QNAP

Silent NAS
HS-251
Ideal Media Storage for Home Theaters
Silent, large capacity NAS for a thrilling multimedia experience

- Winner of iF Design Award 2014
- Silent NAS designed for a maximized audiovisual experience
- Safely store & manage all of your HD videos with a powerful media library
- Limited background noise thanks to a fanless design
- Dust-free with a revolutionary thermal design to intelligently dissipate heat
- HDMI output for directly connecting to HDTVs or A/V receivers
- Provides multiple ways of streaming media
- Compatible with a wide-range of network streaming protocols

Fanless

Silent, large capacity for a thrilling
multimedia experience

Storage problems faced by HD video enthusiasts

Video fans with a lot of disc-based movies can encounter a lot of problems:

- HD has become standard and requires huge amounts of storage space.
- Media players and devices may not support every video file format.
- It can be difficult to manage & organize videos scattered on different devices.
- It can be hard to find specific videos among multiple DVDs.
- It can be inconvenient to play videos on different devices.
- It can be difficult to enjoy videos through mobile devices anytime and anywhere.
- It can be inconvenient to share physical media with family and friends.

Digital video enriches your entertainment

While multimedia streaming sites become more popular and YouTube is one of the world's most popular websites, more and more people like to watch videos on the Internet and enjoy sharing videos with others. The number of available video recorders and the uptake of HD videos drive the increasing demand for large storage to archive sizeable video collections.

Learn more :

Video is an electronic medium for the recording, copying and broadcasting of moving visual images.

Characteristics of video streams :

- Resolution : The higher the video resolution is, the more detailed the video quality can be. But as the video is more detailed, the file size is bigger. For example: 3840×2160 and 4096×2160 (4K resolution), 1920×1080 (1080p), etc.
- Extensions and codecs : Video file extensions and encoding technology. Most people identify file types using extensions, but it may not be applicable to videos as the key to open a video file is whether the system supports specific codecs. For example, MPEG-1 and MPEG-2 are different video file formats because they require different codecs.
- Frame rate : Also known as frame frequency or frames per second (FPS). The frequency at which an imaging device produces unique consecutive images called frames. Typical frame rate can be 24 FPS, 30 FPS, 60FPS and all the way to 120 FPS.
- Aspect ratio : Describes the dimensions of video screens and video picture elements. The screen aspect ratio of a traditional television is 4:3 (1.33:1), HDTVs use an aspect ratio of 16:9 (1.78:1) and a full 35mm film frame uses an aspect ratio of 1.375:1.

HS-251 is the best solution for video collections

You need a reliable device to safely store and search through huge video collections. The HS-251 provides rich features and applications that enable you to enjoy high definition video, and is a wonderful NAS for you to collect, share and enjoy yourself.

Ideal storage for video archiving

The HS-251 provides excellent storage features, allowing you to centrally collect & manage all your videos and to find & play videos on different devices.

- Collect videos in one place, click & play with minimal effort.
- The Video Library makes searching for video easier.
- Back up your files & data in multiple ways to protect rare & precious videos.
- Eco-friendly design saves power even during 24/7 operation.

Watch videos on multiple devices

Besides storage and management, the HS-251 supports various ways to enjoy your videos. You can stream videos stored on the HS-251 via DLNA and AirPlay-compatible devices, or use the HDMI output of the HS-251. Even if you are not at home, you can easily watch videos on the HS-251 from web browsers and through iOS®, Android ™ or Windows® Phone mobile devices.
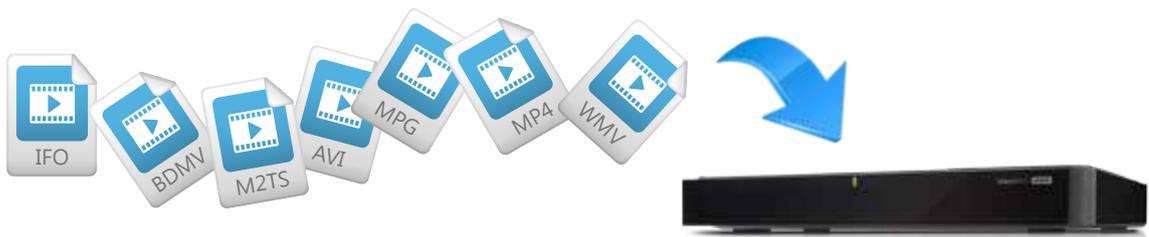
Small in size, but accommodating a world of videos

