

# Hardware Specifications



TANK-860-QGW-i5/8G/2A



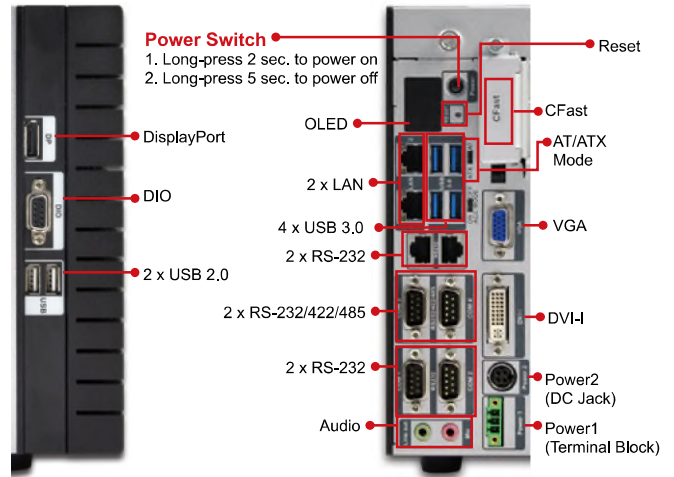
TANK-860-QGW-i5/8G/6A



TANK-860-QGW-i5/8G/4A

Model Name		TANK-860-QGW	
Chassis	Color	Black + silver	
	Dimensions (WxDxH)	2 slots:121.5 x 255.2 x 205 4 slots:154.8 x 255.2 x 205 6 slots:195.4 x 255.2 x 205	
	Fan	Fanless	
	Material	Die-casting aluminum	
Mainboard	CPU	Intel® 4th Gen Core™ i5-4400E 2.7GHz, 37W	
	Chipset	Intel® HM86	
	Memory	2 x 204-pin DDR3 SO-DIMM preinstalled two 4 GB (Maximum memory size supported by the system is 16 GB)	
IPMI	iRIS solution	iRIS-2400 (optional purchase)	
Storage	HDD	2 x 2.5" SATA 6Gb/s HDD/SSD Bay	
	CFast	1 x CFast	
	USB 3.0	4	
I/O interface	USB 2.0	2	
	Network port	2 x RJ-45 1 x PCIe GbE by Intel I210 1 x PCIe GbE by Intel I217LM	
	Serial port	4 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	
	Video output	1 x VGA, 1 x DVI-I, 1 x DisplayPort	
	Resolution	VGA: Up to 1920 x 1200@60Hz DVI-I: Up to 2500x 1600@60Hz DisplayPort: Up to 2500x 1600@60Hz	
	Audio	1 x VGA, 1 x DVI-I, 1 x DisplayPort	
	Expansion slot	PCI/PCIe	2 slots: 2 * PCIe x8 (physical PCIe x16 slot) 4 slots: 2 * PCIe x8 (physical PCIe x16 slot) + 2 * PCI 6slots: 1 * PCIe x8 (physical PCIe x16 slot) + 2 * PCIe x4 + 3 * PCI
		PCIe Mini	4 slots: 1 x Full-size (baseboard) 6 slots: 1 x Full-size (baseboard)
	Power	Power input	DC Jack : 9~36V DC
Power consumption		19W @ 3.34A (Intel® Core™ i5-4400E with 4 GB memory)	
Stability	Installation	Upright/wall-mounted	
	Operating temperature	Ventilated environment -20 ~60° C (SSD), Non-condensing environment 5% ~ 95%	
	Storage temperature	Ventilated environment -30° C ~70° C (SSD), Non-condensing environment 5% ~ 90%	
	Impact test	Half-sine wave shock 5G; 11ms; 3 shocks per axis	
	Vibration test	MIL-STD-810F 514.5C-2 (with SSD)	
	Net weight/gross weight	2 slots: 4.2 kg/6.3 kg 4 slots: 4.5 kg/6.5 kg 6 slots: 4.8 kg/6.9 kg	
	Safety standard	CE/FCC	

## I/O interface



## Ordering information

Part No.	Description
TANK-860-QGW-i5/8G/2A-R10	Intel® Core™ i5-4400E processor, two 4 GB DDR3 memory, two PCIe expansion slots, network port, serial port, digital I/O, VGA/DVI-I/DisplayPort, optional iRIS-2400, built-in QTS-Gateway, 9 V~36 V DC, RoHS
TANK-860-QGW-i5/8G/4A-R10	Intel® Core™ i5-4400E processor, two 4 GB DDR3 memory, two PCIe and two PCI expansion slots, network port, serial port, digital I/O, VGA/DVI-I/DisplayPort, optional iRIS-2400, built-in QTS-Gateway, 9 V~36 V DC, RoHS
TANK-860-QGW-i5/8G/6A-R10	Intel® Core™ i5-4400E processor, preloaded 2 x 4GB DDR3 memory, 3 x PCIe + 3 x PCI expansion slot, network port, serial port, digital interface, VGA/DVI-I/DisplayPort, optional purchase iRIS-2400, preloaded QTS-Gateway, 9 V~36 V DC, RoHS

## Packing list

Packing list
1 x Installation CD
1 x Chassis screw set
1 x Installation frame set

## Optional accessory

Part No.	Description
32000-000002-RS	European regulatory power cord
32000-089900-RS	European regulatory power cord
63040-010120-210-RS	Power supply, input voltage: 90~264VAC, 120W, output voltage:19V DC, 4-pin attachment connector, CCL, RoHS
19Z00-000605-00-RS	System fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
iRIS-2400-R10	IPMI 2.0 expansion card, DDR3 SO-DIMM slot

# Software Specifications

## Operating System

- QTS 4.2 (embedded Linux)

## Supported Client OS

- Windows 7, Windows 8, Windows 10, Windows Server 2003/2008 R2/2012/2012R2
- Apple Mac OS X
- Linux & UNIX

## Supported Browsers

- Microsoft Internet Explorer 10+
- Google Chrome
- Apple Safari 7+
- Mozilla Firefox

## Multilingual Support

- Chinese (Traditional & Simplified), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Romanian, Russian, Spanish, Swedish, Thai, Turkish

## File System

- Internal Hard Drive: EXT4
- External Hard Drive: EXT3, EXT4, NTFS, FAT32, HFS+

## Networking

- TCP/IP (IPv4 & IPv6: Dual Stack)1
- Quad Gigabit NICs with jumbo frame (failover, multi-IP settings, port trunking/NIC teaming)
- Service binding based on network interfaces
- Squid Proxy server
- Proxy client
- DHCP client, DHCP server
- Protocols: CIFS/SMB, AFP (v3.3), NFS(v3), FTP, FTPS, SFTP, TFTP, HTTP(S), Telnet, SSH, SNMP, SMTP, and SMSC
- UPnP & Bonjour Discovery
- USB Wi-Fi Adapter Support\*\*

## Network & Virtual Switch

- TCP/IP (IPv4 & IPv6: Dual Stack)1
- Quad Gigabit NICs with jumbo frame (failover, multi-IP settings, port trunking/NIC teaming)
- DHCP client, DHCP server
- USB Wi-Fi Adapter Support\*\*
- Virtual Switch

## Security

- Network access protection with auto-blocking: SSH, Telnet, HTTP(S), FTP, CIFS/SMB, AFP
- CIFS host access control for shared folders
- FIPS 140-2 validated AES 256-bit volume-based and shared folder data encryption2
- AES 256-bit external drive encryption2
- Importable SSL certificates
- Instant alerts via email, SMS, beep, push service, and LCD panel3
- 2-step verification

## Storage Management

- Storage Space Utilization monitoring
- QNAP flexible Volume/LUN with thin provisioning and space reclaim3
- Disk volume types
- 2-Bay: RAID 0,1, single
- Supports storage pools3
- Supports snapshots (4GB System RAM required)3
- Supports Volume/LUN snapshot
- Snapshot manager
- Snapshot clone
- Snapshot vault
- Snapshot replica
- Snapshot agent for Microsoft Windows and VMware vSphere
- Online RAID capacity expansion and online RAID level migration
- SMART data migration
- Bad block scan and hard drive S.M.A.R.T.
- Bad block recovery & RAID recovery
- Bitmap support

## Power Management

- Wake on LAN
- Internal hard drive standby mode
- Scheduled power on/off
- Automatic power on after power recovery
- USB and network UPS support with SNMP management
- System sleep mode (S3)3

## Access Right Management

- Batch users creation
- Import/Export users
- User quota management
- Local user access control for CIFS, AFP, FTP, and WebDAV
- Application access control for Photo Station, Music Station, Video Station, and File Station
- Subfolder permissions support for CIFS/SMB, AFP, FTP, and File Station

## Domain Authentication Integration

- Microsoft Active Directory (AD) & Domain Controller support
- LDAP server, LDAP client
- Domain users login via CIFS/SMB, AFP, FTP, and File Station

## myQNAPcloud Service

- Private cloud storage and sharing
- Free host name registration (DDNS)
- Auto router configuration (via UPnP)
- Web-based file manager with HTTPS 2048-bit encryption
- CloudLink for remote access without any complicated router setup
- myQNAPcloud connect for easy VPN connection (Windows VPN utility)

