

All-in-One Network Attached Storage for Home & SOHO Users

- Featured QTS 4.0 operating system
- Store, share, and back up valuable data



Simple yet Powerful NAS

The new TS-x20 and TS-x21 series of NAS, running on the industry-leading QTS 4.0 operating system, provides the best in class network storage with rich applications for performance demanding home and SOHO users.



QNAP QTS 4.0

Intuitive, innovative operating system featuring synchronization capabilities, multi-window and easy management.

Innovative Desktop

The QTS 4.0's intelligent desktop offers an intuitive, sleek, and easy-to-follow graphic user interface, simplifying the whole Turbo NAS experience.

Multi-window, multi-tasking

- The QTS 4.0 allows you to open multiple application windows and run multiple tasks simultaneously.
- Application windows can be minimized to the Toolbar which allows you to see an overview of the opened applications and switch among the running applications.
- Multi-window capabilities dramatically increase work efficiency and file operations.

Personalize desktop wallpaper

Choose your favorite wallpaper from the default artwork or upload your own photos.





Intelligent Desktop

Main menu

All your applications, system preferences, and additional apps installed from the App Center are neatly presented for you to find your desired app quickly. Drag and drop frequently used icons to the desktop as shortcuts for quick access.

Folders

Drag the icons from the Main Menu or the Control Panel to the desktop to create a shortcut. Drag one of the icons onto another to create a folder shortcut which reduces clutter on your QTS desktop.

Multiple desktops

This extended desktop workspace is designed specifically to improve your productivity. You can separate the apps onto different desktops according to their nature or genre and switch between the desktops freely. For example, you can group frequently used icons on the first desktop, and place favorite music folders on the second or third.





Smart toolbar

External device

Access the connected devices, such as other storage devices and printers, and eject the devices safely with only one click

Q Quick search

Quickly search the system settings and QTS Help content using relevant keywords as search results are displayed instantaneously while you type.

i Event notifications

Displays constant updates of system information such as system warnings and other error messages.

? Online resources

A quick view of available resources offered to help you access knowledge and support whenever needed, such as Quick Start, QTS Help, Tutorials, QNAP Wiki, QNAP Forum, Customer Service, and Feedback.

Background tasks

Displays all the active tasks and scheduled jobs performed in the background.

Smart dashboard

In one click the smart dashboard presents all important system information in a single panel: including system health, hard drives (HDD) health, resource monitoring, hardware information, storage status, system updates and schedules. Drag any status to the desktop for constant monitoring.

Store, Back up and Share Data

The QNAP Turbo NAS works as a centralized storage to securely save and back up all files and digital contents. Sharing your files, or digital contents with friends and family or data access from anywhere at any time is now much easier.



File Storage & Data Sharing

The QNAP NAS offers a large storage capacity with quick data access across Windows, Mac, and Linux platforms. It also provides advanced RAID configurations and management to reduce the risk of data loss.



File Station

Upload, download and manage files anywhere with a web browser. File extraction, folder creation, smart search files or folders are functioned over the Internet. Preview your photos and videos through any web browsers too!



FTP Server

Establish an FTP server with the Turbo NAS and share large files conveniently with family and friends.

Complete Backup Solution

The Turbo NAS performs as an ideal backup center for valuable data. External storage devices, remote servers and third-party cloud backup services are also supported for extra data backup from the NAS.

Client backup

The QNAP Turbo NAS supports NetBak Replicator, Time Machine and more third party backup software.

External Backup

Every QNAP Turbo NAS comes with a "one touch data copy button" for direct data backup between the Turbo NAS and external USB/eSATA storage devices.

Remote Backup

- Back up the Turbo NAS data to another remote Turbo NAS or an FTP server on a real-time basis via QNAP's Real-time Remote Replication (RTRR) service.
- Back up the Turbo NAS data to a standard rsync server on scheduled basis via the rsync protocol.

Cloud Backup

 Real-time data backup from the Turbo NAS to online cloud storage services: Amazon S3, ElephantDrive, Symform, or Google Drive.

Data Security

Having a sound centralized storage to detect and guard personal data is crucial. Rest easy with the QNAP NAS keeping data protected from data corruption and unauthorized users. Each Turbo NAS comes with the latest antivirus protection and IP-based blocking to make your NAS a safe place for your data.



