Intel® RAID Expander RES3FV288

12Gb/s low profile card perfect for extending RAID arrays beyond 8 drives

PRODUCT BRIEF

For a low-cost value-added alterative to high port count RAID cards, select the Intel® RAID Expander RES3FV288. As the perfect complement for Intel's SAS-3 generation RAID cards, the RES3FV288 offers ultimate flexibility for architecting a high drive count (>8 drive) storage solution in any sized system. Designed with a low profile, MD2 form factor, the RES3FV288 can be used in any server add-in card slot including a low profile slot in a 2U rack system. In cases where an add-in slot is not available, the RES3FV288 can even be mounted to a chassis wall or air-duct.

The RES3FV288, powered by a high performance SAS 3.0 capable expander, enables the connection of up to 28 inside-the-box SAS or Serial ATA (SATA) devices; plus it delivers 8 external ports for connection to a JBOD. Each expander port is capable of performing SAS and SATA transfers based on the speed of the host or target at either 12Gb/s or 6Gb/s. Furthermore, 6Gb/s signals are aggregated by the expander to allow for 12Gb/s communication with RAID add-in cards capable of this higher data rate. The RES3FV288 supports management functions such as discovery and enclosure management, and can be cascaded to accommodate as many drives as the associated SAS/RAID card allows.

All Intel RAID solutions are validated across multiple platforms with Intel® boards, chassis, and systems. Customized training, as well as Intel® service and support, make Intel the one source for customers seeking data protection, increased productivity, and simplified IT.
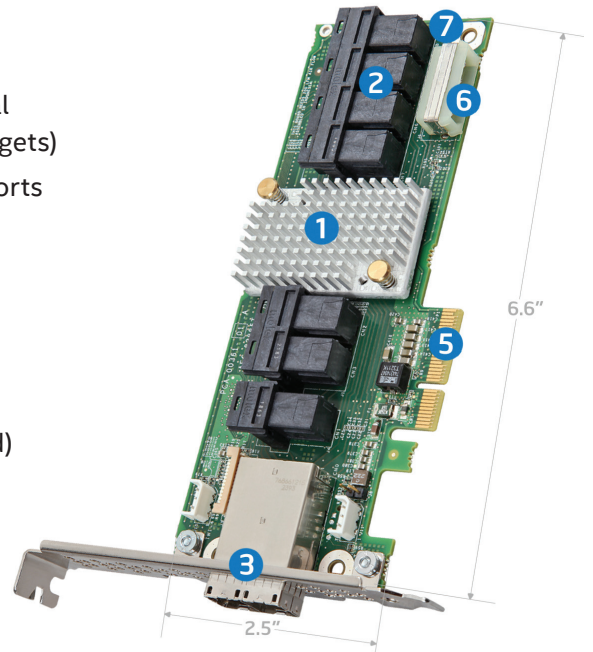
Key Advantages

- **Low-cost alternative to high port count RAID cards.** Provide a more economic solution that is similar to a high port count card, but has more flexibility as the RES3FV288 can be teamed up with a wide variety 4 or 8 port SAS RAID card/modules providing you with features that are best suited to customer needs.
- **Inside-the-box design flexibility.** With a true MD2 form factor, this expander card is ideal for low-profile height and half-length adapter slots. In addition, the card design allows for mounting on chassis walls or ducting. Power can be obtained either from a PCIe slot or a power cable.
- **Excellent performance and data aggregation.** The RES3FV288 is capable of allowing Intel's SAS-3 high port count RAID to reach their optimal performance with transfer rates of up to 12Gb/s per port. Compliance with the SAS 3.0 specification allows for bandwidth aggregation of 6Gb/s target data for transfer at 12Gb/s.
- **Compatible with Intel's current and future RAID products.** Connect any of Intel's current SAS-3 RAID products to extend 4 or 8 ports up to 20 internal and 8 external ports.
- **Exceptional quality and support.** Thoroughly tested across Intel's SAS-3 RAID product line to ensure ease of deployment; and backed by a 3 year warranty. (Extended 5 year warranty available for optional purchase.)

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The perfect complement to Intel's SAS/RAID products to enable high drive counts

1. SAS 3.0 Expander to enable communication with up to 36 total ports at 6 or 12Gb/s

2. Seven HD SFF8643 Mini-SAS internal connectors for 28 internal ports (8 ports for connecting to an initiator and 20 ports for targets)

3. One HD SFF8644 Mini-SAS external connector for 8 external ports

4. Low Profile, MD2 depth for use in low profile slots and motherboards with add-in card depth constraints

5. PCIe x4 connector with power pins to mount and power from a PCIe slot (if desired)

6. RA 4 Pin power connector to power from a cable (if desired)

7. Mounting holes for attaching to a chassis or duct wall (if desired)

8. Two short cables with SFF8644 connectors at each end and designed to allow tight bend radii are included to attach to the teamed RAID add-in card or module (not shown)

Technical Specifications

Order Code	RES3FV288
Included in box	One (1) Expander board with full height and low profile brackets & Two (2) short cables for connecting the expander to a nearby RAID controller
Embedded device	PM8044 SXP 36Sx12G 36 port SAS 3.0
Compatibility	Intel® RAID RS3 Controllers (SAS-3) Intel® Integrated RAID RMS3 Modules (SAS-3) SAS-3 (12Gb/s) and SAS-2 (6Gb) target devices (Hard Drives, SSDs, expanders) RAID or non-RAID mode Drives of mixed capacity and form factors Non disk devices including expanders
SAS/SATA Ports	36 total sub-divided into 7 x quad ports (SFF8643) internal and 2 x quad ports external (SFF8644)
Firmware	8 MB in an updateable flash ROM
Enclosure Management	SGPIO
Operating Temperature	Maximum ambient: 55°C
Operating Voltage	+12V

For more information on the Intel RAID Expander RES3FV288, visit: www.intel.com/go/RAID

For more information on how to make the Intel RAID Expander RES3FV288 part of your server environment, please contact an Intel® Channel Partner Program participant.