

The new energy and cost efficient cloud

The Shuttle OMNINAS KS10 is a one-bay network attached-storage (NAS) designed for personal cloud, home and SOHO use. The read/write speed reaches up to 80MB and 60MB per second. In addition to Gigabit LAN, the KS10 features built-in IEEE 802.11 b/g/n wireless network and supports AP mode. With a screw-free design, the hard disk is easy to install. The KS10 not only has strong data storage and backup capacities but it also supports multiple server functions, BT download, and the free OMNINAS Apps for Android and iOS-based devices. Fanless and low-power consumption design ensures the KS10 is passively cooled and quiet for long-term operation.



Feature Highlights

Application	<ul style="list-style-type: none"> Budget-friendly NAS Server for Small Office, Workgroups and Home Use
Design	<ul style="list-style-type: none"> Elegant, robust design Dimensions: ca. 12.4 x 8 x 20.5 cm = 1.5 litres
Low noise	<ul style="list-style-type: none"> Fanless cooling design
Performance	<ul style="list-style-type: none"> Superior R/W performance: up to 80/60 MB/s [1]
Power-Saving	<ul style="list-style-type: none"> Power saving: only 5.8 W in standby and 11.9 W in normal operation (idle)
Connectors	<ul style="list-style-type: none"> SD card reader (Auto-Copy & share function) 2x USB 2.0 (front and rear) (front port: Auto-Copy & share function) Gigabit LAN (RJ45) supports WOL and 802.3az
Anywhere Access	<ul style="list-style-type: none"> Accessible from local network (LAN/WLAN) under Windows, Mac OS X or Linux Accessible via Internet (Notebooks, PCs) Accessible from iOS and Android mobile devices (smart phones or tablets)
Functions	<ul style="list-style-type: none"> Wireless LAN Access Point (WLAN AP) Samba Server (SMB file sharing) Supports DLNA/iTunes media server for audio/video streaming Scheduled Backup: NAS to USB, NAS to NAS Scheduled BT downloads without PC Printer Server, FTP Server (with SSL/TLS) Online Firmware Update, On/Off Scheduler
Software	<ul style="list-style-type: none"> ONMINAS Finder (Windows & Mac)



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Shuttle OMNINAS KS10 – Overview



- A Four Status LEDs
- B SD card reader
- C USB 2.0 connector
- D Two rubber feet
- E Power Button
- F USB 2.0 connector
- G Gigabit LAN port (RJ45)

- H Reset button (hole)
- I DC input power jack
- J K-Lock security slot (hole)
- K Bay cover
- L PCB mainboard
- M 3.5" hard disk bay

