

NEXT-GENERATION DIT WORKFLOWS WITH HYBRID ALL-FLASH STORAGE

UGREEN

UGREEN DXP480T & 30.72TB¹ SANDISK® NAS 800 NVMe™ SSD INTEGRATION

Executive Summary

Modern media production demands unparalleled speed, reliability, and flexibility. Digital Imaging Technicians (DITs) and on-set editors require storage that can handle rigorous on-location conditions while seamlessly integrating into a large-scale studio network. This solution brief outlines how pairing the UGREEN DXP480T NAS with SANDISK® NAS 800 NVMe™ SSDs create a revolutionary, high-performance all-flash storage environment.



The Challenges of Traditional Storage

For years, production sets have relied on legacy storage solutions that introduce significant bottlenecks and risks to high-value footage:

- **Single USB SSDs & Basic DAS Limitations:** Traditional Direct-Attached Storage (DAS) and single USB drives generally act as isolated “dump storage.” They cannot be easily shared across a network, creating data silos. Multiple editors cannot access the data simultaneously, slowing down the post-production pipeline.
- **HDD Vibration:** Moving a DIT cart across rough terrain on a film set could introduce severe vibration. Traditional Hard Disk Drives (HDDs) utilize spinning platters and mechanical read/write heads with moving parts that could be significantly impacted from such vibration.
- **High Power Consumption:** HDDs and large multi-bay legacy NAS systems draw significant power. On a mobile DIT cart powered by a UPS (Uninterruptible Power Supply), heavy power draw drastically reduces runtime, risking power loss during critical offloads.

The All-Flash Solution

By deploying the UGREEN DXP480T populated with four purpose-built 7.68TB¹ SANDISK® NAS 800 NVMe™ SSDs, productions achieve a raw capacity of 30.72TB¹ in an ultra-compact, high-performance format. This configuration provides the “best of both worlds”—functioning as a lightning-fast DAS on-set, and a high-throughput NAS back at the studio.

Key Advantages:

- **Hybrid Connectivity (DAS + NAS):** The unit features **2 × Thunderbolt™ 4 ports**, allowing editors to connect directly to their PCs for low-latency, high-bandwidth editing right from the DIT cart.
- **Seamless Studio Integration:** It also includes **1 × 10GbE port**. When the DIT cart returns to the studio, the NAS connects instantly to the local network, allowing the cart to rapidly dump the edited data into the facility’s large-scale main system.
- **Purpose-built NAS SSDs:** Integrate and configure high-endurance and high-performance SSDs such as the SANDISK® NAS 800 NVMe™ SSDs which are engineered for media production workflows.
- **Vibration Resistant:** All-Flash storage solution contains no moving parts. It is impacted less by bumps, drops, and vibrations associated with moving DIT carts, helping ensure data integrity.
- **Power Saving & UPS Efficiency:** NAS SSDs are designed for low-power consumption while in operation. Combined with the low power consumption of the UGREEN DXP480T, they help ensure the NAS can run comfortably and reliably for extended periods off the DIT cart’s integrated UPS system.



SANDISK® NAS 800 NVMe™ SSDs

SANDISK® NAS 800 NVMe™ SSDs are engineered for demanding media production in all-flash NAS environments. On-site editors can quickly access, edit, and copy large media and production files stored on the UGREEN DXP480T Plus NAS. Available in capacities from 960GB¹ to 7.68TB¹ built with trusted SANDISK® TLC 3D NAND, production engineers can easily select and integrate into their UGREEN DXP480T Plus NAS to meet their requirements. Designed for primary storage in video editing- NAS workflows, these SSDs offer high-endurance ratings of up to 14 PBW² or 1 DWPD (7.68TB¹ model) and have a MTTF of 1.75Mhrs. For added peace of mind, these SSDs are backed by a 5-year limited warranty.³



Hybrid Workflow Architecture

The integration of Thunderbolt™ 4 and 10GbE technology allows the DXP480T to bridge the gap between active on-set editing and reliable studio archiving. Below is the data lifecycle utilizing this solution.

Phase 1: Ingest

Camera media is ingested directly into the **31.72TB SANDISK® NAS 800 NVMe™ SSDs NAS 800 array** on the UGREEN DXP480T via the DIT Cart's high-speed card readers.

Phase 2: Live Edit

The UGREEN DXP480T acts as a **DAS**. Editors connect via **Thunderbolt™ 4** for real-time 4K/8K grading and editing on location.

Phase 3: Archive

The cart returns to base. The DXP480T connects to the network via **10GbE** to act as a **NAS**, rapidly dumping data to the main server.



Conclusion

By moving away from fragile HDDs and limited USB dump-drives, media professionals can help protect their footage while dramatically accelerating their workflows. The combination of UGREEN's advanced hybrid connectivity (DXP480T) and Sandisk's purpose-built 31.72TB¹ NAS SSDs provides the ultimate rugged, power-efficient, and high-speed solution for any production environment.

- ¹ 1GB = 1 billion bytes, 1TB = 1 trillion bytes, and 1PB = 1 quadrillion bytes. Actual user capacity may be less depending on operating environment.
- ² 1PBW (petabytes written) = 1,000 TBW (terabytes written). TBW (terabytes written) and/or PBW (petabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity. MTTF = Mean Time To Failure based on internal testing using Telcordia³ stress part testing (Telcordia SR-332, GF, 25°C). MTTF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTTF does not predict an individual drive's reliability and does not constitute a warranty.
- ³ See sandisk.com/support for additional details.

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