

SAS Expansion: Making the move from 3G to 6G Technology

The following chart was created to work as a general guide to SAS Expansion (also known as "Daisy Chaining") during the transition from 3G (3Gb/s) to 6G (6Gb/s) technology.*

Applies to: iT8 SAS Expander & iT8 6G SAS Expander; iR8 SAS Expander & iR8 6G SAS Expander

	RAID Controller Card	Daisy Chained Unit 1	Daisy Chained Unit 2
	<p>ATTO R380 (3G)</p>	<p>iT8 SAS Expander (3G) 3G HDDs (3G)</p>	<p>iT8 SAS Expander (3G) 3G HDDs (3G)</p>
	<p>ATTO R380 (3G)</p>	<p>iT8 SAS Expander (3G) 3G HDDs (3G)</p>	<p>iT8 6G SAS Expander (6G) 3G HDDs (3G)</p>
	<p>ATTO R380 (3G)</p>	<p>iT8 SAS Expander (3G) 3G HDDs (3G)</p>	<p>iT8 6G SAS Expander (6G) 6G HDDs (6G)</p>
	<p>ATTO R680 (6G)</p>	<p>iT8 6G SAS Expander (6G) 6G HDDs (6G)</p>	<p>iT8 6G SAS Expander (6G) 6G HDDs (6G)</p>
	<p>ATTO R680 (6G)</p>	<p>iT8 6G SAS Expander (6G) 3G HDDs (3G)</p>	<p>iT8 6G SAS Expander (6G) 3G HDDs (3G)</p>
	<p>ATTO R680 (6G)</p>	<p>iT8 SAS Expander (3G) 3G HDDs (3G)</p>	<p>iT8 6G SAS Expander (6G) 6G HDDs (3G)</p>

The mixing and matching of 3G and 6G enclosures is possible.

The use of a 3G RAID Controller Card only allows for the use of 3G HDDs within the SAS Expander configuration (3G RAID Controller Cards are not compatible with 6G HDDs).

For optimal results, iStoragePro recommends the following upgrades when making the move from 3G to 6G Technology:

- Upgrade all cables to 6G rated cables
- Upgrade any SAS Expander chips used for SAS Expansion to 6G rated SAS Expander chips
- Upgrade any RAID Controller Cards to 6G rated RAID Controller Cards
- Upgrade HBAs (or "Host Bus Adapters") to PCI-e 2.0
- ATTO Controller Cards shown in this diagram are for demonstration purposes only; the same specifications apply to other brands such as LSI, Areca, and other 3G Controller Cards

* All products, dates, specifications, features, and figures specified in this document are introductory and are based on ideal conditions, and are subject to change without notice. Products shown in this diagram are for demonstration purposes only, and may be switched out with other products with equal or similar specifications.

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