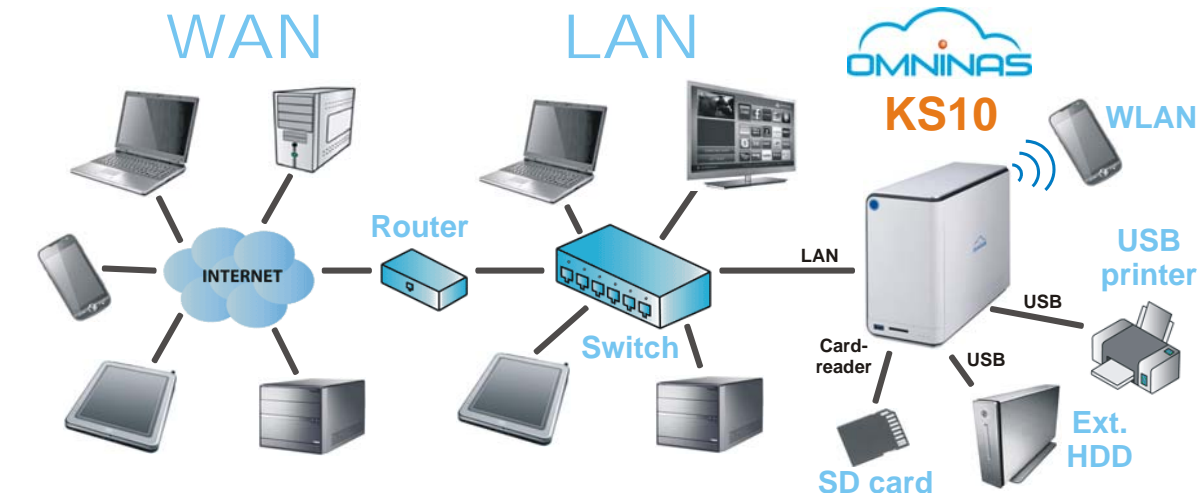
Shuttle OMNINAS KS10 – Applications

Internet (WAN)

Access your Home Cloud with your smartphone, tablet PC, notebook or stationary PC via the internet.

Local Network (LAN)

Access your data, media files, backups and even your USB printer through your local network. Share your external hard disk and auto-copy your photos from the SD card.



Store and Share the Great Moments in Life

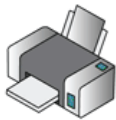


With OMNINAS KS10 you can easily store and share documents, personal movies and music as well as photos. Not only does it support access from personal computers, OMNINAS KS10 makes sure you have your files always with you – basically from any place in the world.



Built-in Media Server

If you want to stream, rather than just store and share audio and video from your file server, OMNINAS KS10 comes with integrated media server and allows you to play multimedia files through XBOX, PS3 or media players on TV.



Built-in printer server

With KS10 you can easily share your USB printer with any users in your local network. Simply connect the USB printer to the USB ports of KS10, share with the Finder software and you can print from anywhere in the house or office. No need to connect your printer directly to PCs.



Share external hard disks and flash memory

The OMNINAS KS10 is also suitable for connecting external USB hard disks and SD flash memory cards, so that you can also share and save files from any PC in your network.



The built-in card reader autcopies your photos and other data

You can enable the auto copy function on the SD card reader or front USB port by configuring the Auto Copy settings. Once enabled, you can insert a USB storage drive, a PTP camera via USB or the SD card from your camera and it will automatically copy the contents to the designated folder on the OMNINAS KS10. The process finishes with three audible beeps.



Upload and share files from iPhone®, iPad® and Android devices

In the modern world, nothing is as important as reaching your data from anywhere. By using a simple app, you can manage your NAS, upload to, download and stream all of your media and files from iOS and Android devices on the go.



Integrated Wireless LAN Access Point (WLAN AP)

It is not required to connect KS10 to a wired network and it is still possible to access all the stored data through your WLAN capable devices.

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Shuttle OMNINAS KS10 – Special Product Features

LAN/Disk
Performance



Superior Performance

The OMNINAS KS10 provides high stability and delivers excellent performance with top read/write speeds of up to 80 MB/s & 60 MB/s while it also allows for up to 256 clients to be connected to the device at the same time. [1]



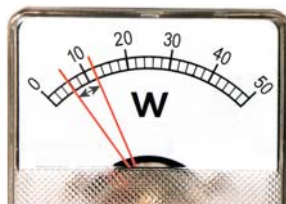
Integrated WLAN function

The OMNINAS KS10 can be configured as Access Point (AP). You can connect to the OMNINAS with WLAN-capable devices e.g. PCs, notebooks, tablets or smart phones. The transmission can be secured by WPA2 encryption. With the built-in access point functionality you are independent from any wired networks and you can use KS10 in a more flexible way even outside your home.



Two built-in USB ports plus Card Reader

The OMNINAS KS10 features two USB ports which support external devices like hard disks, flash drives, printers, digital cameras, etc. The memory can be shared across local networks. In addition, the built-in card reader reads your SD cards and shares such data with the NAS swiftly.