- Requires little space to accommodate huge video collections.
- Supports a wide-range of video formats including: IFO , BDMV , M2TS , AVI , MPG , MP4, WMV , TS , TP , ASF , M2T , MOV , M2V, MPEG , 3GP , MKV , MTS , TOD , MOD , TRP , M1V , M4V , RMP4 , DIVX , FLV , RMVB , RM
- Supports 2 x 3.5" /2.5" SSDs or NAS hard drives (Max. 6TB/ per HDD) to provide a large storage capacity
- Supports RAID 1 to prevent data loss caused by a single hard drive failing. You can also expand the storage space using external hard drives.
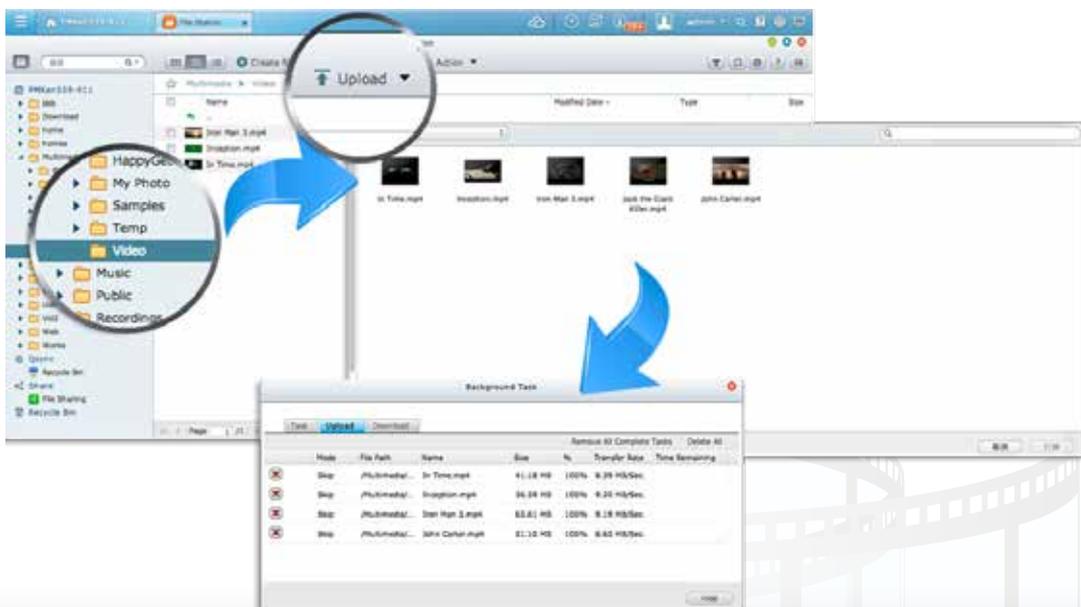

Easily move videos to the Turbo NAS

You can use the web-based File Station to effortlessly move all of the videos from your computer to the HS-251. It takes only 3 steps to complete the upload.

1. Choose the file source
2. Click "Upload"
3. Start uploading after selecting video

The HS-251 also provides other protocols to help you store videos.

Play videos with multiple ways

The HS-251 supports multiple ways and protocols for streaming videos for you to flexibly choose and enjoy videos

Smartphones/ Tablets
iOS / Android / Windows Phone

Computers / Laptops

Internet

Smart TV
(DLNA)

Apple TV
(AirPlay)

PS3
(DLNA)

OPPO Blu-ray player
(Samba supported network player)

HDMI
OUT

TV

Smartphones/ Tablets
iOS / Android / Windows Phone

Computers / Laptops

XBOX 360
(DLNA)

After moving the videos to the HS-251, you can easily :
- Play videos on Smart TVs, video game consoles and Hi-Fi devices which are compatible with DLNA/UPnP
- Play videos with AirPlay-enabled devices
- Play videos on HDMI devices
- Play videos with network devices supporting Samba/FTP protocol
- Play videos through the web-based QNAP Video Station
- Play videos with mobile phones or tablet devices on the go

You can use your smartphones and tablets as remote controls to directly control the HS-251, and play videos with DLNA or AirPlay-enabled devices.

