

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Mercury Computer Systems BCC-301* at our website: *Click HERE*

Ensemble™

DATASHEET

MERCURY COMPUTER SYSTEMS™

Ensemble 8000 Series
BCC-301 Quad AMC AdvancedTCA Carrier Blade

Flexible Foundation for the Ensemble™ Application Platform

- 20-Gbps serial RapidIO® with multicast support for high-bandwidth low-latency applications
- Enables open-standard modular configurations based on AMCs
- Scalable with 2-, 5-, 6-, and 14-slot AdvancedTCA® chassis options
- Supports RapidIO and Gigabit Ethernet switching
- Handles processor and FPGA AMCs to 80W maximum per AMC bay



The Ensemble™ 8000 Series BCC-301 Quad AMC AdvancedTCA® Carrier Blade from Mercury Computer Systems is the foundation of the Ensemble Application Platform. This carrier blade supports either four mid-size or full-size RapidIO-enabled AMC modules and is compliant with an 8U AdvancedTCA form factor. The AMC modules extend and diversify the functionality of the carrier blade, making the BCC-301 ideal for a wide variety of network, telecom, medical, industrial control, test and measurement, and defense applications.

The BCC-301 AMC Carrier Blade is designed to support dual and dual-dual star switched backplanes, as well as a 5-slot, full-mesh, serial RapidIO backplane. Within a 2-, 5-, or 6-slot chassis, the card can also function as a base specification switch board. The four AMC sites each support a dual 4x serial RapidIO interface. Each AMC bay has dual direct serial RapidIO connections to a serial RapidIO switch.

The carrier supports the ATCA optional, dual redundant synchronization clock channels. An onboard IPMI controller is responsible for power control and monitors all temperatures, and power-supply voltages and currents.

Flexible, High-Bandwidth Connectivity

The BCC-301 is a high-performance, quad AdvancedTCA AMC carrier blade with serial RapidIO switch fabric communications and the following high-performance features:

- Four single-wide, or one or two double-wide, mid- or full-size AMC bays for dense packing of mezzanine modules
- SATA support for HDD AMCs
- AMC bays connected by dual connections to Gigabit Ethernet switch fabric that connects into the base interface via five 1-Gigabit Ethernet ports
- 20-Gbps serial RapidIO switching with multicast support
- 1x/2x/4x serial RapidIO links over the AMC connector
- Hot-swap support

Ensemble Platform

The Ensemble 8000 Series BCC-301 Carrier 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®, and AdvancedTCA®. 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.

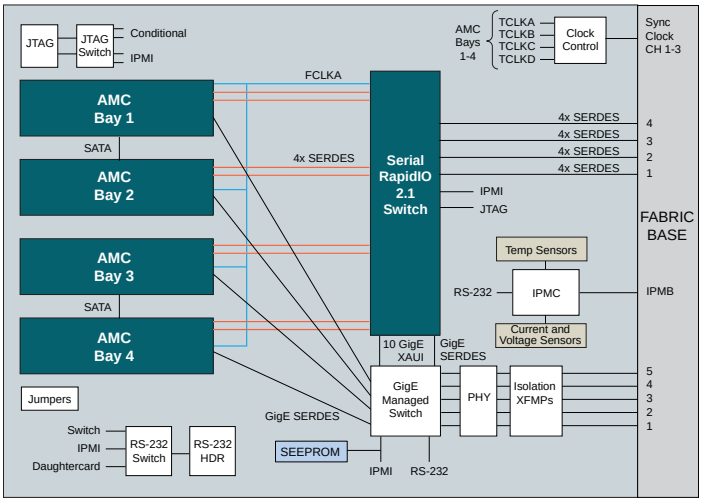


***Figure 1**. Ensemble 8000 BCC-301 functional block diagram*

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 host processors, radio cards, or a network interface card (NIC) AMC.
- 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 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

AMC bays

Number of bays 4
Mid- and full-height support,* single width
Removable rails for double-width AMC support
Power per bay
With current sensing Up to 80W
Maximum power to all AMCs
200W chassis slot Up to 150W
300W chassis slot Up to 240W
B+ connectors
Two 4x or four 1x serial RapidIO ports per slot

*As an orderable option.

Ethernet

10/100/1000Base-T 16-port Ethernet switch
Base-specification-compliant node interface/six-slot chassis switch board
Two Gigabit Ethernet ports to each AMC

Serial RapidIO Switches

IDT CPS1848 serial RapidIO switch
Four links configurable as 1x, 2x, or 4x links
1.25, 2.5, 3.125, 5.0, or 6.25 Gbaud/sec per link
Mesh/switch-enabled backplane support

IPMI

Voltage monitor/control
Geographical address monitor
Temperature monitors
Power/reset controller
Monitor/control for all jumper plugs
AMC power control/monitor

Backplane Connectors

Fabric interface	Four 1x/2x/4x serial RapidIO links (Ports 1-4)
Base interface	Five 10/100/1000Base-T Ethernet ports (Ports 1-4)
Shelf Manager	Two 10/100Base-T ports
Control interface	IPMB-A and IPMB-B link

Synchronization clock interface
CLK1A, CLK1B, CLK2A, CLK2B, CLK3A, and CLK3B

Front Panel

Front-panel LEDs

Out of service (OOS) LED	Red
User LED 2 (LED2)	Green
User LED 3 (LED3)	Yellow
Hot-swap LED (H/S)	Blue

Backplane port link indicators
Ejector handle switch
Hardware address

Power Consumption

<300W at 48V
Depends on AMC installed, limited by cooling capability of the ATCA chassis.

Environmental

Temperature

Operating	0°C to 55°C
Storage	-40°C to +70°C

Humidity
Operating 5-90% non-condensing
Vibration 0.003g^2/Hz, 20-2000 Hz, 1 hr/axis
Shock x/y axes: 32g; z axis: 20g; 11 ms, half-sine

Specification Compliance

AdvancedTCA Base R2.0 (PICMG® 3.0) compliant
AdvancedTCA RapidIO (PICMG 3.5) compliant
PICMG AMC.0 R2.0, AMC.2 R1.0 (Ethernet), AMC.3 R1.0 (storage), and AMC.4 R1.0 (RapidIO)

Challenges Drive Innovation is a registered trademark, and Ensemble is a trademark of Mercury Computer Systems, Inc. RapidIO is a registered trademark of the RapidIO Trade Association. Other products mentioned may be trademarks or registered trademarks of their respective holders. Mercury Computer Systems, Inc. believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice.

Copyright © 2010 Mercury Computer Systems, Inc.

2788.00E-1110-DS-bcc301

MERCURY COMPUTER SYSTEMS™

Corporate Headquarters
201 Riverneck Road
Chelmsford, MA 01824-2820 USA
+1 (978) 967-1401 • +1 (866) 627-6951
Fax +1 (978) 256-3599
www.mc.com

販売代理店

MISH 株式会社ミッシュインターナショナル

TEL 042-538-7650 FAX 042-534-1610 〒190-0004 東京都立川市柏町 4-56-1
sales@mish.co.jp http://www.mish.co.jp/

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP