

6Gbps SAS to SATA SSD adapters for dual-controller NAS/servers with SAS interface

QNAP

QDA-SA & QDA-SA2



How to Cost-Effectively use SATA SSDs in Dual-Controller Servers?

Why Do You Need a Dual-Controller Server

Use SATA SSDs on Dual-Controller Servers with QDA-SA & QDA-SA2

Reliable Performance with SATA SSDs



What if The Following Systems Stop Working



CCTV camera for schools /
communities / hotels



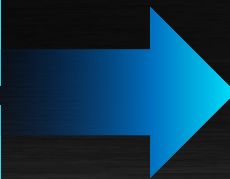
Hospital X-ray scanning and
medical record systems



Critical data and daily operation
systems in companies



Various financial services of banks

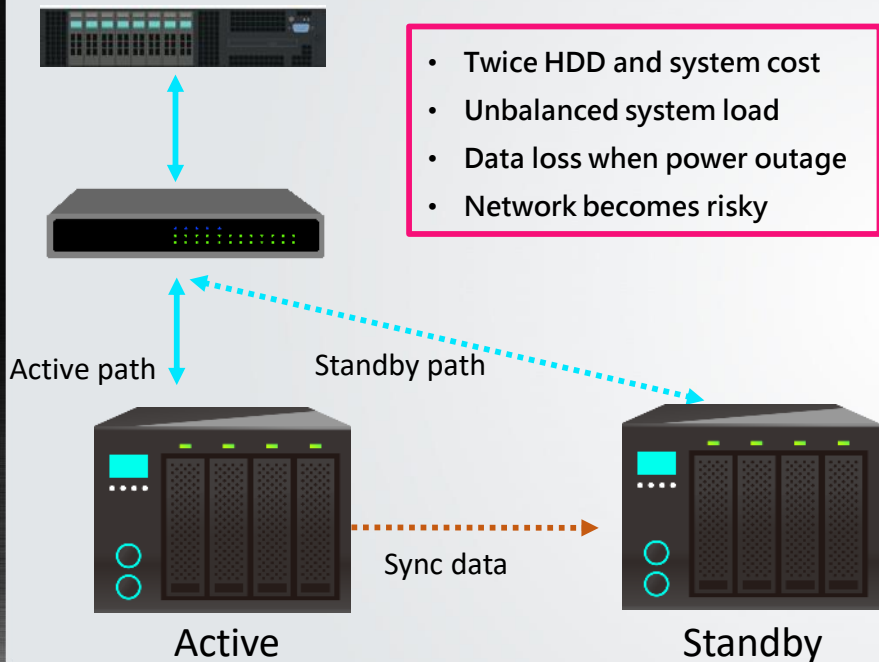


Not that it might cause
monetary losses only

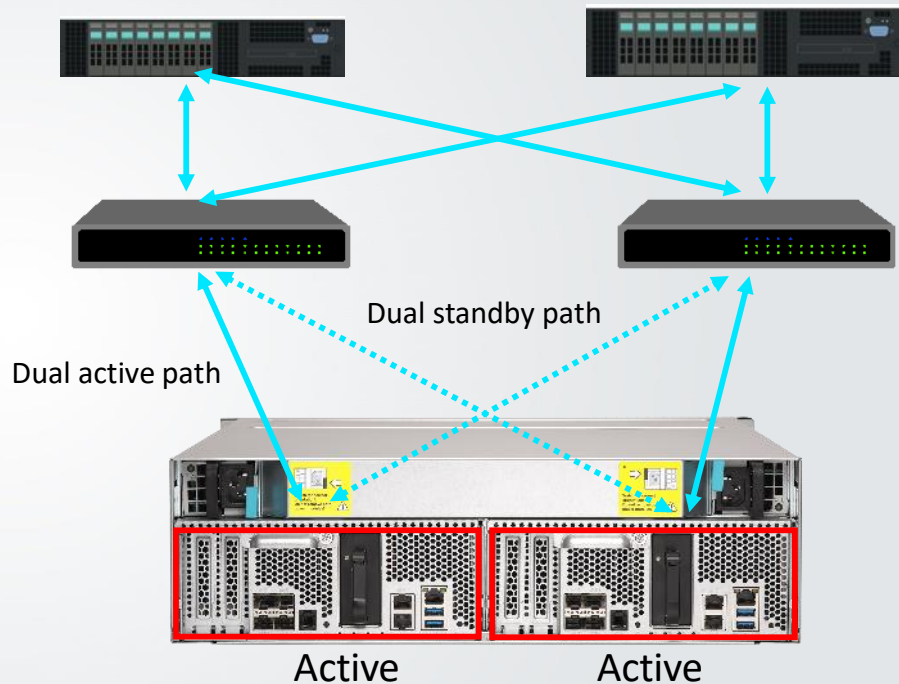
But might endanger the
lives and social security of
the general public