Silent NAS for maximized audiovisual experience

Modern & Stylish

The HS-251 features a fanless and modern set-top design that fits alongside your HDTV, stereo system and other elements of your digital lifestyle.
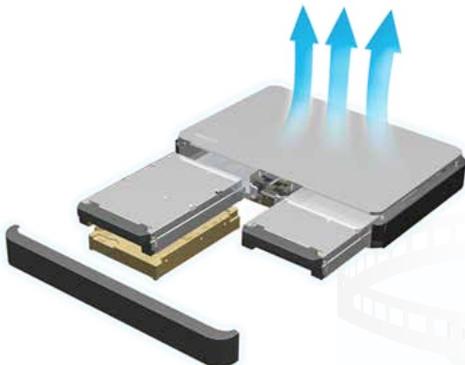
With an ambient noise level of only 15 decibels, the HS-251 does its job perfectly & quietly. In anechoic chamber testing, you can hear its noise only within 1 meter. It works even more silently when using SSDs.

Revolutionary thermal design

Instead of a fan, the HS-251 possesses a remarkable thermal design that intelligently dissipates heat, keeping the system running smoothly even under heavy load.
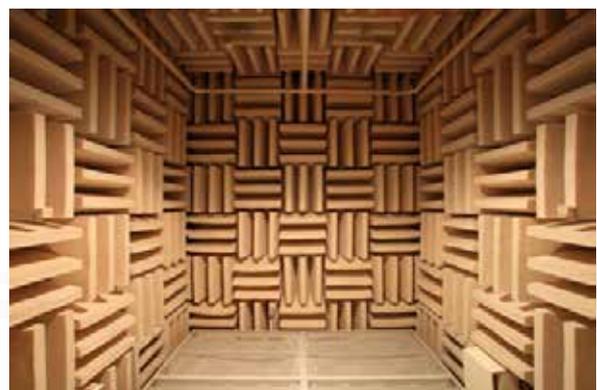The HS-251 is also eco-friendly, with power saving features including hard disk standby when not in use, and power management scheduling options.

▪ Heat is dissipated through the HS-251's aluminum body. Do not put anything on top or otherwise cover the HS-251.

Designed in acoustic chamber

QNAP took great passion in developing the best companion for audiophiles, and built a high-quality acoustic chamber to develop the product. The HS-251 Silent NAS was designed in such a quality-demanding environment to achieve near-silent operation.

Build your personal home theater

These days, it seems every family has tons of photos, music, and videos stored in different places and on different devices. Convenient access to this content to enjoy and share in a variety of ways is increasingly essential in modern homes. The HS-251 features rich multimedia applications and acts as a home multimedia hub for storing files from family members and making them available on various devices, in the home and on the go. You can browse photos or play music and videos on DLNA compatible devices, enjoy digital videos on mobile devices, and easily share them with family members and friends.

Multiple ways to store videos in the HS-251 : File Station, FTP, Samba, AFP, NFS, WebDAV and Qsync.

Multimedia management
All of the photos, music and videos stored in shared folders can be accessed through Photo Station, Music Station, Video Station and DLNA Media Server respectively. Thumbnails of photos, music and video files help you to search for specific files easily. Media file information (date, tags, etc) is consolidated for indexing. It becomes faster to search and organize dozens of multimedia content.

▪ Cross-platform file sharing

The HS-251 supports Windows, Mac, Linux and UNIX platforms, allowing you to centrally manage & store videos and flexibly share with family & friends.

▪ File Station

The File Station brings conventional file operations carried out on a computer desktop to the web browser. Users can upload, download, and manage files anywhere with a web browser. File extraction, folder creation, and smart search for files and folder are all supported over the Internet.

This web-based user interface makes file management on the HS-251 much easier. As long as there is Internet access, you can access files on the HS-251 anywhere and anytime.

