actidata Ti-NAS QT

Windows-Server NAS with dual 10Gb-Ethernet
and integrated LTO Backup

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Ti-NAS
- Windows Server IoT for Storage
- 5bay NAS with HW RAID
- LTO Tape Streamer
- Intel 4Core CPU 32GB RAM
- Dual 10GbE SFP+
- Dual 1GbE RJ45
- IPMI 2.0 Redfish

Ti-NAS means "Tape-in-NAS" and combines a Network Attached Storage system (NAS) with an LTO tape drive. With two storage systems in one solution, an IT platform is available that realizes both: disk space for disk-based backup and the following data transfer to LTO media for external backup. Here, the user decides which backup software should be used on actidata's Ti-NAS QT storage platform. The integration of the Windows Server IoT based system into an existing IT infrastructure is easily to deploy via dual optical 10Gb Ethernet interfaces as well as the embedded two additional 1Gb Ethernet RJ45 ports.

Product-Highlights

- Robust & quite metal Desktop Chassis
- Server Motherboard, Intel 4Core Server CPU, DDR4 ECC reg. RAM
- 5bay Hardware RAID-System for up to 5x SATA-III HDDs / SSDs incl. CacheVault Cache Buffering (Disk-based NAS)
- LTO tape drive for backup on exchangeable LTO media (Off-site Backup)
- Internal data transfer creates no traffic on IT LAN during backup-to-tape
- Windows Server IoT for Storage installed on internal M.2 SSD
- Management via Remote Desktop, monitoring via IPMI 2.0, SNMP
- 4x LAN interfaces dual 10GbE SFP+, dual 1GbE RJ45
- Power Supply 450W 80PLUS GOLD
- 36 months limited warranty including Advance Replacement Service (Fast Exchange Service)
- CF Configuration (CareFree) incl. 24x7 Enterprise SATA-III HDDs / SSDs

Backup-to-Disk-to-Tape (B2D2T)

An emergency plan defines normally a regular backup of mission-critical data to a disk-based target and afterwards an additional transfer to an exchangeable medium. Restore of data from a NAS system is the fastest way to bring data back to the productive system because it is accessible online. Additional data backup sets should be available on external media to avoid against data loss after a possible big disaster.

The actidata Ti-NAS QT combines both necessary technologies into one solution and provides disk-based NAS storage and tape-based LTO backup. A proven Backup-to-Disk-to-Tape (B2D2T) strategy will be performed by a Windows Server-compatible backup software which needs to be installed on the internal M.2 SSD.

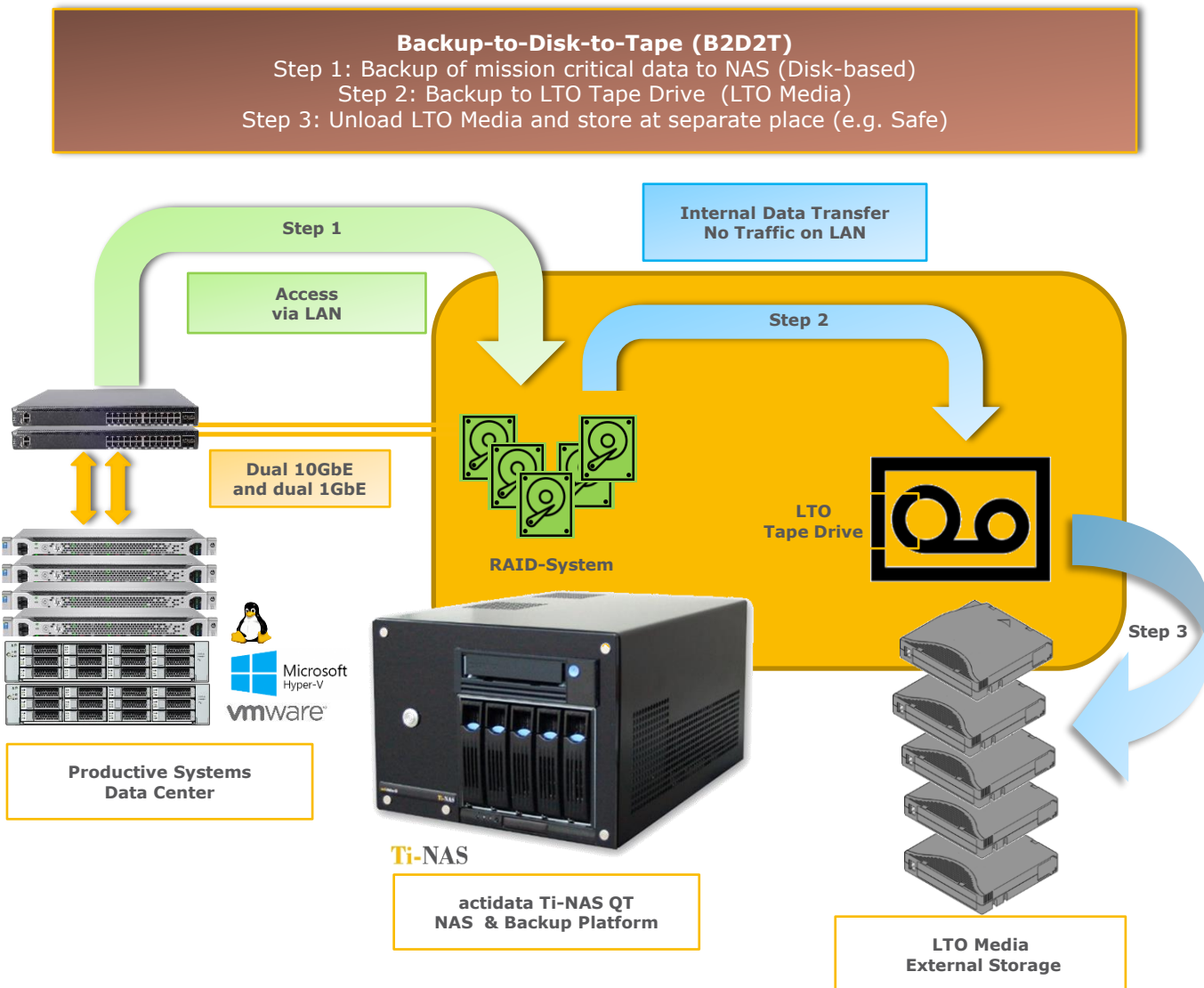### Ti-NAS Backup operates in a separate fire-section

Backup systems, even disk- or tape-based, should always operate in a separate fire section, away from the production systems. This prevents the data backup sets from being damaged in the event of an big disaster loosing most critical company data. The actidata Ti-NAS QT is ideal for this scenario and can be optimally integrated into the existing LAN via the high-performance optical 10Gb Ethernet interfaces.

