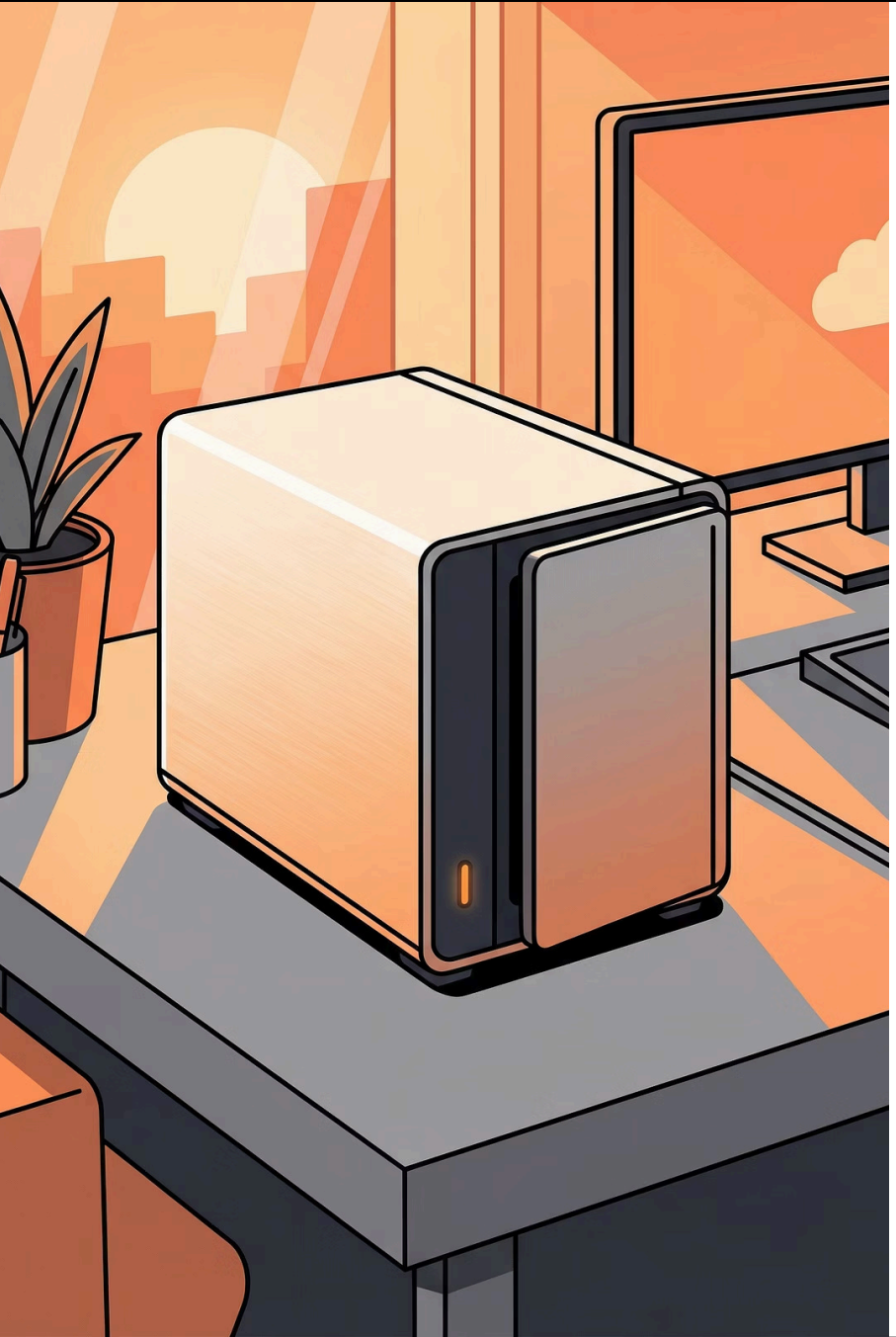


Ugreen NASync DXP4800 vs DXP4800 Plus

A comprehensive technical analysis comparing two 4-bay NAS systems that share identical chassis but deliver fundamentally different performance tiers. This forensic evaluation examines processor architecture, network capabilities, and real-world use cases to provide a definitive purchase recommendation for the Canadian market.

Executive Recommendation

Buy the DXP4800 Plus

The Pentium 8505-powered Plus model delivers superior value despite its $160 CAD premium. With 10GbE networking, double the CPU performance, and 64GB RAM capacity, it future-proofs your investment.

Key Advantages

- Actually available in Canadian market
- 10GbE prevents obsolescence
- Handles VMs and advanced workloads
- Better resale value retention

