can be used either as a Node Board or a 5-slot Hub Board in a standard aTCA chassis (another example application could use 5 PSA-111 boards all operating in a full mesh configuration). The 3 AMC bay and 2 AMC bay configurations both support front panel RJ-45 10/100/1000Base-T Ethernet.

Features:

10 Gigabit Ethernet Switch	Fulcrum FM3224/FM4224 24-Port 10 Gigabit Ethernet Switch • Integrated SerDes • On-chip Multi-port Stream Memory and buffer management • Cut-through, Priority queues and Jumbo Frame support for high-performance cluster • Extended VLAN for Logical Partitioning • Configuration via EEPROM or in-band through other Fulcrum switches
AMC Bays	Three Mid Size B+ AMC Bays • Two 10GBase-KX4 interfaces on AMC Fat Pipe Lane[4:7] and Lane[8:11] • 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
Front Panel Interfaces	RJ-45 10/100/1000 Ethernet Optional 2 SFP+ bays, in lieu of one AMC bay
aTCA Backplane Interfaces	Five 1000Base-T aTCA Base Channel interfaces Four 10GBase-KX4 Fabric Channel interfaces
Assembly options	• 3 mid-size AMC bay configuration (standard option). • 2 mid-size AMC bay configuration with 2 SFP+ interfaces.
Environmental	Operating temperature: 0 to 55 °C Humidity: 0 to 95% (non-condensing) Power Consumption: 85W (with no AMC cards installed)
Regulatory	Designed and manufactured to meet the following requirements: FCC Class A / CE / IEC 60950 / NEBS Level 3 Company will get certifications as required to meet specific customer requirements

Block Diagram: