TS-262 / TS-462

Intel Celeron N4505 Dual-Core 2.5GbE Multimedia NAS with M.2 PCIe slots and PCIe expandability, ideal for home users to maximize their digital lifestyle.
2.5GbE 2-bay TS-262 / 4-bay TS-462 for home users to enjoy digital life

- Conveniently access files, data and multimedia stored in the NAS from all connected devices.
- Equipped with a 2.5GbE network port and HDMI 2.0 port for smooth multimedia streaming.
- Clean white-color housing with champagne gold tone for an aesthetic and functional design.
Latest Intel CPU, "Jasper Lake", with integrated GPU for transcoding and HDMI 4K output

Intel Celeron N4505
Dual core, 2.0 GHz burst up to 2.9 GHZ

Video output
4K
Up to 4K

Transcoding
h.264
Support 4K H.264 transcoding

Intel UHD Graphics
Support 4K @60Hz output and H.264 hardware transcoding
2.5 GbE for home user breaks the traditional Gigabit barrier

2.5 GbE Network port

The TS-262 & TS-462 have a single 2.5GbE RJ45 LAN port which supports existing CAT5e LAN cables.

<table>
<thead>
<tr>
<th></th>
<th>CAT 5e</th>
<th>CAT 6</th>
<th>CAT 6A</th>
</tr>
</thead>
<tbody>
<tr>
<td>100MbE</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>1GbE</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2.5GbE</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
Offer M.2 PCIe Gen3 slots for SSD tiering/caching or edge acceleration

- 3-step installation, supports M.2 2280 PCIe Gen3 x1
  - M.2 NVMe SSD
  - Coral Edge TPU
- Toolless installation
M.2 NVMe SSD cache for improved performance at a lower cost

Especially useful for RAID 5/6 and applications dealing with small files or concurrent user access.

- **Improves I/O latency**
- **For IOPS-demanding apps**
- **Global SSD cache**

Can share a single SSD volume/RAID with all volumes/iSCSI LUNs for a read-only or read-write cache.

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**QTS NAS**

<table>
<thead>
<tr>
<th>SSD Cache Capacity</th>
<th>RAM Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>512GB</td>
<td>-</td>
</tr>
<tr>
<td>1TB</td>
<td>≧ 2 GB</td>
</tr>
<tr>
<td>2TB</td>
<td>-</td>
</tr>
<tr>
<td>4TB</td>
<td>≧ 4 GB</td>
</tr>
<tr>
<td>16TB</td>
<td>≧ 8 GB (x86 CPU)</td>
</tr>
</tbody>
</table>

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**Total capacity = HDD capacity**

![Diagram showing read-only and read-write caches with arrows indicating read and write operations between application, HDD space, and SSD space.](image-url)
Qtier™ Drives Auto-Tiering constantly optimize data across storage tiers

• Automatically moves hot data to high-performance drives and cold data to lower-cost, higher-capacity drives.

• Unlike SSD cache, the SSD capacity in Qtier can be used to store data.

Qtier Engine

01
Before tiering
Frequently accessed data is not optimized

02
Start data tiering

03
After tiering
Data is optimized

04
Changes in data access pattern
Support HDMI 4K output

HDMI output for 4K resolution

With HDMI output, the TS-262 / 462 allows you to directly enjoy multimedia content, use web browsers, manage your NAS, or watch recorded surveillance footage or live feeds on your NAS.
Front view of new TS-262 / TS-462

TS-462

- **Power button**
- **LED indicators**: Status, LAN, USB Copy
- Disk#1~#4
- Disk#1~#2 (TS-262)
- **IR Receiver**
- Optional RM-IR004 remote control accessory
- **USB 3.2 Gen2 (10Gbps)**
- **USB One-Touch-Copy**
Rear view of new TS-262 / TS-462

- PCIe Gen3 x2
- Reset
- USB 3.2 Gen2 Type-A
- USB 2.0 Type-A
- HDMI 2.0
- 12CM Smart Fan
- 7CM Smart Fan (TS-262)
- 2.5GbE NBASE-T
- 12V DC Power input
- K-Lock
Easy to install HDDs and SSDs

Install 3.5-inch without tools, easy to install 2.5-inch SSD also
## Specification of TS-262 / TS-462

