

# Microsemi Adaptec® Series 8E Family: 8405E, 8805E

## Entry-level 12 Gbps PCIe Gen3 SAS/SATA RAID Adapters

Data center, IT, and general consumer server environments have a broad range of requirements—from basic connectivity to extreme data storage capacities. The Series 8E 12 Gbps PCIe Gen3 SAS/SATA RAID adapters deliver the robustness of hardware RAID in an entry-level solution. They offer significant performance acceleration over other 6Gbps adapter card solutions through basic RAID 0,1,10 and built-in cache for cost-effective platforms that don't require the full performance and capabilities of our standard Series 8 RAID adapters. The 8805E, with eight internal SAS/SATA ports, is ideal for applications that require more bandwidth. Both models fit the requirements of industrial PC workstations or entry-level servers. The 8405E and the 8805E support a maximum of four and eight devices respectively, as neither support the use of expanders.

### Maximum Performance for Entry-Level RAID Adapters

Series 8E RAID adapters can also be coupled with 12 Gbps SSDs, providing maximum read/write bandwidth and IOPS for the most performance-hungry applications. The 512 MB DDR3 (1600 MHz) built-in cache (recommended for read and write-through caching) provides maximum acceleration.

### Advanced Data Protection and Ease of Use

Microsemi's Adaptec RAID Code (ARC) delivers maximum reliability with an industry-leading feature set, including all of the RAID levels the industry has come to expect, plus unique features like flexible configuration modes for the adapter, Hybrid RAID, and optimized disk utilization (ODU) where no available space is wasted. Microsemi's Adaptec maxView provides an HTML5 web interface that can be used in standard desktops and mobile browsers for all storage configuration and management needs.



### Benefits

- Ideal for entry-level 12 Gbps servers and workstations for redundant boot support and I/O intensive applications such as databases or video editing
- True hardware RAID 0, 1, 10 (also supports Hybrid RAID)
- Performance acceleration through 512 MB DDR3 (1600 MHz) cache

### Highlights

- 4- and 8-port low-profile MD2 with support for a maximum of 4 and 8 devices respectively
- Mixed mode RAID adapter and caching HBA functionality
- 12 Gbps and 6 Gbps compatibility with SAS/ SATA HDD or SSD devices
- 12 Gbps throughput per SAS port using mini-SAS HD connectors
- Microsemi's 12 Gbps RAID-on-Chip (ROC), 8-lane PCIe Gen3 interface with 12 Gbps SAS ports to enable a new generation of performance
- 512 MB DDR3 (1600 MHz) cache
- Up to 500K IOPS