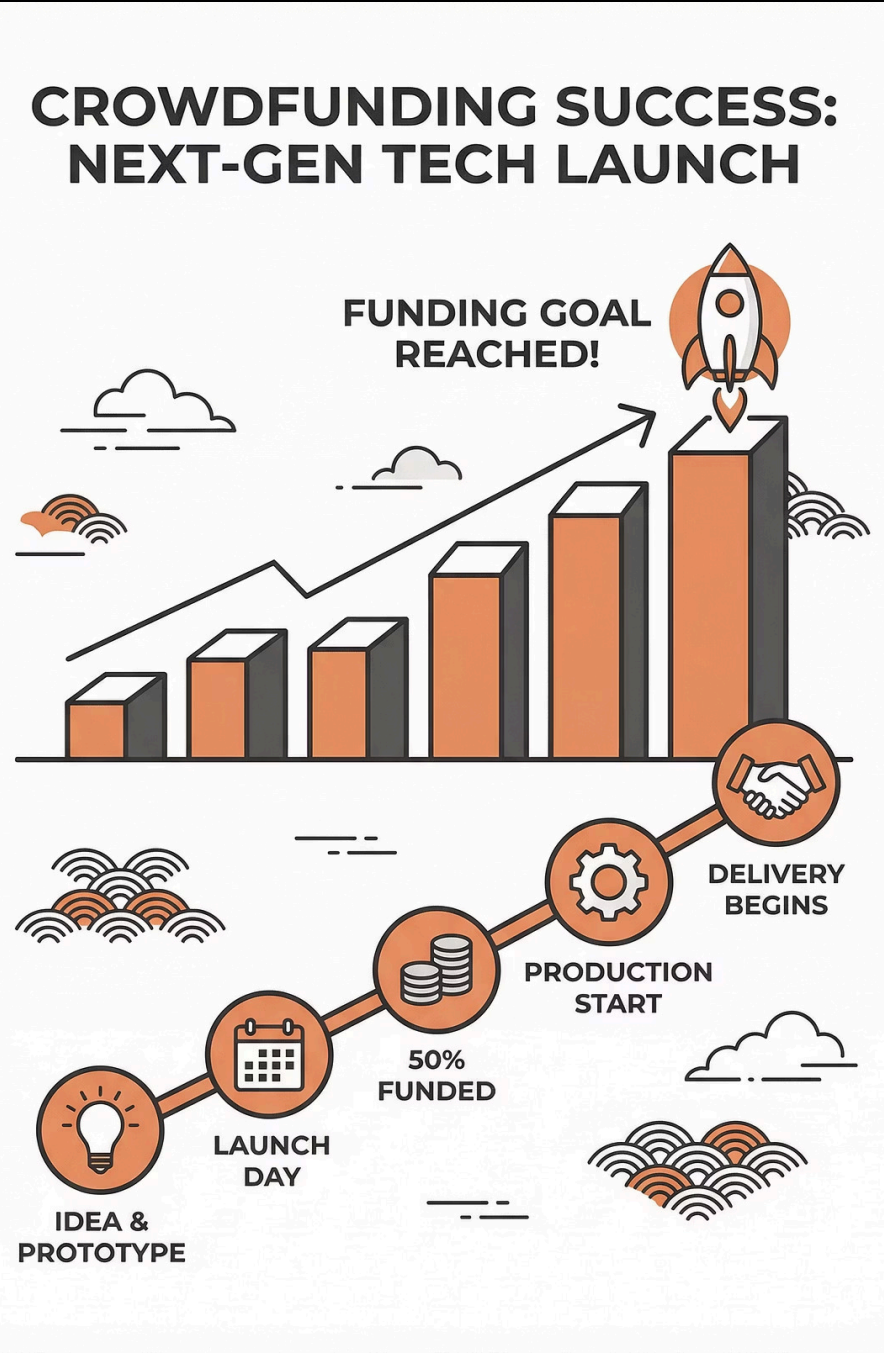
Price Reality

At ~$759 CAD on sale vs ~$594 for the base model (when available), the Plus includes hardware worth more than the price difference: 10GbE card alone costs $100-120.

Market Disruption Context

Ugreen's $6 million crowdfunding campaign disrupted the stagnant NAS market dominated by Synology and QNAP. For nearly a decade, the prosumer segment relied on incremental updates to aging processors and legacy gigabit networking. Ugreen challenged this equilibrium with a hardware-first value proposition: 12th Generation Intel processors and 10-Gigabit networking at entry-level prices.

This report provides forensic analysis of two models sharing identical 4-bay chassis but representing fundamentally different computing tiers. The DXP4800 targets efficiency-conscious users, while the DXP4800 Plus positions as a powerhouse for content creators and virtualization enthusiasts.



The Silicon Foundation

Intel N100 (DXP4800)

Architecture: Alder Lake-N with 4 Efficiency cores only

Clock Speed: Up to 3.4 GHz

TDP: 6W (extremely efficient)

PassMark: ~5,354 multi-thread

The N100 represents a massive leap over previous Celeron processors. It saturates gigabit ethernet and handles file encryption effortlessly. However, its homogenous E-core design creates latency during bursty workloads like photo thumbnail generation.

Pentium Gold 8505 (Plus)

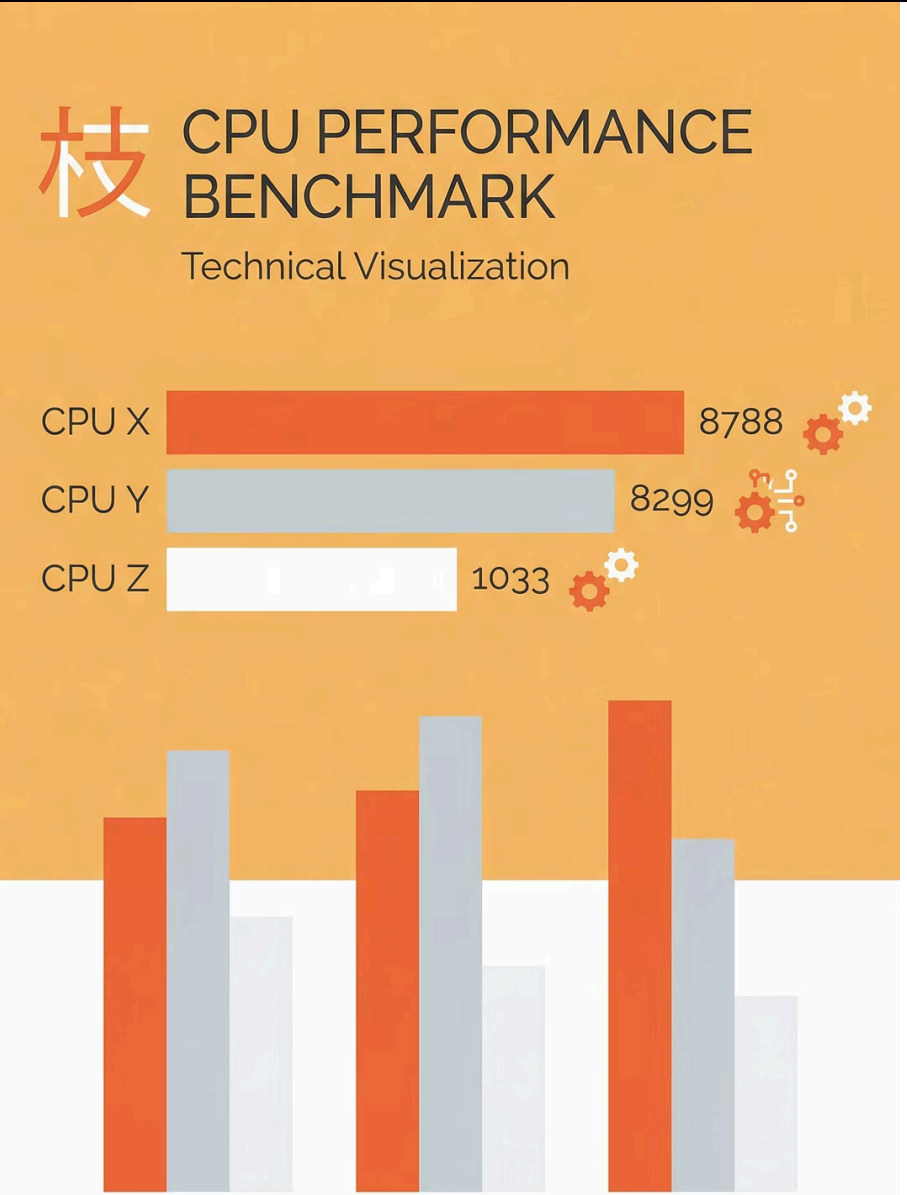
Architecture: Alder Lake-U hybrid (1 P-core + 4 E-cores)

