



Company Profile

2024

Stay
one
step
ahead



- About QNAP
- Product Applications
- Full QNAP Product Lineup
- Operational Sustainability
- Global Businesses Deployment
- Manufacturing and Quality Control



**Stay
one
step
ahead**

About QNAP



The name of QNAP originates from “Quality Network Appliance Provider”. We are committed to developing software applications, dedicated to optimizing hardware design, and have established our own production lines to offer comprehensive and cutting-edge technological solutions.

- QNAP was established in 2004
- We have 11 subsidiaries / 7 offices in 25 countries around the world to serve our customers
- More than 1300 fantastic employees work at worldwide locations of QNAP
- Over 600 engineers dedicated to R&D and innovation



Values

Smart innovation that integrates storage, networking, and video communication to redefine modern IT solutions

Vision

Software-defined architectures to establish future-proof digital information flow

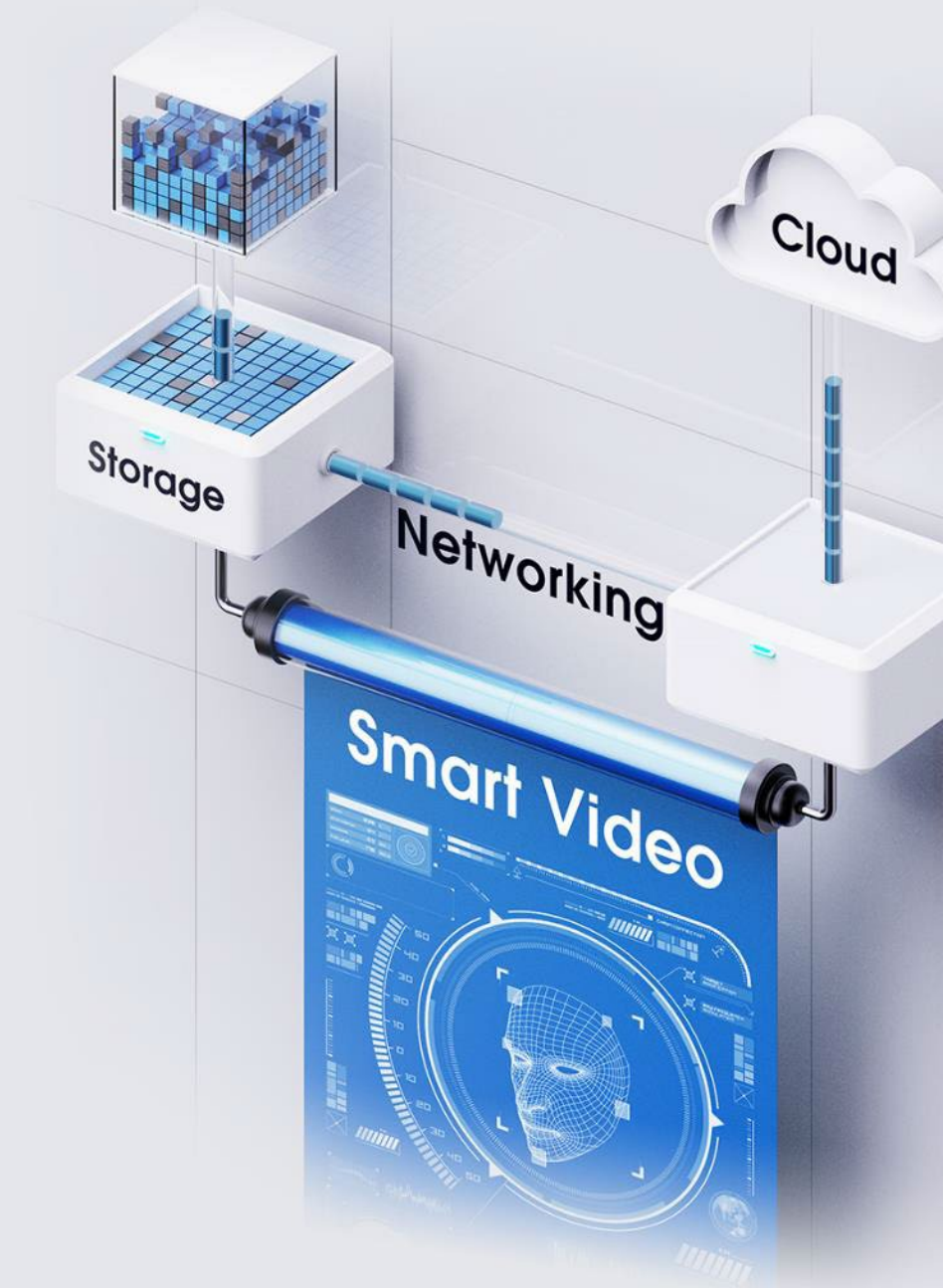
Mission

Drive enterprise digital transformation with innovative information technology



Core Competency

- Virtualized Storage and Network Communication
- Integrated Hybrid Cloud and AI Value-added Information Technology
- In-house Production foundation and Full-process Production Lines
- Vertical Market Deployment for High-Penetration Businesses
- Local Before-and-After Sales Services from Worldwide Subsidiaries



Yearbook

QNAP



QNAP Headquarters
Established in Taipei



NL Warehouse
Established in Bleiswijk,
responsible for deliveries to
European countries



JP office
Established in Tokyo,
offering before-and-after
sales services

TH office: Established in Bangkok, Thailand,
offering before-and-after sales services

UK office: Established in Swindon, UK office and
warehouse offer services to customers in UK &
Ireland

HK office: Established in Kowloon Bay, offering
before-and-after sales services to customers in
Hong Kong and Macau

QKR: Established in
Seoul, Republic of
Korea, offering Pre-
Sales and Post Sales
services.

2004



2009



2012



2015



2016



2017



2018



2022



2024



US office/Warehouse
Established in Pomona,
California, mainly offering
services to customers in the
Americas



CA office: Established in Markham,
Canada, offering before and after sales
services

DE office: Established in Willich,
Germany, the office and warehouse offers
high-end models to European customers

IT office: Established in Rome, Italy,
offering before-and-after sales services

QIN: Established in Bengaluru,
India, with an R&D and after-sales
service center



European Headquarters: Based in
Willich, Germany, the warehouse and
service center covers European
customers



Awards

2018 Red Dot Award:
Product Design



TVS-951X
9-bay 10GbE Multimedia
NAS

CES 2019
Innovation Awards



HS-453DX
Fanless NAS

2021 Red Dot Award:
Innovative
Product Design



QGD-3014-16PT
Desktop Smart Edge PoE
Switch



2022 Red Dot Award:
Product Design



TS-h1290FX
Desktop 12-bay All-Flash NAS

2023 TechRadar Pro
Picks Award Winner
for CES 2023



TS-464
Quad-core dual-port
2.5GbE NAS

2024 TechRadar Pro
Picks Award for CES
2024



TVS-h874T
Thunderbolt™ 4 NAS.



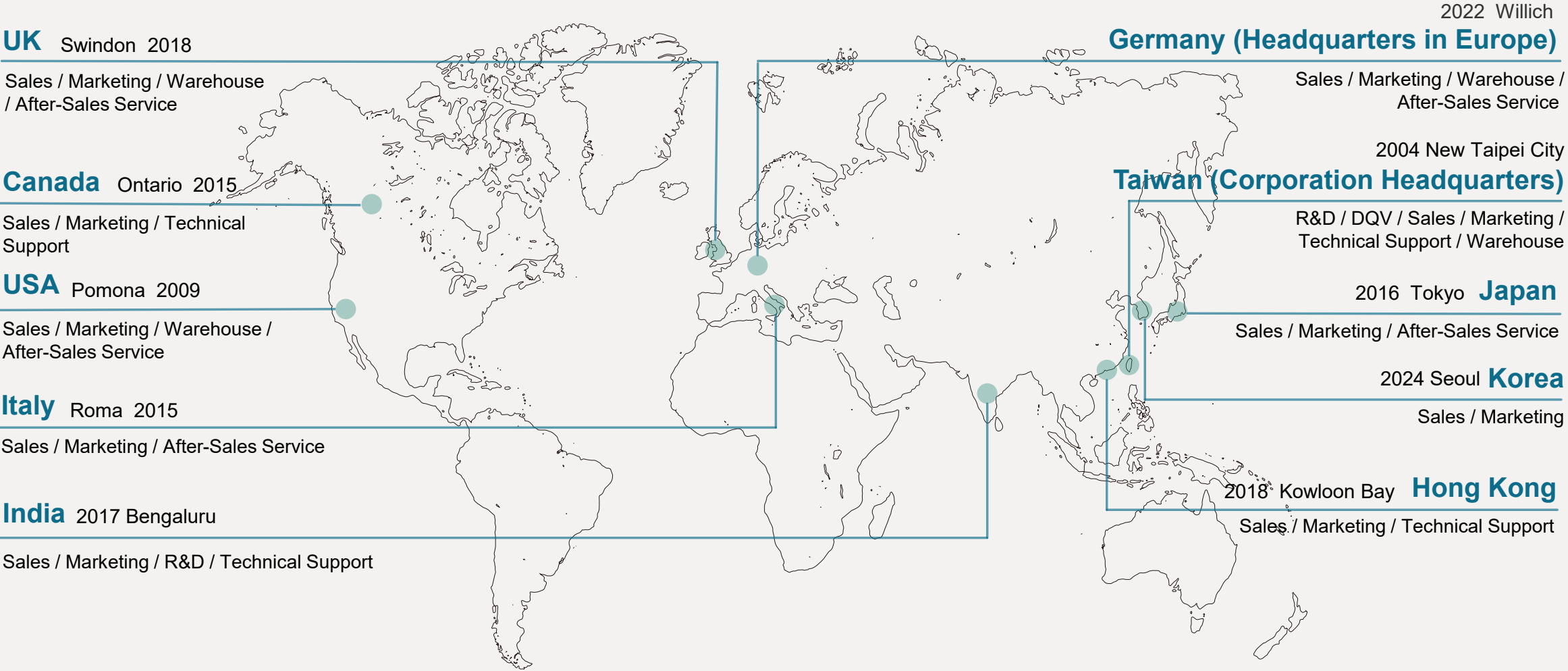
2024 TechRadar Pro Picks
Award for CES 2024

TBS-h574TX Thunderbolt™ 4 All-Flash NASbook



Worldwide Deployment of Subsidiaries

The deployment of QNAP subsidiaries around the world is shown as follows



Corporate Leadership



Chairman of QNAP

Meiji Chang



General Manager of QNAP

Jack Liou



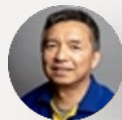
Headquarter

Banson Chang
Sales VP



QUS

James Wu
Regional VP
of US



QCA

Siimon Tsai
Regional VP
of Canada



QDE

Dale Chen
Regional VP
in Europe



QIT

Tony Chou
Regional
Manager of
Southern Europe



QJP

Jack Yang
Regional VP of
Japan & Korea



QUK

Posen Wang
Regional
Manager of UK

Major Customers

Agents

INGRAM
MICRO

DICKER
DATA

TechData

ALSO

NCpt

BREVI

**COMPUTER
GROSS**

TEKWIND

CMS
distribution

FN
konzepte

esprinet

Major Customers

eShop

PChome ONLINE 24h 購物

MOMO 購物網

amazon



amazon.de



cyberport

cool blue

amazon.co.uk
amazon.co.jp

ALTERNATE

notebooksbilliger.de

SPAN.COM

mwave[®]

Major Customers

Retailer



Major Customers

Reseller



Xizhi Headquarters

Number of Employees

456

Scope of Business

- Administration
- General Affairs
- Finance
- Legal
- Information
- Sales and Marketing
- Product Development
- R&D
- Testing
- Technical Support
- Logistics



