


RDX[®] Deep Dive Advanced Training (US/CAN/LATAM)

Dec. 7th, 2022

[Replay Link](#)

Upcoming Deep Dive Webinar: NEO Series® LTO Tape Advanced Training



neoseries

Got more data?
Need more capacity?

**TAA
COMPLIANT**

LEARN MORE



NEOxl 80 Expansion

Thurs., Dec 15th, 2022 | 12 Noon EST

Register: <https://attendee.gotowebinar.com/register/275728256872446557>

Questions: Sales@OverlandTandberg.com

RDX SSD 20% Off Promotion (Expires Dec. 31, 2022)

RDX® SSD Promotion
More Speed & Greater Capacity

GET 20% OFF
RDX SSD Cartridges



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Meet Our Presenter



Jan Hillebrandt

**Pre-Sales Manager
South Europe**

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Agenda

1. Introduction
2. RDX QuikStor & Media
3. RDX QuikStation
4. Accessories
5. Software
6. Resources / Support
7. Summary / Best Practice

Introduction

THE 3-2-1 BACKUP STRATEGY



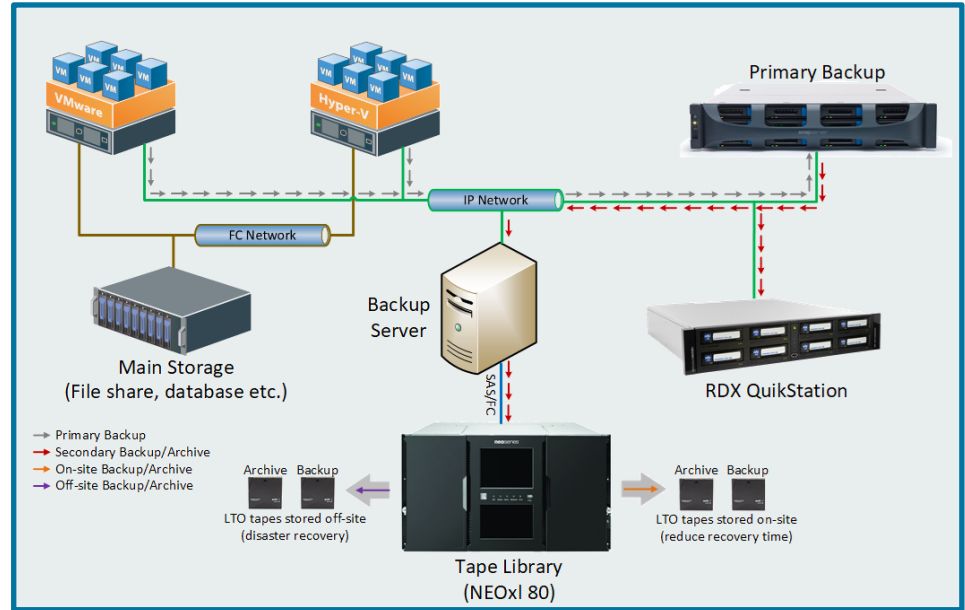
Create at least **3** copies of your data
(1 primary copy and 2 backups)



Use at least **2** different types of storage-media
(local disk, NAS, Cloud, tape, RDX)



Keep at least **1** copy **OFFLINE (AIR GAP!) & OFFSITE**



Where are removable media used today?



Healthcare



Retail



**Restaurants
+ Franchises**



Hospitality



Professionals



Oil & Gas



Education



Government



Telecom



**Broadcast
Media**



**Public
Safety**



Financial



Construction



**High Tech
Aerospace**



Automotive



Research

RDX® Product Portfolio

Designed to deliver cost-efficiency and robustness



QUIKSTOR

Internal & External Removable Disk Drives



QUIKSTATION

iSCSI Removable Disk Appliances



HDD, SSD Media



Accessories



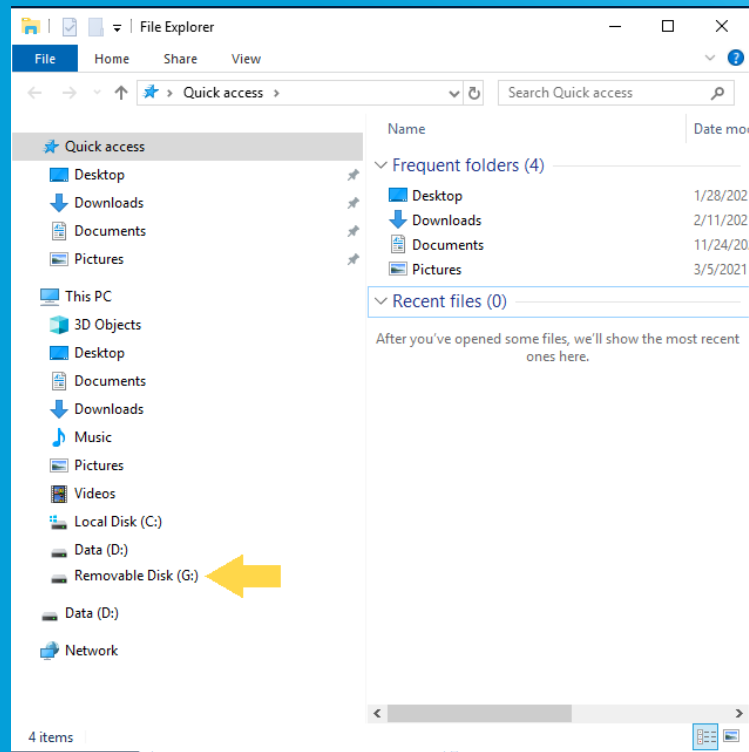
RDX QuikStor installation - Simple plug and play