36 Months Service and Support inclusive

actiCare service includes a 36-month limited system's warranty including the proven Fast Exchange Service (Advance Replacement of defective Parts) as well as a free technical support via telephone, e-mail, and internet in English. On request, actiCare service extensions are possible up to 60 months.
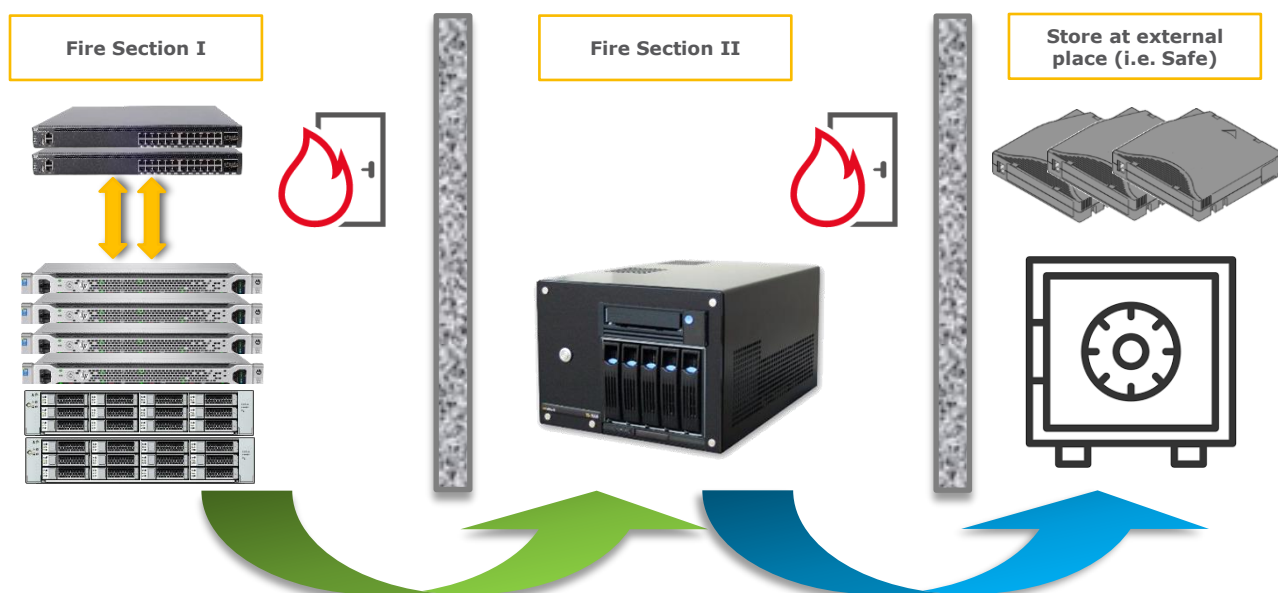
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Windows-Server-NAS with integrated LTO Backup – Applications

Backup-to-Disk-to-Tape (B2D2T)
Step 1: Backup of mission critical data to NAS (Disk-based)
Step 2: Backup to LTO Tape Drive (LTO Media)
Step 3: Unload LTO Media and store at separate place (e.g. Safe)