Common High Availability Storage Architecture

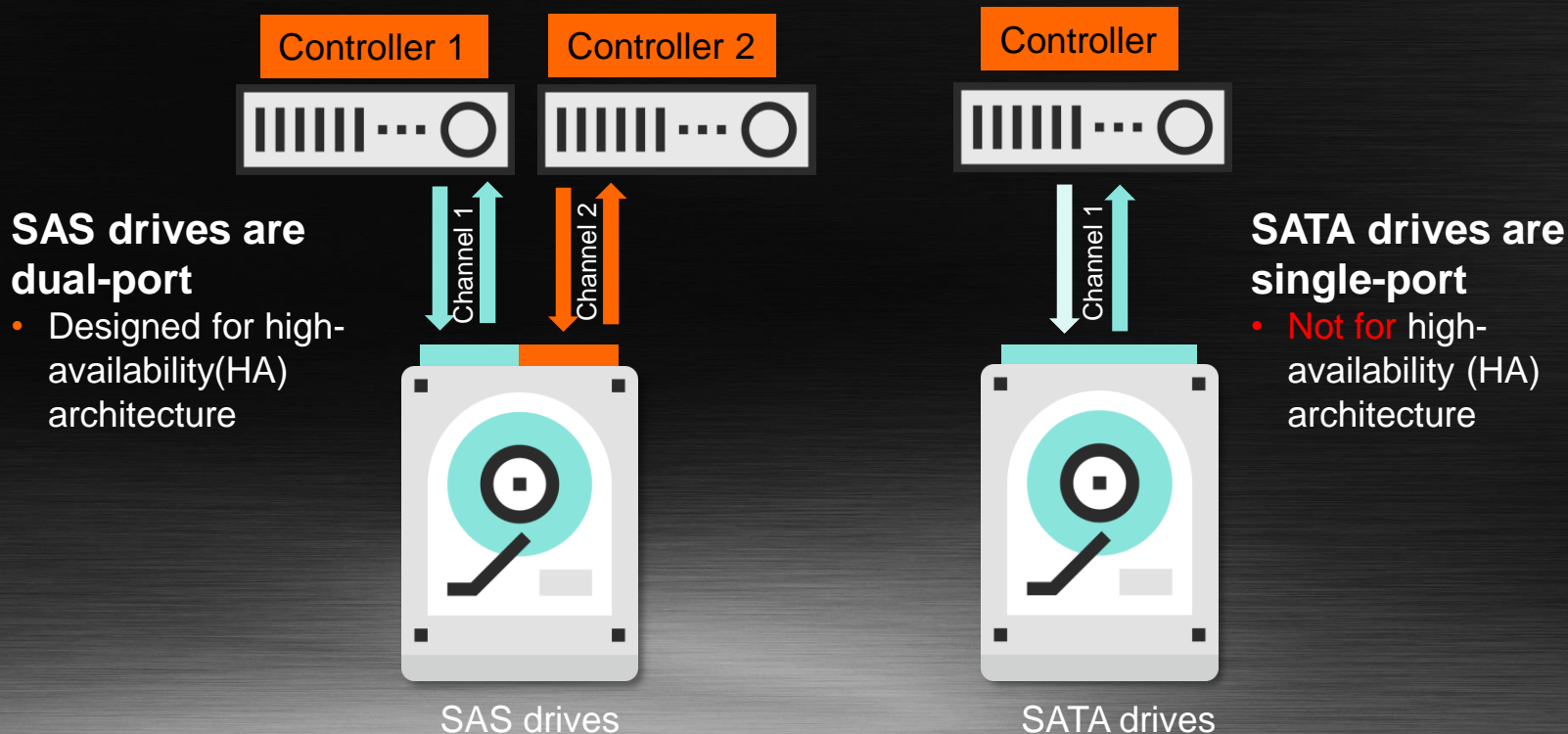
Active-Standby



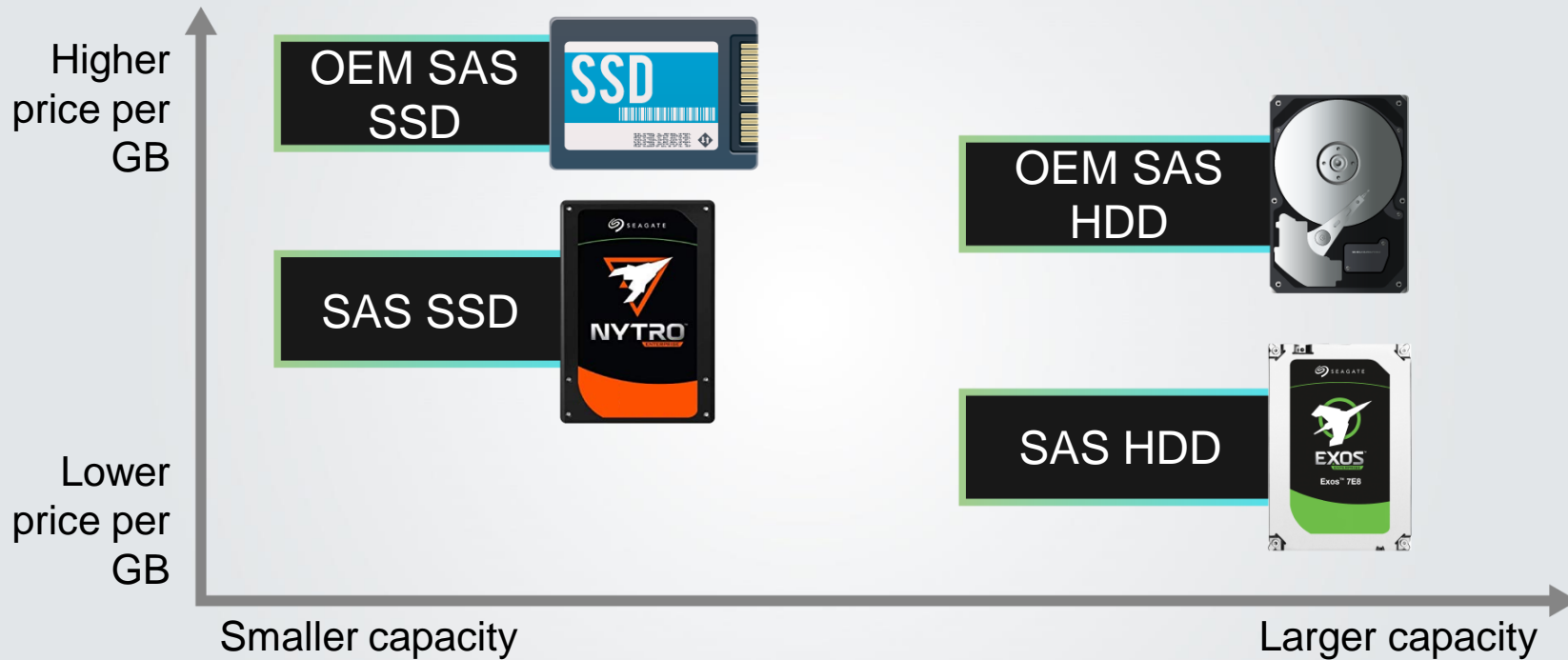
Active-Active



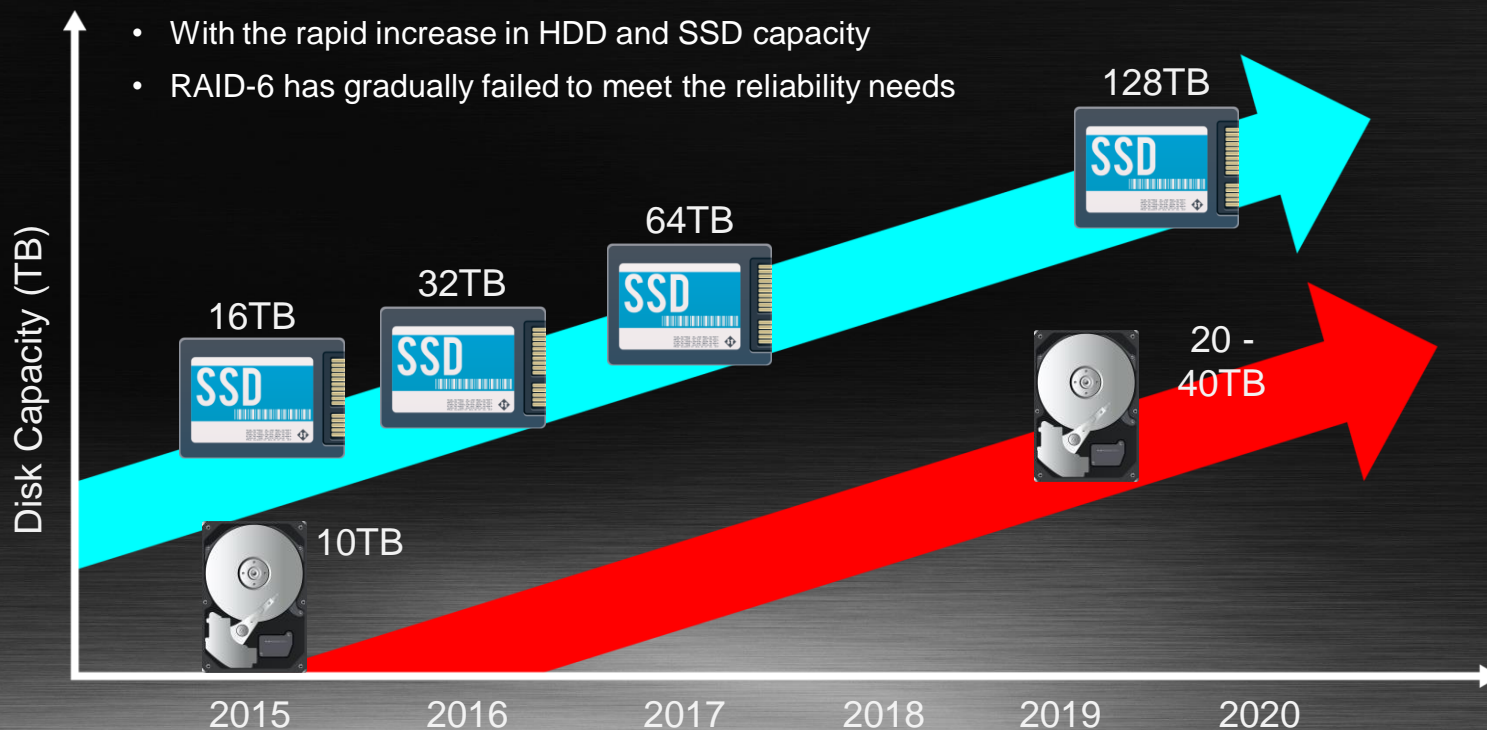
Full-duplex data transfer and dual-port



What kind of storage are supported by dual-controller servers



Large-capacity HDD and SSD are becoming popular



Cost-effective enterprise SATA SSD do exist

2019/07/26 Newegg.com USD prices



Seagate Nytro 3530 XS1600LE10003 **1.6TB**