Clock Speed: Up to 4.4 GHz on P-core

TDP: 15W base, 55W turbo

PassMark: ~9,106 multi-thread

The Golden Cove P-core transforms system responsiveness. The OS scheduler assigns priority tasks to the high-frequency P-core, ensuring snappy web interface performance even when E-cores handle background RAID operations.



Performance Gap Analysis

70%

Single-Thread Advantage

The 8505 scores 3,236 vs N100's 1,895 in single-threaded tasks—critical for databases and PHP execution in apps like Nextcloud.

2x

Multi-Thread Performance

Nearly double the PassMark score means the Plus isn't slightly faster—it's in a different compute class entirely.

1.0...

Clock Speed Delta

The P-core boosts a full gigahertz higher than the N100, delivering transformative responsiveness for interactive workloads.

PCIe Architecture Matters

Beyond raw CPU power, the peripheral bus architecture determines real-world throughput. The N100 is constrained by fewer PCIe lanes at Gen 3.0 speeds, limiting simultaneous high-speed peripherals. The Pentium 8505 exposes more lanes with PCIe 4.0 support, allowing the DXP4800 Plus to drive the 10GbE controller and dual NVMe drives without bandwidth bottlenecks.

N100 Limitation

PCIe 3.0 creates bandwidth splitting when running 10GbE + fast SSDs simultaneously

8505 Advantage

PCIe 4.0 lanes prevent internal bus from becoming the choking point as you add peripherals

