

# 3U 16 bay and 4U 24 bay PCIe expansion RAID subsystem



- Up to 7 extra PCIe slots
- 20Gbps PCIe x8 host connectivity
- Backplane design allows SAS/SATA drives
- Backplane design allows hard disk fail indication on each tray
- Redundant Hot Swappable Power Supply
- LED indicators for Power, Activity and hard disk fail on each tray
- Environment Monitoring with FAN/TEMP LEDs and mutable buzzer alar

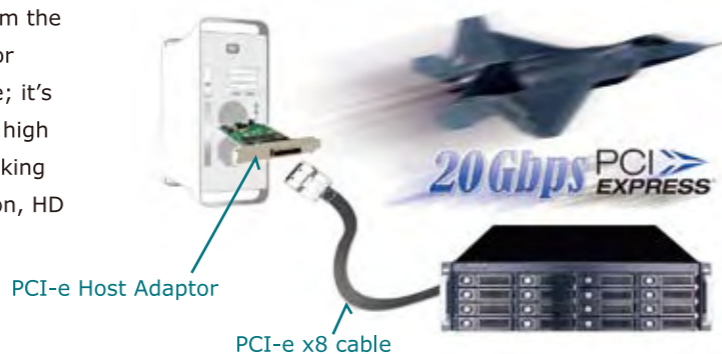
## Overview

Netstor's PCIe expansion RAID series includes 3U 16bay NA333A and 4U 24bay NA380A, feature extra PCIe slots and disk bays together in one enclosure with 20Gbps host connectivity. Extra PCIe slots give a solution to the shortage of workstations and servers which usually limited PCIe slots are offered. The PCIe expansion RAID

series allows users to choose RAID core from PCIe RAID HBAs with respective number of ports – NA333A 16 ports, NA380A 24 ports. With this advantage, users are able to customize the RAID core with appropriate functionality and scalability to suit their workflow.

## 20Gbps host connectivity

Netstor's PCIe RAID series turned the PCIe bus from the motherboard to PCIe x8 external cable with adaptor cards. PCIe x8 delivers a 20Gbps transmission rate; it's five times faster than Fibre Channel. Under such a high transmission speed, the PCIe RAID is capable of taking on any speed critical tasks, such as content creation, HD streaming or other data intensive applications.



# PCI-E to SAS/SATA JBOD with PCI-Express Slot Expander >> JBOD

## PCIe expansion

PCIe slots are needed while looking to equip vast capacity storage devices or peripherals to the computer or server. But usually only limited number of slots are offered. Netstor utilizes the PCIe expansion technology to extend the PCIe slots from the computer to the

enclosure, at the same time, creates extra PCIe slots. NA333A provides extra one PCIe x8 slot or two PCIe x4 slots. NA380A provides extra 3 PCIe x8 slots and 4 PCIe x4 slots.