Step 1

Access via LAN

Internal Data Transfer No Traffic on LAN

Step 2

Dual 10GbE and dual 1GbE

LTO Tape Drive

RAID-System

Step 3

Microsoft Hyper-V
vmware

Productive Systems Data Center

Ti-NAS

actidata Ti-NAS QT NAS & Backup Platform
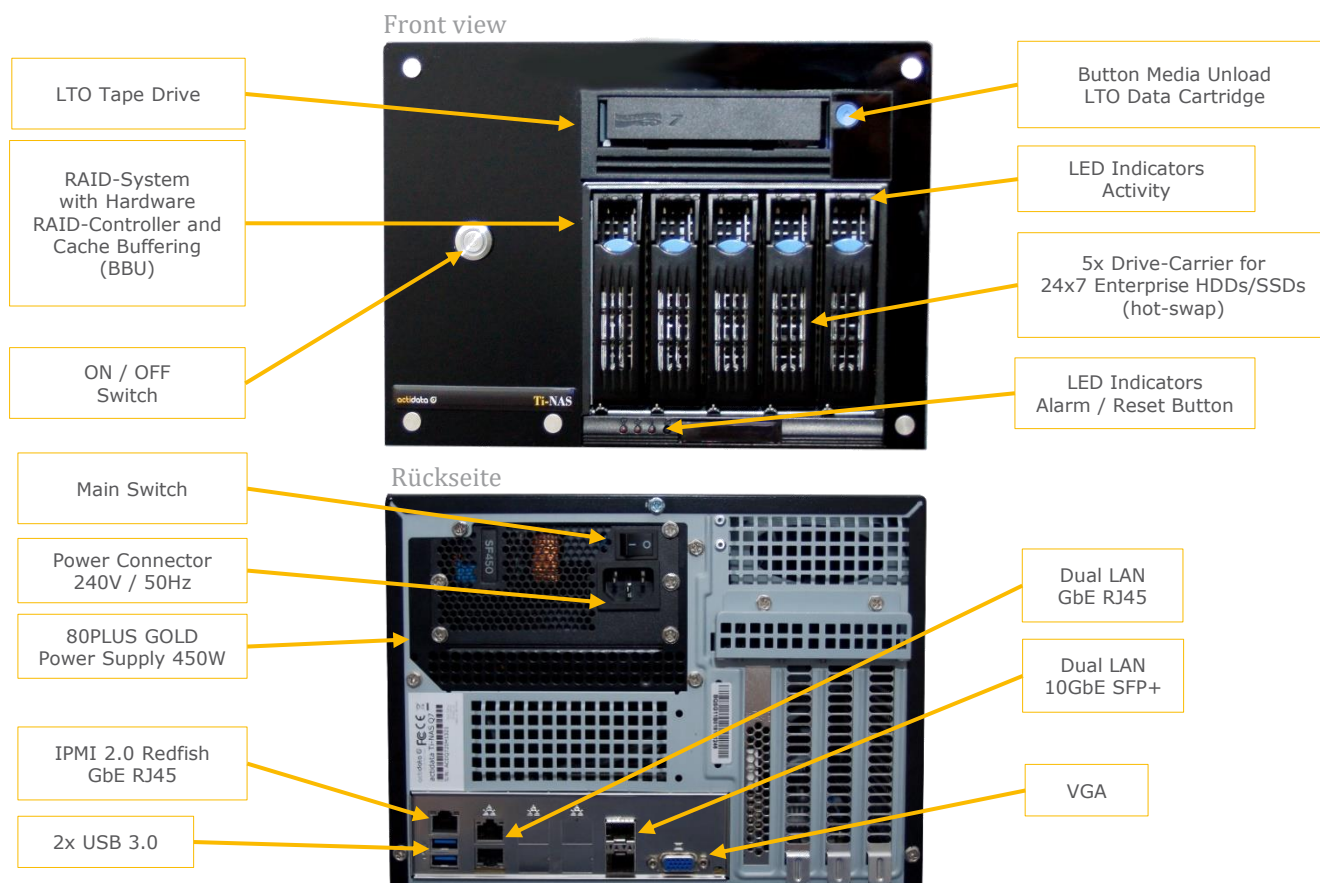
LTO Media External Storage

Backup Software defines the Backup Strategy

The actidata Ti-NAS QT combines disk-based backup with a LTO tape drive in one solution and should be ideally installed in a separate fire section. The system serves storage space as a platform for use by a common backup software, which specifies the data backup strategy. In a first step, the backup data will be stored on the hard disk space of the NAS system and afterwards transferred to exchangeable LTO media. The data on the LTO media should be stored externally to avoid againstz unauthorized access.

Fire Section I

Fire Section II

Store at external place (i.e. Safe)

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Windows-Server-NAS with integrated LTO Backup – Views

Front view

LTO Tape Drive

RAID-System
with Hardware
RAID-Controller and
Cache Buffering
(BBU)

ON / OFF
Switch

Button Media Unload
LTO Data Cartridge

LED Indicators
Activity

5x Drive-Carrier for
24x7 Enterprise HDDs/SSDs
(hot-swap)

LED Indicators
Alarm / Reset Button

Rückseite

Main Switch

Power Connector
240V / 50Hz

80PLUS GOLD
Power Supply 450W

IPMI 2.0 Redfish
GbE RJ45

2x USB 3.0

Dual LAN
GbE RJ45

Dual LAN
10GbE SFP+

VGA

Microsoft Windows Server 2022 IoT for Storage CAL-free:

(Storage-Edition of Microsoft Windows Server 2022 Product Family)

Benefits (Extract)	Windows Server 2022 IoT for Storage – Storage **Standard** Edition
File Sharing SMB / NFS	yes
Shared Block Storage (iSCSI)	yes
No. concurrent SMB Connections	unlimitiert
No. User	unlimitiert
Join a Domain	yes
Networking (DHCP, DNS, WINS)	yes
Deduplication	yes
Virtualization (VM Rights)	Host + 2 VM
Platform for Backup Software (SW not scope of delivery)	yes, e.g. Veeam, Veritas BackupExec, Acronis, ArchiWare, NovaStor, SEP, ARCserve etc.
Client Access Licence (CAL) needed	no

veeAM
Acronis
VERITAS
Barracuda
ARCHIWARE
NOVASTOR
arcserve
SEP
Backup & Disaster Recovery