Xinsheng Office

Number of Employees

118

Scope of Business

Product Development / R&D



Hsinchu Office

Number of Employees

98

Scope of Business

Product Development / R&D



Taichung Office

Number of Employees

18

Scope of Business

Product Development / R&D



Kaohsiung Office

Number of Employees

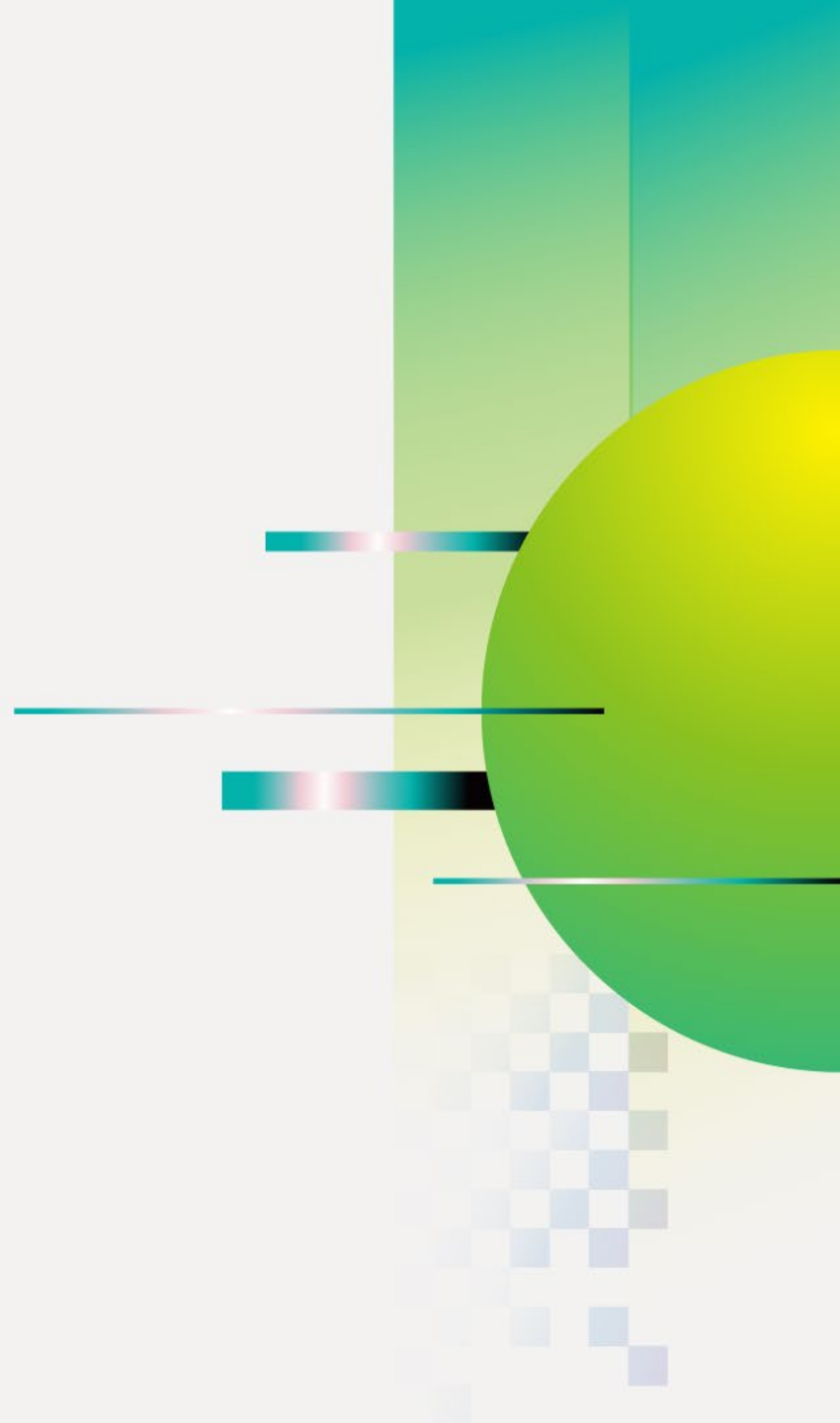
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Scope of Business

Product Development / R&D



Product Applications



Information Engineering

- IT Storage Architecture
- Data Backup and Recovery
- Infrastructure as a Service (IaaS)
- Workspace Collaboration
- Network Infrastructure



Video Surveillance & Teleconferencing

- Live Stream and Surveillance
- AI-powered Surveillance Event Search
- High-availability Recording Takeover
- HD Wireless Projection
- Multipoint Video Conference System



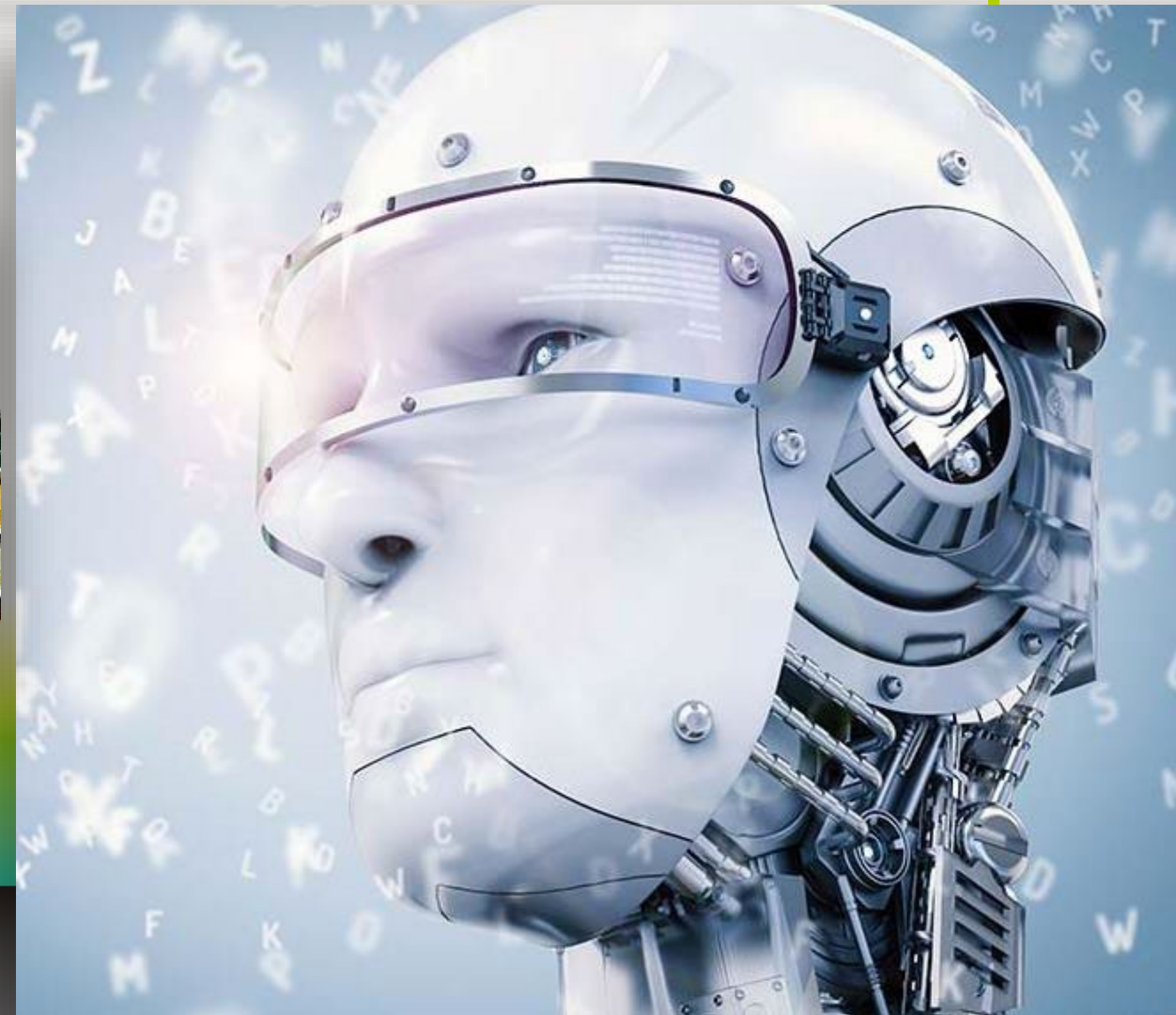
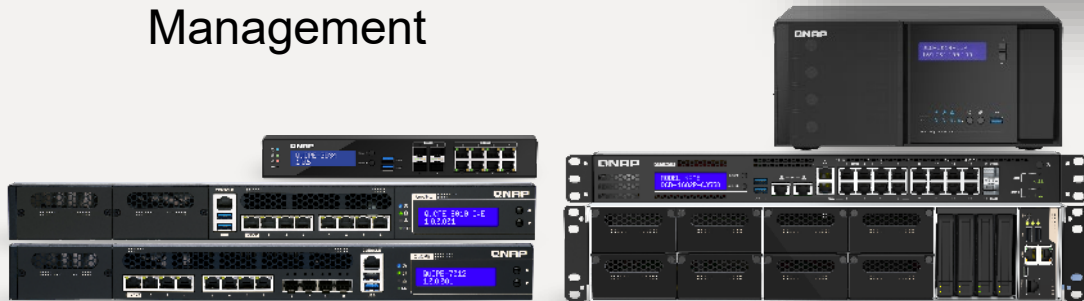
Content Creator & Video Editing

- 4K High Resolution Online Editing
- Thunderbolt High-speed Transmission
- Petabyte-scale File Storage
- Integrates Non-linear Editing Applications
- Direct-attached Storage



Retail & Department Stores

- AI Smart Retail Data Analysis
- Facial Recognition Tracking with Non-overlapping Camera Views
- Heat maps of People Flow
- Computes Visit Duration and Conversion
- Centralized Cloud Management



Healthcare

- Storage and Backup of Confidential Data
- Machine Learning Model for Medical Imaging
- Extraction of Medical Journals and Documents
- Telemedicine and Interaction
- DICOM Integration



Education

- Multipoint Data Sharing and Synchronization
- FTP File Management System
- Small form factor Classroom Storage Device
- Remote Learning and Interaction
- Campus Safety Surveillance

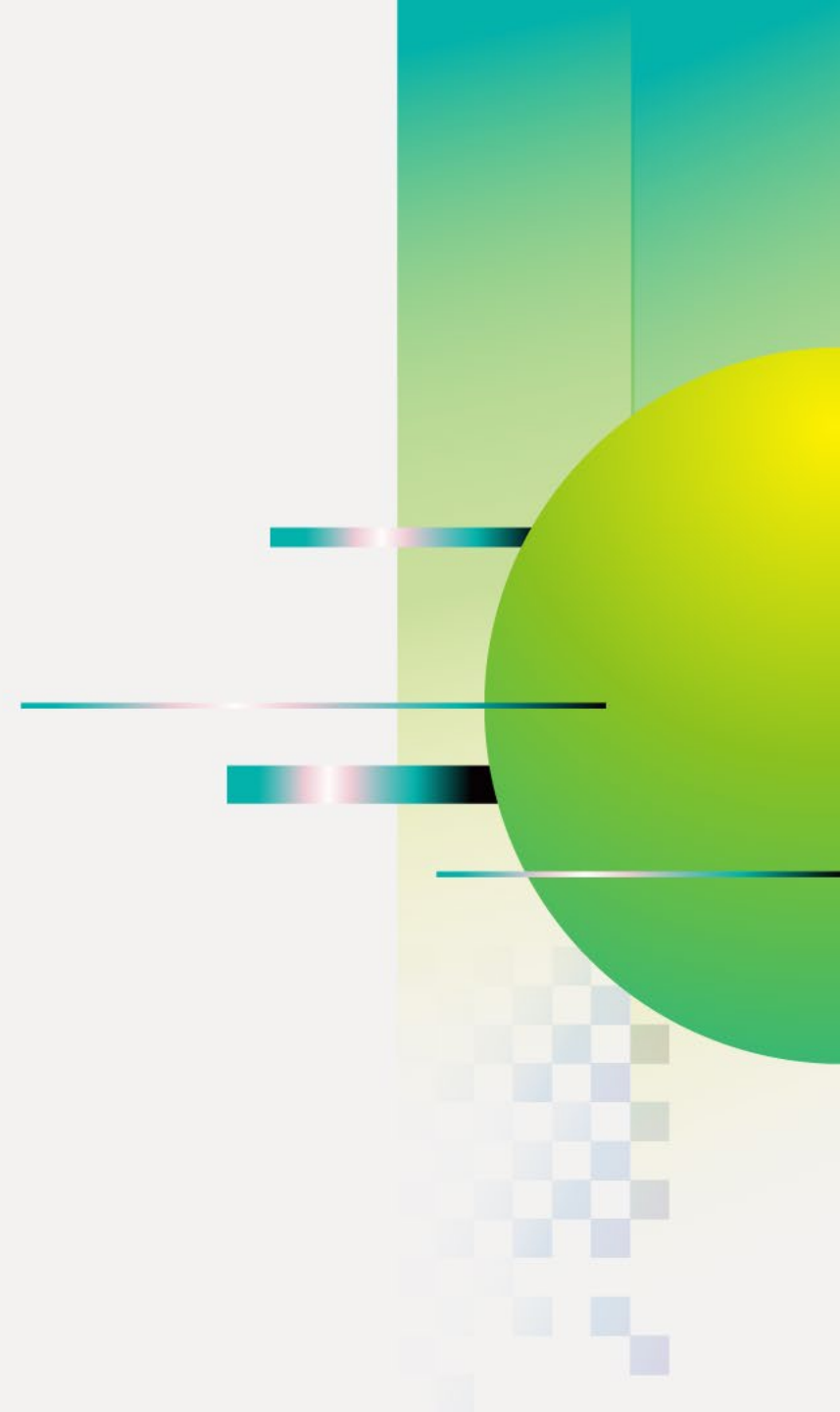


Industrial Manufacturing

- NAS with Wide-temperature and Wide-voltage Power Supply
- Network Switch with Industrial Network Management
- Objective Ransomware Information Defensive System
- PoE++ / PoE+ Power over Ethernet Switch
- IoT Private Cloud Platform



Full QNAP Product Lineup



All-flash storage. Ultimate performance.

QNAP's All-Flash Storage Solutions feature ZFS data reduction and SSD optimization technologies to maximize SSD performance and lifespan. Perfect for keeping your business agile and efficient!



Flash-optimized storage

Write amplification is an undesirable effect of SSDs, bringing challenges to flash memory performance and endurance. QNAP's exclusive Write Coalescing algorithm is engineered for flash optimization by transforming all random writes to sequential writes along with reduced I/O. It not only effectively increases random write performance for all-flash environments but can also improve SSD lifespans.



Quality of service

Quality of Service helps optimize resource allocation based on I/O and bandwidth for LUNs/shared folders at different service levels. QoS prioritizes the performance of business-critical applications that run concurrently with non-critical applications as well as reducing "noisy neighbor" problems.



Inline data compression and compaction

Inline data compression shrinks file sizes to lower storage I/O workloads for improved performance. It also helps optimize storage utilization of SSD over-provisioning.



SSD TRIM

While almost all SSDs have shown consistent write performance degradation, TRIM helps overcome write performance drops. SSD TRIM allows the system to inform SSDs to delete unneeded data blocks. Deletion tasks are processed during system idle times, meaning it does not have to wait for when new data is written to the block.

High-performance ZFS-based OS with greater reliability

QNAP's QuTS hero operating system combines the app-based QTS with a 128-bit ZFS file system to provide flexible storage management, comprehensive data protection and optimized performance to meet the needs of business-critical applications.



ZFS

Efficient data reduction technology

Inline data deduplication is block-based and runs before data is written to storage. This greatly optimizes storage usage while significantly decreasing storage capacity requirements. Coupled with inline compression and inline compaction technologies, ZFS significantly reduces the overall storage footprint - especially helpful for increasing SSD storage efficiency when highly-repetitive data or massive small files are generated.



Near-limitless, instant snapshots

ZFS supports up to 65,535 snapshots for iSCSI LUN and shared folders to accomplish well-rounded snapshot versioning. If 1 snapshot is created every hour, 24 snapshots per day, then up to 7 years of snapshots can be created without needing to delete any!



Up to petabyte capacity per shared folder

The 128-bit ZFS filesystem has huge capacity potential and natively supports standard RAID levels and additional ZFS RAID layouts (RAID Z). ZFS-based QNAP storage solutions provide up to 5PB capacity for individual shared folders, enabling enterprises to tackle storage-demanding applications.

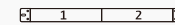
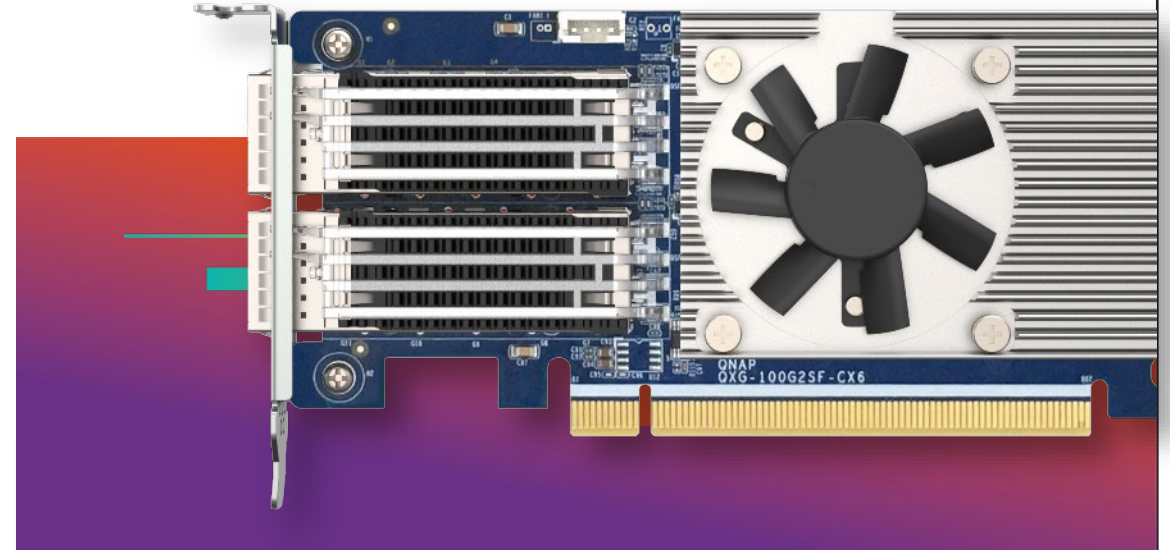
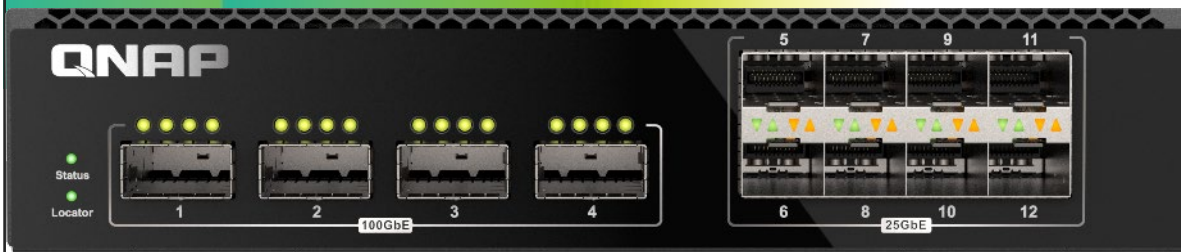


Real-time SnapSync

The advanced block-based real-time SnapSync ensures that a primary and secondary NAS always keep the same data, providing the strongest support for nonstop business operations and helping users remove the risk of data loss!

Embrace the ultra-high-speed 100 GbE network generation

According to market research, the demand for 100 GbE switches has taken in 2023. Enterprises, hyper scalars, and service providers worldwide continue to invest in higher-speed network infrastructure to support higher-speed servers and higher bandwidth demands of new applications such as Generative AI workloads.



Half-width rackmount 100 GbE managed switch

The QSW-M7308R-4X is a 100GbE L2 Managed Switch with four 100GbE QSFP28 and eight 25GbE SFP28 ports. Offering up to 1200Gbps of switching capacity in a compact half-width rackmount case, the QSW-M7308R-4X satisfies the high-bandwidth demands of big data storage, video editing, virtualization, and AI applications to accelerate deploying high-speed data storage centers, smart medicine, and professional multimedia studios.



100 GbE network expansion card

The QNAP dual-port 100 GbE network expansion card is designed to support PCIe 4.0 and delivers an impressive 100 Gbps bandwidth to overcome performance bottlenecks. Its low latency makes it ideal for bandwidth-demanding applications such as data centers, virtualization, multimedia streaming, and transfer, as well as mission-critical backup and restore tasks.

High-speed 25GbE networking

Enable lightning-fast throughput for bandwidth-demanding tasks such as virtualization, massive data transmission, and fast backup/restoration.



25GbE-ready All-flash NAS

The TS-h3088XU-RP provides a built-in dual-port 25GbE SFP28 SmartNIC with the NVIDIA® Mellanox ConnectX-4 Lx SmartNIC controller that supports iSCSI Extensions for RDMA (iSER) to increase performance of data transfer between NAS and ESXi server and offload CPU workloads.



Affordable 25GbE managed switch

The QSW-M5216-1T is a 25GbE Layer 2 web managed switch that provides flexible network interfaces for high compatibility at an affordable price, enabling small businesses to quickly upgrade to an ultra-high-speed backbone network by integrating to existing network infrastructure.



10GbE connectivity: The future is now!

10GbE connectivity improves overall network performance and everyday tasks with ten times the bandwidth of 1GbE. By offering 10GbE-ready NAS, network adapters and switches, QNAP is a one-stop provider for everything you need to create your own 10GbE environment.



10GbE NAS solutions

QNAP provides NAS with built-in 10GbE connectivity and optional 10GbE expandability, ideal for large file transfer, storage, and backup with fast, reliable and cost-efficient advantages.



10GbE network adapters

QNAP provides 10GbE PCIe expansion card and Thunderbolt to 10GbE adapters to empower devices with 10GbE connectivity. The QM2 Expansion Card not only includes 10GbE connectivity, but also provides the ability to add M.2 SSDs to your workstation or NAS.



10GbE switches

QNAP's QSW Series 10GbE switches supports 10GBASE-T and NBASE-T standards, allowing you to take advantage of higher network speeds with existing Cat 5e and 6a cables. Both SFP+ (fiber) and RJ45 (copper) ports are available for servicing a range of network needs.

2.5GbE is not just for offices, but also for homes

The lack of consumer-grade switches has made it hard for home and personal users to adopt 2.5GbE/5GbE networking. QNAP now offers cost-effective multi-port switches that support 10G/5G/2.5G/1G/100M Ethernet, helping you to transform your home network at a wallet-friendly price.



2.5GbE switches

QNAP offers a 10GbE switch series supporting five speeds (10G / 5G / 2.5G / 1G / 100M) and a 2.5GbE switch series. With 2.5GbE ports, the QNAP switch can instantly upgrade your network to take advantage of 2.5GbE-enabled devices and NAS.



2.5 times faster

2.5GbE is 2.5 times faster than standard Ethernet (1GbE), increasing network performance to boost productivity.



Works with existing cables

No special cables or connectors are required to take advantage of 2.5GbE. Simply use your existing CAT5e cables as normal with your new 2.5GbE infrastructure.



More affordable

If you can't budget a 10GbE upgrade at this time, the more affordable 2.5GbE provides a notable improvement in current Ethernet speeds.

Breakthrough performance and outstanding connectivity with Thunderbolt™ NAS

QNAP NAS with Thunderbolt™ provides fast, efficient, scalable and secure storage, enabling the perfect collaboration environment for Mac® and Windows® multimedia professionals.



Ultra-high speed transfer

Edit right off your NAS with blazing fast Thunderbolt™ 4 connectivity. With potential speeds of up to 40Gbps, connect your compatible Macs and other Thunderbolt™ 4 devices directly to the NAS and work unaffected by other network traffic.



Daisy chain multiple Thunderbolt accessories

Not having enough USB ports on your Windows/Mac computer is now a thing of the past. Thunderbolt™ docking and USB devices, such as your keyboard and mouse, can be connected to a USB-C port on one of the five daisy-chained Thunderbolt™ NAS and passed through to your computer.



High availability with USB Type-C

The usage of USB Type-C by Thunderbolt™ 4 provides a universal connection from QNAP NAS to Thunderbolt™ devices as well as countless USB Type-C devices through a single cable, allowing file sharing and centralized data storage without the hassle of stringing multiple cables.

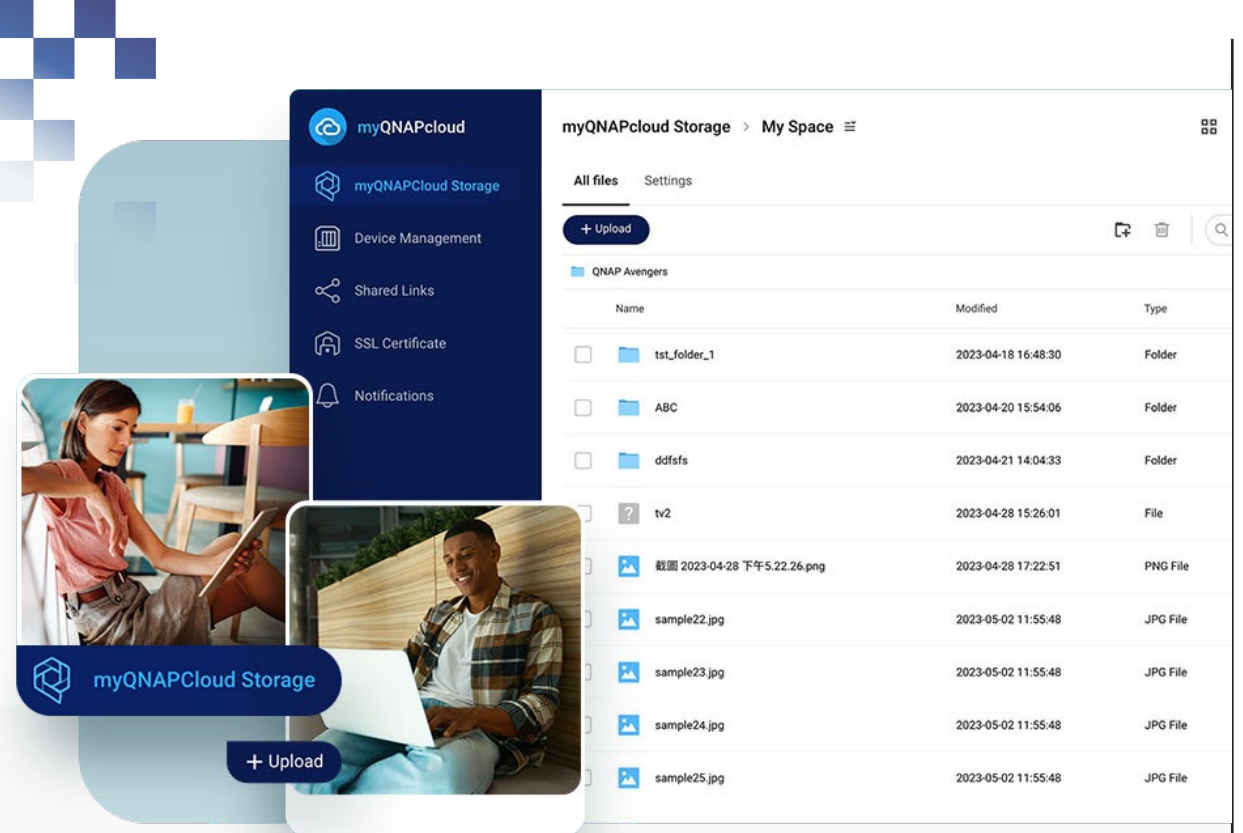


High-efficiency collaboration

Connect the Thunderbolt™ NAS to multiple Thunderbolt™-enabled Mac® and Windows® workstations to optimize your 4K media workflows, file storage and sharing.

myQNAPcloud Storage

Back up your NAS data to a trusted cloud hosted by QNAP. myQNAPcloud Storage is designed for QNAP users to easily carry out off-site backup to meet disaster recovery requirements.



Works perfectly with QNAP backup solutions

myQNAPcloud Storage is supported by QNAP NAS hybrid cloud solutions, such as Hybrid Backup Sync and HybridMount, allowing you to easily perform backup, recovery, mount, and sync tasks.



myQNAPcloud Storage as a file drive

myQNAPcloud Storage supports most file types, including Microsoft Office, iWork, Adobe, and RAW image formats. Images and videos are not compressed or processed, making myQNAPcloud Storage suitable for storing high-resolution media content.



Worldwide coverage with 12 data centers

myQNAPcloud Storage provides users with a faster service experience. For multinational enterprises, these data centers can be used for effective data utilization between headquarters and branches.



