

# ServPoET

## BMS 1000 - Access Concentrator



fine  
point  
technologies

### PPPoE Broadband Residential Access Server (BRAS)

**serv** | **PoET**

Fine Point Technologies' ServPoET BMS 1000 is the industry's largest capacity PPPoE termination server. With its 6,000 subscribers per blade capacity, the ServPoET BMS 1000 can grow with

your network to support up to 72,000 simultaneous subscriber sessions in one 14U form factor.

ServPoET BMS 1000 is built on the Advanced Telecom Computing Architecture, or AdvancedTCA\* which is a series of industry standard specifications for the next generation of carrier grade communications equipment. The BMS 1000 incorporates the latest trends in high speed interconnect technologies, next generation processors, and improved reliability, manageability and serviceability, resulting in a Broadband Management Server optimized for communications.

#### 14U Shelf

The BMS 1000 features 14 board slots, vertically mounted in a 14U enclosure, providing high subscriber session termination. Two of these slots are managed Layer 2 and 3 switches. The remaining twelve slots are available for ServPoET BMS blades at 6,000 subscriber termination per slot.

The BMS 1000 achieves high availability utilizing redundant -48 VDC power, redundant management modules, and industry-leading power and thermal capabilities. The hot-swappable fan tray assembly supports the demanding communications application environment with efficient front-to-rear cooling and multiple levels of internal redundancy. The BMS 1000 supports hot-swappable switches and ServPoET BMS blades.

#### High Performance Single Board Computer

The BMS 1000 High-Performance Single Board Computer (compliant with AdvancedTCA\* specifications) can achieve greater performance levels than have been previously supported on other standards-based blade products.

#### Ethernet Switch

The BMS 1000 base and fabric interface switch features two managed Layer 2 and 3 switches with six Gigabit Ethernet ports to support the 12 ServPoET BMS slots, making the BMS 1000 ideal for next-generation networks, as well as for service provider communications applications that require an integrated BMS solution that can deliver optimum performance and system reliability.

#### ATM Adapter

The BMS ATM interface for our high performance single board computers is designed especially for high-availability, high-bandwidth access applications at reliable ATM connectivity of up to 155 Mbps.

### Key Benefits

- **Complete Redundancy**  
Redundant -48 VDC power, redundant management modules, redundant Base Fabric Switches, Fine Point Technologies' patent-pending SmartCluster™ Advanced Clustering Technology, and industry-leading power and thermal capabilities make the ServPoET BMS 1000 the leading choice for 99.9999% uptime guarantees.
- **Broad set of Interfaces**  
The ServPoET BMS 1000 base fabric switch (with a switching capacity of 24,000,000 pps) features two managed Layer 2 and 3 switches with six Gigabit Ethernet ports to support the 12 ServPoET BMS slots, the ServPoET BMS 1000 also enables Service Providers with legacy ATM infrastructure to utilize the AdvancedTCA (ATCA) platform by offering ATM interfaces, making the ServPoET BMS 1000 ideal for next-generation networks.
- **Multiple Protocol Encapsulation Support**  
Point to Point Protocol over Ethernet (PPPoE), Point to Point Protocol over Ethernet over ATM (PPPoEoA), Point to Point Protocol over ATM (PPPoA), Bridged ATM (1483 / 2684) over Ethernet, Layer 2 Tunneling Protocol (L2TP, LAC/LNS), and 802.1q (Tagged VLAN), allowing for multiple different types of subscriber aggregation.





### Intel® NetStructure™ MPCHC0001 14U Shelf

#### Power

Input Voltage	-40.5 to -72 VDC (unregulated)
Input Power	4 feeds (2 + 2 redundant per feed), 45 A each (34 A each typical)
Overcurrent Protection	50 A circuit breaker for each of the four feeds

#### Physical and Environmental

Acoustics	< 65 dBA with 70% max. fan speed
Height	24.4" (621 mm)
Width	17.6" (446 mm) without rack-mount flanges; rack mount able in 19", 535 mm (ETSI), 23" or 24" racks
Depth	17.4" (441 mm)
Shipping Weight	115.25 lbs
Mounting Weight	49 lbs: includes mounting brackets, cable trays, and chassis (without fan tray, filter tray, and PEMs installed)

### Intel® NetStructure™ MPCBL0001 High-Performance Single Board Computer

#### Processor

Computer,  
ATCA,  
Single 2.0 GHz Xeon,  
400 MHz,  
No FC

#### Memory

2.0 GB DDR PC2100 ECC Registered LP Memory  
128 MB 40 PIN IDE Flash Module

#### Ports

USB port  
Serial port (RJ-45)  
PMC slot (32/64-bit, 33/66MHz)