Easy installation via USB or SATA

Immediately shows up as an additional drive-letter

Allows regular file operations

Integration into most backup, archive and data-management applications



Removable Disk vs Fixed Disk

Removable Mode

Regular operating mode

Fits most applications

Benefit from operations like media spanning and media rotation

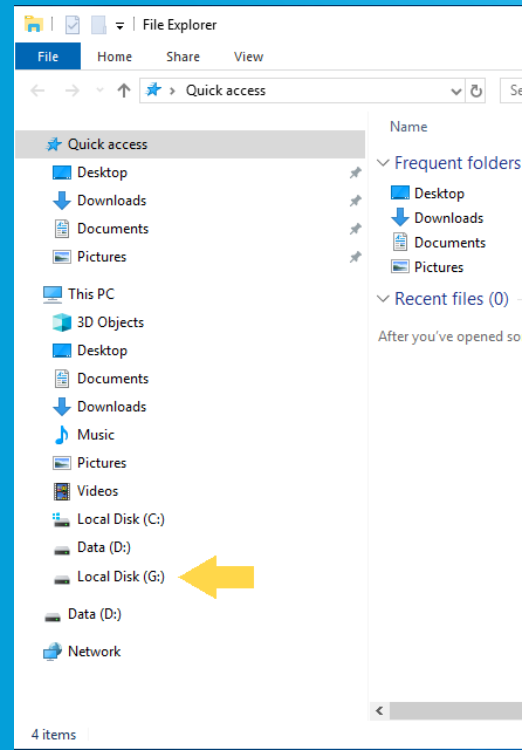
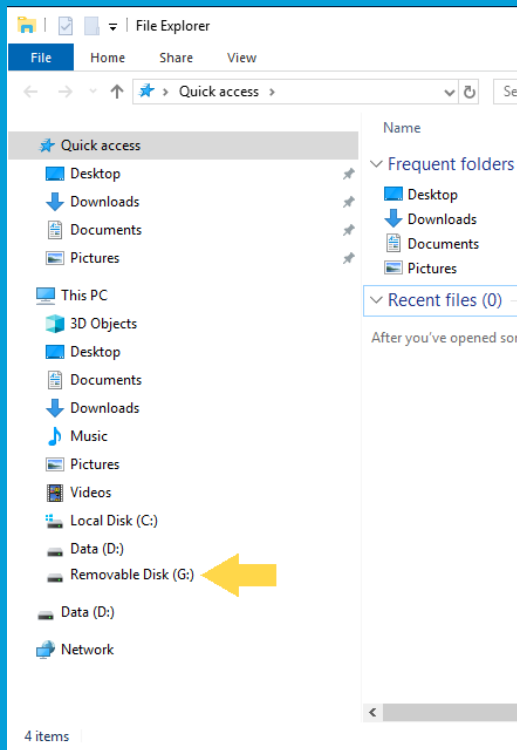
Fixed Disk Mode

Supports Windows Backup

Enables usage with LINUX

Allows integration in applications which do not support removable disks

Configurable via RDX Manager



RDX QuikStor & Media

RDX® Product Portfolio

Designed to deliver cost-efficiency and robustness



QUIKSTOR

RDX QuikStor®

- Single drive solution
- External USB3.0
- Internal USB3.0 and SATA III configurations
- Internal 3.5" and 5.25" bezel
- Removable and fixed disk operational mode
- Window and MAC support



Protects the data in a single workstation, server, NAS or individual PC in the field



Provides an ideal professional solution for remote and mobile workers, SOHO and branch offices





RDX Media

- HDD: ranging from 500GB to 5TB
- SSD: ranging from 500 GB to 8TB
- 3 Year Advanced Replacement Service
- Investment Protection and no data migration effort
 - Full media forward and backward compatibility



Shock, drop and static resistance, environmentally tolerant against humidity, temperature, dust vibration isolation for maximum performance

Cartridge Comparison

RDX HDD	RDX HDD and SSD	RDX SSD
		
Backup	Backup	Fast Backup
Archive	Data Transportation	Data Transportation
Data Transportation	Data Exchange	Data Exchange
Data Exchange		High Performance

RDX QuikStor Drive (external) – front & rear view



RDX QuikStor – contents

Blue Nonwoven Bag

To store RDX accessories like USB cable, media



Eject Pin

for emergency media eject without power



USB Y-Cable

1.5m long



USB-C adaptor

For Mac connectivity

For Android-Phone connectivity

external power-supply required (see pricelist)