## Qsync

- Sync files across multiple devices with SSL secure connection
- Selective synchronization for only syncing specific folders
- Use team folders as a file center for greater team collaboration (maximum sync tasks: x86:32, ARM:5)
- Shares files by links via e-mail
- Policy settings for conflicting files and file type filter support
- Version control up to 64 versions.
- Unified privilege management
- Unified configuration management
- Supports central configuration mode
- Supports remote erase/restore
- Supports shared folders sync
- Supports Windows & Mac OS

## Web Administration

- Multi-window, multi-tasking based system management
- Smart toolbar and dashboard for neat system status display
- Dynamic DNS (DDNS)
- SNMP (v2 & v3)
- Resource monitor
- Network recycle bin for file deletion via CIFS/SMB, AFP, and File Station
- Automatic Cleanup
- File Type Filter
- Comprehensive logs (events & connection)
- Syslog client/server
- System settings backup and restore
- Mobile app: Qmanager for remote system monitoring & management

## File Server

- File sharing across Windows, Mac, and Linux/UNIX
- Microsoft networking
- Windows ACL
- Advanced folder permissions for CIFS/SMB, AFP, FTP
- Shared folder aggregation (CIFS/SMB)

## FTP Server

- FTP over SSL/TLS (Explicit)
- FXP support

## File Station

- Supports mounting cloud drives (such as Google Drive, Dropbox, Microsoft OneDrive, Amazon Cloud Drive, Yandex Disk and Box).
- Supports mounting remote shared folders through FTP, WebDAV or Microsoft networking (SMB/CIFS)
- Supports opening documents via Office Online, Google Docs or Chrome Extension (Edit Office files in Google Docs, Sheets, and Slides)
- Supports ISO Mounting (Up to 256 ISO Files)
- Supports sharing download links and upload links
- Drag-n-drop files via Chrome and Firefox Browsers
- Photo, music, and video preview and playback with hardware-accelerated transcoding3
- File Compression (ZIP or 7z)
- Creation of and sending download links for sharing public files with expiration date and password protection
- Supports displaying subtitles (\*.SRT, UTF-8 format) - Video seeking support for video playback during on-the-fly transcoding3
- Supports slideshow playback in media viewer
- Mobile App: Qfile for file browsing and management

## Backup Station

- Remote replication server (over rsync)
- Real-time remote replication (RTRR) to another QNAP NAS, FTP or CIFS/SMB server
- Works as both RTRR server & client with bandwidth control
- Real-time & scheduled backup
- Backup versioning for RTRR
- Snapshot support for RTRR/Rsync
- Encryption, compression, file filter, and transfer rate limitation
- Desktop backup with QNAP NetBak Replicator for Windows
- Apple Time Machine backup support
- Data backup to multiple external storage devices
- Third party backup software support: Veeam backup & replication, Acronis True Image, Arcserve backup, emc retrospect, Symantec Backup Exec, etc.

## Cloud Drive Sync

- Multiple cloud account management like Google Drive, Dropbox, OneDrive, and hubiC
- Supports multiple cloud accounts
- Manual, scheduled, periodic and continuous sync
- Flexible file filtering using type, date, and size
- SSL transfer encryption
- Dashboard and job statistics
- Configurable network error recovery options

- Extensive job activity logging for tracing history of status and statistics
- Concurrent job execution and multi-threaded data transfer
- Per-account bandwidth throttling

## Cloud Backup Station

- S3 Plus (including Amazon S3)
- Amazon Glacier
- Google Cloud Storage
- WebDAV-based cloud storage
- Microsoft Azure
- OpenStack Swift

## Print Server

- Max number of printers: 3
- Supports Internet Printing Protocol
- Print job display and management
- IP-based and domain name-based privilege control

## Photo Station

- Show photos by thumbnails, list, timeline, or folder view
- Supports virtual/smart albums
- Validity control for sharing albums
- Tag photos with text, colors, and ratings
- Slideshows with background music and different transition effects
- Geotag photos and display them on Google maps
- Supports uploading photos/videos to Picasa, Flickr, Weibo, YouTube
- Supports face detection (with the Photo Station Extension)
- Supports PDF to image conversion (with the Photo Station Extension)
- Supports Facebook friends login
- Backup/Restore album configuration

## Music Station

- Play or share music via web browser
- Supports streaming music to multiple devices.
- Supports changing album covers via Google search or by uploading photos.
- Internet radio (MP3)
- Up to 8 music alarms
- Mobile app: Qmusic for music streaming and management

## iTunes Server

- Audio and video sharing for Windows & Mac iTunes

## Video Station

- Show photos by thumbnails, list, timeline, or folder view
- Supports virtual/smart collections
- Tag videos with text, color, and ratings
- Share video links to social websites or through email
- Display movie information and posters from Internet sources or user-uploaded files
- Supports displaying subtitles (\*.SRT, \*.ASS, \*.SSA)
- Supports online searching and downloading of subtitles as well as importing subtitle files
- Supports adjusting the display style of subtitles
- Supports Facebook friends login
- Supports multi-zone video display
- Video seeking support for video playback during on-the-fly transcoding3
- Mobile app: Qvideo for online video browsing and management

## AirPlay & Chromecast

- Streams videos, photos and music to Apple TV or Chromecast via File Station, Music Station, Photo Station, Video Station or mobile app (Qfile, Qmusic, Qphoto or Qvideo).

