PMC® Adaptec® Trusted Storage Solutions

A complete portfolio of 12Gb/s Host Bus Adapters, RAID Adapters, SAS Expander and Cables

PMC Adaptec HBA 1000 Series
PCIe Gen 3 12Gb/s Host Bus Adapter

The new PMC Adaptec HBA 1000 Series of Host Bust Adapters 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.

Available in five different 12Gb/s configurations with up to 16 internal or 16 external SAS/SATA ports, it offers the highest port count at the lowest power in a low-profile, MD2 form factor.

- **New unified Smart Storage Stack** that 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. The result is a robust and stable stack with common easy-to-use management tools, drivers, and interface

- **PMC SmartIO SAS/SATA protocol controller** that drives efficiency of higher performance, maximum port count and 60% less power consumption, on average, than competing HBAs

- **Performance** of up to 1.3M IOPS, low latency, and bandwidth that fully saturates the PCIe Gen3 bus

- **Scalability** with up to 16 native internal or 16 native external SATA/SAS ports

- **Broad ecosystem compatibility**, including 6Gb/s systems

The HBA 1000 Series is the first of the PMC Adaptec Smart Storage Solutions family and the newest addition to the 12Gb/s storage product portfolio, which includes the award-winning Adaptec Series 8 RAID adapters, Adaptec SAS expander, and mini-SAS HD cables. PMC has the Smart Storage Solution for the data center and enterprise of today — and tomorrow.

12Gb/s

Smart Storage Solutions
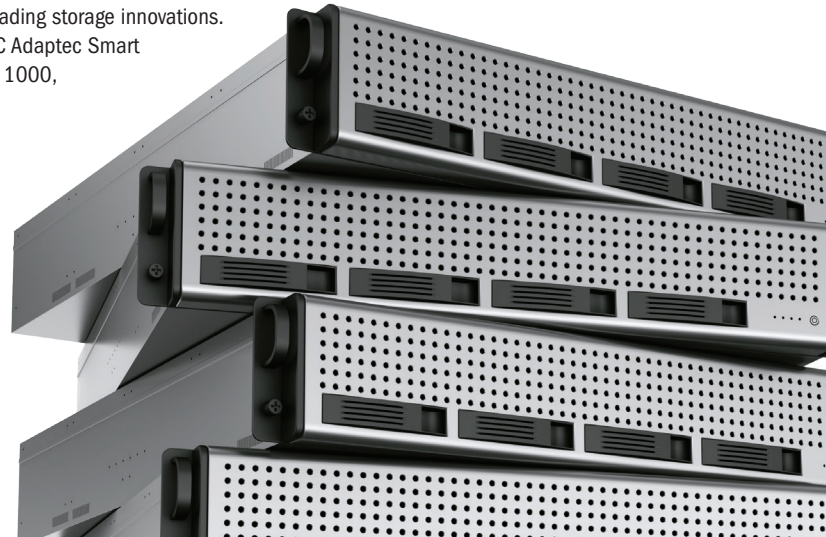# for Your Server-Based Storage Needs

Today's data centers and enterprises continue to search for resilient, efficient, and easy-to-use storage solutions capable of keeping pace with their accelerating data expansion. Advances in SSD performance and HDD capacities require smart storage solutions. Solutions that can manage data effectively, integrate seamlessly, and offer proven compatibility with multiple operating systems versions, as well as numerous current and future server and enclosure brands and models.

Created through the convergence of PMC's silicon expertise, 30+ years of innovative Adaptec board designs, and a robust, enterprise-ready Smart Storage Stack, these PMC® Adaptec® Smart Storage Solutions are a new generation of products that deliver the highest I/O performance, highest density, lowest power consumption per port and the lowest total cost of ownership.

PMC Adaptec Smart Storage Solutions are the next step in PMC's history of developing leading storage innovations. Delivering resiliency, efficiency, and ease of use across the entire new solution family, PMC Adaptec Smart Storage Solutions will provide the most compelling customer value. Starting with the HBA 1000, available today, these future products will be fully compatible with the current portfolio of PMC Adaptec HBA, RAID, and expander solutions.