▪ Video Station

Your video center on the cloud for centrally managing, uploading, downloading and sharing videos.

• Create a personal video center
• Easily categorize videos
• Tag videos for easy management
• Smart collection
• Share music via email, download link or social networking sites

HybridDesk Station (HD Station) brings thrilling home theater experience

With the HS-251, a cinema-grade entertainment experience at home has never been easier. The HDMI port and free HybridDesk Station (HD Station) turns the HS-251 into an amazing multimedia player. By connecting the HS-251 to a HDTV and using the HybridDesk Station (HD Station), you can easily enjoy the vast video, music and photo collections stored on the HS-251, surf the web, and even control the entire experience from your mobile devices. Enjoying a Full HD experience is just that easy!

▪ Watch Full HD movies

The HybridDesk Station (HD Station) delivers a cinema-quality movie experience at home. Coupled with the built-in XBMC media player intuitive interface, HybridDesk Station (HD Station) allows you to easily browse menus and choose your preferred way of watching videos. You can enjoy not only movies and videos, but also photos and music with your family in the comfort of your living room. Supporting audio pass-through, the HybridDesk Station (HD Station) can be used with an A/V receiver to deliver a greater audiovisual experience.

▪ Surf on the web

The HybridDesk Station (HD Station) supports Google Chrome so you can surf the Internet and browse social networks using your TV. You can download and directly save online content to the HS-251 for future use.

▪ Enjoy YouTube on TV

With the HDMI-output of HS-251, just connect it to your HDTV and instantly watch YouTube videos from the comfort of your living room.

▪ Use mobile device as handy a remote control

You can download the Qremote or Official XBMC Remote mobile apps on iOS or Android devices, or use the QNAP remote control (RM-IR002) to conveniently control your multimedia and to enjoy a more convenient entertainment experience.

▪ Use your NAS as a PC with QvPC Technology

QvPC Technology consists of several QNAP-developed technologies, including virtualization, hardware-accelerated transcoding, cloud integration, unified & tiered storage, RAID protection, SSD cache acceleration, video output, and more. QvPC Technology enables you to use the Turbo NAS as a PC by connecting to a HDMI monitor and operating the HybridDesk Station for multiple applications with various desktops: QVM Desk, Defense Desk and Local Display Desk.

▪ Only some QvPC Technology features are available for HS-251-2G (2GB RAM model).
Learn more about QvPC Technology: http://www.qnap.com/i/landing/qvpc/en/index.php

XBMC

Enjoy the comfort of your living room and play movies, photos, and music directly on your TV. Powered by XBMC, the QNAP NAS is now also a home entertainment hub and a media player!

QNAP remote control (RM-IR002)

DLNA Media Server

Through downloading, sharing between friends and video recording, now almost everyone has numerous video files. As well as using a PC to play those videos, there is a better way to enjoy the media content. DNLA-enabled Digital Media Players is an ideal choice to stream and play the media content to TV via LAN without a PC.

The HS-251 is a multimedia center that supports DLNA. You can easily stream and play HD videos stored on the HS-251 with compatible devices including Smart TVs and video game consoles.

▪ **Special features in QNAP DLNA Media Server :**
- You can assign specific user accounts for the DLNA Media Server to read only. When the media player is searching through media library, only the files of the assigned user account can be viewed.
- Supports multiple media formats. If your media player or device does not support a certain format, the on-the-fly transcoding function can transcode the videos to a universal format for playing on any device.
- Easy management using the Unified Media Library.

More about DLNA :