No costs for data transmission

myQNAPcloud Storage is remarkably cheaper than Amazon S3, Microsoft Azure, and Google Cloud. We only charge for storage space, with transmitting data being completely free. myQNAPcloud Storage is the ideal solution for multinational enterprises which are handling large amounts of data.

Easily build a personal cloud and access anywhere

In contrast to the limited storage space and potential security issues with public cloud services, the QNAP NAS is advantageous for establishing a secure and large-capacity personal cloud.



An easy-to-use, all-in-one backup solution

The QNAP NAS can do many things, but at its heart is a complete backup solution to protect your files and data. By regularly backing up your files and device content, you can make data loss a thing of the past.



Greater multimedia enjoyment

The QNAP NAS comes with a wide range of media applications, including Photo Station, Video Station and Music Station, allowing you to easily manage and view your media files.



Easy and secure remote connection with myQNAPcloud

myQNAPcloud allows you to remain connected to your QNAP NAS using a unique domain name. No complex routing or configuration is required, and myQNAPcloud strengthens SSL Certificate keys to 2048-bits to enable secure remote access, management, and sharing files and check your system status from anywhere.



A secure backup center with snapshot protection

Snapshots are essential for NAS data protection, and their block-level feature makes it a dependable data protection method in the face of growing ransomware threats.



Connect to a TV or monitor with HDMI

With HDMI output, the QNAP NAS allows you to directly enjoy multimedia content, use web browsers, manage your NAS, or watch recorded surveillance footage or live feeds on your NAS.

Flexible and economical storage expansion

Direct-attached Storage (DAS) adds additional storage capacity to your PC by being directly connected via USB or another port. DAS is usually plug-and-use to a single device and is suitable for users who seek extra storage space and not the advanced features and network connectivity of NAS.



RAID Support

QNAP DAS supports various RAID levels to improve performance and data protection.



Simple Interface

The QNAP External RAID Manager helps monitor the DAS system, drives, and health status. It automatically sends system alerts to your PC if an error occurs.



For NAS Expansion

QNAP DAS can be used with either USB Type-C, SATA, or SAS for faster data transfer and can be easily managed using QTS / QuTS hero Storage & Snapshots. The TL series is suited for NAS expansion.



Effortless Setup

The DAS is completely plug-and-use and does not require any network configuration. An eject button is included to quickly remove the DAS from the connected computer.



For PC Expansion

QNAP DAS are ideal choices for PC users looking to expand their storage space. They use USB Type-C, SATA, or SAS for faster data transfer and support software and hardware-controlled RAID configurations for flexible storage configuration.

ADRA Network Detection and Response (NDR) appliances

The QNAP ADRA series Network Detection and Response (NDR) appliances selectively screen network traffic and detect malware lateral movement, stopping hostile activities before data leakage and encryption can occur.

ADRA The rapid-screening ADRA NDR cybersecurity appliances

The ADRA NDR precisely pinpoint malware activities on your local network without impacting performance. The proprietary rapid-screening mechanism employed in the ADRA NDR detects potentially malicious activities based on a set of criteria and responds to these anomalies according to defined policies. This greatly improves the security of your network without impacting performance.



Threat detection

The ADRA NDR is equipped with deep analysis features that allow in-depth inspections for malware and vulnerability exploits. The ADRA NDR is also capable of simulating a threat trap for malware to initiate attacks. Once the malware becomes active, hostile behaviors will be detected by the cybersecurity appliance and actions will be taken.



Threat analysis

Once suspicious activities are captured by Threat Detection, network traffic packets are analyzed against a collection of rules to determine the attack type. Different detection events over time will be evaluated against each other to determine their relations as an additional criterion for evaluating associated risk levels.



Threat response

Automatically isolate affected devices only to contain the malware attack to a smaller range, without shutting down the entire network. IT administrators can take a series of actions (such as isolating or temporarily allowing) to flexibly tackle operational needs.



QuWAN SD-WAN solution for resilient IT infrastructure

QNAP's QuWAN SD-WAN solution features Auto Mesh VPN, SAML SSO, IPsec encryption, cloud-centric management and QVPN Service for multi-site networks. Compatible with a wide range of QNAP products and Hypervisor Platforms such as VMware ESXi, QuWAN enables SMBs to efficiently build a dependable network at a cost-effective price, and to facilitate digital transformation, multi-site expansion and remote working.



SSO

Convenient SSO login

QuWAN supports Authentication Server and SAML SSO to allow users to join VPN with a single company email login easily and conveniently.



Auto mesh VPN

Automatically establishes a mesh VPN and removes the need for manual static VPN settings.



Cloud management

The QuWAN Orchestrator provides powerful and convenient central network management.



Network security

Adopts Deep Packet Inspection to analyze L7-Payloads for content information from websites and devices.



WAN optimization

QuWAN adopts load balancing technologies to combine the bandwidth of different ISPs and to prioritize bandwidth utilization.



Cost optimization

Optimizes fiber/network transmission to lower the cost of VPN equipment and bandwidth expenses.



Enjoy a high-coverage Mesh Wi-Fi experience

The QMiro-201W and QMiroPlus-201W support tri-band Wi-Fi 5 wireless transmission and Mesh Wi-Fi handover, ensuring stable Wi-Fi connections and greater signal quality via a Mesh Wi-Fi network.



Connect your Home with High-Coverage Tri-Band Mesh Wi-Fi

QMiro-201W / QMiroPlus-201W adopts Wi-Fi Handover technology, allowing multiple users to be automatically connected to the router with the strongest Wi-Fi signal with a single SSID. With dual-band 2.4GHz/5GHz, QMiro-201W / QMiroPlus-201W also provides a dedicated Mesh 5GHz frequency for high-bandwidth connections between Mesh Wi-Fi routers, guaranteeing smooth and stable Wi-Fi connections.



Dedicated Tri-band Mesh Wi-Fi for smooth connections

Supports tri-band Wi-Fi of 2.4GHz, 5GHz and a dedicated Mesh Wi-Fi 5GHz band for high-bandwidth connections between Mesh Wi-Fi routers. Unlike conventional dual-band routers whose 5GHz band must be shared between Wi-Fi clients and Mesh Wi-Fi routers, the QMiro-201W /QMiroPlus-201W guarantees smooth and stable Wi-Fi connections.

Next-generation intelligent IP surveillance and remote backup solution

With the subscription-based QVR Elite smart surveillance solution you only pay for the channel licenses you need, allowing you to affordably safeguard your property. You can arrange a dedicated, independent storage space for surveillance data on the QNAP NAS and enjoy simplified camera management, storage space allocation, camera live viewing and playback. Recordings are saved as MP4 files for playback on nearly every device.

Direct monitoring on an HDMI display

Easily play recordings with a connected HDMI display using the QVR Smart Client. Search for event recordings within a time period and detection area specified in the user interface.



Leverage AI-based applications for value-added services

QVR Elite's surveillance footage can be processed by multiple QNAP AI-based video analytics applications (such as QVR Face, QVR Human, QVR DoorAccess) to empower surveillance systems with smart door access, facial recognition, human counting capabilities and more.



QVR Pro Client: Centralized monitoring and management

QVR Pro Client enables monitoring multiple channels simultaneously. Flexibly switch between live view and playback mode to easily fulfill centralized monitoring and management.



Records using the MP4 video format

QVR Elite records video files in the universal MP4 format, allowing for smooth playback on any device. In addition, you can conveniently back up recordings to other QTS / QuTS hero NAS or cloud storage space using Hybrid Backup Sync or HybridMount.



Easy capacity expansion

Create multiple recording spaces for QVR Elite recordings. If you run out of storage space, you can easily expand your NAS storage by connecting to QNAP expansion enclosures.



Low cost: flexible subscription plan

QVR Elite is subscription-based, with monthly, yearly, and 3-year subscription plans. You can build a robust surveillance system with a low-cost monthly price of US \$1.99 per channel. You can alter the subscription based on your needs to reach higher cost efficiency.



Smart Video Conferencing Solution

All-in-one: video calling, wireless presentation and meeting recordings.

QNAP Smart Video Conferencing Solution is a high-quality video conferencing system, providing an ideal solution for small meeting rooms with support for wireless presentations, cross-platform communication and local storage.



Running KoiMeeter video conferencing operating system

KoiMeeter provides an dedicated solution for small meeting rooms with support for wireless presentations, cross-platform communication and local storage.



Free yourself from cables with 4K wireless projection

4K wireless projection provides a seamless wireless projection experience free from complex cabling and without needing additional projection devices.



Up to four-way video conferencing and collaboration

Multi-point video conferencing with the QNAP KoiBox-100W, KoiMeeter, the KoiMeeter mobile app, and compatible SIP systems.



Local storage for record and store meetings

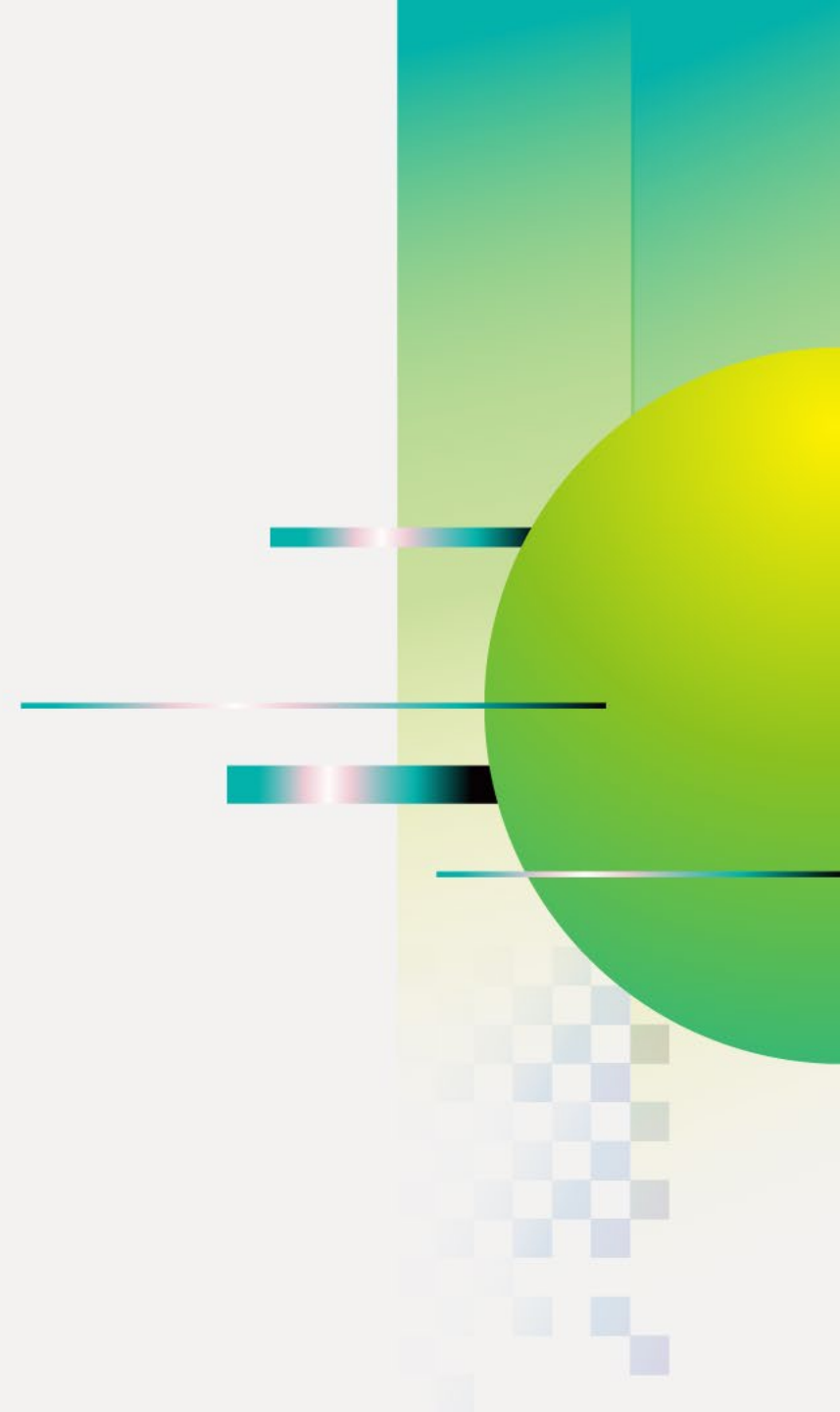
Install a 2.5-inch SATA drive and locally store all your meeting videos, audio and shared files while also enabling further usage as training materials.



Optimized cloud meeting experience

The QNAP Smart Video Conferencing Solution supports popular cloud meeting services, such as Zoom®, Skype™, Microsoft Teams®, Cisco Webex®, and Google Meet™ for streamlining communication between different platforms.

Operational Sustainability



Worldwide Quality Control Processes Certified by ISO

The quality of QNAP products and services is accredited by international certifications, demonstrating the conformity to high-quality standards



ISO 9001
Quality Management System



ISO 27001
Information Security Management System



ISO 14001
Environmental Management System



ISO 45001
Occupational Health and Safety Management System
CSR Certification



ISO 27017
Cloud Information Security



ISO 27018
Cloud PII Protection Management

QNAP ESG Guideline

Environmental protection, employee health and safety, and social participation fulfill corporate social responsibility and the pursuit of business continuity

Environmental Sustainability

- Environmental Policy
- Carbon reduction management
- Green procurement
- Environmental sustainability education
- Supply chain management
- Energy and waste management

Customer Engagement

- Product and service liability
- Ensuring confidentiality of customer information
- Customer relationship maintenance
- Green products

Employee Care

- Employee compensation and benefits
- Labor rights
- Employment environment
- Competency management
- Labor relation
- Education & training

Social Involvement

- Social care
- Community involvement
- Charitable activities
- Corporate image

Corporate Governance

- Integrity management
- Organization strategy
- Regulations compliance
- Information transparency
- Internal control
- Stakeholder compuncions



Green Product Design Management

QNAP takes Sustainable Development Goals (SDG 12) as its corporate philosophy, and also regards the sustainability of the Earth as its corporate vision. Starting from product design, elimination of hazardous elements and packaging design, with innovative thinking, we are dedicated to developing Green products with low consumption and low correlation elements.

