



## 12Gb/s PCIe Gen3 SAS/SATA Host Bus Adapter 1000 Series 1000-16i, 1000-16e, 1000-8i8e, 1000-8i, 1000-8e



### SMART STORAGE AND CONNECTIVITY

Today's data centers and enterprises need storage solutions that can keep pace with their rapid data expansion. The PMC® Adaptec® HBA 1000 is the first product in the new PMC® Adaptec® Smart Storage Solutions family that is being forged through the convergence of PMC SAS/SATA protocol controller expertise, more than 30 years of Adaptec board innovation, and acquired Smart IP technology. The HBA 1000 Series delivers the smart connectivity that businesses are looking for with an optimal mix of resiliency, efficiency, and ease of use. It's an ideal solution for server-based storage systems that require maximum bandwidth and I/O connectivity, low power, and high reliability.

### RESILIENCY AND EFFICIENCY

The new unified Smart Storage Stack delivers resiliency by combining the best of the eighth-generation Adaptec ARC software and drivers with the acquired Smart IP of the most broadly deployed server storage stack. Combined with PMC's SSCI (16x12G/8x12G) SmartIO SAS/SATA protocol controller, the HBA 1000 Series provides a robust and stable solution that can handle the toughest system workloads and configurations. It is fully compatible with existing and future Adaptec HBA, RAID, and expander solutions.

Available in five different 12Gb/s configurations with up to 16 internal or 16 external SAS/SATA ports, the HBA 1000 Series offers the highest port count in a low-profile, MD2 form factor and 60% less power consumption than competing HBAs.

### MAXIMUM PERFORMANCE

The HBA 1000 Series provides the highest levels of storage performance and scalability for next generation data centers by connecting numerous state-of-the-art 12 Gb/s storage devices that can aggregate their performance to the limits of the PCIe Gen 3 host bus at 6600 MB/s and achieve up to 1.3 million IOPs with minimal overhead or additional latency.

### EASE OF USE

The HBA 1000 with its broad operating system support and eco-system compatibility is easy to implement, and easy to scale when directly connecting up to 16 storage devices or scaling out with full compatibility using expanders. The unified management tools and drivers across the PMC Adaptec HBA, RAID and expander solutions enable customer easy manageability across the entire product line.

### HBA 1000 SERIES FEATURES

- 8 or 16 native SAS/SATA ports; low-profile/MD2 form factor
- 12 Gb/s SAS data rates with mini-SAS HD connectors
- Lowest power consumption and TCO of any HBA
- Unified, hardened Smart Storage Stack
- Proven compatibility with existing Adaptec solutions, multiple operating systems, servers, enclosures, SSDs, HDDs, and LTO tape drives

