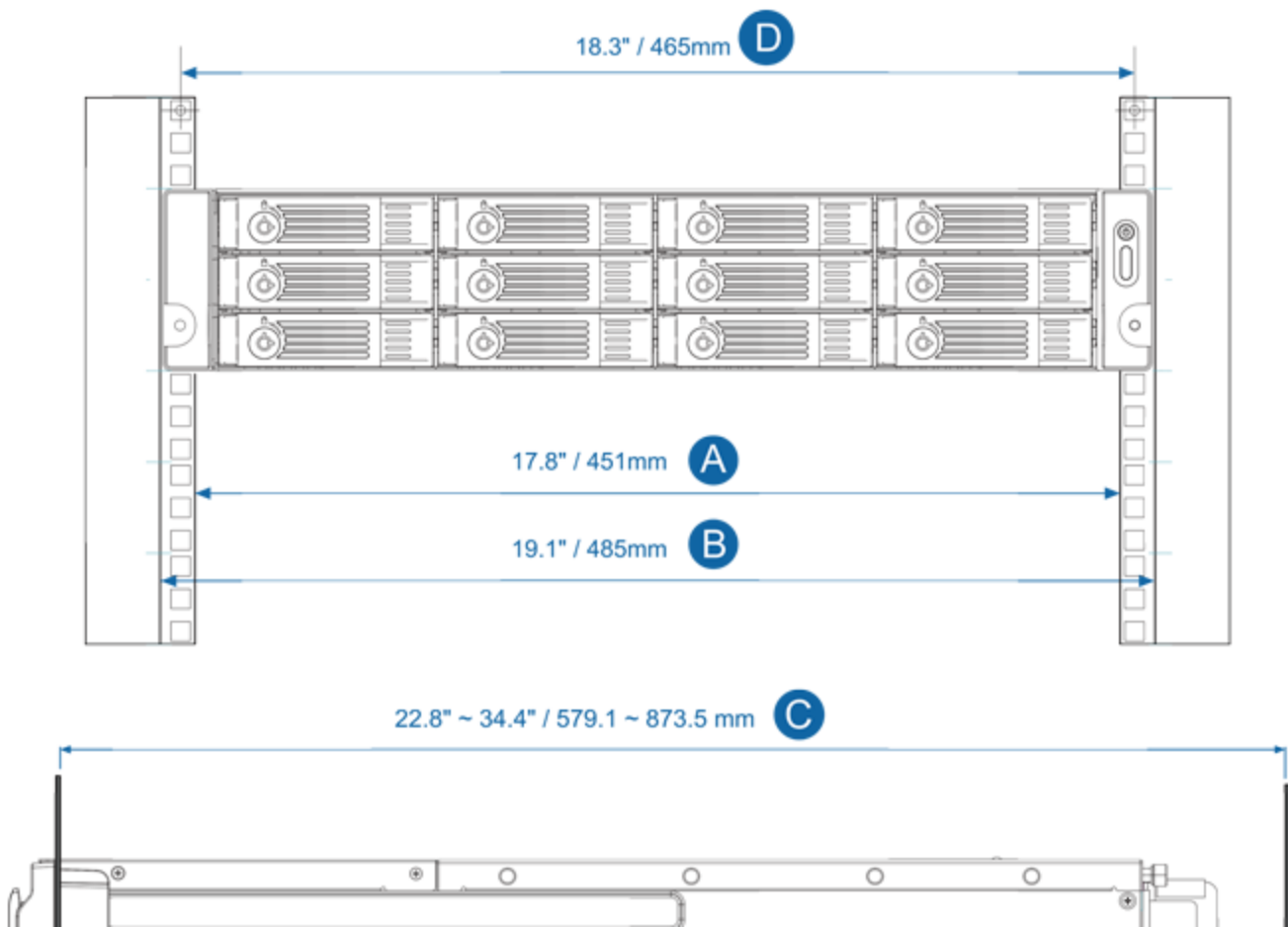|	
Model Name	TS-EC1680U-E3-4GE-R2 TS-EC1680U-i3-4GE-R2 TS-EC1680U-i3-8G-R2
CPU	TS-EC1680U-E3-4GE-R2: Intel® Xeon® E3-1246 v3 Quad-core processor TS-EC1680U-i3-4GE-R2: Intel ® Core i3-4150 processor TS-EC1680U-i3-8G-R2:Intel® Core i3-4150 processor