2.5" SAS 12.0Gb/s 7mm SSD

\$980.99



Seagate Nytro 1351 XA1920LE10063 2.5"
1.92TB SATA III 3D TLC Solid State Disk -
Enterprise

\$354.99

\$269.95 (10 Offers)

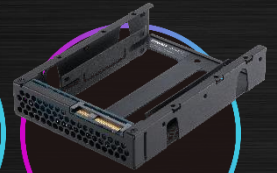
Enterprise-grade SATA SSD designed for data centers and cloud server applications

- **Cost saving** compared to SAS SSD
- Up to **3.8TB** storage capacity
- Enhanced **enterprise reliability** with up to 564MB/s seq. read and 536 MB/s seq. write performance

QDA-SA & QDA-SA2 adapters let dual controller servers use SATA SSDs



QDA-SA



QDA-SA2

QNAP Enterprise ZFS NAS

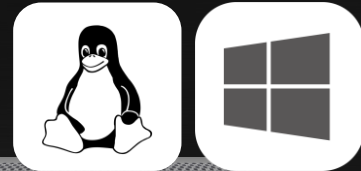


ES1686dc



ES1640dc / E1640dc v2

Dual-controller Windows/Linux servers



For dual-controller Windows/Linux servers and QNAP Enterprise ZFS NAS

Note: NAS must run on QES 2.0.0 or a later version.

QDA-SA for QNAP Enterprise ZFS NAS
3.5" SAS drive trays



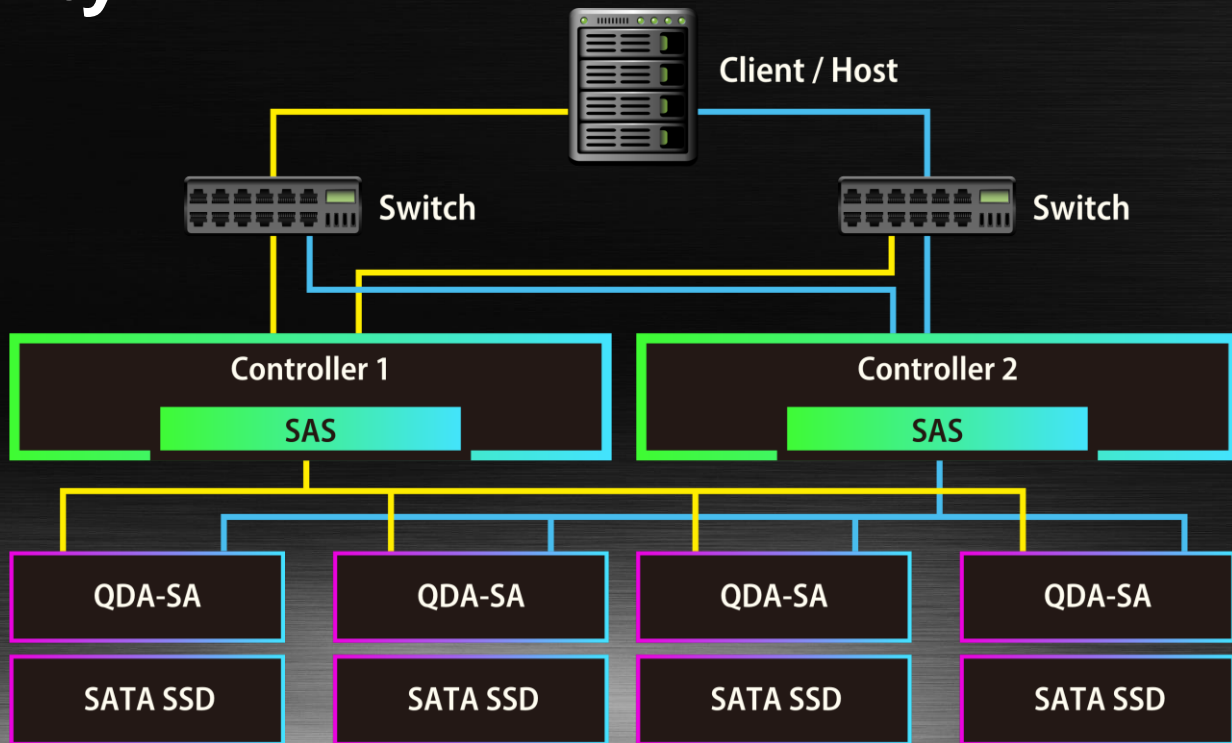
Order number: QDA-SA-4PCS (4 in a bundle)