## Note:

The Media Streaming add-on app must be installed from the QTS App Center.

## Download Station

- PC-less BT, FTP/FTPS, and HTTP/HTTPS, Thunder, FlashGet and qqdl download (up to 500 Tasks)
- BT download with search, Magnet Link and PT support
- Scheduled download and bandwidth control
- RSS subscription and download (broadcasting)
- Proxy support for BT download
- Mobile app: Qget for downloads browsing and management

## Notes Station

- Direct and quick backup from Evernote with re-editing availability
- Supports Google Calendar
- Import/Export PDF and .epub file
- RSS live feed and auto update
- Online quick preview of multimedia attachments
- Notes encrypt/decrypt
- Smart snapshot for version control
- Full site backup for admin user

## HD (HybridDesk) Station 3.13

- Playback videos, music, photos on TV with Kodi via HDMI
- Watch various online content such as YouTube, Flickr, Picasa, Shoutcast, etc.
- Web browsers (Chrome, Firefox)
- Supports international keyboards, input and mouse
- Supports QNAP Qremote app and the official Kodi remote app
- Supports user login permissions

## Note:

The playback and quality of some video files may be affected by the system's CPU and GPU decoding abilities.

## Linux Station

- Support install the Ubuntu OS via Linux Station. Use your device as a Ubuntu PC using the video output.
- Download and use a variety of applications from the Ubuntu Software Center.
- Supports remote desktop to monitor and access Ubuntu remotely.
- An open source software platform for developers.

## Note:

Requires at least 4GB RAM and Container Station must be installed.

## Virtualization Station3

- Supports Virtual Machine (VM) creation to run operating systems such as Windows, Linux, Unix and Android
- Supports VM import and export
- Supports VM cloning & snapshots
- Supports VM backup and restore
- VM console can be displayed via HDMI output - QVM
- HTML5-based shared remote console
- Supports three different networking modes: Isolated, External-only and Bridged

## Container Station

- Supports LXC and Docker
  - Download applications from the built-in Docker Hub Registry
  - Supports one-click installation, container export/import & console mode
  - Supports two network modes (NAT and host)
  - Supports auto-start containers
  - Supports downloading Docker certificates
  - Supports adding private registries
  - Added an application repository for users to switch to any repository on GitHub.com.
- ## Signage Station
- Supports dynamic content including videos, images, music, and text
  - Supports multi-user collaboration
  - Supports sharing by email and social network
  - Supports design software: iArtist Lite
  - Supports playback on Chrome browser

## Qsirch

- Supports full-text search
- Supports Near Real-time Search
- Bar chart to show data distribution
- Supports previews for photos, music, videos, Gmail, PDF, etc.
- Show search results using thumbnails or a list
- Supports search Chrome extension
- \* At least 2GB RAM required

## Surveillance Station

- Supports over 3,000 IP cameras
- Includes 4 free camera licenses, up to 40 camera channels by purchasing additional licenses3
- Instant playback to check recent events
- Visual aid by e-map
- Playback and speed control using the shuttle bar
- Video preview on playback timeline
- Intelligent video analytics (IVA) for advanced video searching
- Surveillance client for Mac
- Mobile surveillance app: Vmobile (iOS and Android)
- Mobile recording app: Vcam (iOS and Android)

## VPN Server

- Secure remote access: PPTP - L2TP/IPsec & OpenVPN VPN services
- Max number of clients: 45

## VPN Client

- Supported VPN protocols: PPTP and OpenVPN services
- PPTP Authentication: PAP, CHAP, MS-CHAP, MS-CHAPv2
- PPTP Encryption: None, AES 40/128 bit, AES 256 bit
- OpenVPN Encryption: None, AES 40/128 bit, AES 256 bit
- Transmission package monitor
- OpenVPN port control
- OpenVPN link compression

## DLNA Server

- Supports DLNA/UPnP TVs and players such as PlayStation 4 and Xbox One
- Support CUE indexing file for APE, FLAC audio format.
- Video and Audio On-the-fly Transcoding3

## App Center

- Over 100 official and community software add-ons

- 1 Not all IPv6 services are supported.
- 2 Data encryption functions may be unavailable in accordance with the legislative restrictions of some countries.
- 3 This feature may vary by model.
- 4 DRM-protected content is not supported.

Designs and specifications are subject to change without notice.