The Digital Living Network Alliance (DLNA) is a nonprofit collaborative trade organization responsible for defining interoperability guidelines to enable sharing of digital media between multimedia devices.
DLNA specifications includes home network devices :
Digital Media Server (DMS): store content and make it available to networked digital media players (DMP) and digital media renderers (DMR).
Digital Media Player (DMP): find content on DMS and provide playback and rendering capabilities.
Digital Media Controller (DMC): find content on DMS and instruct the DMR to play the content. Content does not stream from or through the DMC.
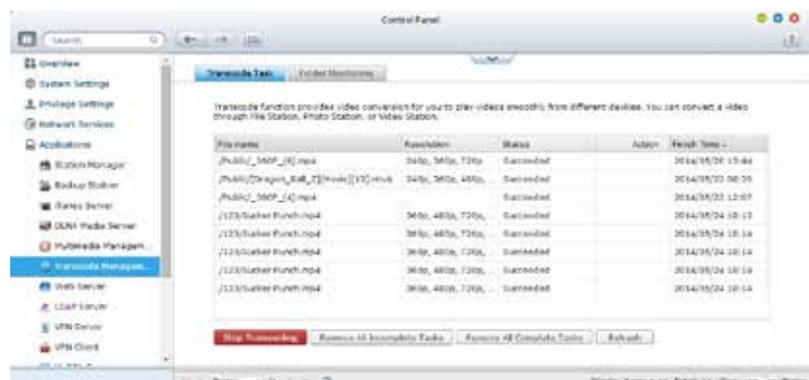Digital Media Renderer (DMR): play content as instructed by a DMC, which will find content from a DMS.

QNAP's unique transcoding technology

Due to the increasing use of HD videos (720p, 1080p), video files are becoming increasingly large in size and can use lots of network bandwidth to share or play them over a network. The HS-251 features hardware-accelerated transcoding to solve that problem.

▪ **Transcode management**

The HS-251 offers on-the-fly and background transcoding that allows you to convert videos to optimized resolutions for accommodating slower/ restricted network environments and device limitations.

▪ Why do we need transcoding ?

With the popularity of high-definition smartphones and digital cameras, video resolutions are getting higher. A higher resolution means larger file sizes and more bandwidth needed to stream it. Transcoding creates videos with optimal resolutions for sharing & watching in order to save bandwidth, but also retains the unaltered original video on the HS-251.

▪ Smart transcoding adapts to suit different bandwidth

The HS-251 provides a range of resolutions to play/share videos according to different bandwidth limits. Higher resolutions need more bandwidth, and you can select the right resolution for your network environment to get the best viewing experience.

Resolution / Network	240P	360P	480P	720P	1080P	4K2K
Ethernet	🖥️	🖥️	🖥️	🖥️	🖥️	🖥️
Wi-Fi (108.11 ac)	🖥️	🖥️	🖥️	🖥️	🖥️	🖥️
Wi-Fi (108.11 a/b/n)	🖥️ 📱	🖥️ 📱	🖥️ 📱			
4G (LTE)	📱	📱	📱			
3G	📱					

Multi-mode transcoding function

▪ Background hardware accelerated transcoding

You can add videos to a transcoding list and use the HS-251 to convert the original high resolution video for use with multiple resolutions. Then you can select an appropriate resolution to match your environment when sharing or watching.

▪ Auto-transcoding

When you set a folder as an auto-transcoding folder, the HS-251 will automatically convert the videos in this folder to the resolution you have set. For example, if you set the folder to 360P, the video will automatically transcode to this resolution when you upload to this folder as a background task.

▪ On-the-fly transcoding

If you have many high-resolution videos, but did not transcode in advance, you can use on-the-fly transcoding. This will adapt to meet bandwidth limits, with the Turbo NAS transcoding in real time for directly watching the video.

▪ Hardware-accelerated transcoding technology

With Intel® HD Graphics, video creation & conversion is faster, easier and can significantly reduce the time needed when handling multiple on-the-fly transcoding tasks.

▪ Performance

Compare the transcoding time between the HS-251 and TS-x69 Pro with using the same high-resolution (1080p) video. Powered by an Intel Celeron CPU with QNAP's exclusive transcoding technology, the HS-251 is 18 times faster than the Atom-based TS-469 Pro.

TS-469 Pro

2069 sec

145 sec

HS-251

18x faster

Transcoding time (sec)

Qsync

The Qsync utility supports Windows & Mac, and turns your HS-251 into a safe data center for file synchronization with huge storage. Whenever you add, edit, delete or rename a file in the Qsync folder on one computer, the change applies to all other linked mobile & tablet devices with the HS-251, so you have identical contents on all your devices. Qsync provides multiple ways of file synchronization and group file sharing, making file sharing easy and fast.