Smart
Storage Solutions

EFFICIENT
EASY TO USE
RESILIENT

PMC Adaptec Host Bus Adapters:

	Adaptec HBA 1000-16i	Adaptec HBA 1000-16e	Adaptec HBA 1000-8i8e	Adaptec HBA 1000-8i	Adaptec HBA 1000-8e
Ordering Part Number	Single: 2288400-R	Single: 228200-R	Single: 2288500-R	Single: 2288300-R	Single: 2288100-R
Bus Interface	8-lane PCIe Gen3	8-lane PCIe Gen3	8-lane PCIe Gen3	8-lane PCIe Gen3	8-lane PCIe Gen3
Processor	PMC SmartIOC	PMC SmartIOC	PMC SmartIOC	PMC SmartIOC	PMC SmartIOC
Form Factor	MD2 – Low Profile	MD2 – Low Profile	MD2 – Low Profile	MD2 – Low Profile	MD2 – Low Profile
Dimensions	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)
Ports	16 Internal	16 External	8 Internal/8 External	8 Internal	8 External
Maximum Scalability	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*
Connector	4 Internal SFF-8643	4 External SFF-8644	2 Internal SFF-8643 2 External SFF-8644	2 Internal SFF-8643	2 External SFF-8644
Power Consumption (typ)	11.8 W	11.1 W	12.3 W	9.4 W	8.7 W

HBA

PMC Adaptec 12Gb/s and 6Gb/s RAID Adapters:

	Adaptec RAID 81605ZQ	Adaptec RAID 8885Q	Adaptec RAID 81605Z	Adaptec RAID 8885	Adaptec RAID 8805	Adaptec RAID 8405	Adaptec RAID 71605Q	Adaptec RAID 7805Q
Ordering Part Number	Single: 2281600-R	Single: 2277100-R	Single: 2287101-R	Single: 2277000-R	Single: 2277500-R	Single: 2277600-R	Single: 2274600-R	Single: 2274300-R
RAID Levels	Hardware RAID 0, 1, 1E, 5, 6, 10, 50, 60						Hardware RAID 0, 1, 1E, 5, 6, 10, 50, 60	
Bus Interface	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3
Processor	PMC 12Gb/s RoC	PMC 12Gb/s RoC	PMC 12Gb/s RoC	PMC 12Gb/s RoC	PMC 12Gb/s RoC	PMC 12Gb/s RoC	PMC 6Gb/s RoC	PMC 6Gb/s RoC
Hybrid RAID	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10
Form Factor	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile	MD2–Low Profile
Dimensions	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)
Ports	16 Internal	8 Internal 8 External	16 Internal	8 Internal 8 External	8 Internal	4 Internal	16 Internal	8 Internal
Maximum Scalability	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*
Connector	4 Internal SFF-8643	2 Internal SFF-8643/ 2 External SFF-8644	4 Internal SFF-8643	2 Internal SFF-8643/ 2 External SFF-8644	2 Internal SFF-8643	1 Internal SFF-8643	4 Internal SFF-8643	2 Internal SFF-8643
Cache	1024MB	1024MB	1024MB	1024MB	1024MB	1024MB	1024MB	1024MB
SSD Cache	maxCache 3.0	maxCache 3.0	–	–	–	–	maxCache 3.0	maxCache 3.0
Cache Protection	Flash backup (embedded) AFM-700 (included)	AFM-700 (included)	Flash backup embedded (similar to AFM-700)	AFM-700 (optional)	AFM-700 (optional)	AFM-700 (optional)	AFM-700 (included)	AFM-700 (included)

* 238 SSD/HDDs maximum. Remaining capacity is reserved for expanders and enclosure management.