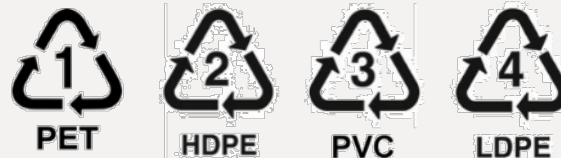
Green Materials

- RoHS II
- RoHS China
- REACH
- United States “TSCA” regulation
- Taiwan EPA
- Conflict Free Minerals Policy
- EU Deca-BDE, PFOS and DMF



Green Packaging

- EU Packaging and Packaging Waste Directive 94/62/EC
- The total amount of Pb, Cd, Hg and Hexavalent Cr doesn't exceed 100mg/kg (ppm)

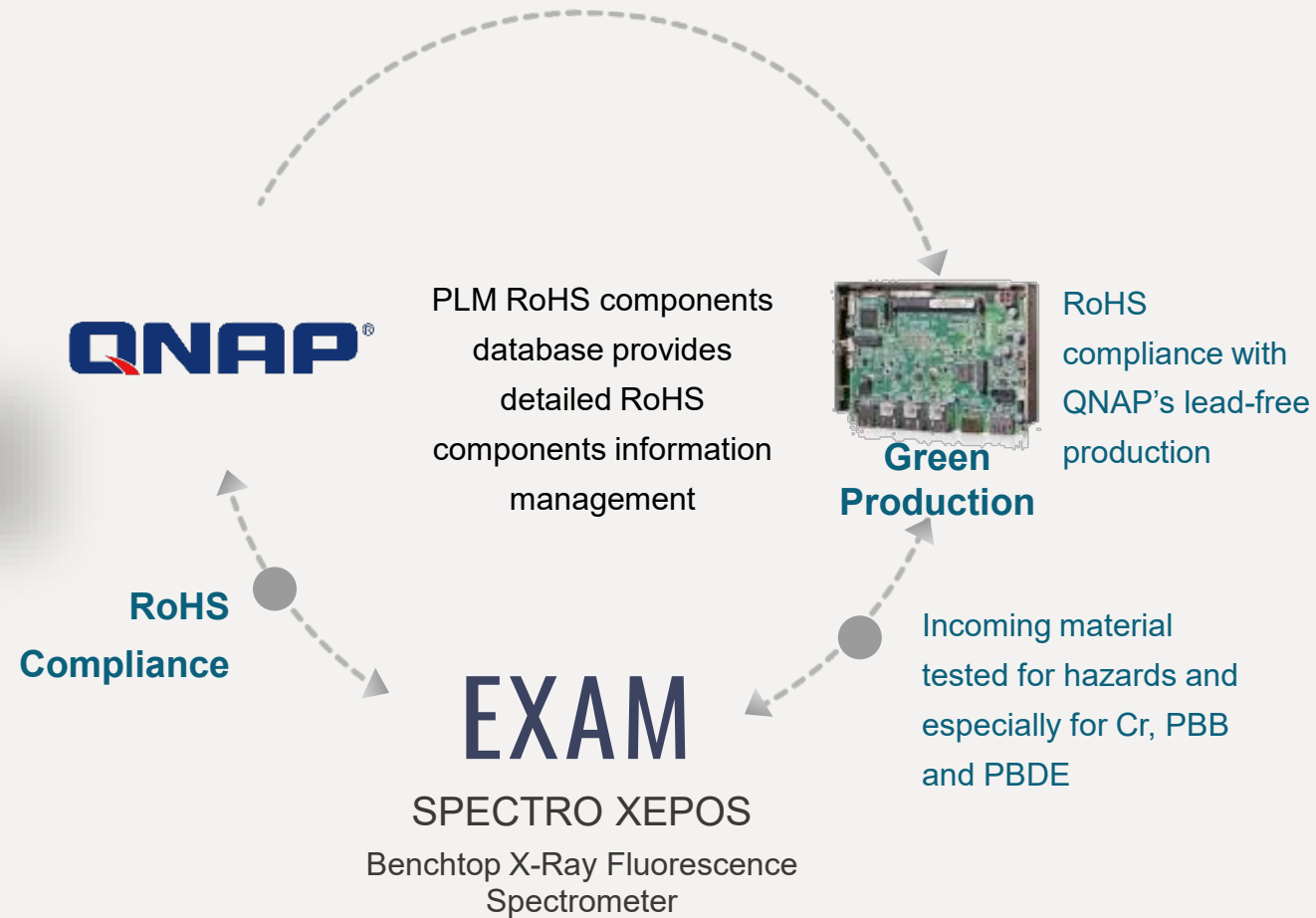
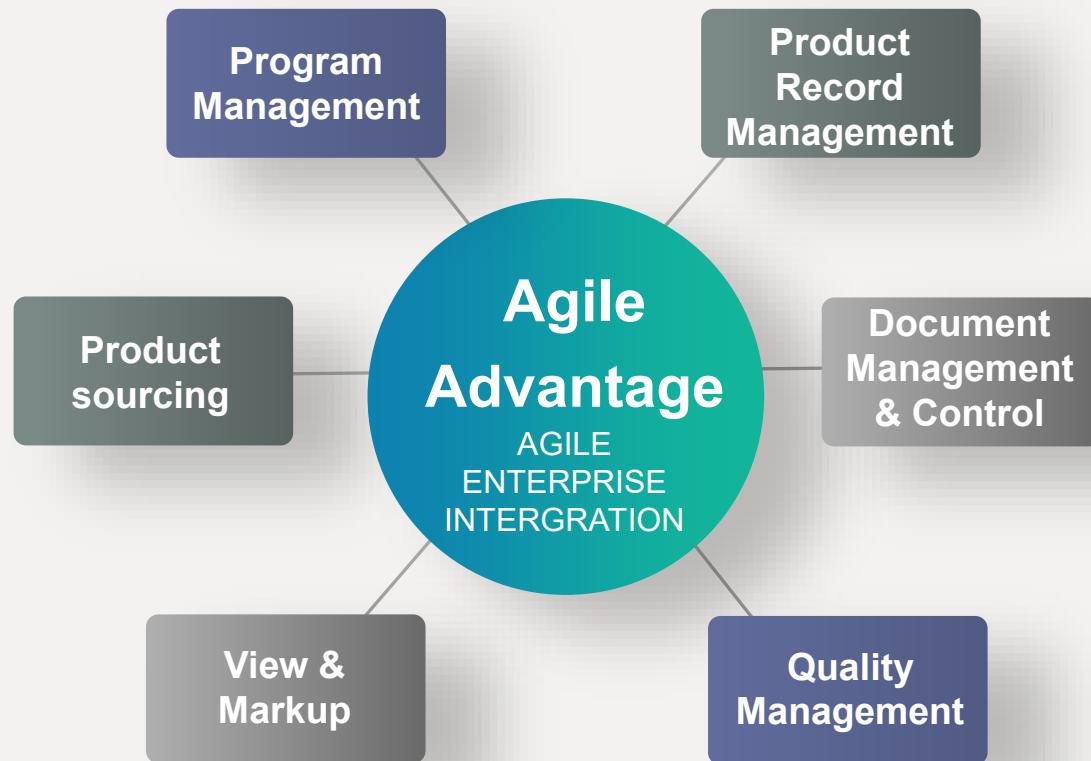


Product Recycling

- Waste Electrical and Electronic Equipment (WEEE) Directive



RoHS Compliance



Environmental Responsibility

QNAP plans to reduce CO₂ emissions by 4% in 5 years

- Operation guidelines related to environmental protection management, environmental management systems (ISO 14001)
- Energy saving appliance replacement, and tracking CO2 emissions
- Reduce electric consumption by using LED lights and inverter air conditioners throughout the company



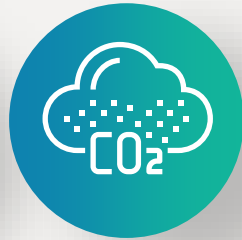
Waste
gas



Waste
water



Waste



Carbon
emissions



Supply Chain Management

QNAP has a skilled supply chain management team that proactively uses advanced ERP tools to help customers gain a competitive edge

QNAP ensure that our customers can reduce their TCO (Total cost of ownership) with the following criteria



**Reduced
Inventory**



**Stable
Quality**



**Time to
Market**



**Reliable
Source**

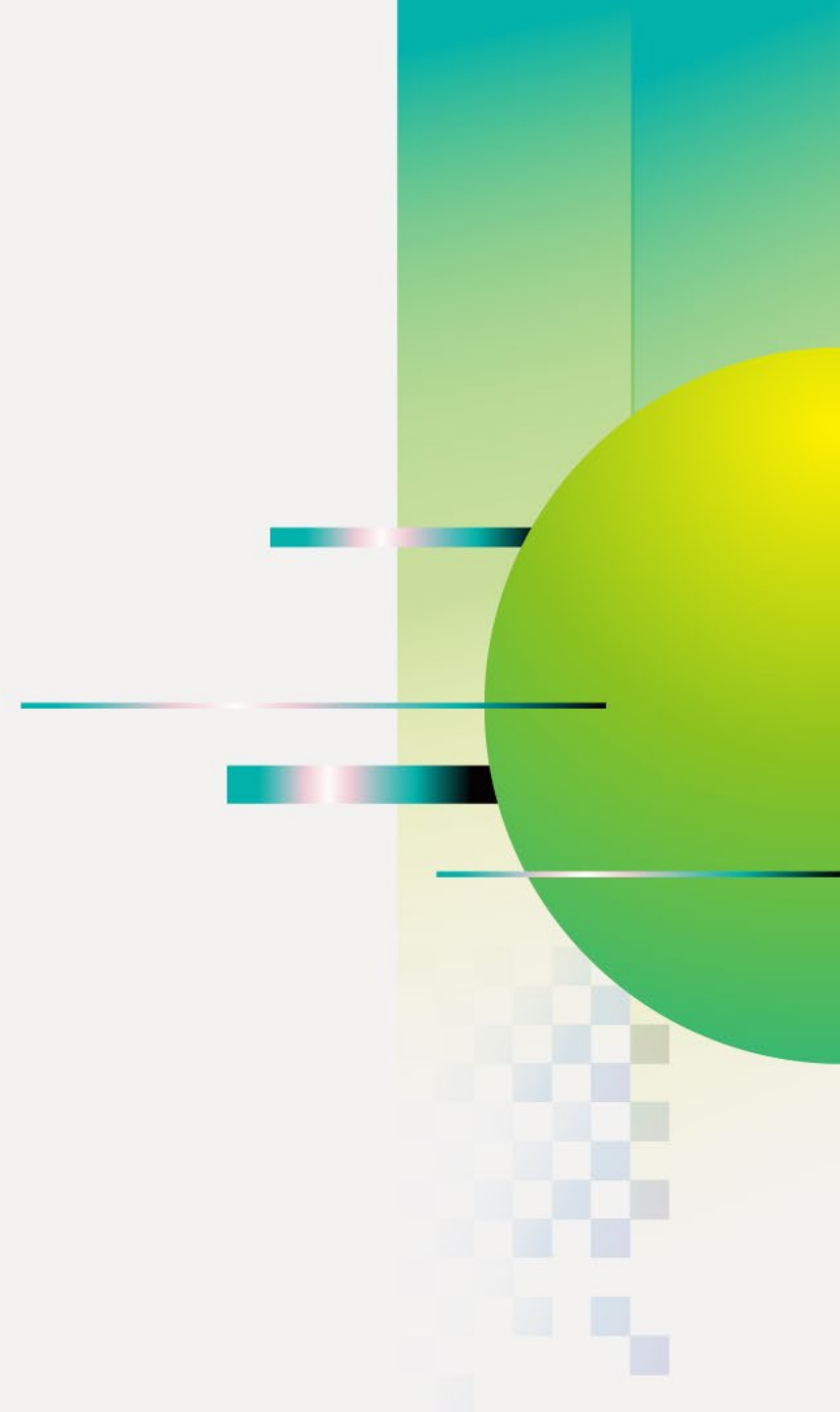


**Competitive
Costs**



**Conflict Mineral
Procurement
Strategy**

Global Deployment of QNAP



Qidu Factory

Gross Building Area

19,180

square meters

PCBA Capacity in 2021

30K per month

SMD x5 & DIP x2

System Capacity in 2021

28K per month

Assembly Line x 13



USA

Office / Warehouse Center

Time of Establishment

2009

Location

Pomona CA



USA

Office / Warehouse Center

Number of Employees

47

Scope of Business

Before & After Sales Services
Warehouse Center



Germany

European Headquarters

Time of Establishment

2022

Location

Willich



Germany

European Headquarters

Number of Employees

50

Scope of Business

Before & After Sales Services

Warehouse Center



Canada

Office

Time of Establishment

2015

Location

Markham, Ontario



Canada

Office

Number of Employees

11

Scope of Business

Before & After Sales Services



Italy

Office

Time of Establishment

2015

Location

Roma



Italy

Office

Number of Employees

8

Scope of Business

Before & After Sales Services



Japan

Office

Time of Establishment

2016

Location

Tokyo



Japan

Office

Number of Employees

15

Scope of Business

Before & After Sales Services



India

Office

Time of Establishment

2017

Location

Bengaluru (Bangalore)



