

# TS-x51 Series Hardware Introduction

The maximum raw storage capacity available by connecting QNAP expansion enclosures

Turbo NAS Model	RAID Expansion Enclosure	No. of RAID Expansion Enclosure	Total HDD No.	Max. Raw Capacity (TB)
<b>TS-851</b> (8 bay)	UX-800P	1	16 (8+8)	96
	UX-500P	1	13 (8+5)	78
<b>TS-651</b> (6 bay)	UX-800P	1	14 (6+8)	84
	UX-500P	1	11 (6+5)	66
<b>TS-451</b> (4 bay)	UX-800P	1	12 (4+8)	72
	UX-500P	1	9 (4+5)	54
<b>TS-251</b> (2 bay)	UX-800P	1	10 (2+8)	60
	UX-500P	1	7 (2+5)	42

# The maximum capacity is calculated by using 6TB hard drives.

## Accessories

Category		Order P/N	Description
RAM		RAM-1GDR3L-SO-1600	1GB DDR3L-1600 RAM Module SODIMM
RAM		RAM-2GDR3L-SO-1600	2GB DDR3L-1600 RAM Module SODIMM
RAM		RAM-4GDR3L-SO-1600	4GB DDR3L-1600 RAM Module SODIMM
RAM		RAM-8GDR3L-SO-1600	8GB DDR3L-1600 RAM Module SODIMM
Remote Control		RM-IR002	QNAP Infrared (IR) Remote Control

## Hardware Specification



Model	TS-251 / TS-251-4G	TS-451 / TS-451-4G	TS-651 / TS-651-4G	TS-851 / TS-851-4G
CPU	Dual-Core Intel® Celeron® 2.41GHz (Burst up to 2.58GHz)			
Memory (RAM)	1GB SO-DIMM DDR3L-1333 / 4GB SO-DIMM DDR3L-1333			
Flash	512MB (DOM)			
Number of RAM Slots	2 (Max 8 GB)			
Max. number of HDDs/SSDs	2 x 2.5" or 3.5" SATA 6Gb/s, 3Gb/s; hot-swappable	4 x 2.5" or 3.5" SATA 6Gb/s, 3Gb/s; hot-swappable	6 x 2.5" or 3.5" SATA 6Gb/s, 3Gb/s; hot-swappable	8 x 2.5" or 3.5" SATA 6Gb/s, 3Gb/s; hot-swappable
Expansion Enclosure Support	1 (UX-800P, UX-500P)			
Gigabit LAN Ports	2			
USB Ports	USB 3.0: 2, USB 2.0: 2	USB 3.0: 2, USB 2.0: 2	USB 3.0: 3, USB 2.0: 2	USB 3.0: 3, USB 2.0: 2
IR Sensor (MCE Remote)	Yes	Yes	Yes	Yes
HDMI	1	1	1	1
LED Indicators	Power/Status, LAN, USB, HDD1-2	Power/Status, LAN, USB, HDD1-4	Power/Status, USB, LAN, HDD 1-6	Power/Status, USB, LAN, HDD 1-8
Buttons	Power, Reset, USB Auto Copy			
Form Factor	Tower	Tower	Tower	Tower
Dimensions (HxWxD)	168.5 x 102 x 225 mm 6.63 x 4.02 x 8.86 inch	177 x 180 x 235 mm 6.97 x 7.09 x 9.25 inch	175 x 257 x 235 mm 6.89 x 10.12 x 9.25 inch	185.2 x 298.2 x 235.4 mm 7.29 x 11.74 x 9.27 inch
Weight (Net/ Gross)	1.28 kg (2.82 lbs) / 2.32 kg (5.11 lbs)	3 kg (6.61 lbs) / 4.3 kg (9.48 lbs)	"6.18 kg (13.62 lbs) / 6.9 kg (15.21 lbs)"	"7.83 kg (17.26 lbs) / 8.9 kg (19.62 lbs)"
Temperature and Humidity	0 - 40 ° C, 5 - 95% R.H	0 - 40 ° C, 5 - 95% R.H	0 - 40 ° C, 5 - 95% R.H	0 - 40 ° C, 5 - 95% R.H
Power Supply Specification	External Power Adapter, 60W, 100-240V	External Power Adapter, 90W, 100-240V	ATX 250W, Input: 110-240 Vac~, 50-60Hz, 5A	ATX 350W, Input: 110-240 Vac~, 50-60Hz, 5A
Power Consumption: HDD Sleep (W)	10.28	15.85	21.08	26.81
Power Consumption: Typical Operation (W)	19.22	31.07	39.42	56.79
Power off: S3 Sleep (W)	0.47	0.55	0.41	0.72
Windows Upload / Download - Link Aggregation (MB/s)	222 / 224	216 / 224	223 / 224	223 / 224
AES 256-bit Encrypted Windows Upload / Download (MB/s)	67 / 68	68 / 68	68 / 69	68 / 69
File System: Internal Hard Drive	EXT4			
File System: External Hard Drive	EXT3, EXT4, NTFS, FAT32, HFS+			
RAID Recovery	Yes			
Online RAID Capacity Expansion	Yes			
Online RAID Level Migration	Yes			
RAID Type	Single Disk, RAID 0, RAID 1, JBOD	Single Disk, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10, RAID 5 + Spare, JBOD	Single Disk, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10, RAID 5/6/10 + Spare, JBOD	
Global Hot Spare	-	Yes		
USB One-Touch-Copy Backup	Yes			
Surveillance Station - Default IP Cameras	2			
Surveillance Station - Max IP Cameras	24 (optional license purchase)			
Virtualization Station	Yes (Max 1 running VM; RAM of NAS >= 2 GB)			
VPN Server (PPTP + OpenVPN)	Yes			
Max. Number of Users	4096			
Max. Number of User Groups	512			
Max. Number of Shared Folders	512			
Max. Number of Concurrent Connections	600			