Smart Detection

The integrated antivirus solution for the Turbo NAS ensures a NAS environment clean from viruses. By offering detection against the latest viruses, malware, worms, and Trojan horses through the continuous free virus database updates your files will always be safe from malicious virus attacks. With the smart antivirus detection, multiple scan tasks with custom folder selections, scheduled scanning and email notifications are included for easy antivirus management.



Network Access Protection

With the IP-based blocking, you can effectively set up a list to screen unauthorized users from accessing the Turbo NAS. Once an IP address is denied, the user will be denied access to the Turbo NAS regardless of the connection ports it uses.

Always Connected

From mobile phones to your personal computers, your files are always within reach.



myQNAPcloud service

Create your own personal cloud with the free myQNAPcloud service. The Turbo NAS creates your own unique URL and in a few easy steps, you will be able to access your files on any web browser.



DDNS/Cloud Portal

By using a DDNS service, you can access the Turbo NAS with a unique domain name and publish your services to the Cloud Portal.



VPN

The VPN service allows you to access the Turbo NAS on the same local network from the Internet and easily manage the files by drag-and-drop through the file browser.



myQNAPcloud Connect

myQNAPcloud Connect is a VPN connection utility specialized for the QNAP Turbo NAS. It can establish a secure VPN connection with the remote NAS over the Internet and enable you to access the NAS as if it were in the network. You can also mount the folders of the remote NAS as the local network drive, allowing you to access other NAS located at the same network.



Synchronization

With the Qsync utility, you can easily synchronize files across different devices and share file across groups and communities. You can share photos and music with friends easier, and synchronize files at work flexibly.



Qsync

Your Turbo NAS becomes a safe data center for file synchronization with huge storage. You can upload photos from mobile or tablet devices to the Turbo NAS, and access the same files on any computer, laptop or mobile device linked to the Turbo NAS for the most up to date files. Qsync provides multiple ways of file synchronization and group file sharing, greatly enhancing the flexibility of collaboration.

Sync files across devices

Whenever you add, edit, delete or rename a file on one computer, the change applies to all others linked with the Turbo NAS, so you have exactly identical contents on all your devices.

Save storage

Remove the files on one computer without affecting the files stored on other devices linked with the Turbo NAS. Even when someone updates the same files from another computer, Qsync will ensure that you will always have the latest files.

Sync selective sub-folders

When synchronizing files, you can choose to only sync specific subfolders within the Qsync folder. Great if your computers have limited storage!



Share team folders with different groups of people

Your life is connected with different groups of people. Create subfolders within the Qsync folder, and share each with different groups of Turbo NAS users as a file exchange center. Everyone in the same subfolder is always kept up-to-date with the latest version of the files.

Quickly share files with download links

You can create download links to share files with others. This greatly reduces the time in creating user account and password for users just to share less-important documents.

Mobility and Remote Access

QNAP provides various mobile apps for you to access the Turbo NAS on the go.



Qfile

Browse and manage all your files stored on your Turbo NAS with iOS° or AndroidTM mobile devices.

Manage multiple NAS

You can manage as many Turbo NAS units as you want by Qfile and conveniently connect to any of them in the login page.

Access and share files

Create a download link to share a file via email or SMS, or simply email the file as attachment. You can also view Qsync file list and download files while being offline.

Auto-upload from photo gallery

Enable the auto-upload function will let your pictures and photo albums automatically sync to your Turbo NAS and works as a real-time backup of your precious photos.

Offline reading mode

Once a file is downloaded to Qfile from the Turbo NAS, you can view and enjoy your documents, photos and music without Internet access.

Easy file management

Qfile displays thumbnails on the list for you to easily identify the file type at a glance. You can move, copy, rename or delete files on the Turbo NAS, all with your mobile device.



VMobile

Monitor your IP cameras managed by the Turbo NAS or the VioStor NVR (Network Video Recorder) on the go.

Monitoring on the go

Access your video surveillance system and monitor the surveillance channels anytime and anywhere.

Multiple advanced surveillance features

- Live view
- Adjustable display mode
- PTZ (Pan-Tilt-Zoom) and preset position control
- Instant notification of alarm events
- Video snapshot
- Video playback
- Video search by date and time

Qmanager

Manage and monitor your Turbo NAS with your iOS $^\circ$ or Android $^{\text{TM}}$ devices.