India

Office

Number of Employees

48

Scope of Business

R&D and After Sales Service



UK

Office / Warehouse Center

Time of Establishment

2018

Location

Swindon



UK

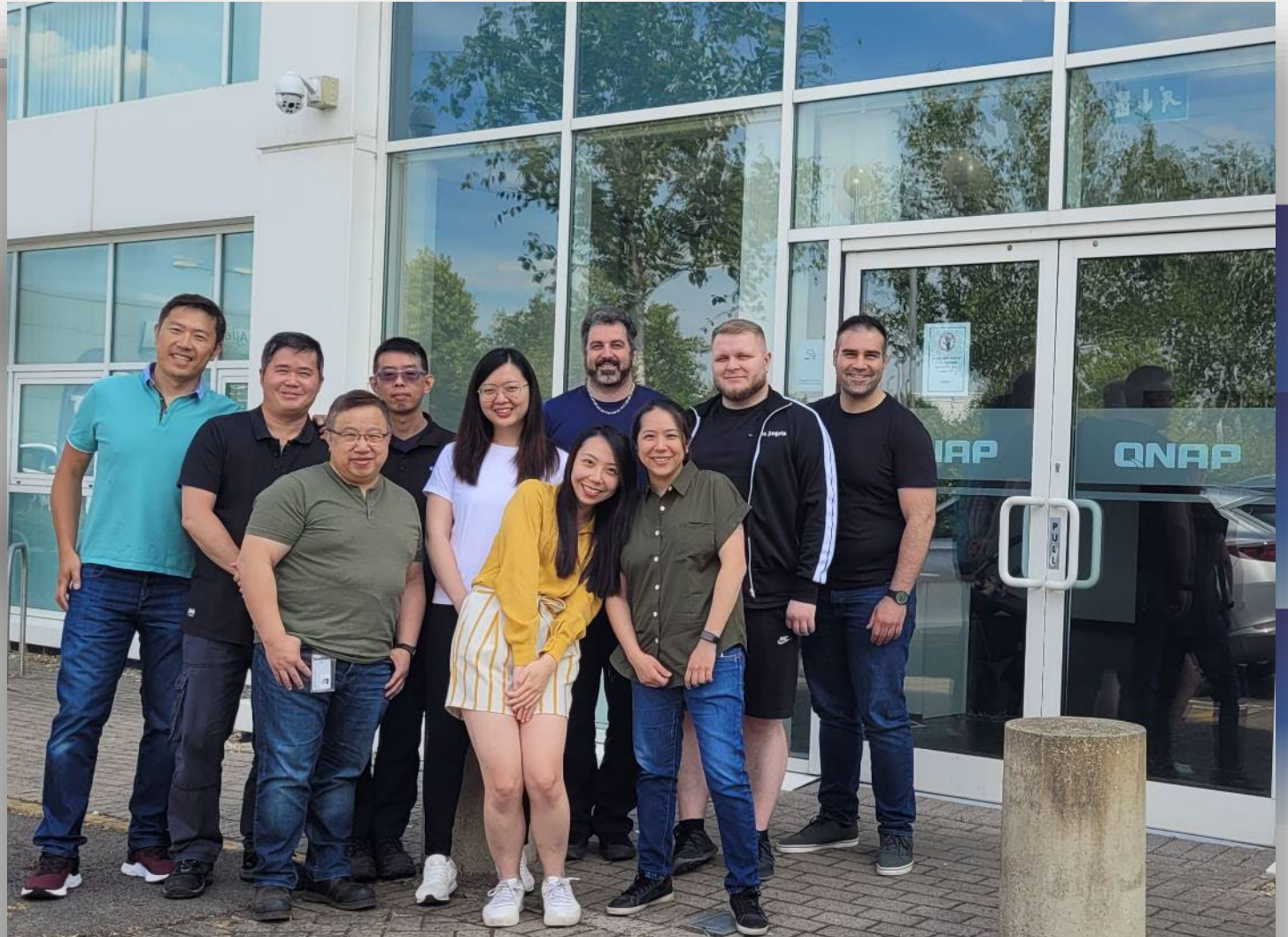
Office / Warehouse Center

Number of Employees

13

Scope of Business

Before & After Sales Services
Warehouse Center



HK

Office

Time of Establishment

2018

Location

Kowloon Bay



HK

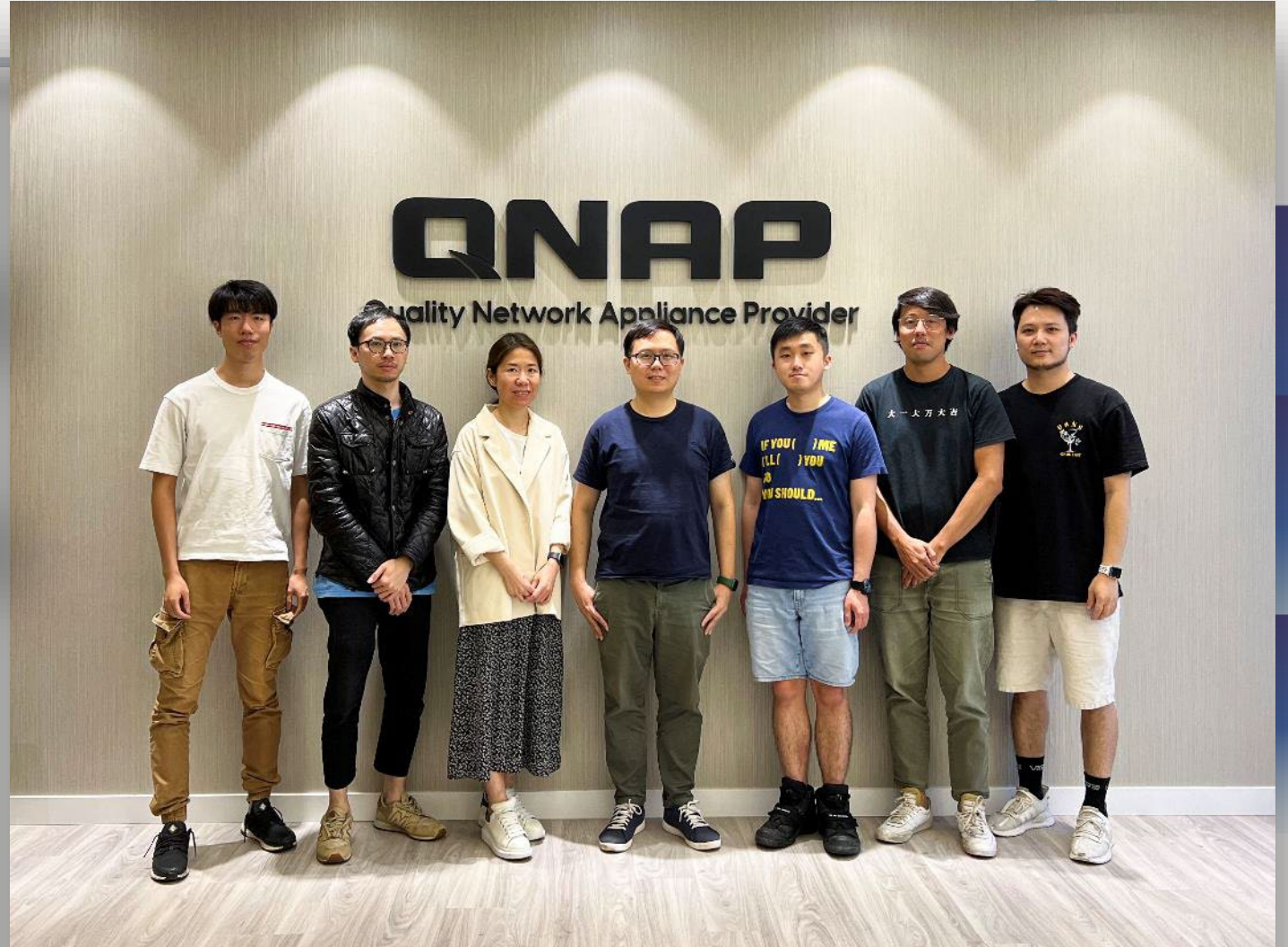
Office

Number of Employees

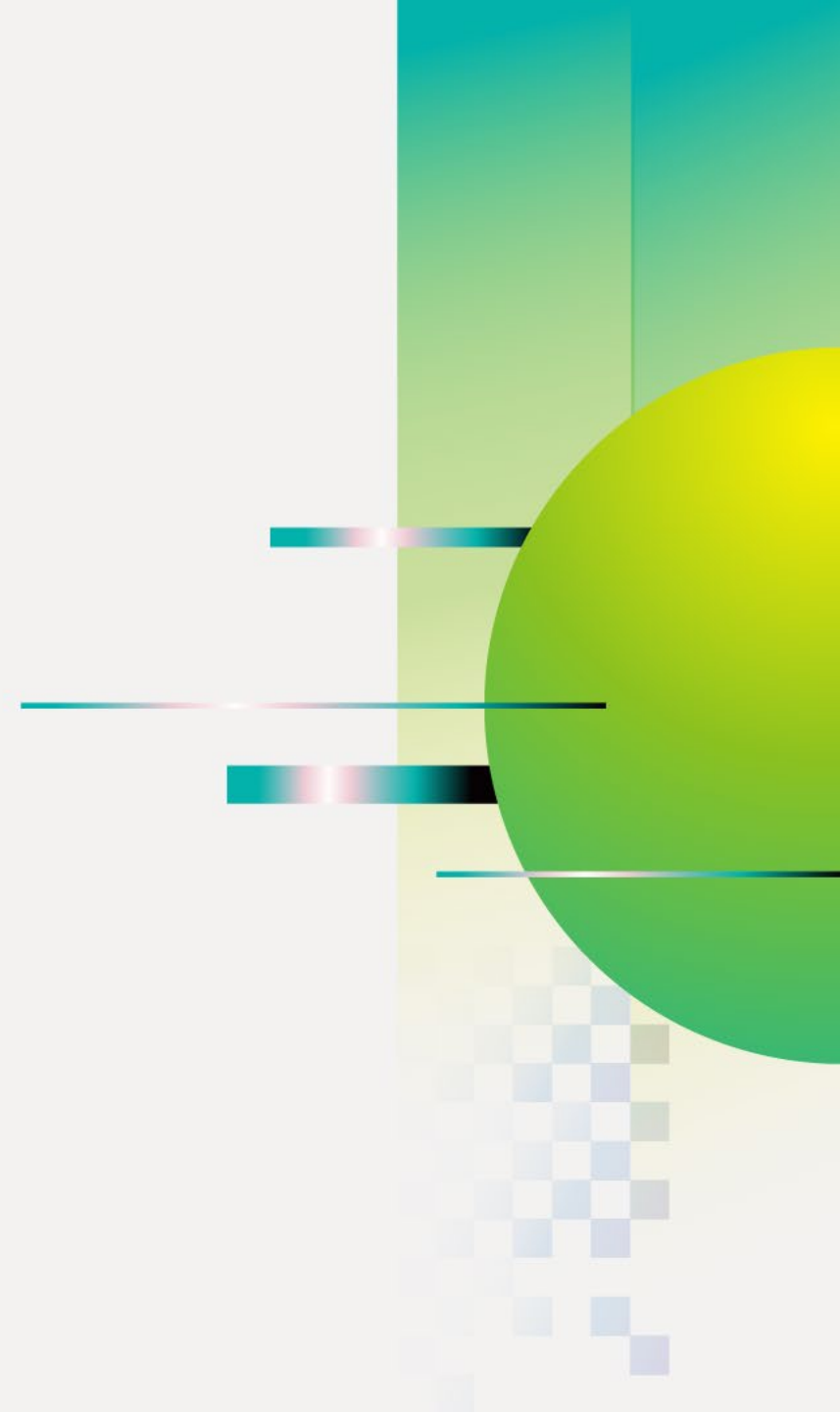
7

Scope of Business

Before & After Sales Services



Quality Management and Production Process of QNAP



QNAP Quality Control Management

Design
Quality Assurance

R&D

- NPI
- ECR/ECN
- P/N approval

QA Lab

- Mechanical/signal/environmental reliability capability
- Networking products reliability capability
- Certifications (EMC/Safety)

Manufacturing
Quality Assurance

IQC

- Component yield rate

LQC

- First article inspection
- On line audit

OQC

- Finish goods yield rate

QE

- Analysis defect symptom
- Feedback issues
- Track improvement

Customer
Quality Assurance

Customer

- Annual customer satisfaction survey & feedback

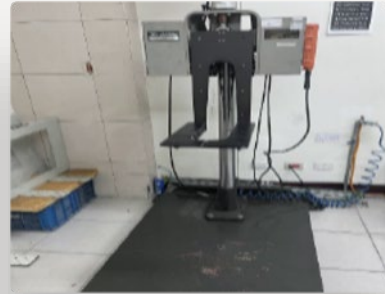
FAE & RMA

- Customer application service
- Return product analysis
- Technical support
- DOA & RMA
- Product lifecycle management
- Production traceability
- Quality traceability