Quick Start Guide



RDX Media – front view



RDX Media Design

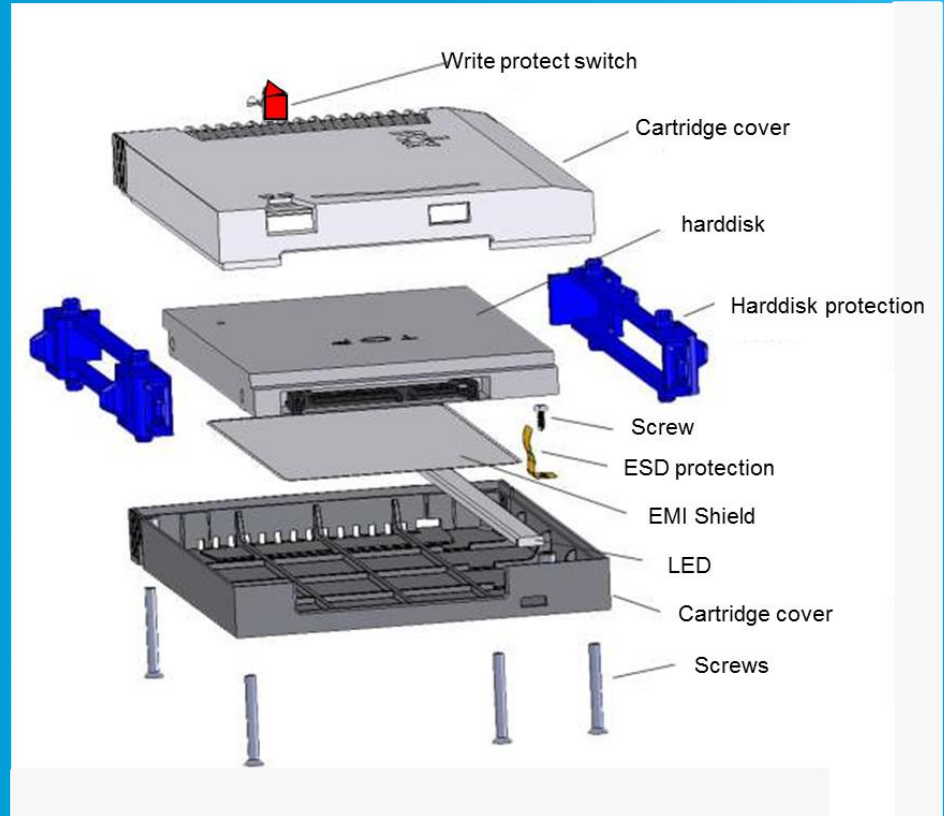
Uses core laptop HDD or SSD

Special isolation mounts improve shock / vibration

Conductive shell drains static charge before electrical interface connection is made

Electronic barcode

Each cartridge has a unique number



Media Qualification – extreme testing

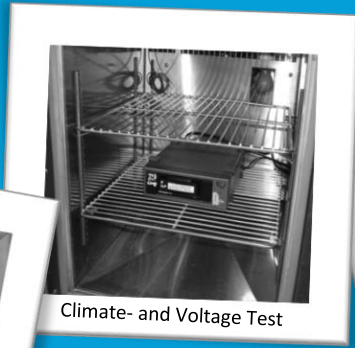
Drop-Test

Specified Drop-Test with over 800 Drops
>99,x% survive at 36" (~1m) height

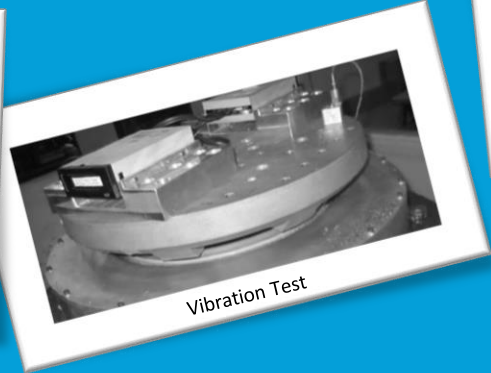


RDX extreme-testing

Vibration tests
Extreme environment tests
Climate tests



Climate- and Voltage Test



Vibration Test



RDX QuikStor – Performance Considerations

A USB 3.0 port will realistically allow data throughput up to ca. 250 MB/s

A SATA III port will realistically allow data throughput at over 300 MB/s

A “classic” RDX cartridge, based on mechanical HDDs will provide a maximum performance of around 100 MB/s

An SSD-based RDX cartridge can provide a performance of 200+ MB/s

Data structure (number of files, file sizes & types) and hardware specs of the backup server(s) are important factors in overall performance!

RDX QuikStor – Highlights

Universal Compatibility (any cartridge, any drive)

Drives are rated for up to 10 000 load/unload cycles

Cartridges are rated for up to 5 000 load/unload cycles

The return rate for RDX is < 0,5%

The standard warranty on RDX is 3 years Advance Exchange*

Cartridges are pre-formatted to NTFS but support other file systems

* Subject to location

RDX QuikStation

RDX® Product Portfolio

Designed to deliver cost-efficiency and robustness



QUIKSTATION

RDX QuikStation® 4

- 4-bay appliance
- iSCSI network attachable
- Windows and MAC support
- Multiple operating modes
 - Disk autoloader
 - Tape autoloader and tape library emulation
 - Logical Volumes
 - RAID 5



Protects data from multiple workstations or servers in physical and virtual environments



Provides a network attached backup solution for multiple drives or one large volume

RDX QuikStation® 8

- 8-bay appliance
- iSCSI network attachable
- Windows and MAC support
- Multiple operating modes
 - Disk autoloader
 - Tape autoloader and tape library emulation
 - Logical Volumes
 - RAID 5 and 6