<table>
<thead>
<tr>
<th>Model</th>
<th>TS-262</th>
<th>TS-462</th>
<th>Ts-462-4G</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKU</td>
<td>TS-262-4G</td>
<td>TS-462-2G</td>
<td>TS-462-4G</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel® Celeron® N4505 2-core/2-thread processor, burst up to 2.9 GHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default Memory</td>
<td>4GB Onboard, non-expandable</td>
<td>2 GB SO-DIMM DDR4 (1 x 2 GB), Max 16GB (2 x 8GB)</td>
<td>4GB Onboard, non-expandable</td>
</tr>
<tr>
<td>Maximum Memory</td>
<td>4GB</td>
<td>16GB</td>
<td>4GB</td>
</tr>
<tr>
<td>Bay count</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>M.2 SSD slots</td>
<td></td>
<td>2 x M.2 2280 PCIe Gen3 x1 slot</td>
<td></td>
</tr>
<tr>
<td>Ethernet</td>
<td></td>
<td>1x 2.5GbE NBASE-T</td>
<td></td>
</tr>
<tr>
<td>HDMI</td>
<td></td>
<td>1 x HDMI 2.0 (4K @60Hz)</td>
<td></td>
</tr>
<tr>
<td>PCIe</td>
<td></td>
<td>1 x PCIe Gen3 x2 slot</td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td></td>
<td>2 x USB 3.2 Gen2 Type-A (10Gbps) + 2 x USB 2.0</td>
<td></td>
</tr>
<tr>
<td>External adapter</td>
<td>65W</td>
<td></td>
<td>90W</td>
</tr>
</tbody>
</table>
PCIe 3.0 slot for various 5GbE & 10GbE PCIe NICs

QXG-2G1T-I225
1 x 2.5G/1G/100M/10M Port

QXG-2G2T-I225
2x 2.5G/1G/100M/10M Ports

QXG-5G1T-111C
1 x 5G/2.5G/1G/100M Port

QXG-5G2T-111C
2 x 5G/2.5G/1G/100M Ports

QXG-10G1T
1 x 10G/5G/2.5G/1G/100M Port

QXG-10G2TB
2x 10G/5G/2.5G/1G/100M Ports

For more please check compatibility list
Full 2.5GbE Ethernet performance for 2.5X faster file transfer

1 x 2.5GbE File Transfer

Download 295 MB/s
Upload 293 MB/s

Tested in QNAP Lab:
NAS: TS-462; 4GB DDR4; 4 x Samsung 860 EVO 1TB SSD; RAID5
PC: Intel Xeon W-1250 3.3GHz; 32GB RAM; QXG-2G4T-I225; Windows Server 2019
TS-262: optional 10 GbE for high-speed network transmission

**1 x 10GbE Windows File Transfer**
- Upload: 751 MB/s
- Download: 1,181 MB/s

**2 x 10GbE SMB Sequential Throughput**
- Write: 1,505 MB/s
- Read: 1,644 MB/s

Test environment:
- NAS: TS-262-4G, QTS 5.0.0
- 2 x Samsung 860 Evo 1TB SSDs, RAID 1, thick volume
- Client PC: Intel i7-6700 3.4GHz, 64GB RAM
- IOMeter | RAM*4, 30-sec ramp up time, 3-min seq. run time, 1 worker, 32-outstanding
TS-462: optional 10 GbE for high-speed network transmission

1 x 10GbE Windows File Transfer

Upload: 650 MB/s
Download: 1,077 MB/s

2 x 10GbE SMB Sequential Throughput

Read: 1,623 MB/s
Write: 1,378 MB/s

Test environment:
NAS | TS-462, QTS 5.0.0, 4 x Samsung 850 Pro 512GB SSDs, RAID 5, thick volume
Client PC | Intel i7-6700 3.4GHz, 64GB RAM
TS-262 / TS-462
LIVE DEMO
Optional Support USB / SATA JBOD & RAID Storage Expansion Unit

### Maximum of JBOD / RAID expansion enclosures

<table>
<thead>
<tr>
<th>Model</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR-002</td>
<td>2</td>
</tr>
<tr>
<td>TR-004</td>
<td>2</td>
</tr>
<tr>
<td>TR-004U</td>
<td>2</td>
</tr>
<tr>
<td>TL-D800C</td>
<td>2</td>
</tr>
<tr>
<td>TL-R1200C-RP</td>
<td>2</td>
</tr>
<tr>
<td>TL-D400S</td>
<td>1</td>
</tr>
<tr>
<td>TL-D800S</td>
<td>1</td>
</tr>
<tr>
<td>TL-D1600S</td>
<td>1</td>
</tr>
<tr>
<td>TL-R400S</td>
<td>1</td>
</tr>
<tr>
<td>TL-1200S-RP</td>
<td>1</td>
</tr>
</tbody>
</table>
QNAP enclosure supports 2 modes on NAS

- TS-262 / TS-462 supports up to two QNAP TR or TL enclosures.
- Internal mode with storage pool support or external mode with cross-platform compatibility with Windows/Mac computers.