Low power consumption

When using the OMNINAS KS10 in a home environment it likely rests most of the time in suspend mode and the average consumption should be more or less 5,8 W only. Based on this value, the annual consumption would amount to approx. 51 kWh which would mean just 10 Euros on the power bill (based on 20 Euro ct/kWh). Under normal load (idle mode), the KS10 consumes 11.9 W.



Screw-free Installation Design

Thanks to its screw-free design, the KS10 is one of a kind among NAS products and features super easy hard drive installation.



Online Firmware Update

Unlike other NAS products with complicated updating procedures, the KS10 offers easy online firmware update. Users will receive notification of firmware updates and have the option for automatic download to keep NAS up to date.

Comparison: Shuttle OMNINAS Series

	KS10	KD20	KD21	KD22
Drive bays	Single Bay	Dual Bay	Dual Bay	Dual Bay
4 TB HDD support	Yes	Yes	Yes	Yes
Processor	Marvell 88F6707 800 MHz	PLX7821 2x 750 MHz	Marvell 88F6707 1.0 GHz	Marvell 88F6707 1.2 GHz
Memory	256 MB DDR3	256 MB DDR2	512 MB DDR3	512 MB DDR3
Performance (R/W)	80 / 60 MB/s	75 / 55 MB/s	100 / 70 MB/s	110 / 75 MB/s
Chassis Material	Plastic	Alu + Plastic	Alu + Plastic	Alu + Plastic
Android / iOS Apps	Yes	Yes	Yes	Yes
RAID level	-	Raid 0+1	Raid 0+1	Raid 0+1
RAID 1 Hot Swap	-	Yes	Yes	Yes
USB 3.0	-	1	2	2
USB 2.0	2	2	1	1
SD card reader	1	1	1	1
Gigabit LAN (RJ45)	1	1	1	1
Wake-on-LAN (WOL)	Yes	-	Yes	Yes
802.3az Energy Efficient Support	Yes	-	Yes	Yes
WLAN 802.11n, Access Point	Yes	-	-	Yes
Simultaneous server services	Yes	-	Yes	Yes
DLNA / iTunes server	Yes	Yes	Yes	Yes
BT downloads	Yes	Yes	Yes	Yes
FTP Server	Yes	-	Yes	Yes
PTP (Picture Transfer Prot.)	Yes	-	Yes	Yes
Printer server	Yes	Yes	Yes	Yes
Auto-copy from USB / SD	Yes	Yes	Yes	Yes
Acronis Backup Software	-	since May'13	Yes	Yes
Online Firmware Update	Yes	-	Yes	Yes
2 HDDs in Single Mode	-	-	Yes	Yes
On/Off Scheduling	Yes	-	Yes	Yes
LED / FAN On/Off Switch	-	-	Yes	Yes
Power (standby / idle)	5.8 W / 11.9 W	9 W / 15.5 W	9,6 W / 19 W	9,6 W / 19 W



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Shuttle OMNINAS KS10 Specifications

Hardware

<p><i>Chassis</i></p>	<p>Chassis Robust black plastic chassis with large rubber feet Dimensions: 124 mm (H) x 60 mm (W) x 205 mm (L) = ca. 1.5 litres Weight: 550 g Kensington Security Slot at the back panel (also called a K-Slot or Kensington lock) as a part of an anti-theft system</p>
<p><i>Hard disk support</i></p>	<p>One storage bay (storage drive not included) Supports one 8.9 cm (3.5") hard disk drive up to 4 TB capacity (or more) Easy screw-free hard disk installation (no tools required). Supports hard disk spin-down timer Supports check/format disk, SMART information report, disk usage status report Hard disks must support SMART temperature feature with temperature sensor</p>
<p><i>Network connector and IP setting</i></p>	<p>1x Gigabit LAN (RJ45, rear) Supports Wake-on-LAN (WOL) [4] Supports IEEE P802.3az Energy Efficient Ethernet (EEE) IP Configuration: Supports Static IP or Auto IP by DHCP server Supports Hostname/Groupname</p>
<p><i>Integrated WLAN AP</i></p>	<p>Wireless LAN Access Point / Hotspot (can be enabled/disabled) IEEE 802.11 b/g/n (max. 54 Mbit/s) Encryption methods: WEP 64/128 bits, WPA, WPA2 Frequency band: 2.4 GHz Bandwidth settings: 20 and 40 MHz</p>
<p><i>USB Connectors</i></p>	<p>1x USB 2.0 (type A, front), supports Auto-Copy function 1x USB 2.0 (type A, rear) Both USB ports support external devices like hard disks, flash drives, printers, digital camera and USB hubs. Memory can be shared to local network.</p>
<p><i>Card Reader</i></p>	<p>Built-in card reader in the front panel Supports SD, SDHC and SDXC flash memory cards Supports Auto-Copy function</p>
<p><i>Buttons (rear)</i></p>	<p>Main power button Reset button (hole) for admin password reset</p>