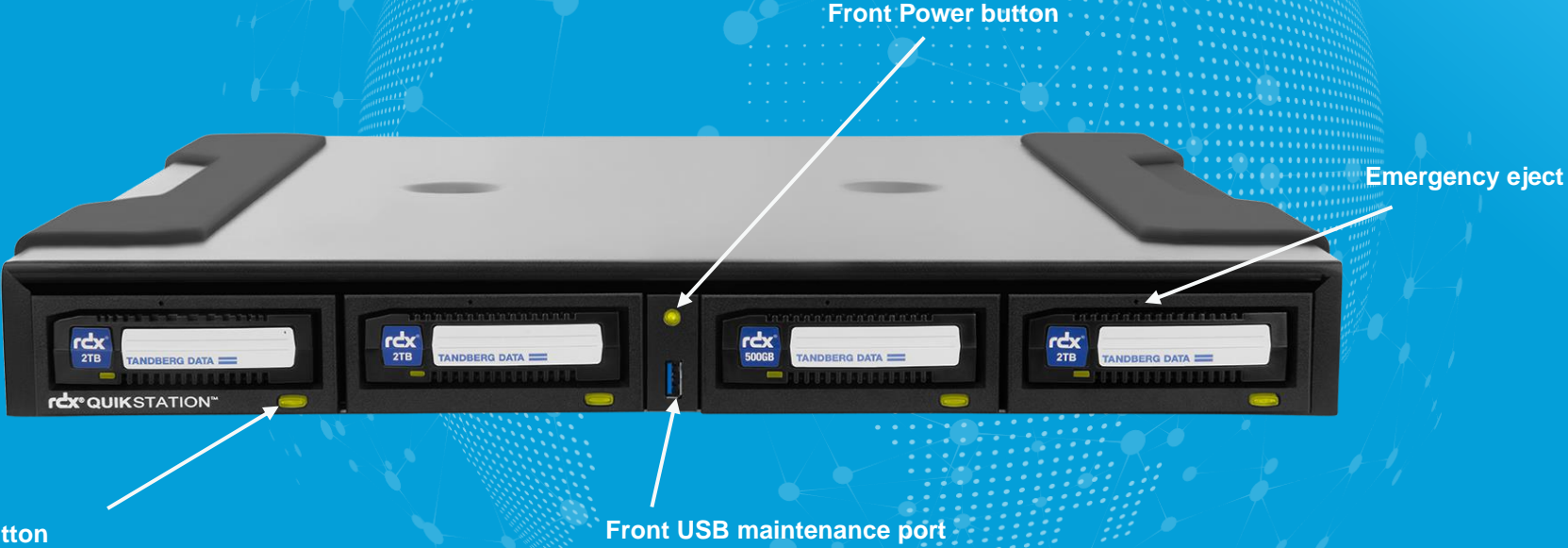


Protects data from multiple workstations or servers in physical and virtual small and medium businesses environments



Provides backup for network attached disk arrays and multiple large volumes

RDX QuikStation 4 – front view



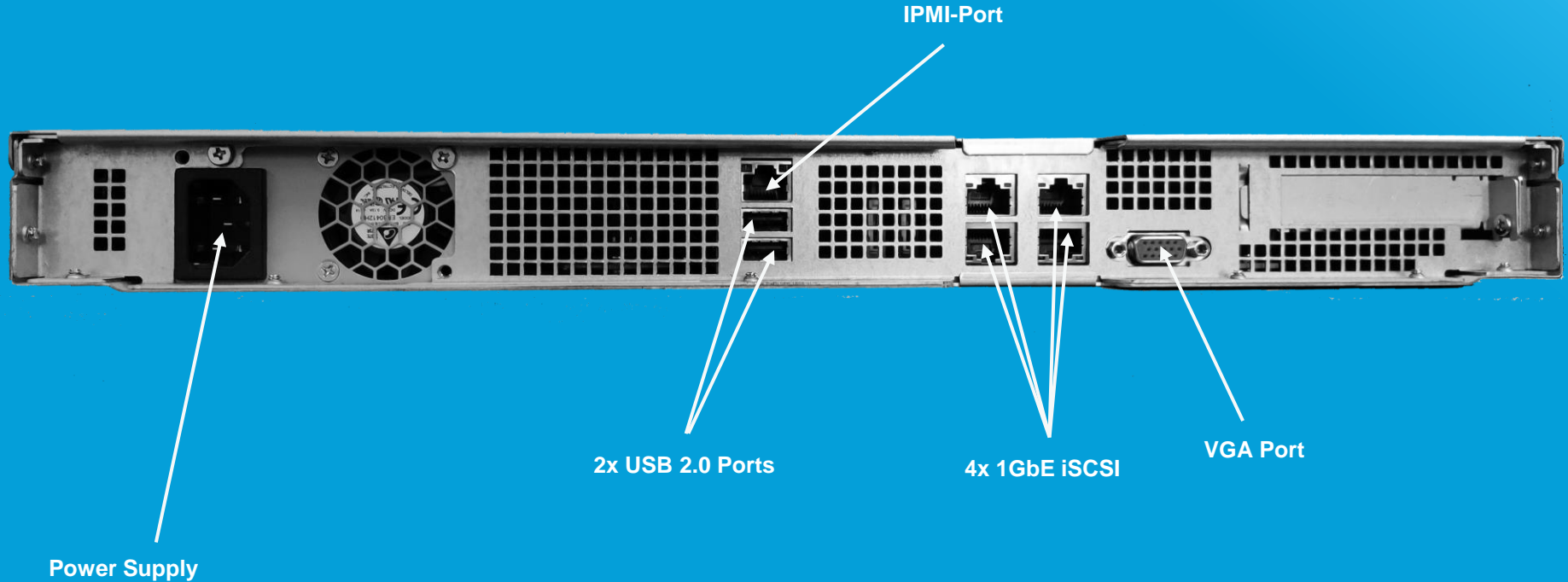
Eject button

Front USB maintenance port

Front Power button

Emergency eject

RDX QuikStation 4 – rear view



RDX QuikStation 4 - contents

Rack rail kit
rackmount only

1x Ethernet cable (3m)