Adaptec RAID 78165	Adaptec RAID 71685	Adaptec RAID 72405	Adaptec RAID 71605	Adaptec RAID 7805	Adaptec RAID 71605E
Single: 2280900-R	Single: 2274700-R	Single: 2274900-R	Single: 2274400-R	Kit: 2274200-R Single: 2274100-R	Single: 2274500-R
Hardware RAID 0, 1, 1E, 5, 6, 10, 50, 60					Hardware RAID 0, 1, 1E, 10
8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3	8-Lane PCIe Gen3
PMC 6Gb/s RoC	PMC 6Gb/s RoC	PMC 6Gb/s RoC	PMC 6Gb/s RoC	PMC 6Gb/s RoC	PMC 6Gb/s RoC
Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10	Hybrid RAID 1, 10
MD2 – Low Profile	Half Length–Full Height	Half Length–Full Height	MD2 – Low Profile	MD2 – Low Profile	MD2 – Low Profile
2.535"H x 6.6"L (64mm x 167mm)	4.198"H x 6.6"L (107mm x 167mm)	4.198"H x 6.6"L (107mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)	2.535"H x 6.6"L (64mm x 167mm)
8 Internal 16 External	16 Internal 8 External	24 Internal	16 Internal	8 Internal	16 Internal
256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*	256 SAS/SATA devices*
2 Internal SFF-8643/ 4 External SFF-8644	4 Internal SFF-8643/ 2 External SFF-8644	6 Internal SFF-8643	4 Internal SFF-8643	2 Internal SFF-8643	4 Internal SFF-8643
1024MB	1024MB	1024MB	1024MB	1024MB	256MB
–	–	–	–	–	–
AFM-700 (optional)	AFM-700 (optional)	AFM-700 (optional)	AFM-700 (optional)	AFM-700 (optional)	–

PMC Adaptec SAS Expander Card

Adaptec 82885T	
Single: 2283400-R	
Ports:	28 Internal / 8 External
Connectors:	7 x SFF-8643, 2 x SFF-8644
Form Factor:	MD2 – Low Profile
Dimensions:	2.535"H x 6.6"L (64mm x 167mm)
PCIe Slot Power:	Through PCIe x4 interface
Auxiliary Power Connector:	Yes

EXPANDER

SAS HD

Cables

INTERNAL

Supported Products
- ASR-81605Z
- ASR-81605ZQ
- ASR-8885Q
- ASR-8885
- ASR-8805
- ASR-71605Q
- ASR-7805Q
- ASR-72405
- ASR-71685
- ASR-78165
- ASR-71605
- ASR-7805
- ASR-71605E
- HBA 1000-16i
- HBA 1000-8i8e
- HBA 1000-8i

Connector to Adapter	12 Gb/s Internal	6 Gb/s Internal			
	SFF-8643	SFF-8087	SFF-8482	SATA	SATA right angle
SFF-8643 right angle	ACK-I-rA-HDmSAS-HDmSAS	ACK-I-rA-HDmSAS-mSAS	ACK-I-rA-HDmSAS-4SAS-SB	ACK-I-rA-HDmSAS-4SATA-SB	ACK-I-rA-HDmSAS-4rASATA-SB
	Part # 1 meter: 2282800-R Part # .5 meter: 2282500-R	Part # .8 meter: 2280200-R Part # .5 meter: 2281300-R	Part # .8 meter: 2279600-R	Part # .8 meter: 2280000-R	Part # .8 meter: 2279900-R
SFF-8643	ACK-I-HDmSAS-HDmSAS	ACK-I-HDmSAS-mSAS	ACK-I-HDmSAS-4SAS-SB	ACK-I-HDmSAS-4SATA-SB	
	Part # 1 meter: 2282100-R Part # .5 meter: 2282200-R	Part # 1 meter: 2279700-R Part # .5 meter: 2281200-R	Part # .8 meter: 2280100-R	Part # .8 meter: 2279800-R	

EXTERNAL

Supported Products
- ASR-8885Q
- ASR-8885
- ASR-71685
- ASR-78165
- HBA 1000-16e
- HBA 1000-8i8e
- HBA 1000-8e

Connector to Adapter	12 Gb/s External	6 Gb/s External
	SFF-8644 External	SFF-8088 External
SFF-8644	ACK-E-HDmSAS-HDmSAS	ACK-E-HDmSAS-mSAS
	Part # 2 meters: 2282600-R	Part # 2 meters: 2280300-R

CABLES

Make the Right Connection
with Adaptec 12Gb/s and 6Gb/s SAS HD Cables

PMC Adaptec 12Gb/s (Series 8, HBA 1000) and 6Gb/s (Series 7) RAID adapters and HBAs are configured with mini-SAS HD connectors to allow for maximum performance and connectivity in a MD2-Low Profile form factor.

Pick the right cable for your internal or external storage solution.

Need more info?
Visit: **www.adaptec.com**

PMC | adaptec®

Customers, resellers and system integrators worldwide benefit from our superior reputation for technology innovation, reliability, local service and support. Contact us to learn more about our storage solutions.

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.

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