NA333A Rear panel

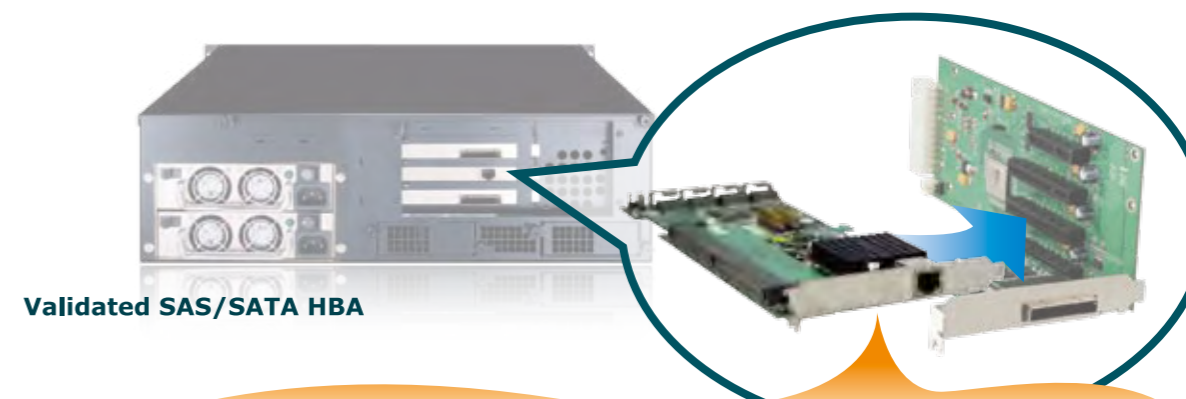


NA380A Rear panel

## PCIe expansion Q&A

**Q1** Is NA333A/NA380A a Raid ready chassis?

**A:** No, to run NA333A/NA380A, you have to install a Raid HBA with 4/6 internal miniSAS connectors (16/24 disk ports) in NA333A/NA380A. Find validated Raid HBA below.



Validated SAS/SATA HBA

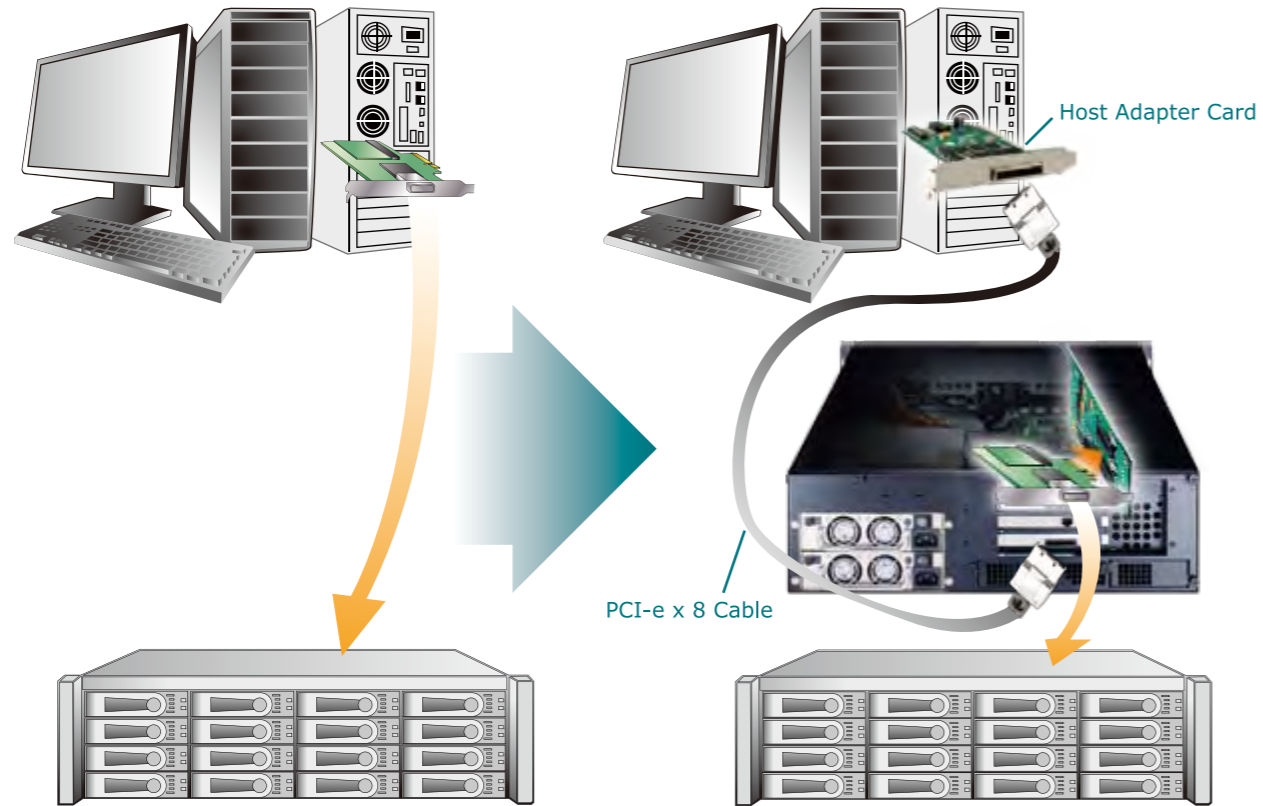
	adaptec	areca	ATTO	3ware	HighPoint
NA333A	RAID 51645 RAID 31605	ARC-1261ML ARC-1680ix-16	R30F	9650SE-16ML	RocketRAID 3540
NA380A	RAID 52445	ARC-1680ix-24	N/A	9650SE-24M8	RacketRAID 3560