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<i>LED Indicators</i>	<p>KS10 comes with six LED indicators with the following behavior:</p> <ol style="list-style-type: none"> 1) System LED: dual colour (operating mode/error: blue/red) 2) HDD LED: dual colour (access/error: blue/red) 3) SD card reader LED: single colour (access: blue) 4) USB LED: single colour (access/connect: blue) 5) LAN speed LED (10/100 Mbps: green, 1000 Mbps: orange) 6) LAN activity LED (access/link: blinking green)
<i>CPU, RAM and OS</i>	<p>Processor: Marvell 88F6707 800 MHz, ARMv7 compliant SOC DRAM memory size: 256 MB DDR3 Flash memory size: 1 Gb Operating system: Embedded Linux</p>
<i>Power Adapter</i>	<p>External 40W AC/DC power adapter (fanless), 19V / 2.1A AC Input: 100~240V AC, 50~60Hz Automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH) DC Connector: 5.5/2.5mm (outer/inner diameter)</p>
<i>Fanless Cooling System</i>	<p>Low noise operating thanks to a fanless cooling design. Make sure the NAS device is in a well ventilated area. The System also shuts down when the hard disk temperature exceeds 65 °C / 149°F. [2]</p>
<i>Accessories</i>	<p>Quick Installation Guide AC Power adapter (40 W) with AC power cord (plug depends on region) Ethernet cable, ca. 150 cm Driver CDROM with NAS finder software (Windows & Mac) and documentation Functionality:</p>

Functionality

<i>Web User Interface</i>	<p>The device settings are made through a web browser on a computer, which is connected to the same local subnet. 12 languages are supported: English, German, French, Spanish, Italian, Dutch, Danish, Russian, Turkish, Chinese (simple+trad.) and Japanese. The OMNINAS Web Interface is particularly user friendly thanks to its simple structure. The OMNINAS Wizard is your guide during the initial setup.</p>
<i>Finder Software</i>	<p>The OMNINAS Finder Software Tool is used to detect the OMNINAS system in the local network (within the same subnet). It can start the Web User Interface in your default browser and can map/unmap the internal and external storages of the OMNINAS to a drive letter of your PC.</p>
<i>APPs for mobile devices</i>	<p>You can use an App to upload and share files from iOS and Android devices like iPhone, iPad, Android phone and Android tablet. Just look for the appropriate "OMNINAS" app on one of these websites: Android: https://play.google.com/store/apps/details?id=com.shuttle.omninas2 iOS: http://itunes.apple.com/nz/app/omninas/id543929833</p>