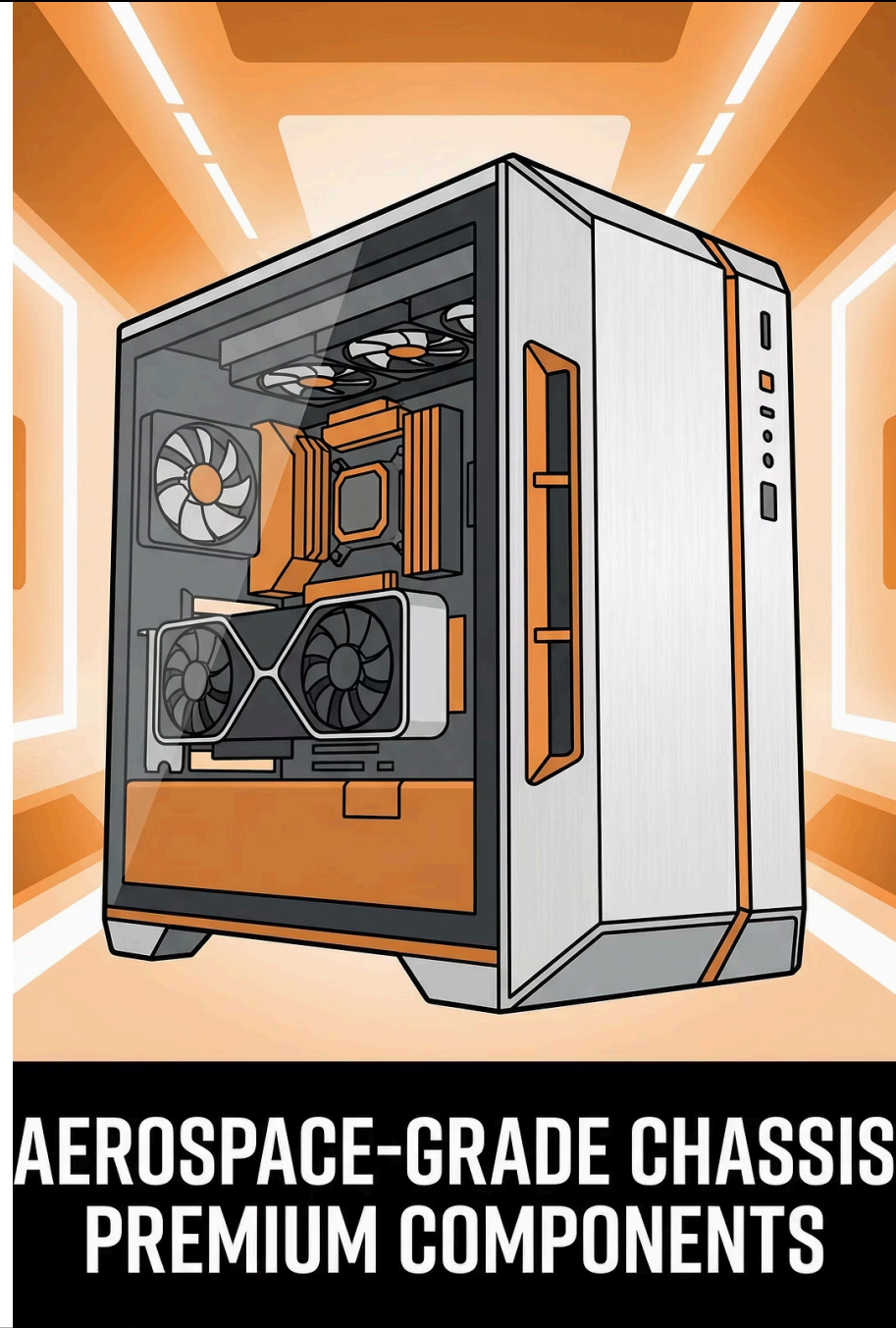
Future-Proofing

Gen 4 NVMe drives reach 7,000 MB/s—critical for VM responsiveness and 8K video workflows

Premium Build Quality

Both models share an identical unibody aerospace-grade aluminum enclosure in matte gunmetal grey. This premium material choice serves dual purposes: sophisticated aesthetics for modern offices and passive heat dissipation. The magnetic front panel conceals tool-less drive trays, while the 140mm rear exhaust fan pulls air through the system.

Ugreen invested heavily in industrial design to differentiate from utilitarian plastic competitors. Buyers of the cheaper DXP4800 suffer no penalty in build quality—the external experience is identical.



Thermal Reality and Acoustics

DXP4800 Thermal Profile

The 6W N100 generates minimal heat. System fan spins at low RPMs, making mechanical hard drive noise the primary sound source. Ideal for quiet home offices or bedrooms.

DXP4800 Plus Heat Load

The 15W base TDP (spiking to 55W) plus hot-running 10GbE controller requires aggressive fan management. Users report 33.5 dB(A) at idle—audible in quiet rooms. Some warranty claims for fan failures exist.

Noise Sensitivity Warning: If you plan to keep the NAS in a bedroom or quiet workspace, the DXP4800 (N100) is physically less obtrusive. The Plus model's thermal demands create a noticeable acoustic footprint.

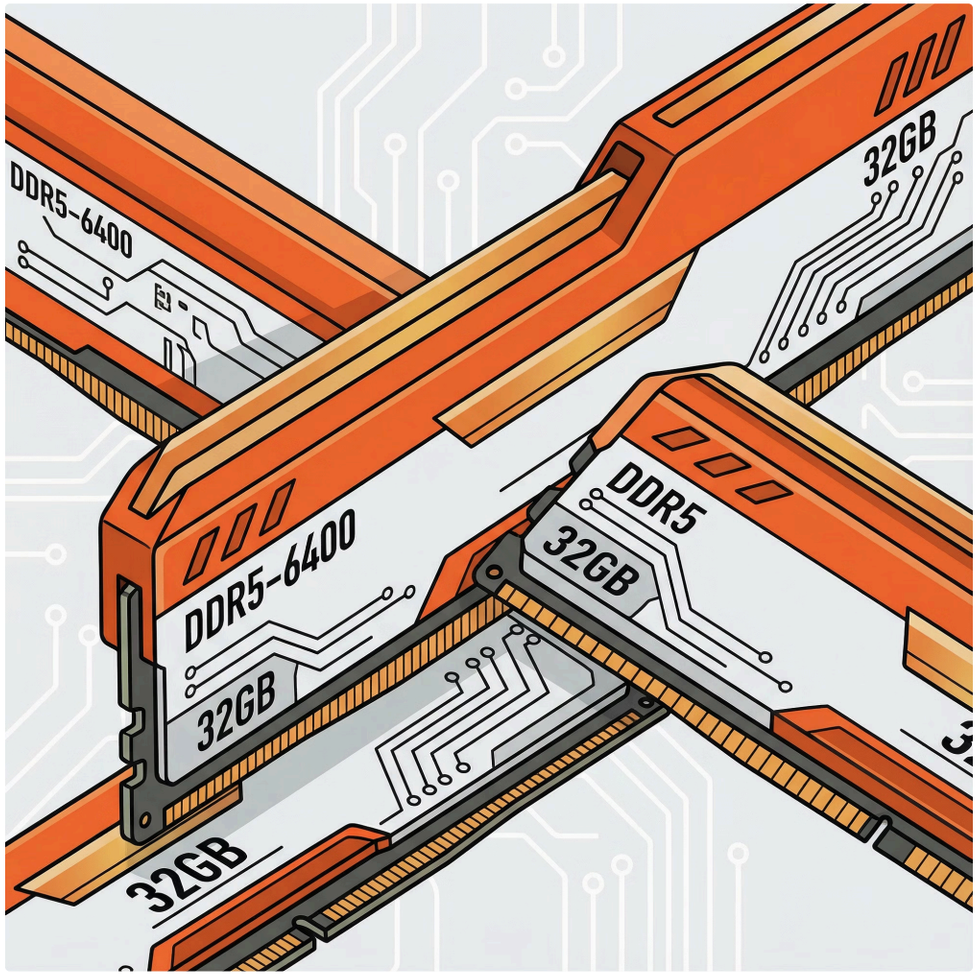
Memory Subsystem Deep Dive

Both models ship with 8GB DDR5 4800MHz RAM—a forward-looking choice offering higher bandwidth than DDR4 competitors. However, upgrade potential diverges dramatically.