QDA-SA2 for dual-controller
Windows®/Linux® SAS servers, and QNAP
Enterprise ZFS NAS 3.5" SAS drive trays

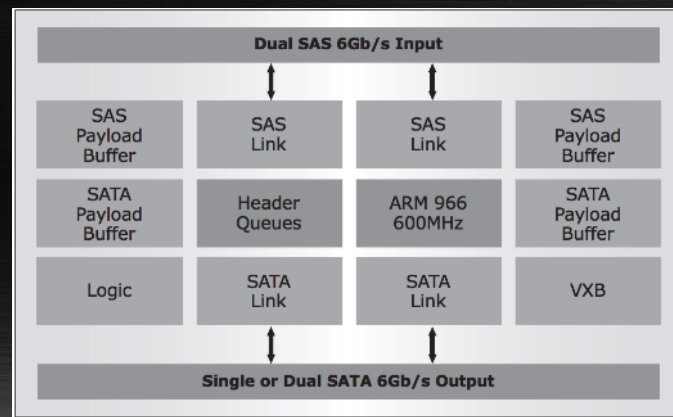
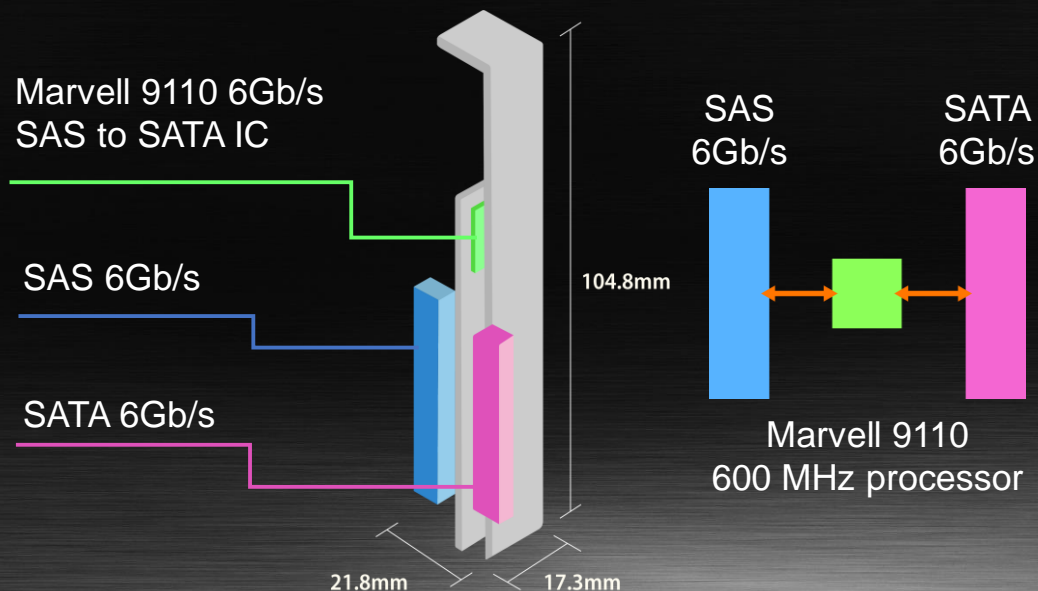


Order number: QDA-SA2-4PCS (4 in a bundle)

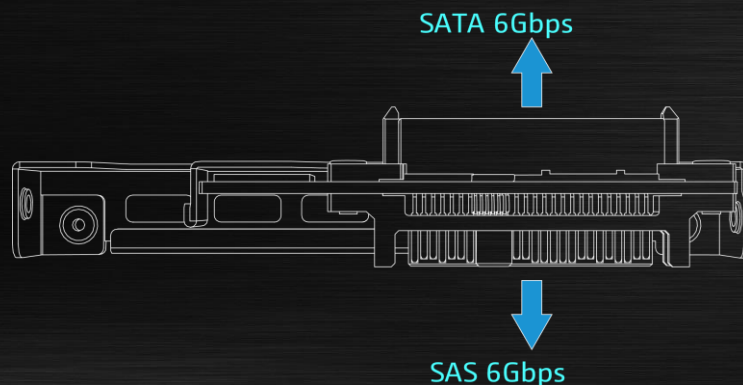
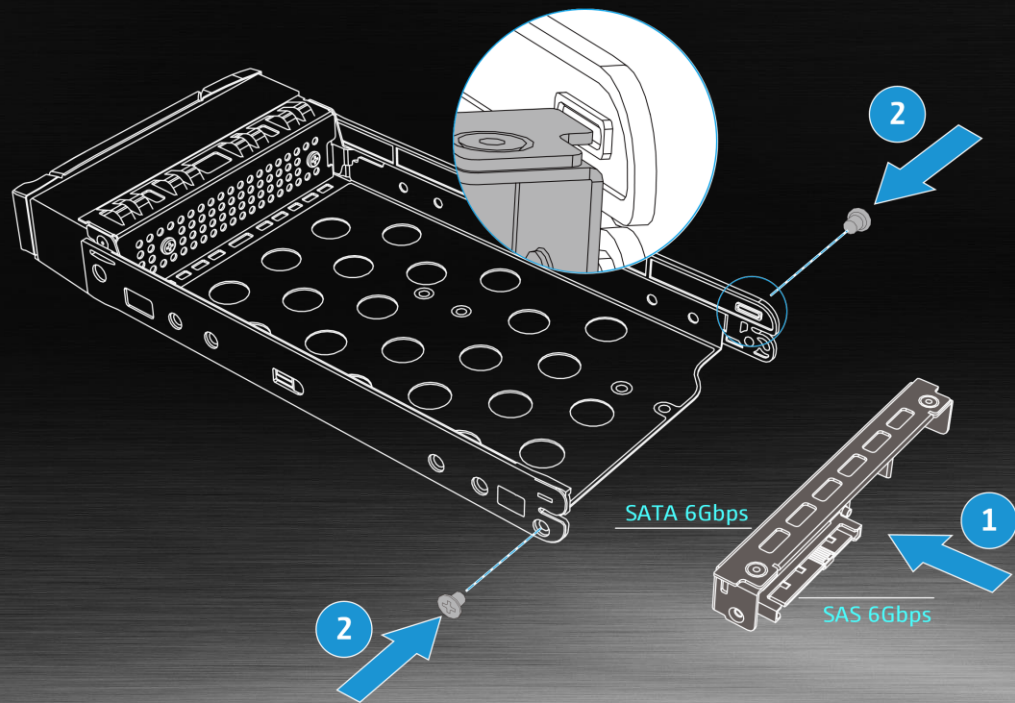
Let SATA SSD support SAS dual-port capability