Monitor system and connection status

Qmanager lets you monitor as the CPU usage, memory usage, system event info, and active users. You can also remotely check the connection status or logged in users to prevent unauthorized activities.

Manage system services

Remotely restart or shut down your Turbo NAS, and use Qmanager to turn the application services on and off. You can use Wake on LAN to power on your NAS. It only takes a single click and you are done!

Manage download/backup tasks

Remotely check the Download Station and backup task information, pause or run downloads and backup tasks.



QNAP mobile apps are available at Google Play Store and the Apple App Store.

Surveillance and Security



Surveillance Station Pro

The Surveillance Station Pro allows users to easily set up a home security system and flexibly choose the IP cameras for live view monitoring, recording, and playback. The live view provides instant video images from the monitored areas. Event

notifications and fast video retrieval also offered. iOS® or Android™ users can install the VMobile app to monitor the surveillance channels anytime and anywhere.





Your Ultimate Home Entertainment Center

With the Turbo NAS, you can view and share photos, music, videos on the web, enjoy them on large screen TV with full HD quality via DLNA, and AirPlay or directly download the contents from the Internet.

On the Computer





Photo Station

The QTS 4.0 Photo Station helps manage your precious photo collections intuitively.

· Easy import

You can easily import the photos stored in PC, external drive and network shares to the Turbo NAS all at once.

Easy arranging

The intuitive "drag-and-drop" feature allows you to arrange photos into albums or slideshows in seconds.

Get organized

You can auto-sort photos in a timeline format and tag your friends in the photos which makes searching photos more effective.

· Easy to share

Share public albums with friends on social networking sites such as Facebook, Google+, Twitter, and Pinterest.

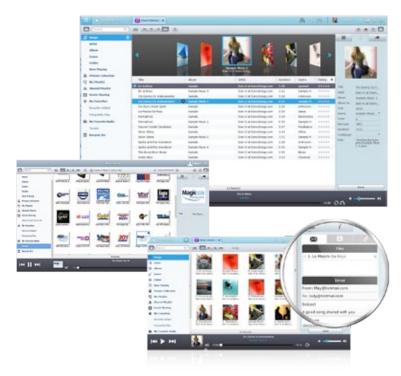
Smart import

Simply connect your digital camera to the USB port on the front of the Turbo NAS and all your photos and videos will automatically be imported in a newly created folder named "Smart Import".

Geotag photos

Pinpoint the location of photos on Google maps so you can identify where the photos were taken.







The QTS 4.0 Music Station is your personal music center in the cloud. All your music collection on the Turbo NAS is well organized and easily accessed through the web browser.

· Manage your music collections intuitively

Choose to display the music in thumbnails, detailed list, album, and cover flow mode.

· Sing along with lyrics

Enter song lyrics and sing along while listening to your music collection from the Turbo NAS!

Internet Radio

The built-in online radio stations such as music, talk shows, sport radio, and more are free for you to enjoy.

Share your music

Share your music by drag-and-drop, and enjoy the flexibility of being able to share the songs via email, a download link, or social networking sites such as Facebook, Google+, and Twitter.



The Video Station is great for archiving and playing your personal video collection online.

Build a personal video website

Just upload your video collection, and sit back to enjoy the clips anywhere. To add more fun, you can share your video collection with family or friends via social networking sites such as Facebook, Twitter, and Google+. Visitors can leave comments on your videos to keep the fun going.





From DLNA to AirPlay, simply choose the way you prefer to stream your TV, sit back, relax and enjoy your high definition video collections on a big-screen TV.





TV Station

Just insert the DVB-T mode USB dongle* into your Turbo NAS at home, and you can enjoy the live TV shows immediately from anywhere via a web browser

* Available TV channels may vary by location and be subject to change.



DLNA Media Server

You can use DLNA-compatible devices such as TV, HDTV, Smart TV sets, Sony® PS3, Microsoft® Xbox 360 and Hi-Fi system to enjoy HD quality videos stored on the Turbo NAS.



AirPlay

The Qfile mobile app supports AirPlay. You can use the Qfile app on an iOS device to browse the videos and photos stored on the Turbo NAS and play them on the TV via AirPlayenabled devices such as Apple TV.