Seamless file sharing

Supporting SMB/CIFS, AFP, and NFS, the HS-251 enables seamless file sharing across computers of different operating systems without incompatibility issues. The integrated FTP Server in the HS-251 makes it easy to share files with others, particularly large files. The FTP server is easy to set up and you can enjoy a high-speed data transfer from the HS-251 with huge storage capacity.

Collect more digital videos

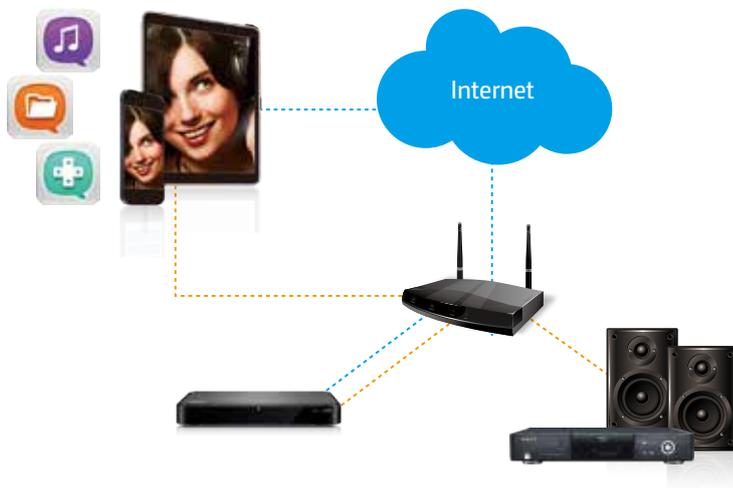You have more ways to conveniently store the videos bought online directly to the HS-251.

Download Station

Typical Internet downloading requires that your computer is powered on throughout the process, and that can be both energy-inefficient and noisy. The Download Station serves as a non-stop download center. Once you finish managing download tasks, just turn off the computer. The download tasks will then keep going until they are finished.

Enjoy videos on the go

Does the limited space of mobile devices stop you from storing lots of videos?
Use the HS-251 with QNAP mobile apps to solve this problem! Install Qfile mobile app on your iOS, Android or Window Phone devices, and you can access the full video collection stored on your HS-251 at home anywhere and anytime. At home, you can also use Qfile to remotely control video playback through DLNA or AirPlay-enabled devices.

1. In an Internet environment, you can use Qfile on your mobile devices to remotely access and play videos on the HS-251.
2. At home (LAN environment), you can use Qmusic, Qfile or Qremote mobile apps to select videos and music for direct play, or for playing through DLNA or AirPlay-enabled devices.

Economical storage expansion with scale-up solution

The HS-251 offers a high performance yet affordable storage solution to fulfill the needs of small/home offices in archiving rapidly growing data & large files. The HS-251 supports online capacity expansion by connecting a QNAP expansion enclosure UX-500P/UX-800P. With the QNAP scale-up solution, the raw storage capacity can be expanded on demand, making the HS-251 an ideal file center with large storage capacity for personal video collections.

Learn more about QNAP expansion enclosure http://goo.gl/719K1Q

How to create a digital video streaming environment ?

Use the HybridDesk Station (HD Station) with HDMI-out to enjoy multimedia content on TV

The award-winning Silent NAS brings you a thrilling home theater experience!
The HS-251 offers comprehensive backup features for your videos, music and photos and supports multiple video file formats, performing as a powerful digital media player for you to enjoy HD media content on TV with the HybridDesk Station (HD Station) and HDMI-out.

Environment settings :

1. To set up HybridDesk Station (HD Station): use an HDMI cable to connect the HS-251 to a TV. Advanced connection: use an HDMI cable to connect the HS-251 to an A/V receiver and then connect it to a TV. You will be able to enjoy better audio quality through the receiver.