QDA-SA: 6Gb/s SAS to SATA adapter

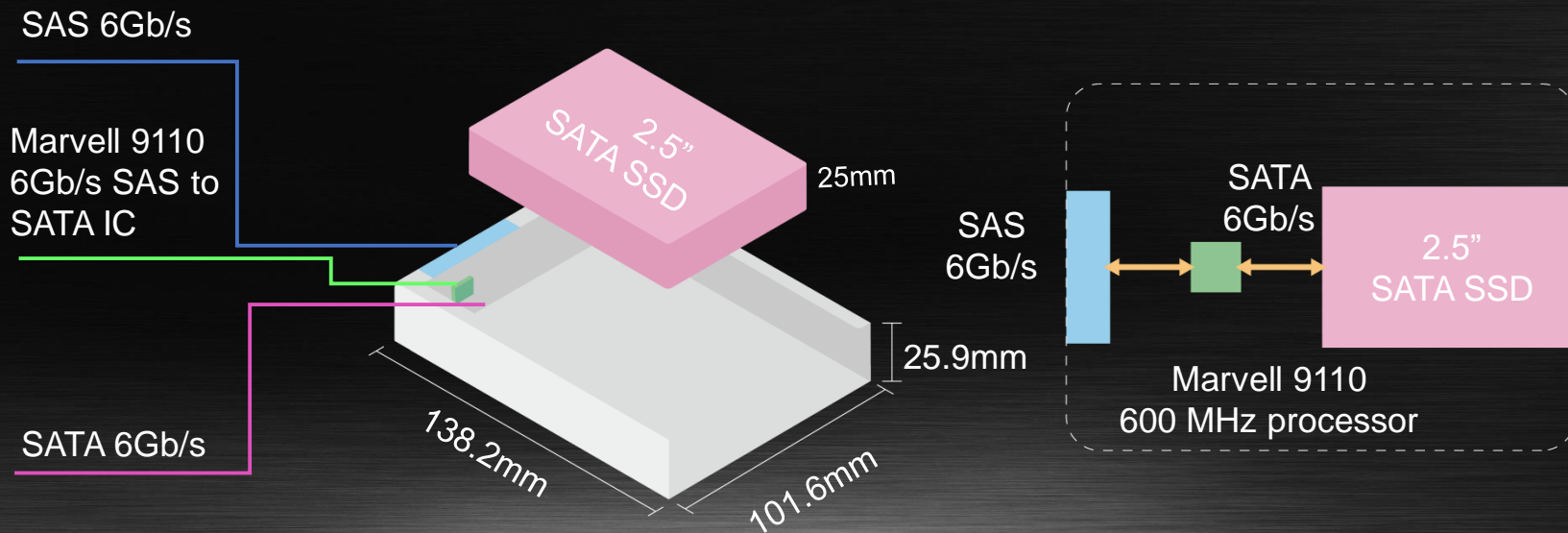


Support Enterprise ZFS NAS 3.5" drive trays

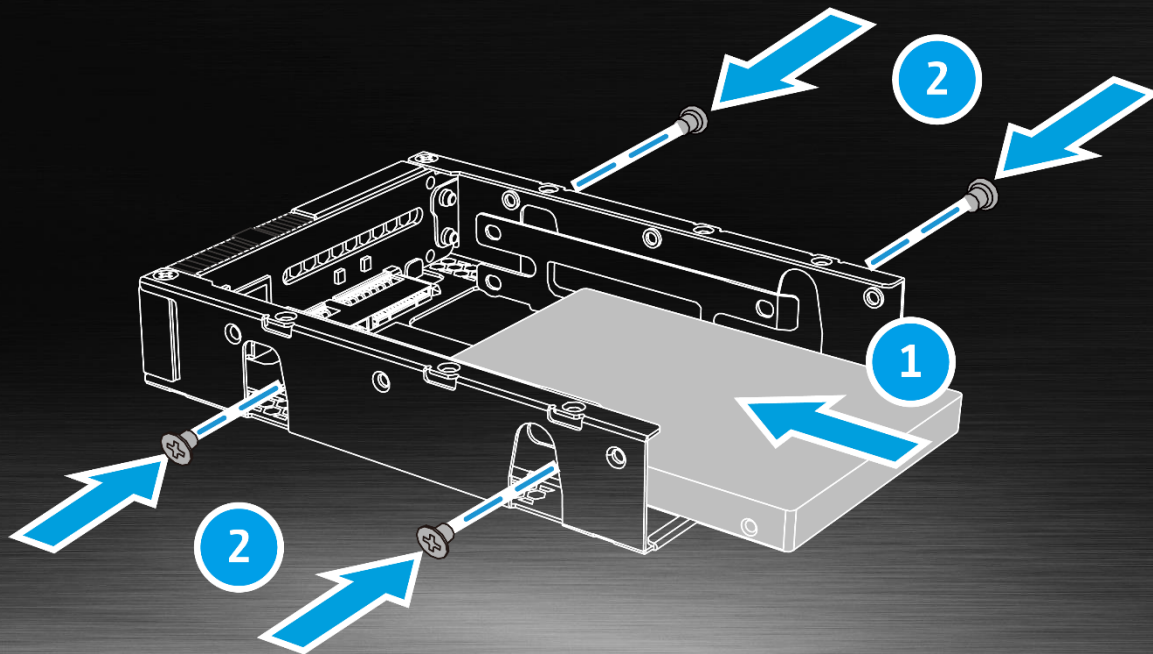


ES NAS 3.5" drive tray
Order number: SP-ES-TRAY-WOLOCK

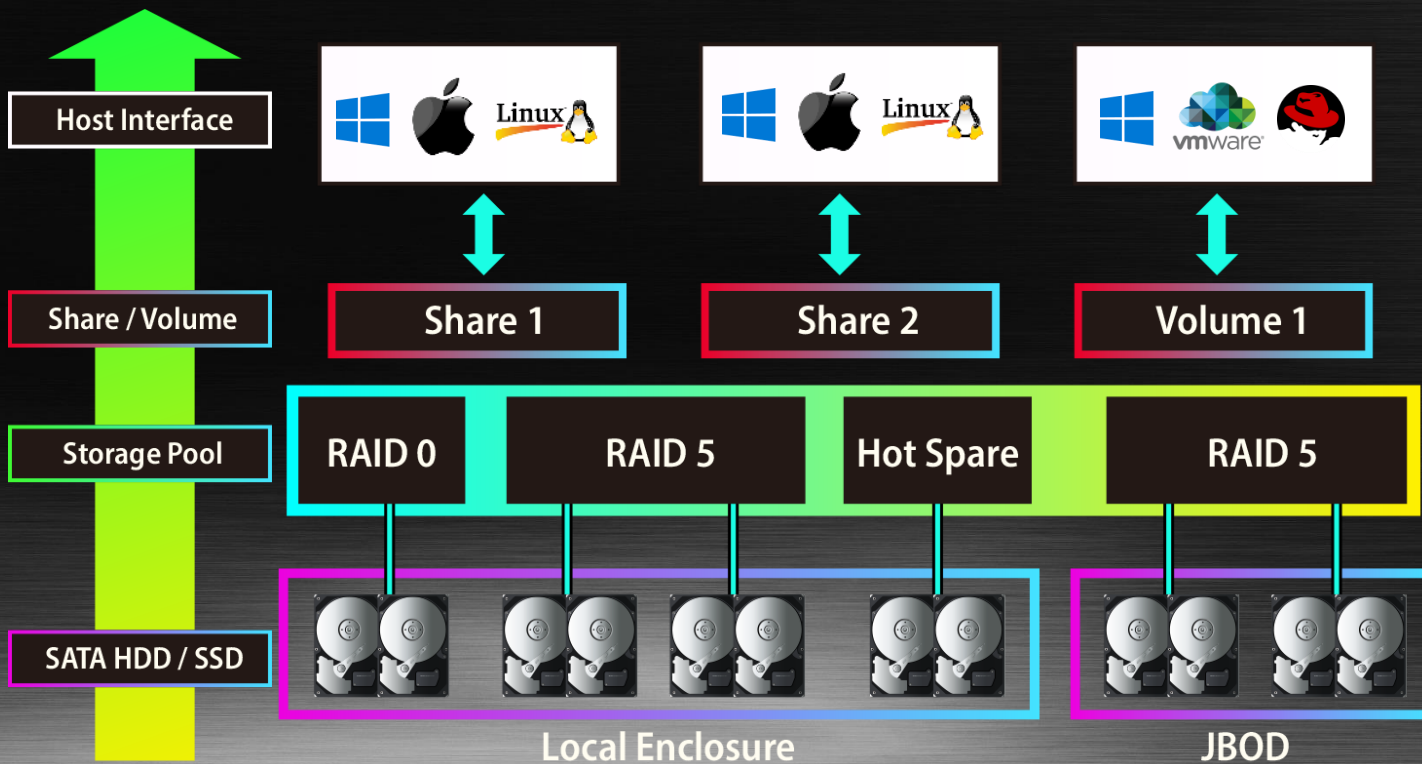
QDA-SA2: 6Gb/s SAS to SATA adapter



Install 2.5" SATA SSD to QDA-SA2 adapter

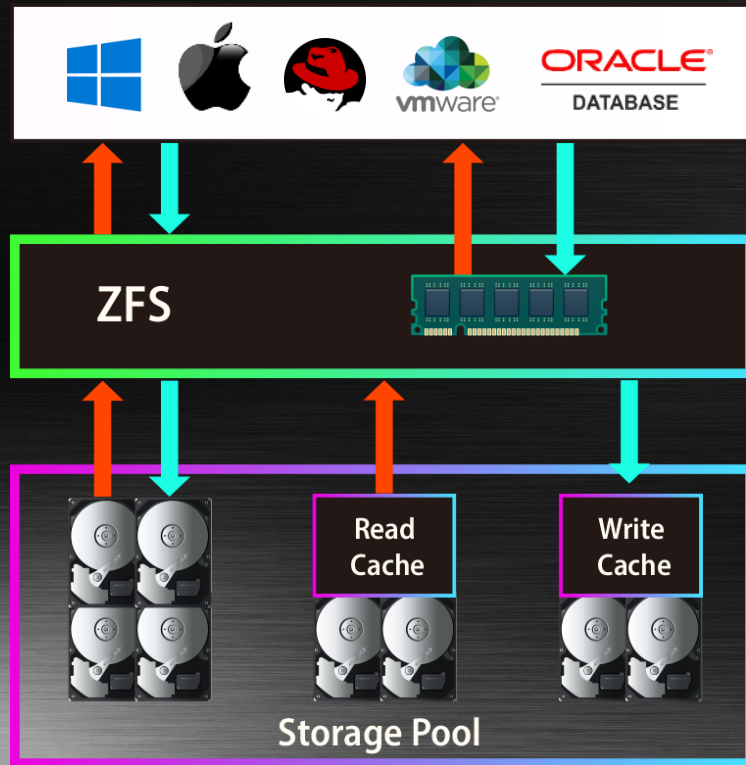


SATA HDD/SSD for NAS storage pool



SATA HDD/SSD for NAS SSD cache

- Improves random read IOPS
- Accelerate file and block access performance
- Support multiple SATA SSDs