Power cable
1x European, 1x US/Japanese

USB flash drive
for IP address obtaining and static
IP address assigning

Eject key

Quick Start Guide



RDX QuikStation 8 – front view



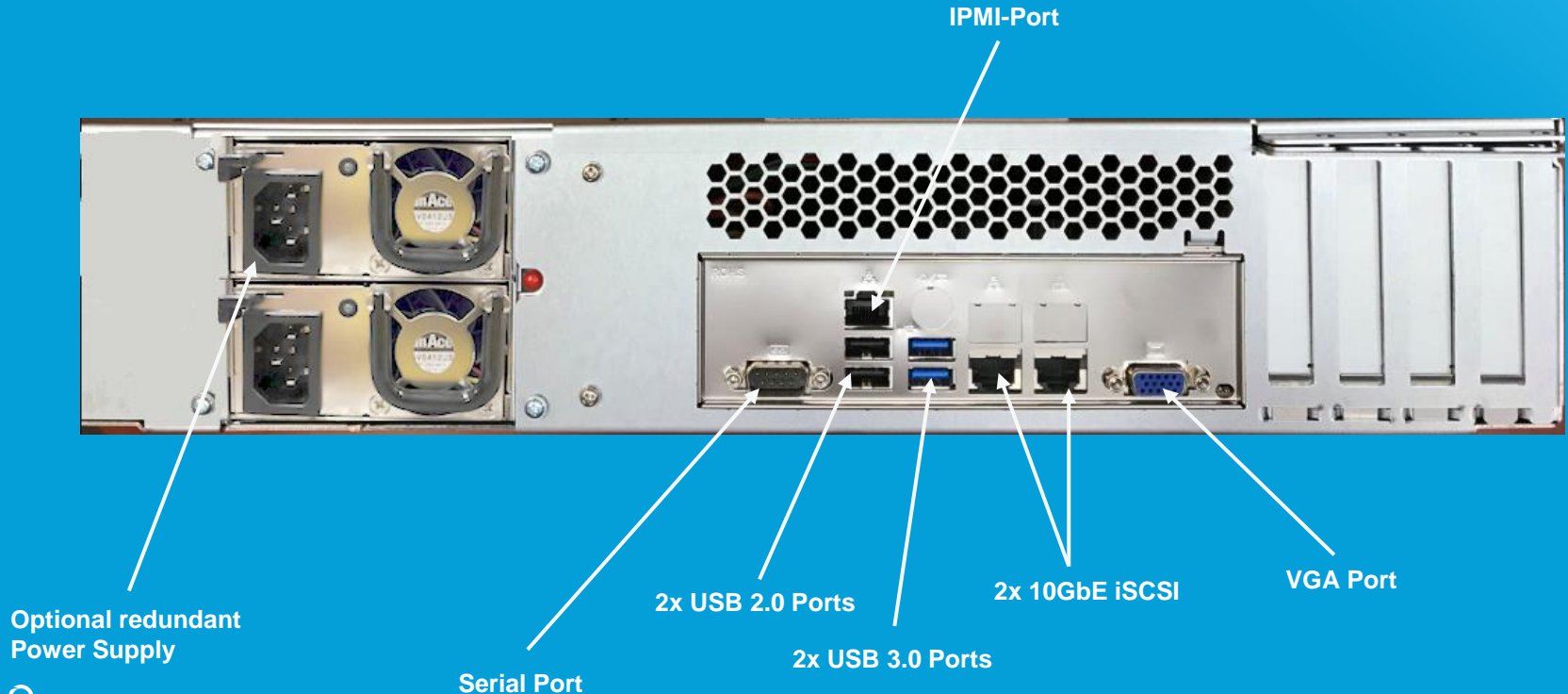
Front Power Button

Eject Button

Emergency Eject

Front USB
Maintenance Port

RDX QuikStation 8 – rear view



RDX QuikStation 8 - contents

Rack rail kit

2x Ethernet cable (3m)

Power cable

1x European, 1x US/Japanese

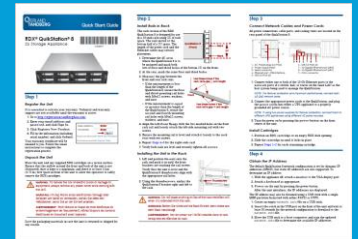
USB flash drive

for IP address obtaining and static
IP address assigning

End caps

Eject key

Quick Start Guide



Numerous Operational Modes

Disk Configurations

4/8 RDX drives

Either removable or fixed disk mode

Disk Autoloader

1 drive and 4/8 slots

Logical Volumes

1 logical volume across 4 drives (QS4)

2 logical volumes across 4 drives (QS8)

Either removable or fixed disk mode

Protected logical volumes (fixed or removable)

1 protected volume across 4 drives with 1 disk fault tolerance (QS4)

2 protected volume across 4 drives with 1 disk fault tolerance (QS8)

1 protected volume across 8 drives with 2 disks fault tolerance (QS8)

Tape Configurations

TD StorageLoader LTO (1 drive and 4/8 slots)

TD StorageLibrary T24 (2 drives and 4/8 slots)

Hybrid Configuration (QS8)

TD StorageLoader and 4 RDX drives

Logical Device Type Settings

This action will eject all the cartridges in the RDX QuikStation 8 and restart the system. For more information about logical device types, refer to the RDX QuikStation 8 product manual.

If you are using a device type with an RDX drive, such as the Disk Configuration option, you must install RDX Utility on each Windows host attached to an RDX device. Otherwise, the eject button will not work properly. Download the latest RDX Utility [Here](#).

Current Selected Type

TD StorageLoader LTO (One LTO-3 drive and four slots) and four TD RDX targets

- Disk Configuration (+)
- Disk Automation Configuration (+)
- RDX Logical Volume Configuration (+)
- RDX Protected Volume Configuration (+)
- Tape Automation Configuration (+)
- Hybrid Configuration (-)

TD StorageLoader LTO (One LTO-3 drive and four slots) and four TD RDX targets

Change Cancel

RDX Cartridge - barcode

Virtual barcodes in Tape Emulation mode (RDX QuikStation) are generated based on the last 6 numbers of the cartridge serial number



RDX QuikStation – Performance Considerations

A single 1 Gb/s Ethernet port will realistically allow data throughput up to 100 MB/s

A “classic” RDX cartridge, based on mechanical HDDs will provide a maximum performance of around 100 MB/s

An SSD-based RDX cartridge can provide a performance of 200+ MB/s

Optimising performance at the QuikStation level means increasing the number of addressable targets (eg 4x / 8x RDX modes) & running multiple jobs in parallel

Data structure (number of files, file sizes & types) and hardware specs of the backup server(s) are important factors in overall performance!

RDX QuikStation – Highlights

Ethernet ports can be teamed for higher throughput and reliability

Ethernet ports on all QuikStation models are copper RJ45 form factor

The tape library emulation mode provides a higher level of security (cartridges are formatted as tapes and do not appear as disk volumes!)