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<p><i>Networking Services</i></p>	<p>Samba Server (SMB file sharing) with up to 256 share folders, up to 256 users and up to 256 concurrent connections FTP Server (File Transfer Protocol with SSL/TLS support) Apple File Protocol (AFP) DLNA Media Server iTunes Media Server Printer Server (supports USB printers) BT download (scheduled and without PC) External device sharing (via USB or card reader) NTP support for scheduled time synchronization (RTC integrated) Wake on LAN (WOL)</p>
<p><i>System Services</i></p>	<p>Firmware upgrade (online live update or offline manual update) Time-Zone settings Factory reset function System log report</p>
<p><i>Backup functions</i></p>	<p>Quick Auto Copy for external storage connected to front USB (also PTP camera [3]) or card reader NAS to USB storage backup (scheduled or immediately) NAS to NAS backup (scheduled or immediately)</p>
<p><i>Disk Management</i></p>	<p>HDD Spin down timer Check Disk Disk usage status management Disk Format SMART information report</p>
<p><i>File Systems</i></p>	<p>Internal: XFS External: EXT2, EXT3, EXT4, XFS, NTFS, FAT, FAT32</p>
<p><i>System Requirements</i></p>	<ul style="list-style-type: none"> - Workstation OS: MS Windows XP SP3, Mac OS X 10.4, Apple Safari 3.0, Linux kernel 2.6.x or later - Smart phone OS: iOS 4.2, Android 2.3 or later - Browser: MS Internet Explorer 7.0, Firefox 3.x, Google Chrome, Apple Safari 3.0 or later - Router for Internet connection
<p><i>Standby Mode</i></p>	<p>After a certain time of inactivity the system will enter power saving (standby) mode. This time can be set under: Settings - General - Power Saving Time Setting You can select a time from 10 minutes up to 5 hours.</p>
<p><i>Power on/off functions</i></p>	<p>Scheduled power on/off - simple configuration for each day of the week Power Recovery: Auto restart after power failure Wake on LAN (WOL) [4]Reference values and compliance</p>

Reference values and compliance	
<i>Transfer Speed [1]</i>	Read data - from NAS to workstation: up to 80 MB/s Write data - from workstation to NAS: up to 60 MB/s Maximum number of concurrent connections: 256
<i>Power Consumption [1]</i>	Power saving mode (suspend): 5.8 W Normal operating (no hard disk access): 11.9 W
<i>Environmental spec.</i>	Operating temperature range: 0~40 °C Relative humidity range: 10~90% (non-condensing)
<i>CE Compliance</i>	This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office. The CE and WEEE marks approve the conformity by the EU-guidelines: <ul style="list-style-type: none"> • EMC - guideline 2004/108/EC, Directive on Electromagnetic Compatibility • LVD - guideline 2006/95/EC, Directive on Low Voltage • ErP Lot6 - guideline 2009/125/EC, Directive on ecoconception of Energy related Products • RoHS - guideline 2002/95/EC, Directive on Restriction of Hazardous Substances • WEEE - guideline 2002/96/EC, Directive on The Waste Electrical and Electronic Equipment
<i>Other Compliance</i>	<ul style="list-style-type: none"> • CB (IEC 60950-1:2005 (2nd Edition)) • FCC • C-Tick • BSMI • R&TTE

Footnotes:

[1] depending on the test environment

[2] the **threshold temperatures** are subject to change by firmware update.

The KD20's threshold temperature refers to the "Current internal temperature" provided by the SMART monitoring system. This temperature may be much higher than the "operating/ambient temperature" that is also mentioned in the hard disk specification. The KD20 only supports hard disks with SMART monitoring system and temperature sensor which all available SATA hard disks should support.

[3] **Picture Transfer Protocol (PTP)** - allows the transfer of images from digital cameras to computers and other peripheral devices without the need of additional device drivers. Modern digital cameras usually support this protocol.

[4] You can enable the **Wake on LAN function** in Web User Interface: Settings - General - Enable Wake-On-LAN. After Wake on LAN is enabled for your OMNINAS, you can switch off the OMNINAS and turn on over the network by using a WOL (Wake on LAN) application. For proper function, please do not interrupt the power supply from the OMNINAS. You will find the MAC address on the bottom of the OMNINAS device.

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