# Microsemi Adaptec® Series 8E Family: 8405E, 8805E

## Entry-level 12 Gbps PCIe Gen3 SAS/SATA RAID Adapters

<b>Key software features</b>	<ul style="list-style-type: none"> <li>Flexible configuration: HBA mode and auto volume mode for automatic deployment</li> <li>Optimized disk utilization (multiple arrays per disk)</li> <li>Support for native 4K sector SAS and SATA devices in addition to 512-byte sector devices</li> <li>Hybrid RAID 1 and 10</li> <li>Quick initialization</li> <li>Online capacity expansion</li> <li>Copyback hot spare</li> <li>Dynamic caching algorithm</li> </ul>	<ul style="list-style-type: none"> <li>Native command queuing (NCQ)</li> <li>Background initialization</li> <li>Hot-plug drive support</li> <li>RAID level migration</li> <li>Hot spares—global, dedicated, and pooled</li> <li>Automatic/manual rebuild of hot spares</li> <li>SES and SAF-TE enclosure management</li> <li>Configurable stripe size</li> <li>S.M.A.R.T. support</li> <li>Multiple arrays per disk drive</li> <li>Dynamic sector repair</li> </ul>	<ul style="list-style-type: none"> <li>Staggered drive spin-up</li> <li>Bootable array support</li> <li>Support for tape devices and autoloaders</li> <li>MSI-X support for all device drivers for all supported operating systems</li> <li>Secure boot support for the uEFI host BIOS</li> <li>USB image available on <a href="http://start.microsemi.com">start.microsemi.com</a> to boot maxView GUI from any USB device for enhanced GUI-based setup and offline maintenance</li> </ul>
<b>Management utilities</b>	<p><b>maxView Storage Manager</b></p> <ul style="list-style-type: none"> <li>Web-based GUI management utility</li> <li>OS support: Windows, Linux, Solaris, VMware</li> <li>Remote configuration, monitoring, and notification</li> <li>Remote firmware updates</li> <li>SMI-S support (CIM provider)</li> <li>SMTP</li> </ul>	<p><b>ARCCONF</b></p> <ul style="list-style-type: none"> <li>Command-line interface</li> <li>SMI-S support for VMware</li> </ul> <p><b>BIOS Configuration Utility (CTRL+A)</b></p> <ul style="list-style-type: none"> <li>Legacy configuration utility</li> <li>Flashable BIOS support</li> </ul>	<p><b>uEFI BIOS Configuration Utility</b></p> <ul style="list-style-type: none"> <li>HII-based configuration utility</li> <li>Flashable BIOS support</li> </ul> <p><b>Event Monitor</b></p> <ul style="list-style-type: none"> <li>Lightweight event monitoring and logging tool</li> <li>Distributes adapter events and notifies user</li> <li>VMWare vSphere plugin</li> </ul>
<b>Operating systems</b>	Microsoft Windows, Red Hat Linux, SUSE Linux, Fedora, Debian Linux, Ubuntu Linux, Sun Solaris, FreeBSD, VMware ESXi. The latest drivers are available at <a href="http://start.microsemi.com">start.microsemi.com</a> .		
<b>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). <b>Note:</b> This adapter contains a powerful RAID processor that requires adequate airflow to operate reliably. Only install this card into server or PC chassis with at least 200 LFM airflow. Temperature measured 1 inch from RAID adapter.		
<b>Operating current</b>	0.1 A at 3.3 VDC, 1.2 A at 12.0 VDC (8405E, 8805E)		
<b>Regulatory certification</b>	CE, FCC, UL, C-tick, VCCI, KCC, CNS		
<b>Environmental compliance</b>	RoHS		
<b>MTBF</b>	2 million hours at 40 °C		
<b>Warranty</b>	3 years		

RAID adapter	8405E	8805E
<b>Order number</b>	2293901-R	2294001-R
<b>RAID levels</b>	0,1,10	0,1,10
<b>Ports</b>	4 internal	8 internal
<b>Connectors</b>	1 SFF-8643	2 SFF-8643
<b>Bus interface</b>	8-lane PCIe Gen3	8-lane PCIe Gen3
<b>Processor</b>	12 Gbps RoC	12 Gbps RoC
<b>Cache</b>	512 MB DDR3 (1600 MHz)	512 MB DDR3 (1600 MHz)
<b>Cache protection</b>	No	No
<b>Number of supported devices</b>	4	8



**Microsemi Corporate Headquarters**  
 One Enterprise, Aliso Viejo, CA 92656 USA  
 Within the USA: +1 (800) 713-4113  
 Outside the USA: +1 (949) 380-6100  
 Fax: +1 (949) 215-4996  
 Email: [sales.support@microsemi.com](mailto:sales.support@microsemi.com)  
[www.microsemi.com](http://www.microsemi.com)

©2016 Microsemi Corporation. All rights reserved.  
 Microsemi and the Microsemi logo are registered trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, California and has approximately 4,800 employees globally. Learn more at [www.microsemi.com](http://www.microsemi.com).

Microsemi makes no warranty, representation, or guarantee regarding the information contained herein or the suitability of its products and services for any particular purpose, nor does Microsemi assume any liability whatsoever arising out of the application or use of any product or circuit. The products sold hereunder and any other products sold by Microsemi have been subject to limited testing and should not be used in conjunction with mission-critical equipment or applications. Any performance specifications are believed to be reliable but are not verified, and Buyer must conduct and complete all performance and other testing of the products, alone and together with, or installed in, any end-products. Buyer shall not rely on any data and performance specifications or parameters provided by Microsemi. It is the Buyer's responsibility to independently determine suitability of any products and to test and verify the same. The information provided by Microsemi hereunder is provided "as is, where is" and with all faults, and the entire risk associated with such information is entirely with the Buyer. Microsemi does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other IP rights, whether with regard to such information itself or anything described by such information. Information provided in this document is proprietary to Microsemi, and Microsemi reserves the right to make any changes to the information in this document or to any products and services at any time without notice.