Mode 1: Expanding the NAS with a new volume

Mode 2: Work as a backup destination for snapshot replica
Use Virtual JBOD to expand NAS capacity

Max. 8 VJBOD connections

TS-462

2.5GbE / 1GbE iSCSI VJBOD connection

TS-832PXU

TS-832PX
Qfinder Pro
Helps you find, connect and set your NAS

- Connect to the NAS via Qfinder Pro for initial setup
- Search and connect to the NAS under the same network IP to operate
Support the latest QTS 5.0.1 NAS operating system

- Support the latest transport layer security protocol TLS 1.3, with better security and faster speed
- Optimize the QTS UI, and the notification panel will pop up the instructions at any time
- Improve NVMe SSD cache performance, reducing memory workload
- Faster WireGuard VPN service for fast and secure connection
Access and share data anytime with myQNAPcloud

Remote connection
Support both Email and Mobile phone number to registration and login
Backup data with deduplication

HBS 3 (Hybrid Backup Sync 3)
Keep 3 copies, on 2 types of storage, and store 1 copy off-site to ensure your data safety

From local NAS (via HBS 3)
- From local NAS (via File Station)
- From remote NAS (via File Station)
- Carry and Use (QuDedup Extract Tool)

File Station with QuDedup (soon)

Backup/Restore
TCP BBR
Access from Cloud

Windows
Tokyo
Nacos
New York
Ubuntu
Beijing

Carry and Use (QuDedup Extract Tool)
DA Drive Analyzer, Predict Drive Failure and Minimize Downtime

1 free disk prediction per NAS
Paid subscription for additional disks for added protection

DA Drive Analyzer integrates ULINK cloud artificial intelligence technology, which can notify you before disk failure, helping you prevent data loss or downtime loss caused by unwarranted disk damage.
Snapshots Help You Fight with Ransomware Threats

TS-262 / 462 supports Snapshot, like taking a photo - within seconds the complete status of your NAS system and data is recorded.

Mitigate the growing threat of ransomware

Step 1
Regularly update, and use Malware Remover

Step 2
Routinely back up to your NAS, and create multi-version snapshots

Step 3
Back up snapshots to another QNAP NAS
File Station – Multifunctional file browser

File Station not only allows you to manage the files stored in the NAS, but also the files on the cloud space can be easily managed. Through simple and intuitive operations, you can quickly upload files from devices such as computers, drag and drop files between different folders, delete files, and set file and folder permissions to protect important data from prying eyes.
Intelligent and automated file management

Qsirch 5

Google™ like Search Tool for NAS

- Enables you to find files based on filename, content, and metadata.
- Can choose from a variety of search options to quickly find documents, images, videos, emails, and other NAS-based files.
- Available using a companion mobile app, browser extension, and Mac® Finder

Qfiling 3

All you need to do is categorize your files, set a schedule!

- 2 tasks: Archive task, Recycle task
- 3 types of setting: one-time, Scheduled, Real-time
- 9 editing modules: Such as Face Blur, Video transcoding, Encryption & Decryption...
QNAP meets all needs for File Management

- File Station
- OCR Converter
- Qsirch
- Qfiling

Store and backup — File Digitization — Search — Archive

With OCR Converter, Qsirch can search for image context.
OCR: Best solution for document digitization

- Search
- Edit
- Archive

- PCIe expandability for additional NAS functionality
  The TS-x538 series comes with a PCIe slot, offering extreme flexibility for users to install a QM2 card, 10G/E network expansion card, or wireless network card for greater application potential.

- USB type C QuickAccess port for direct file access
  The TS-x538i series features a USB-C QuickAccess port to simplify NAS setup and to allow direct access to files without needing a network connection.

- Powerful transcoding and 4K HDMI output
  The TS-x538 series supports 4K hardware decoding and supports H.264 video transcoding for a high-quality audiovisual experience.