QAirplay

Available in the App Center, QAirplay allows you to steam your media content directly on TV via AirPlay-enabled devices such as Apple TV. The media contents are streaming on Apple TV, bypassing your mobile device, thus saves the energy of your mobile device.



iTunes Server

Stream the MP3 music on the NAS to your computers on your home network and listen to the music by iTunes over wired or wireless network connection.

Download and more...



Download Station

• Your 24/7 download center

Typical Internet downloading requires the computers being turned on throughout the process, and it is usually energy-consuming. The Download Station serves as a non-stop download center. Once you finish managing the download tasks, just turn off the computer. The download tasks will keep going until they are finished.

• Wide range of download types for HD videos

You can conveniently search and download high definition movies or films to enjoy with the Download Station that supports BT, PT (Private Trackers), Magnet link, HTTP/HTTPS and FTP/FTPS download. It also supports RSS download (broadcatching) for automatic BT download.



DJ Station

Presents all your music creation on the air! You can easily share the music on Facebook.



HappyGet II

Easily back up online videos

HappyGet is a third-party app available in the App Center and is supported within the Chrome web browser. It lets you easily back up YouTube, Vimeo videos or Facebook photos to the Turbo NAS.



App Center

Expand the possibilities of your Turbo NAS with add-on apps.

· Powerful, organized, rich-in-content

The new App Center makes it easy to find and install all sorts of apps and also acts as a central platform to manage and update your installed apps.

One click install

Find what you need and install it immediately with just one click

Turbo NAS HOME Series













	TS-421	TS-420	TS-221	TS-220	TS-121	TS-120
CPU	Marvell 2.0GHz	Marvell 1.6GHz	Marvell 2.0GHz	Marvell 1.6GHz	Marvell 2.0GHz	Marvell 1.6GHz
RAM	1GB DDR3	512MB DDR 3	1GB DDR3	512MB DDR3	1GB DDR3	512MB DDR3
No. of Internal Hard ⁽¹⁾ Drives	4 x SATA II	4 x SATA II	2 x SATA II	2 x SATA II	1 x SATA II	1 x SATA II
Compatible Hard Drives	3.5-inch/2.5-inch	3.5-inch/2.5-inch	3.5-inch/2.5-inch	3.5-inch/2.5-inch	3.5-inch/2.5-inch	3.5-inch/2.5-inch
Maximum Raw Capacity	16TB	16TB	8TB	8TB	4TB	4TB
Swappable Hard Drive	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes	Yes
USB 3.0	2	2	2	2	2	2
USB 2.0	2	2	1	1	1	1
eSATA	2	2	2	2	1	1
10/100/1000 Mbps Ethernet	2	2	1	1	1	1
Wake on LAN	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions (HxWxD)mm	177 x 180 x 235	177 x 180 x 235	150 x 102 x 216	168.5 x 102 x 225	150 x 67 x 216	168.5 x 73 x 225
Weight (Net/Gross) kg	3/4.6	3/4.6	1.74/2.92	1.28/2.32	1.06/1.86	1.04/1.8
RAID Support	Single Disk, JBOD, RAID 0, 1, 5, 6, 10, 5+ Hot Spare		Single Disk, JBOD, RAID 0, 1		Single Disk, Q-RAID 1	
External Power Adapter	External power adaptor, 120W Input: 100-240V	External power adaptor, 120W Input: 100-240V	External power adaptor, 60W Input: 100-240V	External power adaptor, 60W Input: 100-240V	External power adaptor, 36W Input: 100-240V	External power adaptor, 36W Input: 100-240V
Smart Fan	1 (9cm)	1 (9cm)	1 (7cm)	1 (7cm)	1 (5cm)	1 (5cm)
Power Consumption ⁽²⁾ (Sleep/Operation)	Sleep mode: 13W In operation: 31W (with 4 x 500GB HDD installed)	Sleep mode: 13W In operation: 26W (with 4 x 500GB HDD installed)	Sleep mode: 8W In operation: 19W (with 2 x 500GB HDD installed)	Sleep mode: 7W In operation: 16W (with 2 x 500GB HDD installed)	Sleep mode: 5W In operation: 12W (with 1 x 500GB HDD installed)	Sleep mode: 4W In operation: 7W (with 1 x 500GB HDD installed)
Transfer Performance ⁽²⁾ (Read/Write MB/Sec)	212.5/148.0	212.1/145.3	107.9/77.5	102.9/71.4	103.8/77.2	103.3/65.1
Max No. of Users	4096	4096	2048	2048	2048	2048
Max No. of User Groups	512	512	256	256	256	256
Max No. of Network Shares	512	512	256	256	256	256
Max No. of Concurrent Connections	256	256	256	256	256	256
Max No. of IP Cameras	8	8	8	8	8	8