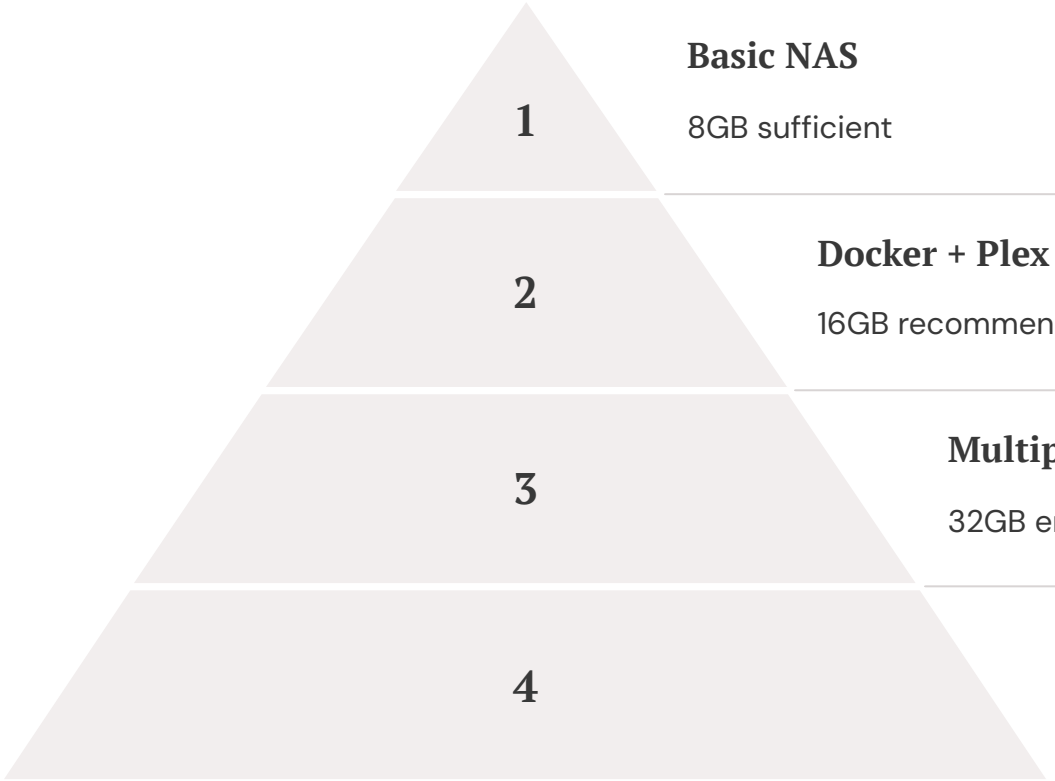
Official vs Reality

Ugreen officially lists 16GB maximum for the DXP4800. The N100's memory controller technically supports only single-channel memory. While 32GB sticks may boot, stability is questionable and performance gains are capped.

The DXP4800 Plus officially supports 16GB, but enthusiasts have confirmed **64GB recognition and stability** (2x 32GB modules) thanks to the robust mobile-series memory controller.



Memory Capacity for Advanced Use



Basic NAS

8GB sufficient

Docker + Plex

16GB recommended

Multiple VMs

32GB enables smooth operation

ZFS + VMs

64GB unlocks full potential

For Home Lab users running ZFS via TrueNAS Scale, the rule of thumb is "1GB RAM per 1TB storage" for optimal deduplication and caching. With 80TB+ raw storage capacity, the DXP4800's 16GB limit becomes a bottleneck. The Plus model's 64GB capability comfortably manages massive ZFS pools while allocating 16–32GB to containers and VMs.

Storage Architecture and RAID

Both units feature four 3.5-inch SATA bays and two M.2 NVMe slots, supporting RAID 0, 1, 5, 6, 10, JBOD, and Basic configurations. In RAID 5 with four 7200RPM drives, arrays sustain 500-700 MB/s sequential reads.

DXP4800 Bottleneck

The 2.5GbE network caps at ~280 MB/s. Your RAID array is faster than the network pipe—wasted potential unless operations are strictly local.