Protected logical volumes may slightly increase performance

QuikStation – Configuration choices

QuikStation Mode	Use case	Security level
Individual RDX	Consolidation Performance	Basic
Logical Volume	Capacity	Basic
Logical Volume (protected)	Capacity Performance (minor)	Medium
Disk Autoloader	Automation	Advanced
Tape Library	Automation	High

Accessories

RDX® Product Portfolio

Designed to deliver cost-efficiency and robustness



RDX QuadPAK



- Professional Rack Mount Kit for external RDX QuikStor
- Easy integration of up to 4 external RDX QuikStor
- Fast adding and removal of QuikStor drives from the front
- Allows to assign dedicated RDX drives to up to four servers
- Ideal for media spanning and media rotation for one server



Enables RDX to be installed with other IT equipment in one rack

RDX TENCASE



- Professional RDX Media transportation and flight case
- For 10pcs RDX Media/Cartridges
- Dust & waterproof
- Automatic Pressure Equalization Valve
- balances interior pressure, keeps water out
- Pad lockable for security



Allows secure transportation and archiving of RDX media

RDX QuadPAK™

Professional Rack Mount Kit for external RDX QuikStor

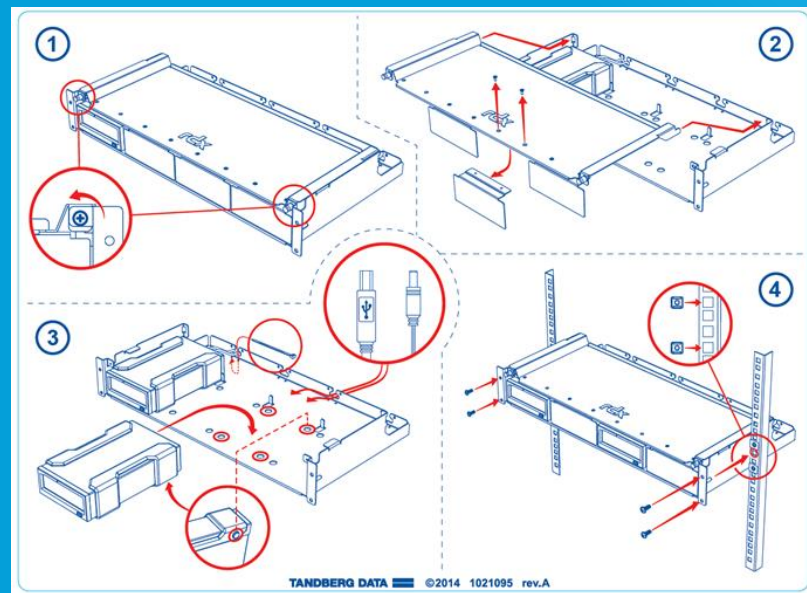
Easy integration of up to 4 external drives

Enables RDX to coexist with other IT equipment in one rack

Fast adding and removal of drives from the front

Allows to assign dedicated RDX drives to up to four servers

Ideal for media spanning and media rotation for one server



Software

RDX Manager - Administrative Features

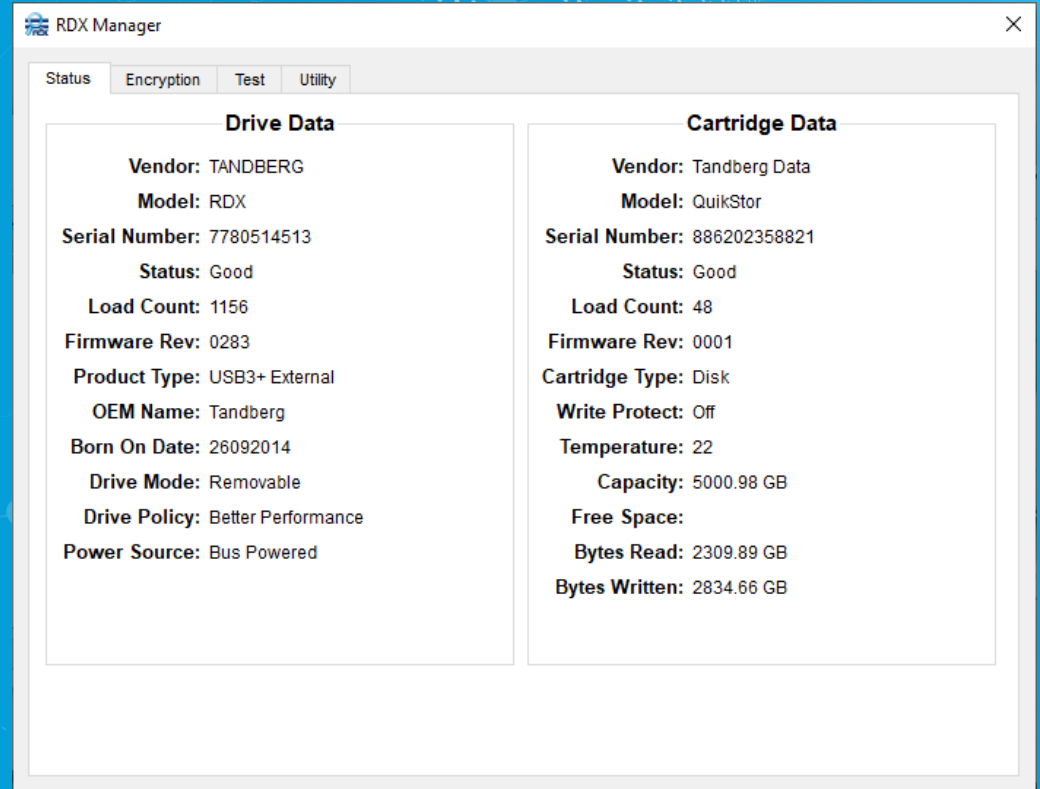
Allows easy administration of RDX

Shows status of media and drive

Self test

LED test

Read/Write test



The screenshot displays the RDX Manager application window. At the top, there are tabs for 'Status', 'Encryption', 'Test', and 'Utility'. The 'Status' tab is active, showing two columns of data: 'Drive Data' and 'Cartridge Data'. The 'Drive Data' column lists details for a TANDBERG RDX drive, including its serial number, status, load count, firmware revision, product type, OEM name, born-on date, drive mode, drive policy, and power source. The 'Cartridge Data' column lists details for a Tandberg Data QuikStor cartridge, including its serial number, status, load count, firmware revision, cartridge type, write protect status, temperature, capacity, free space, bytes read, and bytes written.