- Hot-swappable drive in SSD cache
- NAS QES 2.1.1 O.S. will support HDD/SSD S.M.A.R.T health monitoring



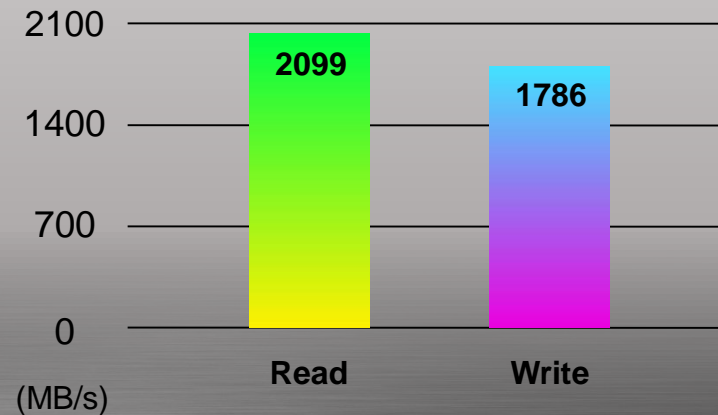
Disk Information Good	Disk Model:	Samsung SSD 860 PRO 512GB (SATA)	Maximum Speed:	6.0 Gbps
	Model Number:	SSD 860 PRO 512GB	Firmware Version:	RVM01B6Q
	Disk Capacity:	476.94 GB	Disk Access History (I/O):	Good
	Status:	Ready	Disk SMART Information:	Good
	Temperature:	33°C / 91°F		
		SSD Life		
		Life remaining %: 98 %		
		S.M.A.R.T. life attribute: 177_Wear_Leveling_Count		

*QDA-SA & QDA-SA2 do not support SSD TRIM and the HDD/SSD S.M.A.R.T. This feature is not supported on non-QES operating systems.

SATA SSD for reliable performance



10GbE x 2 (SMB seq. transfer)



Tested in QNAP Labs. Figures may vary by environment.
Test environment: ES1686dc Xeon E5-2420 v2 80GB RAM RAID 5 2 x 10G SFP+ +
16 x QDA-SA + 16 x Intel SSDSC2BB240G4 SATA SSD

DEMO

Testing the ES1686dc 4 x 10GbE iSCSI performance
with QDA-SA2 and SATA SSD in RAID 60



QDA-SA & QDA-SA2

6Gb/s SAS to SATA adapter

Let SATA SSD become dual-path for dual-controller servers



QNAP

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