Memory	Total memory slots: 4
	TS-EC1680U-E3-4GE-R2/ TS-EC1680U-i3-4GE-R2:
	
	System memory: 4 GB DDR3 ECC RAM
	Memory module pre-installed: 2 GB x2
	Memory expandable up to: 32 GB (8GB x4)
	
	TS-EC1680U-i3-8G-R2:
	System memory: 8 GB DDR3 non-ECC RAM
	Memory module pre-installed: 4 GB x2
	Memory expandable up to: 32 GB (8GB x4)
	
	Note:
	    1. When upgrading RAM to more than 28GB, the original 4GB RAM modules must be removed.
	    2. For the information of RAM module installation and compatible NAS models, please refer to the QNAP RAM Module Installation Guide

Flash Memory	512MB DOM
Internal Cache Port	Two mSATA port on board for read caching Note: The standard system is shipped without mSATA flash. For the optional mSATA flash, please visit http://shop.qnap.com/

Hard Drive	16 x 3.5-inch SATA 6Gbps/3Gbps hard drive or 2.5-inch SATA, 6Gbps/3Gbps hard drive SSD hard drive
	NOTE:
	    1. The standard system is shipped without hard drives.
	    2. For the hard drive compatibility list, please visit Compatibility list

Hard Drive Tray	16 x hot-swappable and lockable tray
LAN Port	Built-in 2 x 10 GbE SFP+ ports (LAN-10G2SF-MLX) and 4 x GbE ports 40GbE is optional Note: 1. For the optional network card compatibility list, please visit Compatibility list of Expansion Card 2. For the information of network card installation, please refer to chapter 6 in the Turbo NAS Hardware Manual.
LED Indicators	Status, 10 GbE, LAN, eSATA, storage expansion port status
USB	4x USB 3.0 port (rear) 4x USB 2.0 port (rear) Support USB printer, pen drive, USB hub, and USB UPS etc.
Buttons	System: Power button and reset button
Alarm Buzzer	System warning
Form Factor	3U, Rackmount
Dimensions	130(H) x 442.5(W) x 530.5(D) mm 5.12(H) x 17.42(W) x 20.89(D) inch
Weight	Net weight (NAS only) : 18.3 kg/40.34 lb Gross weight (with packing and accessories) : 24.18 kg/ 53.30 lb
Power Consumption (W)	Sleep mode: 82.4 In Operation: 166.58 W (with 16 x HITACHI HUS724020ALA640 hard drive installed)
Sound Level*	Sound pressure (LpAm) :40.5 dB(A)

Temperature	0-40°C
Relative Humidity	5–95% non-condensing, wet bulb: 27˚C.
Power Supply	Redundant power: Input: 50-60 Hz; 100-127V~/ 8.5A; 200-240V/ 4.2A Output: 650W
PCIe Slot	2 (Right slot: 1* PCIe Gen3 x8; Left slot: 1* PCIe Gen3 x4) Note: The PCIe Gen3 x8 slot is occupied by a 10GbE network adapter.
Fan	4 x 8 cm smart cooling fan

1.	Power Button	6.	USB 3.0 Port x 4
2.	LED Indicators: 10 GbE, Status, LAN, Storage Expansion Port Status	7.	HDMI port
3.	Password & Network Settings Reset Button	8.	Dual port 10GbE SFP+
4.	USB 2.0 Port x 4	9.	PCIe slot (PCIe Gen3 x4)
5.	Gigabit LAN x 4	10.	Power connector

Remark:

The TS-x80 rack mount models comply with ANSI/EIA-RS-310-D rack mounting standards. Before purchasing the server racks for these models, please make sure the server racks conform to the following criteria:

1. Rack size

    A. Mounting post width : ≥ 451mm

    B. Panel width : ≥ 485mm

    C. Mounting post depth : 579.1mm~873.5mm

    D. The distance between two rack posts is 465mm (center-to-center measurement of the rack's square holes)

18.3" / 465mm D

17.8" / 451mm A

19.1" / 485mm B

22.8" ~ 34.4" / 579.1 ~ 873.5 mm C

2. The optional rack kits for the TS-x80 rack mount models are only compatible with square-hole server racks.

* Testing Environment:

Refer to ISO 7779 ; Maximum HDD loaded ; Bystander Position ; Average data from 1 meter in front of operating NAS