Drive Data	Cartridge Data
Vendor: TANDBERG	Vendor: Tandberg Data
Model: RDX	Model: QuikStor
Serial Number: 7780514513	Serial Number: 886202358821
Status: Good	Status: Good
Load Count: 1156	Load Count: 48
Firmware Rev: 0283	Firmware Rev: 0001
Product Type: USB3+ External	Cartridge Type: Disk
OEM Name: Tandberg	Write Protect: Off
Born On Date: 26092014	Temperature: 22
Drive Mode: Removable	Capacity: 5000.98 GB
Drive Policy: Better Performance	Free Space:
Power Source: Bus Powered	Bytes Read: 2309.89 GB
	Bytes Written: 2834.66 GB

RDX Manager - Utilities

Updating firmware

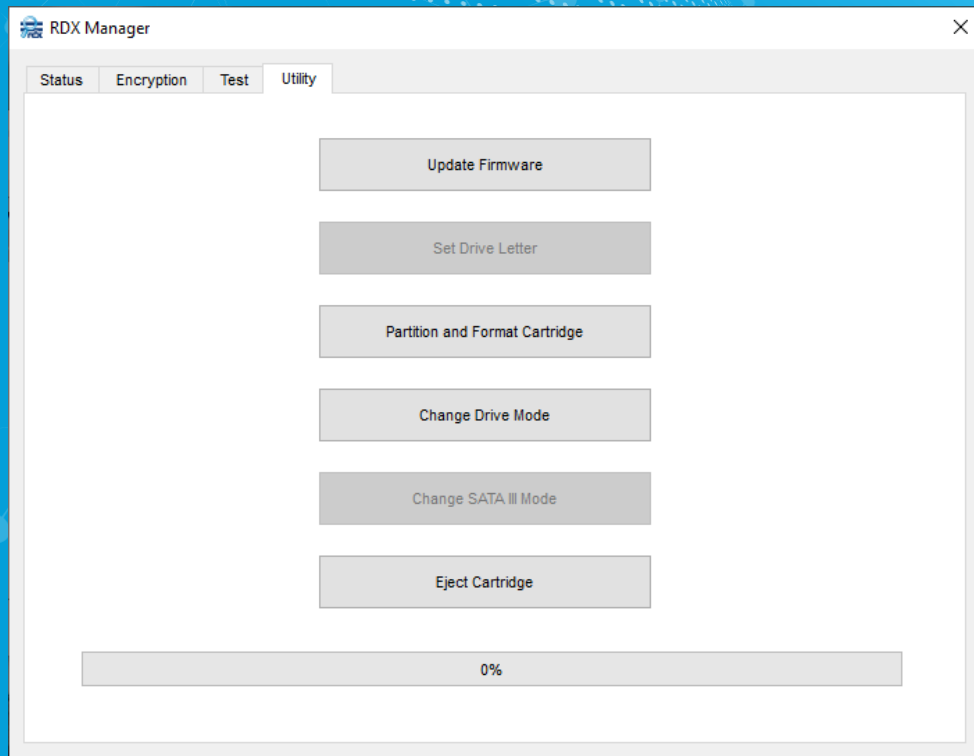
Setting the drive letter (keeping it persistent)

Media formatting and partitioning

NTFS

exFAT

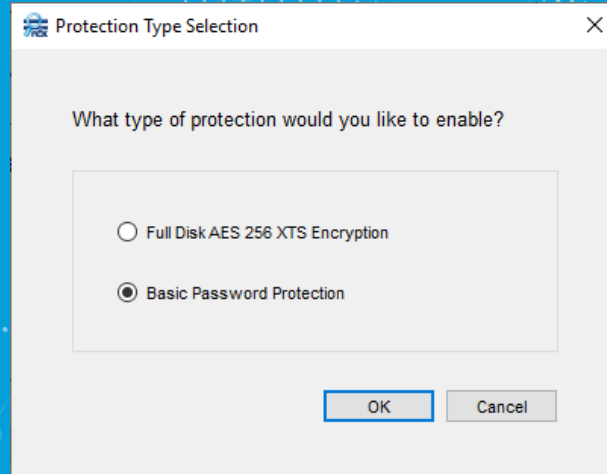
Changing of drive mode
(removable – fixed, USB 3.0
drives)



RDX Manager - Security Features (1/3)

Manages encryption (**SATA III drives**) and password access protection (**SATA III and USB 3.0 drives**)

Secures data on RDX media during transit or off-site storage and protects against data theft



RDX Manager - Security Features (2/3)

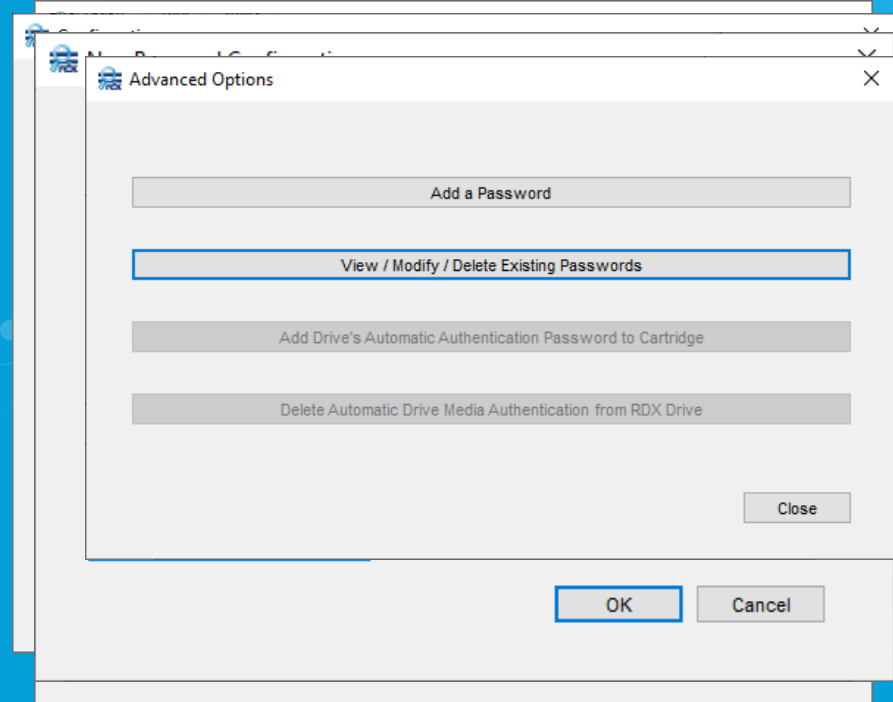
Password Protection

Up to 8 passwords with different access rights

1 master password

RDX manager determines the strength of the password

Without password, data is inaccessible



RDX Manager - Security Features (3/3)