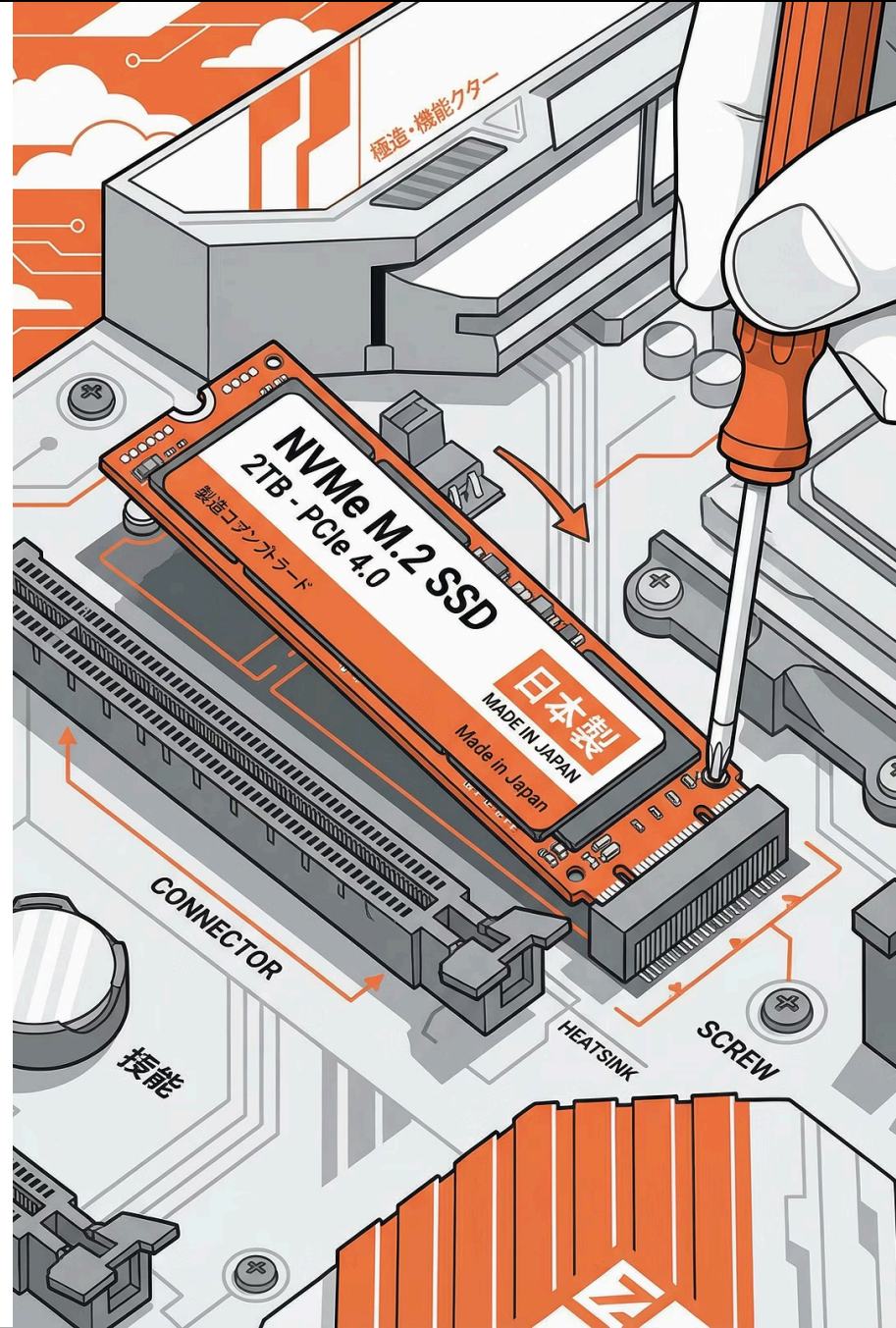
DXP4800 Plus Unleashed

The 10GbE interface (1,100 MB/s) is wider than HDD array speed. The network is no longer the bottleneck—the ideal scenario for performance NAS.

NVMe Implementation Strategy

UGOS Pro allows flexible M.2 slot usage: as read/write cache for HDD arrays (accelerating random I/O for databases and photos) or as high-speed storage volumes in RAID 0/1 configuration.

The DXP4800 Plus holds a distinct advantage with **PCIe 4.0 support**. NVMe slots achieve up to 7,000 MB/s per drive versus the N100's PCIe 3.0 limitation. For users running VMs, the IOPS performance of Gen 4 drives provides responsiveness indistinguishable from local desktop PC storage.



The Network Infrastructure Divide

DXP4800: Dual 2.5GbE

Theoretical 312 MB/s, real-world ~280 MB/s. Supports SMB Multichannel for ~560 MB/s with dual-port clients. Sufficient for 4K streaming and reduces backup windows significantly versus 1GbE.

DXP4800 Plus: 10GbE + 2.5GbE

Theoretical 1,250 MB/s, real-world ~1,100 MB/s. Transforms the NAS into direct workstation storage extension. Enables edit-in-place workflows for 4K/8K video in Premiere Pro and DaVinci Resolve.

10GbE: The Hidden Infrastructure Cost

Utilizing the DXP4800 Plus's 10GbE port requires supporting ecosystem investment. Without these components, the 10GbE port remains dormant—though buying this capability now costs less than upgrading the entire NAS later.

01

10GbE Switch or Direct Connection

Managed switches start at $200-300 CAD; direct cable connection is cheaper but less flexible

02

10GbE NIC or Thunderbolt Adapter

PCIe cards cost $100-120 CAD; Thunderbolt adapters run $150-200 CAD

03

Cat6/Cat6a Cabling

Cat5e often insufficient for 10GbE over long distances; quality cables essential

Given NAS longevity (5-8 years), this infrastructure investment future-proofs your workflow as file sizes and network standards evolve.

