

## QNAP TS-h686 NAS Tower Ethernet LAN Black D-1602





**Brand**: QNAP Product code: TS-H686-D1602-8G/72TB-GOLD

**Product name:** TS-h686

Intel Xeon D-1602 (2x 2.5GHz), 8GB DDR4, 5GB Flash, 4x 2.5"/3.5" + 2x 2.5", 2x M.2, 4x 2.5G RJ-45, 3xUSB 3.2 Gen1

QNAP TS-h686. Total installed storage capacity: 72 TB, Installed storage drive type: HDD, Supported storage drive types: HDD & SSD. Processor family: Intel® Xeon® D, Processor manufacturer: Intel, Processor model: D-1602. Internal memory: 8 GB, Internal memory type: DDR4, Maximum RAM supported: 128 GB. Ethernet LAN data rates: 10,100,1000,2500 Mbit/s. Chassis type: Tower, Cooling type: Active, Product colour: Black

Storage		Performance	
	4.70		•
Storage drive capacity *  Storage drive interface *	4 TB	Backup function *	✓ Cloud, iSCSI LUN
Storage drive interface * Supported storage drive interfaces	Serial ATA II, Serial ATA III M.2, Serial ATA II, Serial ATA III	Backup features Buzzer	✓
Storage drive sizes supported	2.5,3.5,M.2	Multilingual support	<b>V</b>
Number of M.2 (M & B) slots	2.5,5.5,14.2	Noise level	18.6 dB
RAID support *	✓	Snapshot	√ V
RAID levels	0, 1, 5, 6, 10, 50, 60, JBOD	Management protocols	SNMP 2/3
Online RAID migration	✓	Web-based management	✓
Online RAID expansion	1	<del>-</del>	256-bit AES, AES, FIPS 140-2,
RAID rebuild	1	Security algorithms	HTTPS, SSH, SSL/TLS
Hot-swap drive bays	1	Access Control List (ACL)	✓
	FAT32, HFS+, NTFS, ZFS, exFAT,	Reset button	✓
Supported file systems	ext3, ext4	On/off switch	✓
Storage drives installed *	✓	Built-in FTP server	✓
Total installed storage capacity *	72 TB	Browser supported	Safari, Chrome, Internet Explorer,
Number of storage drives installed *	4	• •	Firefox
Number of storage drives supported	6	System log	<b>√</b>
In shall and a transport and the street with	LIDD	Hot spare	<b>√</b>
Installed storage drive type *	HDD c ccb	S.M.A.R.T. support	CIEC/CMP
Supported storage drive types * Bad block scan	HDD & SSD	Share folder	CIFS/SMB
Disk roaming	<b>√</b>	Universal Plug and Play (UPnP) USB copy function	1
DISK TUAITIIIIY	<b>4</b>	USB COPY IUIICUOII	4
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Processor		Software	
Processor manufacturer *	Intel	<b>Software</b> Operating system installed *	QuTS hero
Processor manufacturer * Processor family *	Intel® Xeon® D	Software Operating system installed * Operating system version	QuTS hero h5.0.0
Processor manufacturer * Processor family * Processor model *	Intel® Xeon® D D-1602	Software  Operating system installed *  Operating system version  Windows operating systems	•
Processor manufacturer * Processor family * Processor model * Processor frequency *	Intel® Xeon® D D-1602 2.5 GHz	Software  Operating system installed *  Operating system version  Windows operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz	Software  Operating system installed *  Operating system version  Windows operating systems supported  Linux operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8 ✓
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz	Software  Operating system installed *  Operating system version  Windows operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2	Software  Operating system installed *  Operating system version  Windows operating systems supported  Linux operating systems supported  Mac operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB	Software  Operating system installed *  Operating system version  Windows operating systems supported  Linux operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2	Software  Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB	Software  Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1	Software  Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1 DDR4 128 GB	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported Memory slots	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory  Internal memory type Maximum RAM supported Memory slots Internal memory *	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1 DDR4 128 GB 4 8 GB	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical)	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory  Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W 100 - 240 V
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor ECC	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM ✓	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage Fan voltage	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory  Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor ECC Flash memory	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W 100 - 240 V
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor ECC	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM ✓	Software  Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported  Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage Fan voltage Weight & dimensions Width *	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W 100 - 240 V
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor ECC Flash memory  Network Ethernet LAN *	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM ✓ 5000 MB	Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage Fan voltage Weight & dimensions Width * Depth *	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W 100 - 240 V 12 V  224.9 mm 319.8 mm
Processor manufacturer * Processor family * Processor model * Processor frequency * Processor boost frequency Processor cores Processor threads Processor cache CPU configuration (max)  Memory Internal memory type Maximum RAM supported Memory slots Internal memory * Memory form factor ECC Flash memory  Network	Intel® Xeon® D D-1602 2.5 GHz 3.2 GHz 2 4 3 MB 1  DDR4 128 GB 4 8 GB UDIMM  ✓ 5000 MB	Software  Operating system installed * Operating system version Windows operating systems supported Linux operating systems supported Mac operating systems supported  Server operating systems supported  Power Power Power supply location Power supply unit (PSU) capacity Number of power supply units Power consumption (typical) AC input voltage Fan voltage Weight & dimensions Width *	h5.0.0 Windows 10, Windows 7, Windows 8  Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019  Built-in 250 W 1 61.115 W 100 - 240 V 12 V

Network		Packaging content	
DHCP server Jumbo frames support iSCSI support Wake-on-LAN ready Dynamic DNS (DDNS)	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	Cables included Power cables quantity Number of screws Drive tray key included Processor special features	AC, LAN (RJ-45) 1 24 ✓
Ports & interfaces USB port * USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity Ethernet LAN (RJ-45) ports *	<b>√</b> 3 4	Embedded options available Enhanced Intel SpeedStep Technology Execute Disable Bit Idle States	<b>X √ √ √</b>
PCI Express x8 (Gen 3.x) slots  Design  Chassis type * Cooling type * Product colour  Number of fans Fan diameter Fan diameter 2	Tower Active Black 2 fan(s) 9 cm 9.7 cm	Intel 64 Intel QuickAssist Technology Intel Trusted Execution Technology Intel TSX-NI Intel Virtualization Technology (VT-x) Intel Virtualization Technology for Directed I/O (VT-d) Intel VT-x with Extended Page Tables (EPT)	*  *  *  *  *  *  *  *  *  *  *  *  *
LED indicators Built-in display Cable lock slot Cable lock slot type Performance Type *	HDD, LAN, SSD, Status, USB  Kensington  NAS	Operational conditions Operating temperature (T-T) Operating relative humidity (H-H) Storage temperature (T-T) Storage relative humidity (H-H)	0 - 40 °C 5 - 95% -20 - 70 °C 5 - 95%
Device class *	Home & Home Office	Logistics data Harmonized System (HS) code	84714100