#### Backplane Connections

Dual Gigabit Ethernet (Base Interface)  
Optional Dual Fibre Channel OC3 or OC 12 (Fabric Interface)  
Optional Dual ATM over DS3 (Fabric Interface)  
Dual IPMB connections (Zone 1)  
Redundant power connections (Zone 1)

#### Environment

Supported Voltage	-39.5 to -72 for boards
Maximum Power Draw	-150W to 175W
Temperature (Ambient)	<ul style="list-style-type: none"> <li>● Operating: Normal Operation: 5° C to 55° C Transient Operation: 5° C to 70° C</li> <li>● Storage: -40° C to 70° C</li> </ul>
Humidity	<ul style="list-style-type: none"> <li>● Operating: 5 to 85% (90% short term) non-condensing</li> <li>● Storage: 10 to 95% non-condensing</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>● Operating - Sine: 0.5 g acceleration over 5 to 500 Hz sine wave (P-P), 0.5 oct/min sine sweep</li> <li>● Operating - Random: 5 Hz to 20 Hz @ 0.01 g2 Hz, 20 Hz to 500 Hz @ 0.02 g2 Hz</li> <li>● Storage &amp; Transport: 0.5 g acceleration over 5 to 50Hz sine wave (P-P), 0.25 oct/min sine sweep 3 g acceleration over 50 to 500 Hz sine wave (P-P), 0.25 oct/min sine sweep</li> </ul>



### Intel® NetStructure™ MPCMM0001 Chassis Management Module

Ports	
	Dual 10/100 Ethernet (front- or rear-panel access, or routed to backplane) RS-232 (front- or rear-panel access) DB15 Telco* Alarm Interface (front- or rear-panel access)

Power	
Input Voltage	-39.5 VDC to -72 VDC
Input Power	17 to 21W typical, 28W momentary max

Environmental	
Temperature (Ambient)	<ul style="list-style-type: none"> <li>Operating: Normal Operation: 5° C to 55° C Transient Operation: 5° C to 70° C</li> <li>Storage: -40° C to 70° C</li> </ul>
	<ul style="list-style-type: none"> <li>Operating: 5 to 85% (90% short term) non-condensing</li> <li>Storage: 10 to 95% non-condensing</li> </ul>
Humidity	
Vibration	<ul style="list-style-type: none"> <li>Operating - Sine: 0.5 g acceleration over 5 to 500 Hz sine wave (P-P), 0.5 oct/min sine sweep</li> <li>Operating - Random: 5 Hz to 20 Hz @ 0.01 g<sup>2</sup>/Hz, 20 Hz to 500 Hz @ 0.02 g<sup>2</sup>/Hz</li> <li>Storage &amp; Transport: 0.5 g acceleration over 5 to 50Hz sine wave (P-P), 0.25 oct/min sine sweep</li> </ul>
	<ul style="list-style-type: none"> <li>3 g acceleration over 50 to 500 Hz sine wave (P-P), 0.25 oct/min sine sweep</li> </ul>
Shock	<ul style="list-style-type: none"> <li>Operating: 5 g, trapezoidal 11 ms duration (system-level)</li> <li>Storage &amp; Transport: 50 g, trapezoidal 11 ms duration (packaged board) 18 in. drop test @167 in/sec accelration (packaged board) 20 g, trapezoidal 11 ms duration (packaged system)</li> </ul>

Physical	
Height	177 mm faceplate (144.5 mm PCB)
Width	20.32 mm (4HP) faceplate
Depth	300 mm (280 mm PCB)
Shipping Weight	0.9 kg (2.0 lbs)

Regulatory Compliance	
	<p>AdvancedTCA Core Specification, PICMG 3.0, NEBS Level-3 and ETSI, IPMI v1.5, CPE Certification, UL50950, USA 22.2 No. 60950, Low-Voltage Directive, 73/23/EEC, EN60950, CB Certificate and Report to IEC 60950, including EMKO-TSE (740SEC) 207/94 and other national deviations, Emissions Test Regulations FCC CFR 47 Part 15, EMC Directive, 89/336/EEC, EN55022, EN55024, VCCI (Japan), SMI CNS13438 (Taiwan), AS/NZS 3548 (Australia/New Zealand), The MPCMM0002 Chassis Management Module is designed to meet the intent of Directive 89/336/EEC for Electromagnetic Compatibility and Low-Voltage Directive 73/23/EEC for Product Safety.</p>