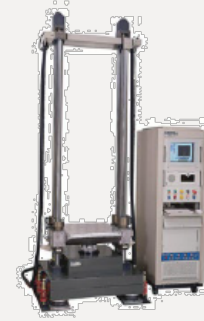
Mechanical Reliability Capability



Vibration Test



Drop Test



Shock Test



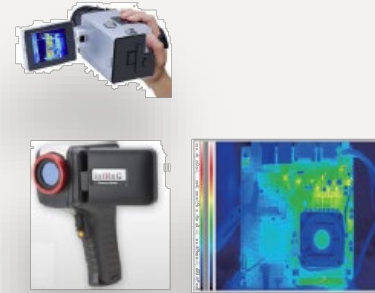
3D Printing RP sample



Thermal Analysis
Lab



Natural Convection
Chamber



IR Camera



Temperature Data
Acquisition

Experienced Heat Flow Engineering

Data Collection

- Power consumption
- Mechanical drawing
- Material property
- Component spec.
- Customer request

Model Building

- Geometry simplifying
- Material property setting
- Condition setting

Running and debug

- Grid generation
- Grid quality improvement
- Model check

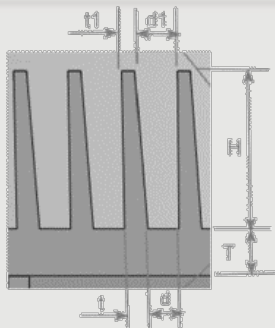
Post Processing

- Temperature profile
- Air flow profile

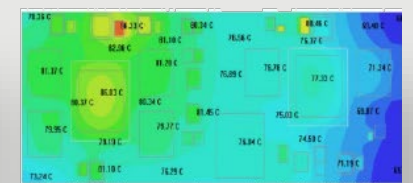
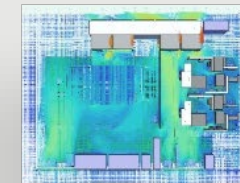
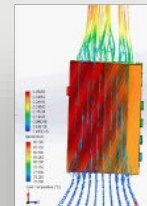
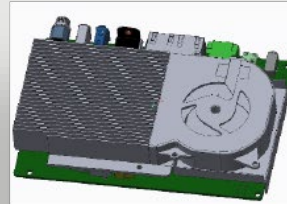
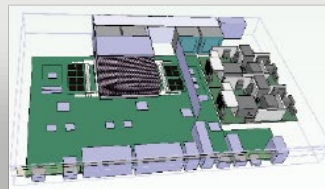
Thermal Simulation Report

- Temperature results
- Temperature profile
- Flow profile

Optimal Heat Sink Simulation



System Thermal Simulation



Environmental Reliability Capability



Thermal Shock
With Humidity



Hosedown IPX6



Air Leak Tester
IPX7 / IP69K



Dust Test



LCD Display and
Compatibility Test



Acoustic Noise
Testing



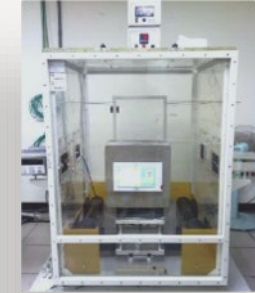
Salt Spray Tester



Natural Convection
Chamber



Represents real interior environment
for in-wall mounting system



Signal Validation Test

Radio Frequency Testing



Impedance Test

Agilent Network Analyzer



Bluetooth

Anritsu MT8852



WLAN

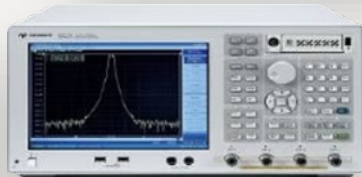
Anritsu MT8860C



Throughput Test

IxChariot / LitePoint IQxel

Signal / Power / Spectrum



Agilent Signal Gen.



Agilent Power Meter



Agilent Spectrum Analyzer



Tektronix Signal Measurement Labe
(4 channel 200GS/s)



Sifos POE Tester
PSE & PD
(802.3/at/af/bt compliance)

Networking Specific Design and Validation Facilities

Testing Center



Spirent Testing Center

- 100/1G/10G/25G/40G/100G Ethernet (12-Port Dual Media QSFP+)
- Test 16 port RJ45 or fiber (SFP+)*3
- Test 16 Port RJ45 10G/5G/1G/100M/10M
- Test Standard RFC2544 or RFC 2889
- WiFi-modules

LAN Performance Test



Spirent CHS-9000A

- 10/100/1G Ethernet (12-Port Dual Media QSFP+)
- Test 36 port RJ45 or fiber (SFP+)
- Test Standard RFC2544 or RFC 2889

LAN Performance Test



Spirent N11U

- 100/1G/10G/25G/40G/100G Ethernet (12-Port Dual Media QSFP+)
- Test 16 port RJ45 or fiber (SFP+)
- Test Standard RFC2544 or RFC 2889

Spirent 400G Test



Spirent dX3 G400G Seven-Speed Appliance

- PAM4:
8 x 400GbE, 16 x 200GbE, 32 x 100GAUI-2, 64 x 50GAUI-1
- NRZ(25G)
16 x 100GAUI-4, 32 x 50GAUI-2, 32 x 25GAUI
- NRX(Others): 16 x 40GbE, 32 x 10GbE

Networking Specific Design and Validation Facilities

100G Load Tester



NOVUS 100GE

- Enable high-density multi-rate native 100/50/40/25/10 GE testing
- Leverage affordable lower-density 4-port full feature configuration with field-upgradable option to 8-ports

100G Load Tester



XENA 10/40/100-GigE

- 12 slots in a 4U form factor
- High port density e.g. 144x10GE ports
- Support copper and optical Gigabit Ethernet and 0/40/100/200/400-Gigabit Ethernet modules

100G Load Tester



Spirent CF20 L4-L7

- 1G/10G/40G and 100G interfaces
- Web-based test controller

400G Real Time Signal



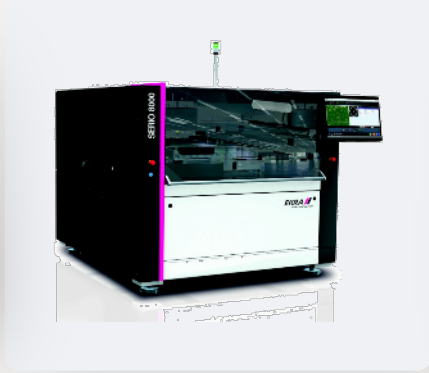
Tektronix DPS77004SX

- 70 GHz ATI Performance Oscilloscope Systems: 2 x 70 GHz, 200 GS/s or 4 x 33 GHz, 100GS/s
- 2 x DPS77004SX required for 400GbE PAM4 real-time signals

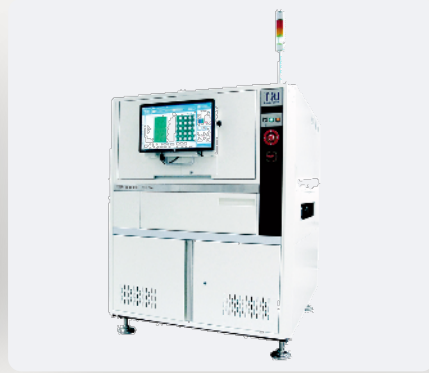
High Reliability PCBA Production & Quality Management



Omron VT-X750
High-speed automated X-ray
CT inspection system



ERKA SERIO 8000



3D Solder Paste
Inspection (SPI)



Panasonic NPM-W2 /
NPM-W2S



Pyramax 150A z12



TR7700 SIII Plus



TR7006L



YG100



TR7500



YG88

Production History Management

Manufacturing

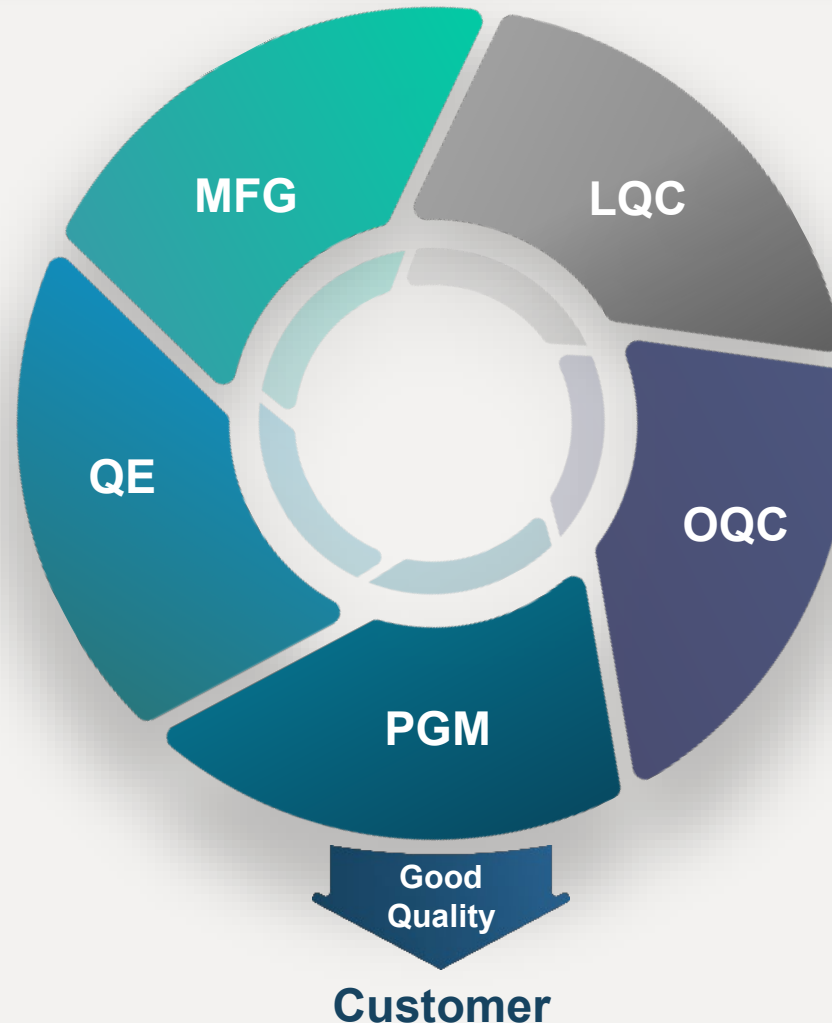
- Visual inspection (cosmetic)
- Functional test (simulation test)

Quality Engineering

- Analyze defects and take action
- Feedback to related department for future improvements
- Track improvement efficiency

Project Quality Management

- Lead team members push quality improvement for quality yield rate
 - 4M management
- Follow up customer requirements



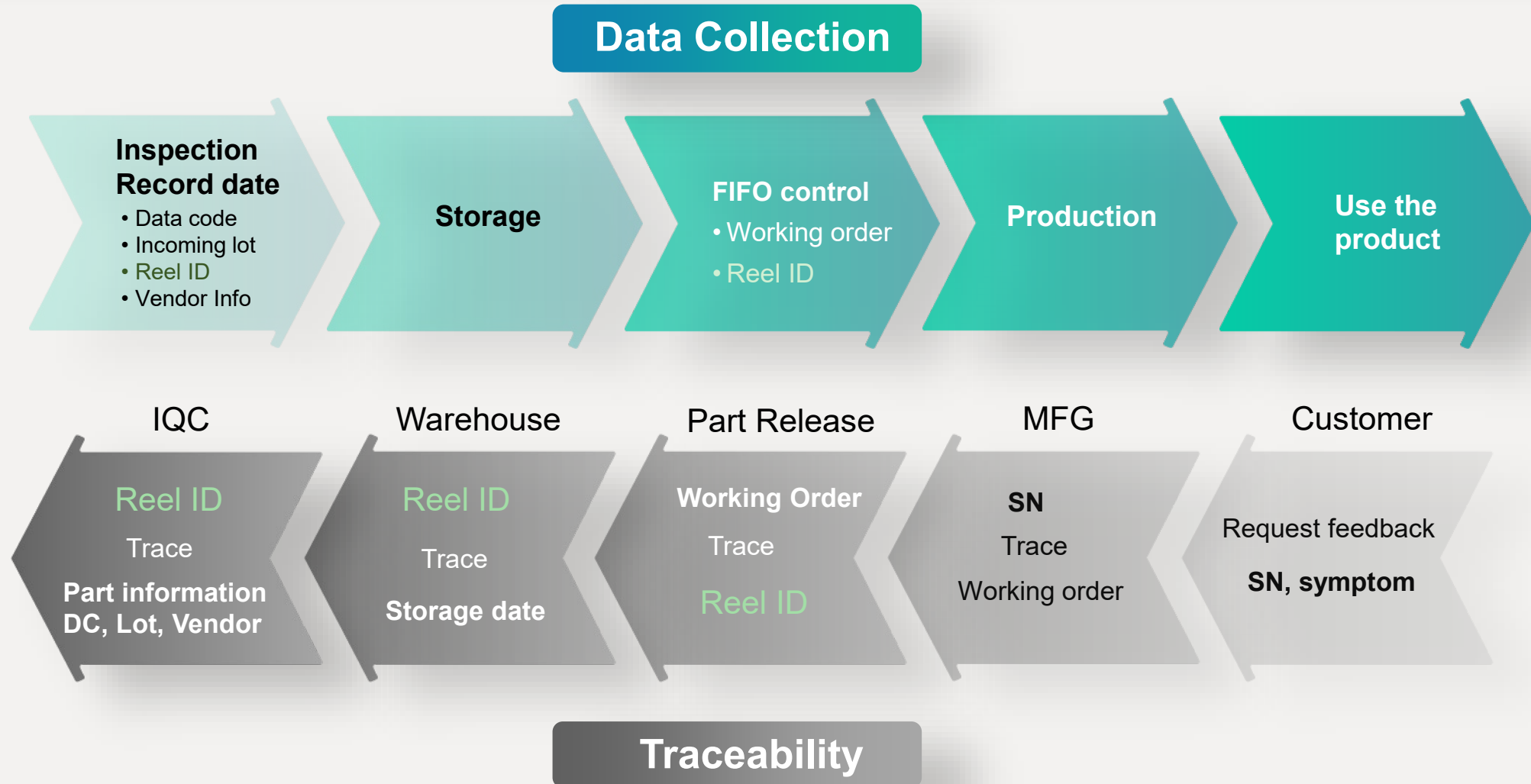
Line Quality Control

- First article inspection
- On line audit according to checklist
- LQC-SMT 100% inspection
- LQC-DIP 100% inspection
- LQC-ASSY 100% inspection