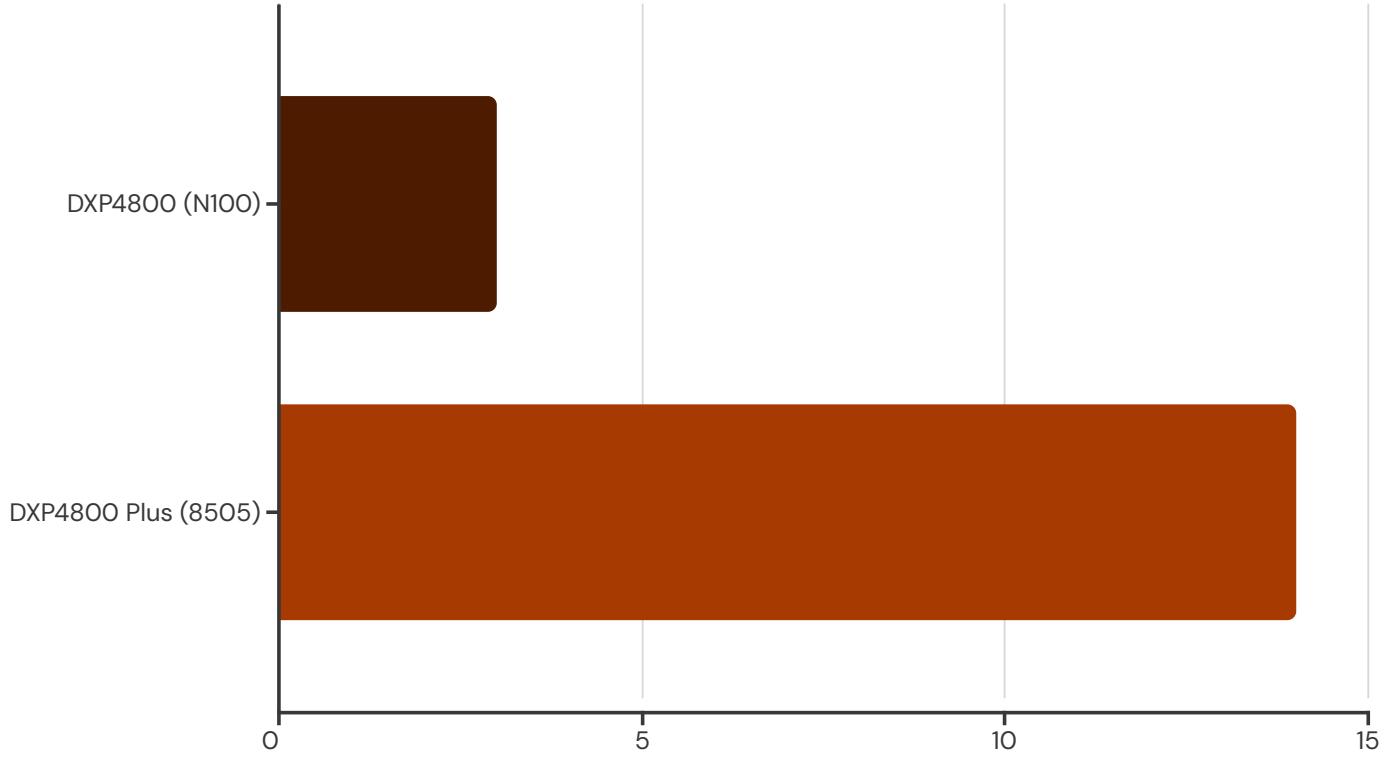
UGOS Pro Operating System

Ugreen's UGOS Pro is built on **Debian 12 (Bookworm)**, providing a stable Linux foundation with long-term security support. This open architecture is a double-edged sword: average users rely on Ugreen for packaged updates, while power users can SSH in and use standard apt commands to install utilities and deploy custom scripts.

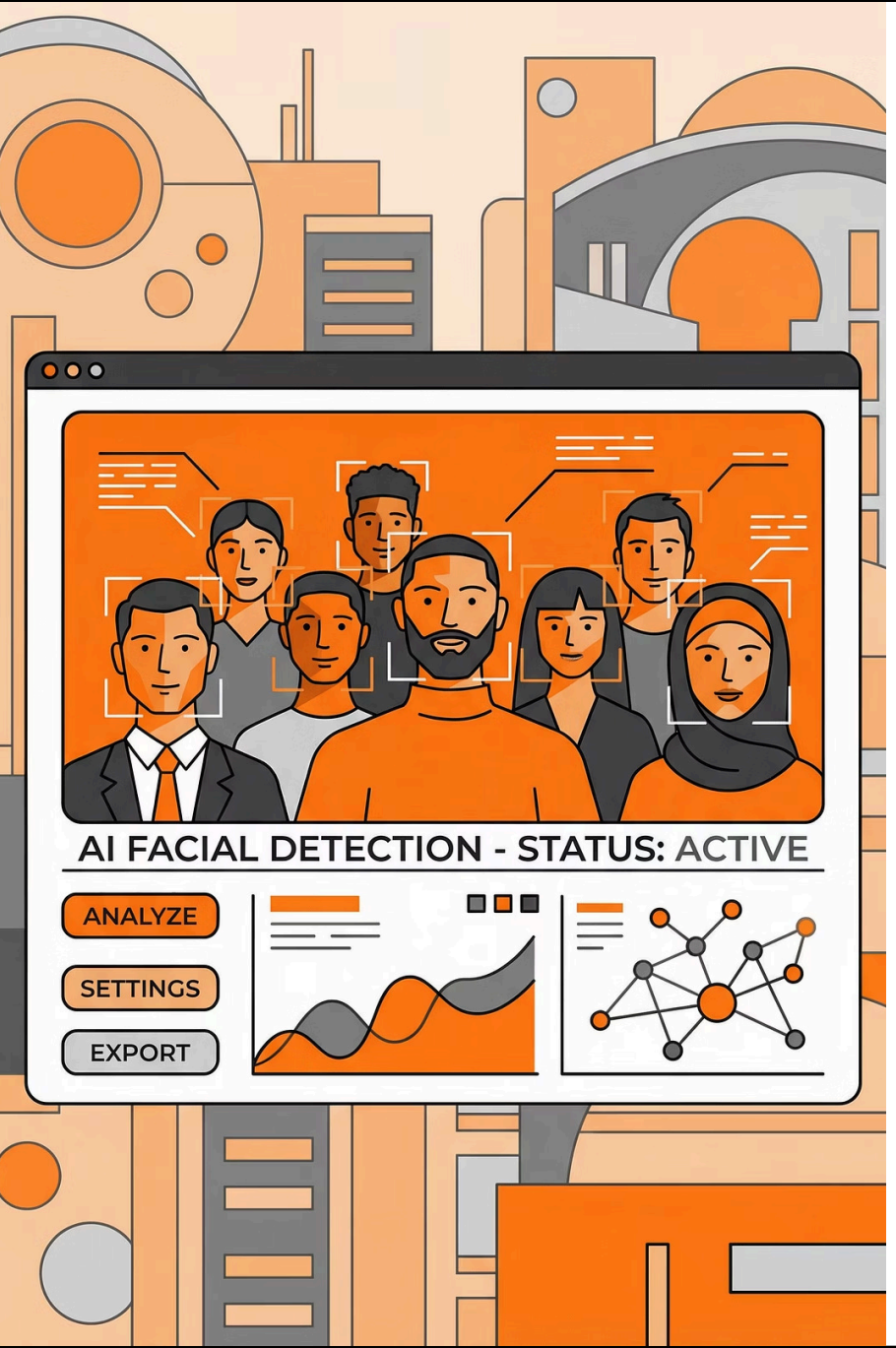
A critical 2024 development: Ugreen pivoted from Btrfs to **EXT4 for RAID configurations** due to stability issues. While EXT4 is fast and stable, it lacks self-healing capabilities. Many DXP4800 Plus users install TrueNAS Scale (ZFS-based) or Unraid instead, leveraging the superior hardware.

