

# Adaptec® Smart Storage Solutions

## Solution Overview

Smart Storage solutions from Adaptec® are comprised of HBAs, SmartHBAs and full featured cache protected SmartRAID standard PCIe adapters. Smart Storage solutions include a full suite of management tools, plug-ins for the Software Defined Data Center, and a unified firmware stack across the entire product portfolio that reduces support requirements and enhances the customer experience. The latest Smart Storage solutions leverage 30+ years of providing data protection and the highest level of system security for small business, public /private cloud and enterprise class data centers.

## Product Features

- Widest selection of standard PCIe board level solutions with 4 ports up to 24 ports
- 0, 1, 2 and 4 GB on board cache options
- Unified local and remote web-based management with maxView and full featured ARRCONF CLI
- Performance over 1.7 M 4K Random Read IOPS
- maxCache™ SSD caching application for high performance requirements and applications
- Mixed-Mode support for both RAID data protection and HBA throughput on the same adapter
- Advanced diagnostics and monitoring including predictive failure analysis for connected devices

## Target Applications

- Cloud computing
- Industrial PC for factory automation
- Video streaming
- Surveillance
- Banking and financial institutions
- Point of sale and kiosk installations

## Challenges Addressed

- Unified firmware stack, management tools and drivers reduce support and integration costs
- Maximum PCIe slot utilization and reduced integration complexity with on-board supercap
- Reduced thermal concerns and operating costs with industry's lowest power requirements and reduced airflow/cooling
- Reduced downtime with Online Capacity Expansion, RAID Level Migration and reduced rebuild times using last block used identifiers
- Broad ecosystem compatibility with tested HDDs, SSDs, Operating systems and JBOD/Enclosures  
[www.adaptec.com/compatibility](http://www.adaptec.com/compatibility)
- Secure sensitive customer data with 256-bit AES, H/W accelerated in-line encryption with maxCrypto



## Why Smart Storage

Adaptec Smart Storage products provide the highest level of data protection, security and lowest industry power for today's demanding server and storage environments. Our Smart storage adapters are field proven with over 30 million deployments, and are the trusted solution for connectivity, data protection and secure computing with controller-based encryption and secure boot functionality. With the widest range of adapter options, customers can deploy the server configuration they need with the same tools and management interfaces they know, which reduces training and support costs. Whether the requirement is performance with SSDs or storage of large video files or images on HDDs, Adaptec storage products have the right solution.

For more information go to <https://ask.adaptec.com/app/ask/> or [microchip.com/smartstorage](http://microchip.com/smartstorage)

## Product Selection Guide

### SmartRAID RAID Adapters

Product	Ordering Part Number	RAID Levels	SAS/SATA Ports	Connectors	Cache	SSD Cache	Cache Protection	Dimensions	
SmartRAID 3162-8i	2299800-R	Hardware RAID 0, 1, 5, 6, 10, 50, 60, 1 ADM and 10 ADM	8 internal	2 (x4) SFF-8643	2 GB DDR4/2100 MHz	maxCache™ 4.0	Embedded Flash backup On board ASCM-17F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3162-8i /e	2299600-R		8 internal	2 (x4) SFF-8643	2 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup On board ASCM-17F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-24i	2294700-R		24 internal	6 (x4) SFF-8643	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-8i16e	2294600-R		8 internal/ 16 external	2 (x4) SFF-8643 4 (x4) SFF-8644	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-16i	2295000-R		16 internal	4 (x4) SFF-8643	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-8i8e	2295100-R		8 internal/ 8 external	2 (x4) SFF-8643 2 (x4) SFF-8644	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-8e	2290800-R		8 external	2 (x4) SFF-8644	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3154-8i	2291000-R		8 internal	2 (x4) SFF-8643	4 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3152-8i	2290200-R		8 internal	2 (x4) SFF-8643	2 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3102-8i	2294800-R		8 internal	2 (x4) SFF-8643	2 GB DDR4/2100 MHz	NA	NA	2.535" H x 6.6" L (64 mm x 167 mm)	
SmartRAID 3151-4i	2294900-R		4 internal	1 (x4) SFF-8643	1 GB DDR4/2100 MHz	maxCache 4.0	Embedded Flash backup Tethered ASCM-35F supercap	2.535" H x 5.2" L (64 mm x 132.08 mm)	
SmartRAID 3101-4i	2291700-R		4 internal	1 (x4) SFF-8643	1 GB DDR4/2100 MHz	NA	NA	2.535" H x 5.2" L (64 mm x 132.08 mm)	
SmartRAID 3102E-8i	2304200-R		0, 1, 10, 1 ADM and 10 ADM	8 internal	2 (x4) SFF-8643	2 GB DDR4/2100 MHz	NA	NA	2.535" H x 6.6" L (64 mm x 167 mm)
SmartRAID 3101E-4i	2304400-R			4 internal	1 (x4) SFF-8643	1 GB DDR4/2100 MHz	NA	NA	2.535" H x 6.6" L (64 mm x 167 mm)

\*238 SSD/HDD maximum. Remaining device count is reserved for expanders and enclosure management. SAS Expanders are not supported on SmartRAID 3100E adapters.

### SmartHBA 2100 Host Bus Adapters

Product	Ordering Part Number	RAID Levels	SAS/SATA Ports	Connectors	Caching	Dimensions
SmartHBA 2100-24i	2301600-R	Hardware RAID 0, 1, 10, 5	24 internal	6 (x4) SFF-8643	NA	2.535" H x 6.6" L (64 mm x 167 mm)
SmartHBA 2100-16i	2302100-R		16 internal	4 (x4) SFF-8643		2.535" H x 6.6" L (64 mm x 167 mm)
SmartHBA 2100-8i8e	2301900-R		8 internal/ 8 external	2 (x4) SFF-8643/ 2 (x4) SFF-8644		2.535" H x 6.6" L (64 mm x 167 mm)
SmartHBA 2100-8i	2290400-R		8 internal	2 (x4) SFF-8643		2.535" H x 6.6" L (64 mm x 167 mm)
SmartHBA 2100 4i4e	2292200-R		4 internal/ 4 external	1 (x4) SFF-8643/ 1 (x4) SFF-8644		2.535" H x 5.2" L (64 mm x 132.08 mm)

\*238 SSD/HDD maximum. Remaining device count is reserved for expanders and enclosure management.

### HBA 1100

Product	Ordering Part Number	SAS/SATA Ports	Connectors	Dimensions
HBA 1100-24i	2293800-R	24 internal	6 (x4) SFF-8643	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100-16i	2293500-R	16 internal	4 (x4) SFF-8643	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100-16e	2293600-R	16 external	4 (x4) SFF-8644	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100- 8i8e	2293700-R	8 internal/ 8 external	2 (x4) SFF-8643/ 2 (x4) SFF-8644	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100-8i	2293200-R	8 internal	2 (x4) SFF-8643	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100-8e	2293300-R	8 external	2 (x4) SFF-8644	2.535" H x 6.6" L (64 mm x 167 mm)
HBA 1100-4i	2293400-R	4 internal	1 (x4) SFF-8643	2.535" H x 5.2" L (64 mm x 132.08 mm)

\*238 SSD/HDD maximum. Remaining device count is reserved for expanders and enclosure management.

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