Data LTO Tape Drives:

(Extract)

ULTRIUM LTO

Technology / Type	Capacity (* compressed)	Data Transfer Rate (* compressed)	Compatibility (* read only)
LTO-9 in Ti-NAS QT-9	18TB / 45TB*	300MB/s / 750MB/s*	LTO-9, LTO-8
LTO-8 in Ti-NAS QT-8	12TB / 30TB*	300MB/s / 750MB/s*	LTO-8, LTO-7
LTO-7 in Ti-NAS QT-7	6TB / 15TB*	300MB/s / 750MB/s*	LTO-7, LTO-6, LTO-5*

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Windows-Server-NAS with integrated LTO Backup – Technical Data

Product Type	actidata Ti-NAS QT-9 / QT-8 / QT-7
Description	NAS- & Backup Platform in robust and quite Desktop Chassis
Application	Backup- & Storage System for use in 10Gb- and/or 1Gb Ethernet Environment e.g. as Backup Target within an Backup-to-Disk-to-Tape (B2D2T) Backup Strategy
Storage Operating System	Windows Server 2022 IoT for Storage (Standard-Edition) CAL-free Installed on an internal server-grade M.2 SSD 250GB
NAS Functions	e.g. File-Server, Shares with support of SMB
Backup Functions	Windows Server Platform – prepared for installation of a Backup-Software e.g. Veeam Server or Veeam Tape Mover, Veritas BackupExec, Acronis, Archiware, SEP and others
Form Factor	Robust Desktop Chassis (less noise) 5bay SATA-III HDD/SSD hot-swap drive carrier 1x LTO Tape Drive, Serial Attached SCSI (SAS) ON / OFF switch and LED indicators on the front side
Prozessor / Motherboard	Server-CPU Intel Xeon D-1518, 2,2GHz, 4 Core, Server Motherboard (IoT embedded)
Internal Memory (RAM)	Default: 32GB DDR4 ECC reg. Upgrade up to: 128GB DDR4 ECC reg.
No. of HDDs/SSDs	Up to 5x SATA-III
Configuration	no HDDs / SSDs or as CF-Configuration (CareFree) with Enterprise SATA-III HDDs (Specification: 550TB/anno)
RAID Management	Hardware-RAID-Controller for RAID-Level 0, 1, 5, 6, 10 incl. Hot-Spare, CacheVault for Cache Buffering Online Extension, Volume-Management and Disk Statistics
LAN Interfaces (Ethernet)	4x total, 2x (dual) 10 GbE SFP+ and 2x (dual) GbE RJ45
System Management	OS Access: via Remote Desktop Hardware Management: via IPMI 2.0 Redfish, SNMP
System Interfaces	Rear side: 2x USB 3.0, 1x VGA 1x separate GbE RJ45 (IPMI 2.0)
Extension	Yes, HDD / SSD extension in free drive carrier
Power	Power Supply: 110-240V (Full Range), 50-60Hz, max. 500W, 80PLUS GOLD Standard Idle: ca. 95W, Load: ca. 195W Heat generation under load: ca. 665Btu/h
Environment	10-35 Degree Celsius 10-85% Humidity – not condensed
Dimension / Weight	195mm x 265mm x 390mm (HxWxD) ca. 8 kg w/o HDDs/SSDs / ca. 10 kg incl. HDDs/SSDs
Limited Warranty	36 Months (3 Years) incl. Fast Exchange Service (FESc) – Advance Replacement of defective Parts incl. E-Mail/Internet Support & Telephone Hotline (English / German)
Service Options	Up to 60 Months (5 Years) incl. Fast Exchange Service (FESc) – Advance Replacement of defective Parts
Certifications	CE, TÜV-Safety, RoHS

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