Plex Media Server Performance

Both processors feature Intel QuickSync Video hardware acceleration for efficient video transcoding. However, the scale of the graphics engine differs dramatically, impacting simultaneous stream capacity.



The DXP4800 Plus features **48 Execution Units** versus the N100's 24 EUs—effectively double the GPU power. Testing confirms the Plus handles up to 14 simultaneous regular 4K streams or approximately 10 high-bitrate 4K Remux files with HDR tone mapping. This is enterprise-grade media performance, essential for users sharing libraries with extended family or friends.



AI Processing and Photo Management

Modern NAS systems include AI features for photo management—facial recognition, object detection, and automatic tagging. This analysis happens locally to preserve privacy, utilizing CPU resources through OpenVINO or similar libraries.

1

DXP4800 Processing Time

Uploading 50,000 lifetime photos might take several days to index, face-match, and generate thumbnails. CPU pinned at high usage makes the NAS sluggish during processing.

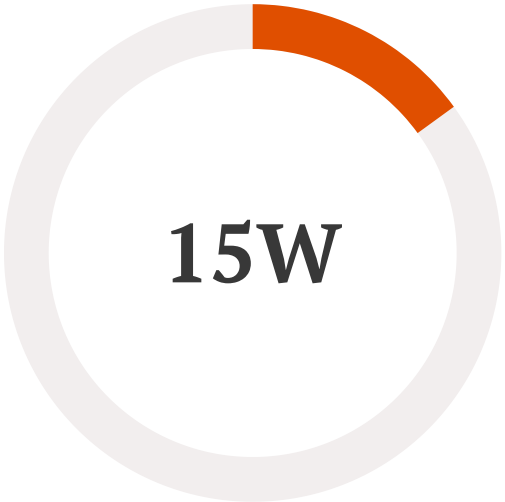
2

DXP4800 Plus Advantage

Completes the same task in a fraction of the time. The P-core handles web UI requests while E-cores crunch AI data, maintaining system responsiveness throughout.

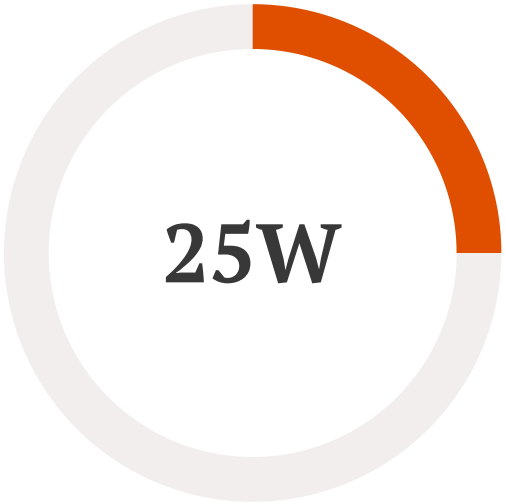
Power Consumption Economics

For 24/7 appliances, electricity cost matters. Despite TDP differences, modern power management narrows the real-world gap.



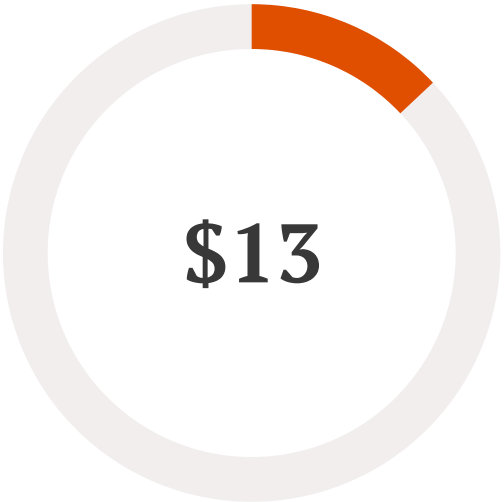
DXP4800 Average Draw

~$19.65/year at $0.15/kWh



DXP4800 Plus Average Draw

~$32.85/year at $0.15/kWh



Annual Cost Difference

Over 5 years: ~$65 total

The efficiency penalty is negligible compared to performance gains. The N100's 6W TDP advantage is partially offset by the 8505's effective C-state power gating, which allows aggressive power reduction during idle periods.

Canadian Market Reality

A critical factor in the purchase decision: the **DXP4800 (non-Plus) is frequently out of stock** across major Canadian retailers including Canada Computers, Newegg.ca, and Amazon.ca. The DXP4800 Plus remains widely available and subject to aggressive discounting.

DXP4800 Pricing

MSRP ~$699 CAD

Sale Price ~$594 CAD

Status: Sold Out

DXP4800 Plus Pricing

MSRP ~$894 CAD

Sale Price ~$759 CAD

Status: In Stock

Value Analysis

$160 CAD difference

Includes $100-120 10GbE card value

Superior ROI

Final Verdict: Buy the DXP4800 Plus

The comparison between these models is not a battle of equals—it's a choice between a competent appliance and a versatile server. While the DXP4800 (N100) delivers sufficient performance for basic NAS tasks with exceptional efficiency, it's hampered by market availability and lack of 10GbE upgrade path.

1

Availability

Actually purchasable in the current Canadian market, unlike the frequently sold-out base model

2

Future-Proofing

10GbE port ensures the device won't be obsolete when you upgrade your computer or router in 3 years

3

Versatility

Pentium 8505 allows growth into advanced usages—VMs, ZFS, AI processing—that the N100 cannot support comfortably

4

Value Retention

A NAS with 10GbE will retain resale value significantly better than one limited to 2.5GbE

Even if your current needs are modest, the DXP4800 Plus offers a ceiling high enough to accommodate future growth. The $160 CAD premium is exceptionally low for the hardware gains: double the CPU performance, quadruple the network bandwidth, double the transcoding capability, and significantly expanded memory ceiling. This makes it the mathematically and strategically superior purchase.