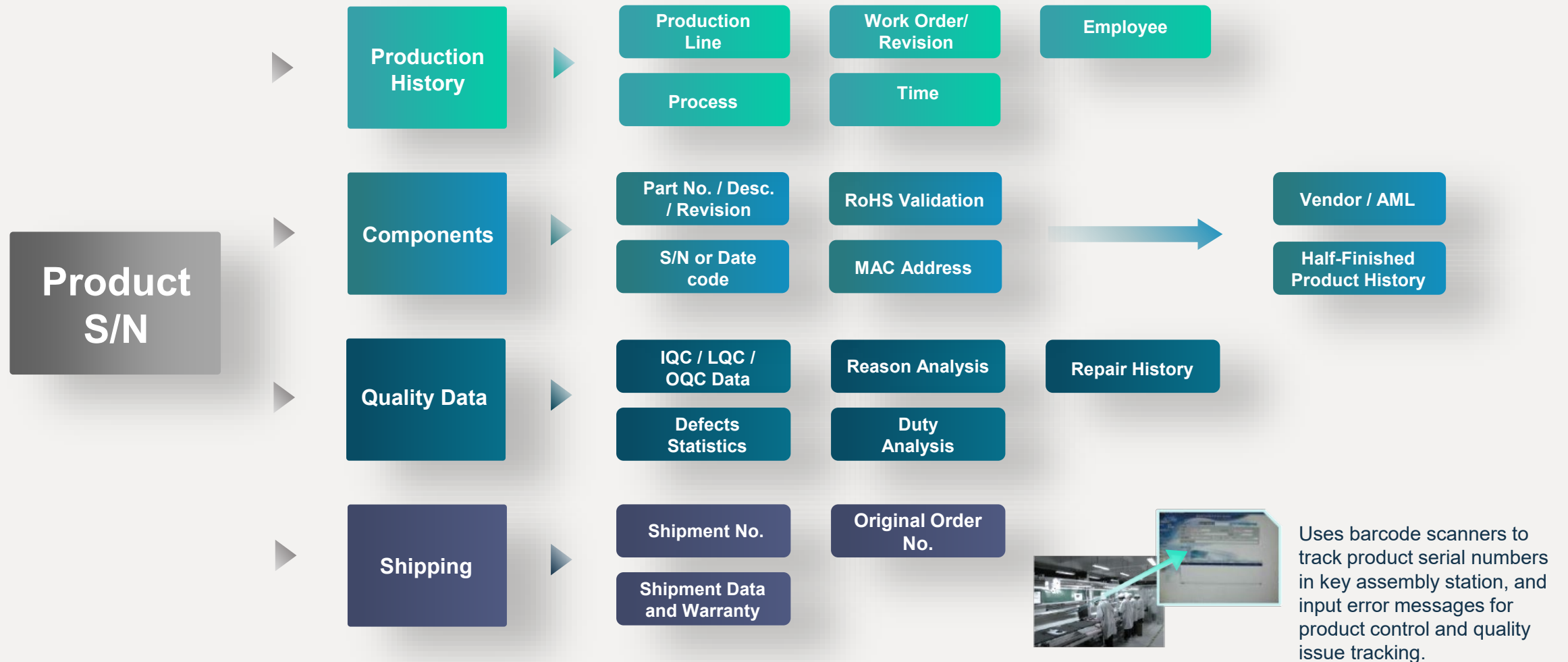
Outgoing Quality Control

- Visual inspection (AOI)
- ECN change review
- ORT test
- FCT test

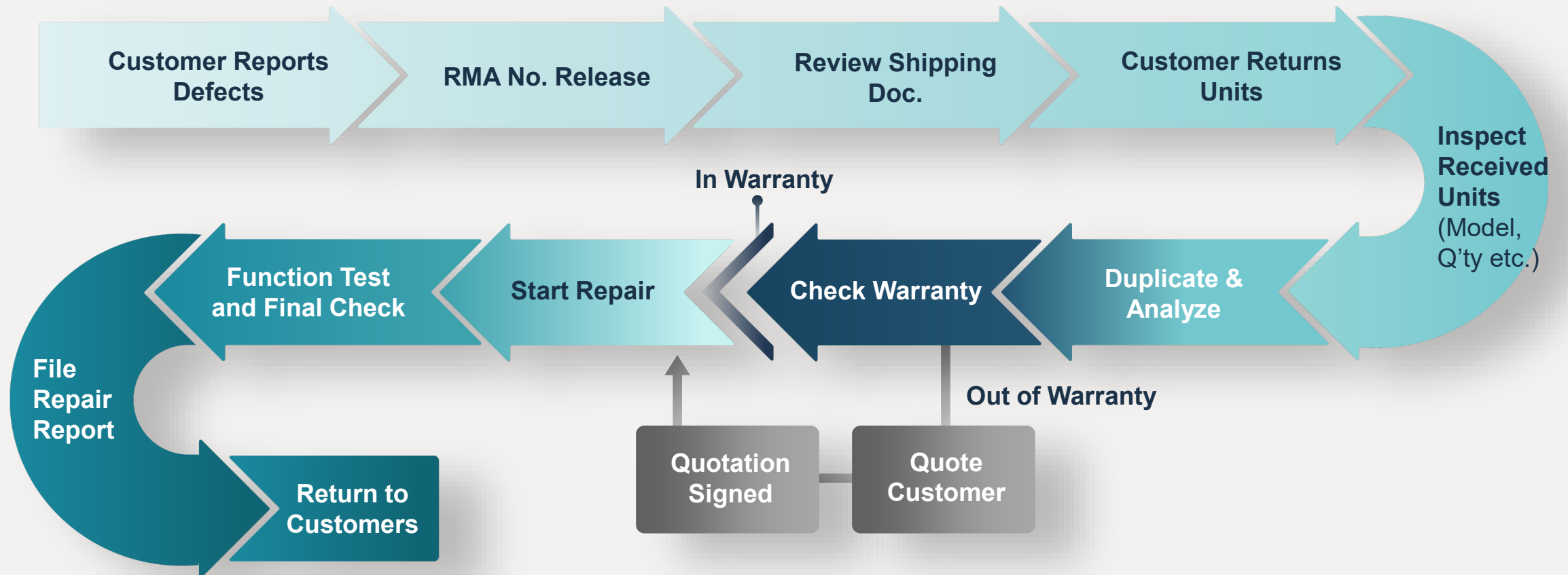
Product Traceability



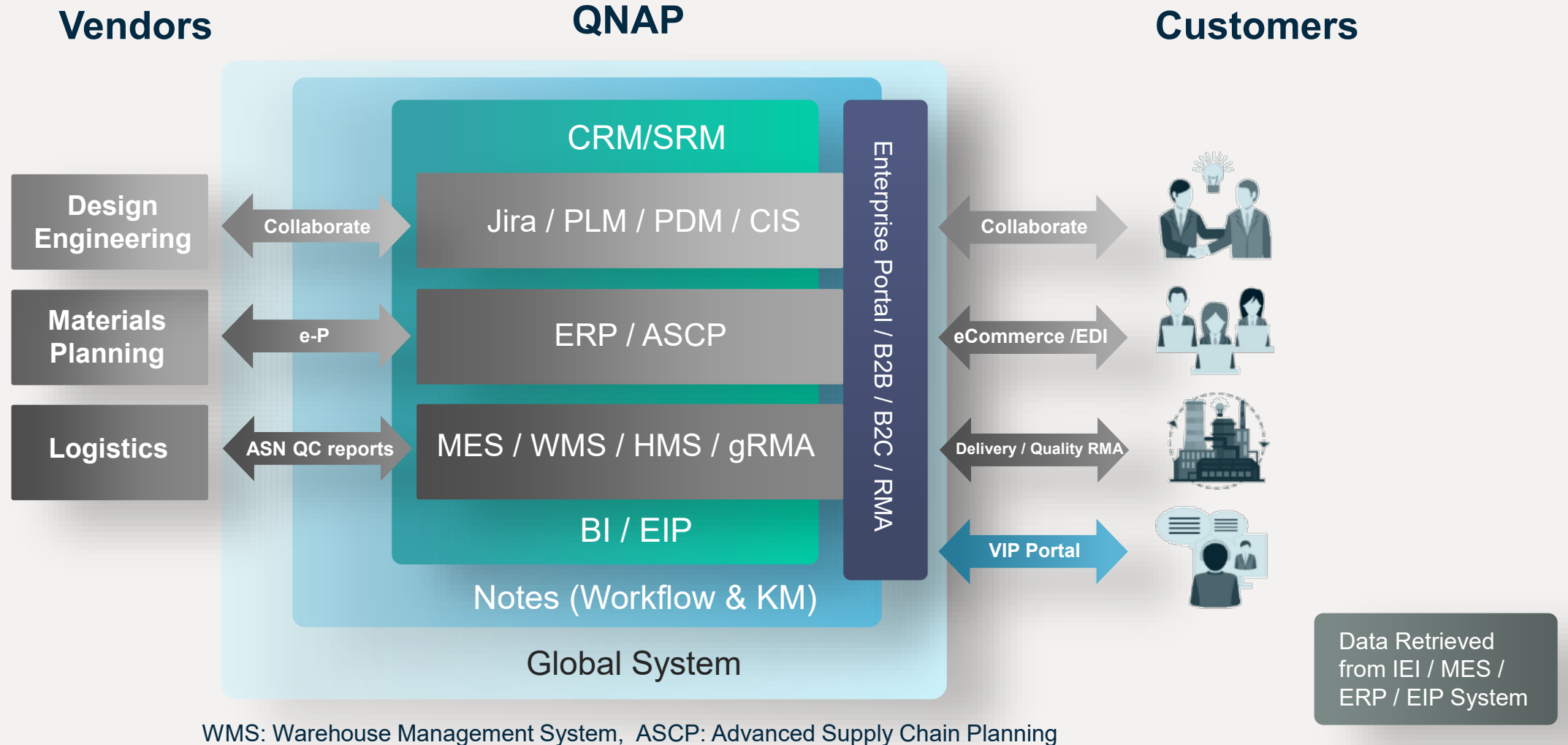
Production History Management



RMA Service Process



IT Infrastructure at QNAP



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www.qnap.com



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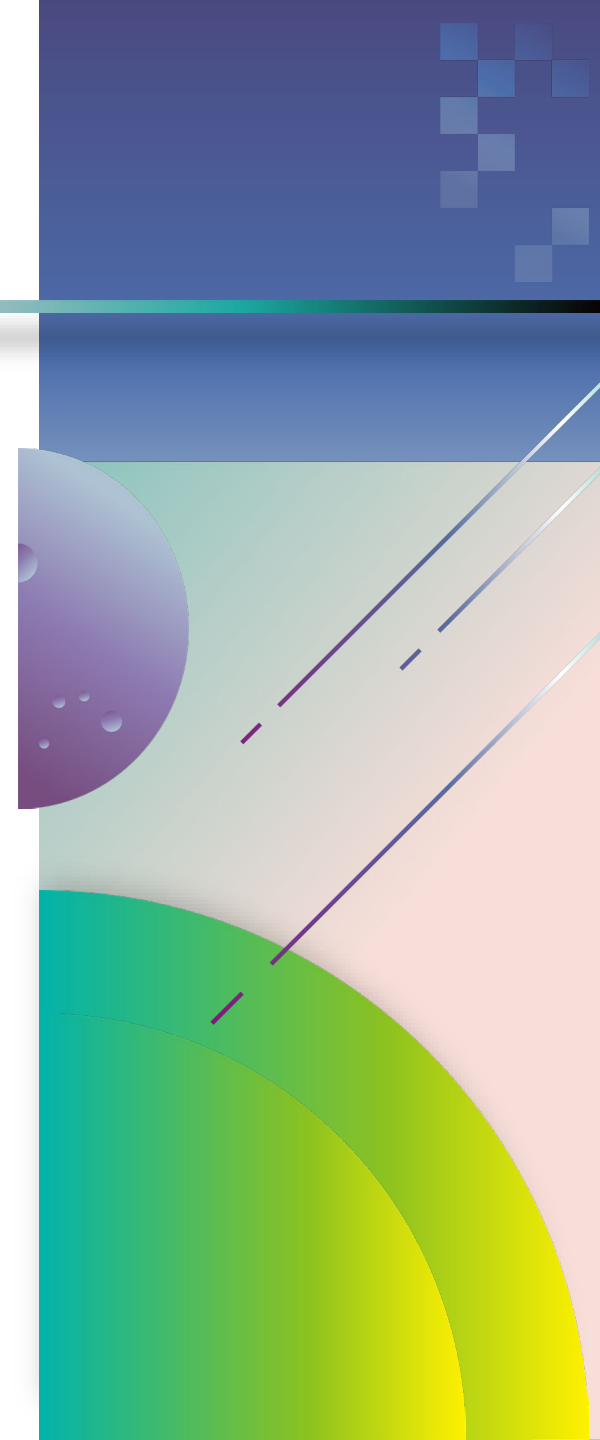
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Instagram



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one
step
ahead**