Encryption

Encryption deletes all data on the media

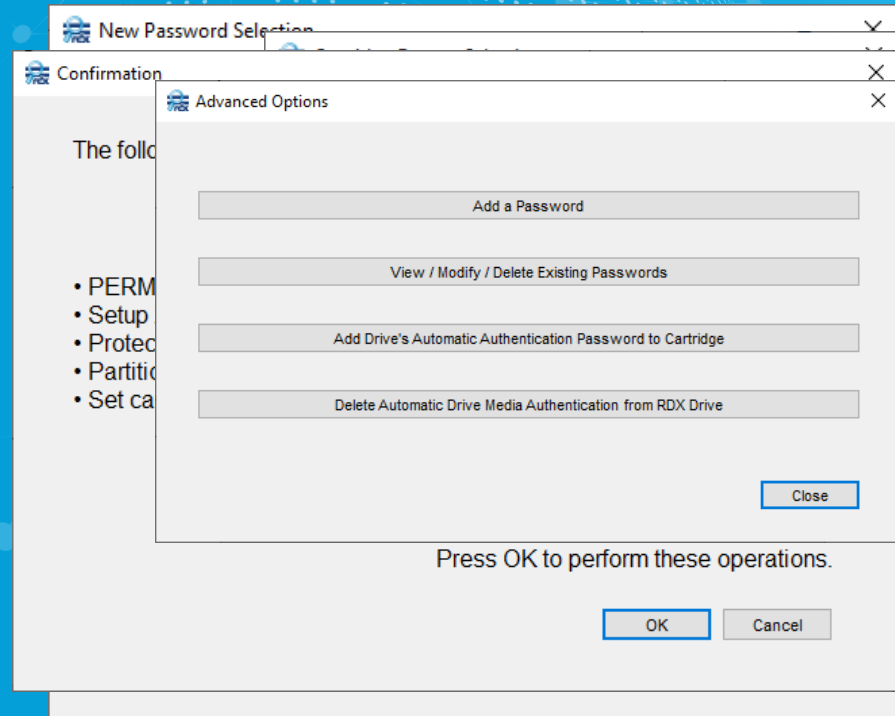
Data will be accessed via password

Up to 8 passwords with different access rights

1 master password

1 drive/media authentication password

Decryption deletes all data on the media



The rdxLOCK Software

rdxLOCK is a software solution which enables regulatory compliance archiving (RDX WORM)

RDX WORM



Meets legal requirements for archiving and storage

Data can be read without restriction

Data can no longer be changed or deleted

Is transparent to applications such as

- Document management

- Enterprise content management

- Accounting

- PACS (medical application)

- Technical Documentation

Operating System Support

Windows 7, 8, 8.1 and 10

Windows Server 2008 R2, 2012, 2016 and 2019



Resources / Support

Service & Support Details:

<https://www.overlandtandberg.com/service-support/contact-service-support/>

Documentation & Knowledge Base:

<https://overlandtandberg.atlassian.net/wiki/spaces/KNOW/pages/104759297/Removable+Disk+Solutions+RDX%20>

Downloads (Software, Firmware, etc.):

<https://ftp1.overlandtandberg.com/rdx/>

Summary / Highlights

RDX connectivity choices:

- USB 3.0 (Internal, External drives)
- SATA III (Internal drives)
- Ethernet/iSCSI (RDX QuikStation)

Universal compatibility between all QuikStor drives, QuikStations & cartridges

Zero Maintenance

High durability of drives and cartridges

RDX cartridges are ruggedized and highly reliable (return rate <0,5%)

RDX QuikStation includes a large choice of configuration option

All RDX products and media have a standard warranty of 3 years Advance Replacement Service (ARS) - subject to country/location

Excellent ISV compatibility

Hints, Tips & Best Practice

RDX SATA III drive: use a dedicated SATA controller & configure AHCI mode

RDX USB drive (external): not all USB 3 ports provide sufficient power, so the second USB connector on the Y-cable or even an external PSU may be required in rare cases

RDX QuikStation: when bundling Ethernet ports verify that

- the switch supports the chosen protocol
- the backup server's outgoing bandwidth is greater than a single 1 GbE port

RDX QuikStation: the web interface is only accessible via the data ports, NOT the IPMI port

Power down the drive or QuikStation before using the emergency eject mechanism

ALWAYS install RDX Manager on any Windows system that uses RDX

Only HDD-based cartridges should be used for archiving,
SSD-based cartridges should not be offline for more than one month

RDX QuikStation includes a large choice of configuration option

RDX Resources

- [RDX Overview](#)
 - [RDX QuikStor](#) | [Data Sheet](#)
 - [RDX QuikStation 4](#) | [Data Sheet](#)
 - [RDX QuikStation 8](#) | [Data Sheet](#)
 - [RDX Removable Data Cartridges](#) | Data Sheet [SSD](#), [HDD](#)
 - [RDX WORM Data Cartridge](#) | [Data Sheet](#)
 - [RDX Software Compatibility Matrix](#)
-

RDX SSD 20% Off Promo (expires Dec. 31, 2022)

- [Latin America](#)
- [US/CAN](#)

Thank You !

Questions?
Sales@OverlandTandberg.com