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## PCIe expansion Q&A

**Q2** I need more disk arrays for my server but PCIe slots are all occupied. Can NA333A/NA380A solve this problem?

**A:** Yes, there are four PCIe slots in NA333A/NA380A. Except for the slots of the Target Adaptor and the Raid HBA, the remaining PCIe slots can be configured to either one PCIe x8 slot usable or two PCIe x4 slots usable upon users' need. Users can remove a PCIe card that occupies a PCIe x8 from the computer then install it into NA333A/NA380A, sparing the slot for the Host Adaptor of NA333A/NA380A.



PCIe slots are all occupied by existing facility.  
While planning to add more mass capacity storage device.  
That requires another PCIe slot.

Reset the PCIe HBA for the existing equipment to NA333A.  
Install the Host Adaptor of NA333A in the computer.

**Q3** Is NA333A/NA380A able to be used in the environment which needs very high transmission speed?

**A:** Yes, NA333A/NA380A utilizes its PCIe x8 host adaptor which extends bus from the computer to NA333A/NA380A. PCIe x8 runs at 20Gbps; exceeds the requirement from the most speed demanding applications. Such as Audio/Video Editing, Content Creation or other data intensive applications.

**Testing Equipment Machine:**  
Apple Mac Pro  
Netstor NA333A configured as RAID 5 + Hot Spare  
AJA KONA System Test (Version 2)  
16x Seagate NS (ES2.0) 1.0TB HDD

**Q4** What kind of PCIe cards can be plugged in NA333A/NA380A, do I need any extra software driver? Will the PCIe card happen to be incompatible with NA333A/NA380A?

**A:** The PCIe x4 and PCI x8 slots are simply the extension of the motherboard's PCIe BUS. If the PCIe card works well in the computer, it should work well in NA333A. Besides, just install the same software driver which is enclosed from your original add-on card again.



## Specifications



Model	NA333A	NA380A
Form Factor	3U 16 bay	4U 24 bay
Host Interface	20Gbps External PCIe	
HDD Interface	SAS/SATA (3Gbps)	
No. of Disk(s)	Up to16	Up to24
Raid Function	NA (Depends on the HBA)	
Slot Expansion	One PCIe x8 or Two PCIe x4 configurable by users	Three PCIe x8 and Four PCIe x4
LED Display for each Tray	White - Power ON indicator , Blue- Busy (HDD Accessing) indicator Red – Hard disk fail (if HBA supports)	
LED Display for Enclosure	Power-On LED - White , FAN Normal –Green ; FAN Fail - Red TEMP. Normal-Green ; TEMP. over 50°C - Red	
Material	Heavy-duty cold-rolled steel Housing	
Power Supply	mini-Redundant 400W PSU100-240V AC, 50/60Hz Universal	2+1 Redundant 650W PSU100-240V AC, 50/60Hz Universal
Cooling	Two 75x75x28 mm Hot-Swappable Blowers	Two 90x90x25 mm and three 60x60x25 mm cooling fans
Alarm	Buzzer Beeping for Fan-fail or over temperature(over 50°C) occurs Red LED for hard disk fail on each tray(if HBA supports)	
External Enclosure Management	Backplane supports SGPIO	
Dimension	559(D) x482(W) x 131(H)mm 22(D) x19(W) x 5.16(H) inch	559(D) x482(W) x176(H) mm 22(D) x19(W) x6.9(H) inch
O.S Support	OS Independent	