(1) The standard system is shipped without hard drives. Please visit www.qnap.com for the official hard drive compatibility list. (2) Actual results may vary due to environment factors and other variables. All specifications are subject to change without notice. For more QNAP product information, please visit www.qnap.com

QTS 4.0 Home NAS Applications

Operating System

Supported Clients

- Windows XP, Vista, Windows 7 (32/64-bit), Windows 8 (32/64-bit), Windows Server 2003/2008 R2/2012
- Apple Mac OS X
- · Linux & UNIX

Supported Browsers

- Microsoft Internet Explorer 8, 9, 10
- · Mozilla Firefox 8+
- Apple Safari 4+
- · Google Chrome

File System

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

Networking

- TCP/IP (IPv4 & IPv6: Dual Stack)
- DHCP Client, DHCP Server
- Protocols: CIFS/SMB, AFP (v3.3), NFS(v3), FTP, FTPS, SFTP, TFTP, HTTP(S), Telnet,
- SSH, iSCSI, SNMP, SMTP, and SMSC TFTP Server with PXE Booting
- UPnP & Bonjour Discovery
- USB Wi-Fi Adapter Support

Security

- IP Filter and Policy-based Automatic IP Blocking
- Network Access Protection with Auto blocking: SSH, Telnet, HTTP(S), FTP, CIFS/
- Encrypted Access: HTTPS, FTP with SSL/ TLS (Explicit), SSH/SFTP (admin only), Instant Alert via Email, SMS, Beep, and LCD Panel*

Disk Management

- Online RAID Capacity Expansion and
- Online RAID Level Migration
 Bad Block Scan and Hard Drive S.M.A.R.T.
- · RAID Recovery
- Bitmap Support

Power Management

- Wake on LAN
- · Internal Hard Drive Standby Mode
- · Scheduled Power on/off (Max 15 Settings)

QNAP Systems, Inc.

- Automatic Power on after Power Recovery
 USB and Network UPS Support with SNMR Management

Access Right Management

- Batch Users Creation Import/Export Users
- · User Quota Management
- Subfolder Permissions Support for CIFS/ SMB/AFP, FTP
- · Application Privilege

mvONAPcloud Service

- Private Cloud Storage and Sharing
- Free Host Name Registration (DDNS)
 Auto Router Configuration (via UPnP)
- mvONAPcloud Connect for easy VPN connection (Windows VPN Utility)

Sync files among multiple devices through the NAS

- · Option for not removing any files on the NAS during sync
- Selective sync Share securely with SSL
- Share team folders
- Share file links by email
- Upload photos or videos to Qsync folder
- automatically via Qfile Support restore files from network recycle bin
- Support file name conflict policyOption for filter settings
- Privilege control for Qsync users
- Supports Windows & Mac OS

Web Administration

- Smart Fan Control
- Resource Monitor
- Automatic Cleanup File Type Filter
- Comprehensive Logs (Events & Connection)
- Firmware Live Update
- System Settings Backup and Restore Restore to Factory Default
- · Mobile App Qmanager for Remote Monitoring

File Station

- File Sharing across Windows, Mac, and Linux/UNIX
- Windows ACL
- · Advanced Folder Permission for SMB, AFP,
- · Shared Folder Aggregation (CIFS/SMB)File

- Supports ISO Mounting (Up to 256 ISO Files) File Viewing via Google Doc
- Create and Send Download Links for Public File Sharing with Expiration Time
- File drag-n-drop via Chrome and Firefox browsers
- Photo, Music, and Video Preview and Playback with Transcoding
- File Compression (ZIP or 7z) Advanced Search

and Password Protection

Mobile App: Ofile for File Browsing and

FTP Server

- FTP over SSL/TLS (Explicit)
- Max No. of Concurrent Connections: 256
- FXP Supported Passive FTP Port Range Control
- FTP Bandwidth & Connection Control
- Unicode Support