- ▪ Remote control: there are four ways to control the HybridDesk Station (HD Station)

  - • QNAP remote control (RM-IR002)　　• USB keyboard & mouse
  - • MCE remote control　　　　　　　　• Qremote : the QNAP mobile app for HybridDesk Station (HD Station)
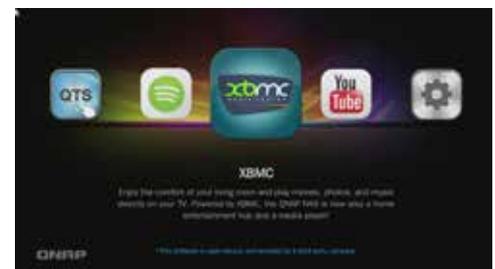
  Please note : If you want to control Google Chrome you need to use Qremote's mouse function, or use a USB mouse connected to the HS-251.

2. Install the HybridDesk Station (HD Station) :
   Go to QTS [Control Panel] > [Applications] > [HybridDesk Station (HD Station)], and click "Get Started Now". The system will install the HybridDesk Station (HD Station). You can choose to enable multiple applications.

   - ▪ **The HybridDesk Station (HD Station) allows you to use various applications on HDMI displays :**

     XBMC : enjoy multimedia content on HDTVs
     Chrome : surf the web and browse Internet content on HDTV
     YouTube : watch the near-limitless YouTube content on HDTV
     QTS : access the QTS management interface to manage the HS-251

3. After installation, select your preferred language.

4. The main interface of HybridDesk Station (HD Station) will be displayed, and you can start to use the applications.

   For example, choose XBMC, and you can enjoy the videos, photos and music stored on the HS-251. The HS-251 is an amazing multimedia hub for your home entertainment needs.

How to monitor surveillance videos with a TV ?

Use HybridDesk Station (HD Station) to do real-time monitoring on TV via HDMI

Install the "Surveillance Station" in the QTS App Center and the "Surveillance Station (Local Display)" on the HybridDesk Station. Then, you can directly choose the Surveillance Station (Local Display) for real-time video monitoring and video playback to gain complete control of your home or office's surveillance.

Recommended QNAP Turbo NAS for video collections

Model	HS-251	TS-251	TS-453 Pro	TS-470 Pro
CPU	Intel Celeron 2.41GHz Dual-Core (burst up to 2.58GHz)	Intel Celeron 2.41GHz Dual-Core (burst up to 2.58GHz)	Intel Celeron 2.0GHz Quad-Core (burst up to 2.41GHz)	Intel Core i3 3.3GHz Dual-Core
RAM	1GB DDR3L	4GB / 1GB DDR3L (expandable to 8GB)	8GB / 2GB DDR3L (expandable to 8GB)	16GB / 2GB DDR3
Maximum Number of Hard Drives	4 x SATA 3Gb/s,6Gb/s	2 x SATA 3Gb/s,6Gb/s	4 x SATA 3Gb/s,6Gb/s	4 x SATA 3Gb/s,6Gb/s
Form Factor of Compatible Hard Drive	3.5" /2.5"	3.5" /2.5"	3.5" /2.5"	3.5" /2.5"
Hot-swapping	Yes	Yes	Yes	Yes
USB 3.0	2	2	3	2
USB 2.0	2	2	2	3
eSATA	No	No	No	2
IR receptor	Yes (support MCE remote control)	Yes (support MCE remote control)	Yes (support MCE remote control)	Yes (support MCE remote control)
HDMI Output	1	1	1	1
3.5mm Stereo Output	No	No	No	No
LAN Port	2	2	4	2
Physical Dimensions (HxWxD) mm	302 x 220 x 41.3	168.5 x 102 x 225	177 x 180 x 235	177 x 180 x 235
Weight (Net/Gross Weight) (Kg)	1.56/2.62	1.28/2.32	3.65 / 4.65	4.56/5.7
Supported RAID Levels	RAID 0, 1, JBOD	RAID 0, 1, JBOD	RAID 0, 1, 5, 6, 10, RAID 5+ Spare	RAID 0, 1, 5, 6, 10, RAID 5+ Spare
Power Supply	60W, External Adaptor	60W, External Adaptor	ATX, 250W, 100-240V	250W, External Adaptor
Fan	No	1 (7cm)	1 (9cm)	1 (9cm)
Power Consumption (Sleep mode/In operation)	8.96W/15.64W	10.28W/19.22W	20.71W/33.13W	22.8W/38.2W

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