## SPECIFICATIONS

<b>Benefits</b>	Ideal for high performing I/O solutions supporting SAS/SATA HDDs and SSDs requiring maximum connectivity.	
<b>Key Differentiators</b>	<ul style="list-style-type: none"> <li>— Low-profile, MD2, form factor for up to 16 native SAS/SATA ports</li> <li>— Lowest power, highest density solution</li> <li>— Unified management tools with Adaptec RAID adapter family</li> </ul>	
<b>Customer Needs</b>	I/O connectivity offers the highest bandwidth, lowest latency and highest I/O performance paired with broad operating system support	
<b>Key Software Features</b>	<ul style="list-style-type: none"> <li>— Support for up to 256* SAS/SATA target devices</li> <li>— Multi-LUN support</li> <li>— SAS expander support</li> <li>— TLR</li> <li>— SATA NCQ</li> <li>— Hot Plug Drive</li> <li>— S.M.A.R.T.</li> </ul> <p>*238 SSD/HDDs maximum support and remainder are reserved for expanders and enclosure management.</p>	
<b>Management Utilities</b>	<b>Adaptec BIOS Configuration Utility (CTRL+A)</b> <ul style="list-style-type: none"> <li>— Legacy configuration utility</li> <li>— Flashable BIOS support</li> </ul>	<b>Adaptec uEFI BIOS Configuration Utility</b> <ul style="list-style-type: none"> <li>— Flashable BIOS support</li> <li>— HII GUI support</li> </ul>
		<b>ARCCONF</b> <ul style="list-style-type: none"> <li>— Command Line Interface</li> </ul>
<b>Operating Systems</b>	Microsoft Windows, Red Hat, SuSE, CentOS, Ubuntu, VMware ESXi. The latest drivers and OS support are at: <a href="http://start.adaptec.com">start.adaptec.com</a>	
<b>Physical Dimensions</b>	2.535" H x 6.6" L (64 mm x 167 mm)	
<b>Operating Temperature</b>	0°C to 55°C* with 200 LFM airflow. Note: This adapter contains a powerful IO processor which requires adequate airflow to operate reliably. Please install this card only into server or PC chassis with at least 200 LFM airflow. *Temperature measured 1 inch from adapter.	
<b>Regulatory Certification</b>	CE, FCC, UL, C-tick, VCCI, KCC, CNS	
<b>Environmental Compliance</b>	RoHS	
<b>Warranty</b>	3 years	
<b>Accessories</b>	Serial Attached SCSI (SAS) cables ( <a href="http://www.adaptec.com/cables">www.adaptec.com/cables</a> )	

PMC Adaptec HBA 1000 Series	HBA 1000-16i	HBA 1000-16e	HBA 1000-8i8e	HBA 1000-8i	HBA 1000-8e
<b>Order Part Number</b>	2288400-R	2288200-R	2288500-R	2288300-R	2288100-R
<b>Host Bus Interface</b>	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3
<b>Form Factor</b>	Low-Profile, MD2	Low-Profile, MD2	Low-Profile, MD2	Low-Profile, MD2	Low-Profile, MD2
<b>Ports</b>	16 Internal	16 External	8 Internal/8 External	8 Internal	8 External
<b>Connectors</b>	4 (x4) SFF-8643	4 (x4) SFF-8644	2 (x4) SFF-8643 2 (x4) SFF-8644	2 (x4) SFF-8643	2 (x4) SFF-8644
<b>Operating Current</b>	0.3A @ 3.3V; 0.9A @ 12V	0.1A @ 3.3V; 0.9A @ 12V	0.1A @ 3.3V; 1A @ 12V	0.3A @ 3.3V; 0.7A @ 12V	0.1A @ 3.3V; 0.7A @ 12V
<b>MTBF</b>	2 million hours	2 million hours	2 million hours	2 million hours	2 million hours
<b>Typical Power</b>	11.8 W	11.1 W	12.3 W	9.4 W	8.7 W



**Further Resources and Information:** [www.adaptec.com](http://www.adaptec.com)



### ABOUT PMC-SIERRA

PMC (Nasdaq: PMCS) is the semiconductor and software solutions innovator transforming networks that connect, move and store Big Data. Building on a track record of technology leadership, the company is driving innovation across storage, optical and mobile networks. PMC's highly integrated solutions increase performance and enable next-generation services to accelerate the network transformation.

For more information visit [www.pmcs.com](http://www.pmcs.com) or email [info@pmcs.com](mailto:info@pmcs.com)

#### Corporate Head Office:

PMC-Sierra, Inc.  
1380 Bordeaux Drive  
Sunnyvale, CA 94089 USA

T: 1.408.239.8000

F: 1.408.492.9192

#### Operations Head Office:

PMC-Sierra, Ltd.  
8555 Baxter Place  
Burnaby, BC V5A 4V7 Canada

T: 1.604.415.6000

F: 1.604.415.6200

Copyright © 2015 PMC-Sierra, Inc. All rights reserved.

For a complete list of PMC-Sierra's trademarks, visit [www.pmc-sierra.com/legal/](http://www.pmc-sierra.com/legal/). Other product and company names mentioned herein may be the trademarks of their respective owners. PMC-2151928, Issue 3