Backup Station

- Remote Replication Server (over Rsync)
- Real-time Remote Replication (RTRR) to another QNAP NAS or FTP Server
- Works as Both RTRR Server & Client with Bandwidth Control Real-time & Scheduled Backup
- Encryption, Compression, File Filter, and Transfer Rate Limitation
- Encrypted Replication between QNAP NAS
- · Desktop Backup by QNAP NetBak Replicator
- for Windows Apple Time Machine Support with Backup Data Backup to Multiple External Storage
- Data Backup to Cloud Storage (Amazon S3,
- ElephantDrive, Symform, and Google Drive) Third Party Backup Software Support: Veeam Backup & Replication, Acronis True Image, ARCserve Backup, EMC Retrospect, Symantec Backup Exec, LaCie SilverKeeper,

Print Server

- Max No. of Printers: 3
- Supports Internet Printing Protocol
- Print Job Display and Management IP-based and Domain Name-based Privilege Control
- Supports Apple Bonjour Printing

Surveillance Station Pro

- Supports over 1,400 IP cameras
- Includes 1 Free Camera License
- Up to 16 Camera Channels via Additional License Purchase
- Intelligent Video Analytics (IVA) for Advanced Video Search
- Visual Aid by E-map Surveillance Client for Mac
- Mobile App: VMobile (iOS and Android)

iTunes Server

- Audio and Video Sharing for Windows & Mac iTunes (MP3, AIFF, WAV, MPEG-4,
- AAC, and M4A)

- Photo Station
- Intuitive Drag & Drop UI Design Organize Photos in a Timeline
- utomatically Photo Tagging by Text, Color Label, and
- Rating for Quick Search Slideshow with Background Music and
- Different Transition Effects
- Animated Thumbnails for Videos
- Online Photo Editing by PixIr Editor Geotagging Photos with Google Maps Slideshow Sharing through Email, Sharing
- Slideshow Publishing to Social Websites (Facebook, Google+, Twitter, Pinterest, Weibo, Plurk, and Renren)
- Supported File Formats: Photo: JPG/JPEG, GIF, PNG, BMP, RAW Video: MP4 (H.264 + AAC)

Music Station

- Supported Audio Formats MP3, OGG, WAV, AIFF, AU, FLAC, M4A,
- APE, AAC Local Playback with USB Speakers/Sound
- Card Music Streaming from DLNA/UPnP Media
- Servers Internet Radio (MP3)
- · Music Alarm (up to 8 Alarms)

Video Station

- Web Video Sharing
- Video Categorization and Transcoding

 Supported format: mv, avi, divx, 3gp, mov, mpeg, mpg, xvid, flv, asf, rm, dat, mp4
- · Video Upload

- Up to 2048MB in Size
- Up to 320 Minutes in Length
- Batch Upload (Max 50 Files) Publish Videos to Facebook, Twitter, and

Google+

- **TV Station** DVB-T Digital TV Live View, Recording, and
- Playback
- Supports up to 2 USB TV Tuners* Electronic Programming Guide (EPG) with Scheduled Recording

Note: The availability of DVB-T broadcasting and EPG may vary depending on geographic locations

- **Download Station** · PC-less BT, FTP, and HTTP Download (up
- to 500 Tasks) BT Download with Magnet Link and PT
- Support
 HTTP/FTP Download
- RapidShare Download Support Website Subscription Service: YouTube
- QNAP Download Management Software: QGet
- For Both Windows & Mac OS Manage the Download Tasks of Multiple QNAP NAS Remotely over LAN or WAN

DJ Station

- · Live Web Broadcast of Music Playlists Music Sharing on Facebook
- Antivirus Protection against Viruses, Trojans, and Other Threats
 Free Virus Databases Update on Manual or
- Scheduled Basis
- · Email Notification upon Task Completion or Virus Detection

Quarantines or Deletes Infected Files

applications

- **APP Center**
- Offers more than 80 install-on-demand apps Live update supported QDK document offered to make your own
- *This feature may vary according to

Design and specifications are subject to change without notice.