- QTS-Linux Combo NAS for centralized storage and IoT applications
  The TS-x538 series integrates two operating systems to host an ideal IoT platform with near limitless containerized apps to empower developers.
Faster image identification with integrated Intel® OpenVINO™ AI engine.

QuMagie
Organize photos with similar faces using facial recognition

QNAP NAS
Upload, Back-up Photos
Browse, manage Photos
Share Photos

QNAP AI Core

Mobile
Camera
PC

Mobile
PC
Social Media
Qsync, Cross-device file sync for individuals and teams

When there are different devices such as laptops and mobile phones, as long as the files are modified on a single device, the modified files will be automatically synchronized to other devices.

When team members collaborate and communicate, files can be automatically pushed to the binding devices of all members, making the workflow faster and collaboration smoother.
HybridDesk Station for various A/V needs

Support RM-IR004 remote control or USB wireless keyboard and mouse control
Versatile HybridDesk Station apps

**System Management**
- QTS
- FileStation HD

**surveillance**
- QVR Pro Client

**Social Media**
- Skype
- Facebook

**Multimedia**
- HD Player
- Clementine
- Spotify
- Tuneln Radio

**Media management**
- PhotoStation HD
- VideoStation HD
- MusicStation HD

**Browser & Productivity**
- Chrome
- Firefox
- LibreOffice
Full 4K UHD multimedia experience

- 4K HDMI v2.0 60Hz output
- Plex Server streaming & transcoding
- Use Cinema28 for multi-room streaming
QVR Elite
Smart Surveillance System

2 channels are included for free (expandable)

Record using the MP4 Format

Flexible Subscription

Expandable Capacity
QVR Elite with powerful IP surveillance camera management and support

More than 180 Brands
- GeoVision
- Panasonic
- MOBOTIX
- HIKVISION
- Honeywell

More than 6700 Models
- VIVOTEK
- AXIS
- Canon
- alhua
- Brick.com

ONVIF Profile support

Record into QVR Elite by using the RTSP/RTMP link with no integration needed. Multiple video sources are supported - not just IP cameras.

Built-in Firewall for QNAP Appliances

QuFirewall

You can allow/deny IP addresses and regions to prevent unauthorized access and brute force attacks for safeguarding data and service security.
Secure communication for peace of mind

QVPN

- In addition to establishing a VPN client connection to a remote server, QVPN can also be used.
- Supports WireGuard® to provide faster and more stable VPN connections, and to easily set up VPN.
QuFTP remote file FTP access service

- Updated independent
- Support FTP server
- Support FTP client
- Support TLS setting
- Support QoS setting
Under the similar appearance of TS-x62 / TS-x64, how should we choose?

<table>
<thead>
<tr>
<th>Model</th>
<th>TS-262</th>
<th>TS-462</th>
<th>TS-264</th>
<th>TS-464</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>SOHO / Home NAS</td>
<td>Entry SMB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>Intel® Celeron® N4505 2-core/2-thread processor, burst up to 2.9 GHz</td>
<td>Intel® Celeron® N5095 4-core/4-thread Processor, burst up to 2.9 GHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>4GB onboard not expandable</td>
<td>TS-462-2G: 2GB (1x 2GB) DDR4 (2 x SODIMM slots, max. 16GB total)</td>
<td>TS-464-4G: 4GB (1x 4GB) DDR4 (2 x SODIMM slots, max. 16GB total)</td>
<td></td>
</tr>
<tr>
<td>M.2 SSD</td>
<td>2 x M.2 2280 PCIe Gen 3 x1</td>
<td>2 x M.2 2280 PCIe Gen 3 x1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethernet</td>
<td>1 x 2.5 GbE</td>
<td>2 x 2.5 GbE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDMI</td>
<td>1 x HDMI 2.0 (4K @60Hz)</td>
<td>1 x HDMI 2.0 (4K @60Hz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCIe</td>
<td>1 x PCIe Gen3 x2 slot</td>
<td>1 x PCIe Gen3 x2 slot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td>2 x USB 3.2 Gen2 Type-A (10Gbps) + 2 x USB 2.0</td>
<td>2 x USB 3.2 Gen2 Type-A (10Gbps) + 2 x USB 2.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Shipped with 2-year standard warranty, optional up to 5-year coverage

**TS-262 / TS-462**
Backed by a 2-year warranty at no additional cost.

Extend hardware warranty up to 5 years
You can also purchase a warranty extension that extends your warranty coverage up to 5 years.
Learn More: QNAP warranty services