

To provide system host capability, both AMC bays are connected via SATA link, which allows the use of one AMC bay for the system host processor and the other for the hard drive.

Ensemble Application Platform

The BSW-201 Switch Blade is part of the Ensemble Serial RapidIO ATCA Platform. The Ensemble Platform is a standards-based solution built around the power, functionality, and scalability of serial RapidIO®, AdvancedMC®, AdvancedTCA®, and MicroTCA®. The platform supports a variety of I/O sources and heterogeneous processing endpoints, thereby reducing integration costs, improving efficiency, and minimizing risks in design of next-generation applications.

The Ensemble Platform has many advantages that accelerate application development activities:

- The variety of heterogeneous Ensemble AMCs allows developers to customize applications with options to plug in a wide array of processing elements.
- AMCs can be combined with Ensemble carrier boards that provide RapidIO chip-to-chip and across-the-chassis connectivity, enabling seamless scaling from a single-sector system to multisector, multi-antenna, multicarrier base-station implementations.
- Ensemble offers developers the flexibility to easily expand specific processing nodes to address application performance bottlenecks. Additional FPGA or DSP modules communicating over RapidIO can be used to support specific application requirements.
- The homogeneous RapidIO interconnect among processing nodes enables ease of programming of DSPs, communication processors, and FPGAs.

Specifications

Serial RapidIO Switches

Three 8-port Tundra® TSi578™ serial RapidIO switches

Eight links per switch, configurable as 1x or 4x links

Supported data rate

For 1x connections, after 8/10 encoding 2.5 Gbps maximum

For 4x connections, after 8/10 encoding 10 Gbps maximum

Supports backplane star topology

Ethernet

Broadcom BCM56500M 10/100/1000Base-T 24-port Ethernet switch

AMC bays

Mid-height support

Single width

B+ connectors

Two 4x or four 1x serial RapidIO ports per slot

IPMI

Hitachi™ 2166 IPMI controller

Voltage monitor/control

Geographical address monitor

Temperature monitors

Power/reset controller

Monitor/control all jumper plugs

AMC power control/monitor

Backplane connectors

Fabric interface Thirteen 1x/4x serial RapidIO links

Base interface Thirteen 1000BaseT Ethernet ports

Control interface IPMB-A and IPMB-B links

Physical

Height 350.93 mm

Width 28.85 mm

Depth 332.82 mm

Weight 2.30 kg

Electrical

Power supplied from ATCA backplane

Input voltage 48 Vdc ±5%

Power consumption

92W (1.9A at 48V) maximum (no AMC module installed)

Available power per each AMC bay

60W (5A at 12V) maximum (actual maximum power

dependent on cooling capabilities of the chassis)

Environmental

Temperature

Operating 0°C to 55°C at 10,000 ft

Storage -40°C to +85°C

Operating humidity 10-90% non-condensing

Altitude

Operating 0-3049 m

Storage 0-3049 m

Vibration 0.003g²/Hz, 20-2000 Hz, 1 hr/axis

Shock x/y axes: 32g; z axis: 20g; 11 ms, half-sine

Air flow Chassis-dependent

Compliance

AdvancedTCA Base R2.0 (PICMG® 3.0) compliant

AdvancedTCA RapidIO (PICMG 3.5) compliant

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