

# V500

12 BAY · 2U RACK · V5 VIDEO SERVER

NDA

CE / UKCA

FCC / UL / RCM

THROUGHPUT  
**3,000 Mbit/s**

MAX STORAGE  
**288 TB**

DRIVE BAYS  
**12**

MAX CAMERA STREAMS  
**275**

## RECOMMENDED USAGE

Tailored for mid to large-sized deployments with growing camera counts and retention needs, this solution prioritizes security and high performance. It offers robust video protection combined with expanded storage capacity, to meet the demands of evolving surveillance environments

## KEY ATTRIBUTES

- Windows Server 2022 or 2025 LTSC
- 32GB ECC DDR5 RAM
- RAID 6 data protection
- N+1 hot-swap power & cooling
- AMD EPYC 9005 CPU
- Mirrored, hot-swap OS SSDs
- Quad 10Gb Ethernet
- TCG 2.0 cybersecurity w/ TPM



## 5-Year NBD Advanced Parts Warranty

Advanced Warranty with NBD Advanced Parts Replacement of Field Replaceable Units (FRUs). Secure remote management & advanced support delivers rapid response & uptime.

## VIDEOX ENTERPRISE FEATURES

- Lower deployment costs — hardware accelerated H.265**  
V5 micro-architecture acceleration delivers up to 2.3× H.265 stream processing per server, and 30–50% storage and bandwidth savings versus H.264 — fewer servers, higher camera density, longer retention, same budget.

- High data availability**  
RAID 6/60 redundancy tolerates up to 6 hard drive failures depending on model and configuration, with hardware XOR, CacheVault protection and patrol read repairs.

- Flexible & scalable tier-1 enterprise storage**  
Scale to petabytes of tier-1 capacity and tailor retention per project. Enterprise-class HDDs and SSDs throughout, for tier-1 availability and performance.

- Strengthen cybersecurity**  
A built-in TPM 2.0 module supports hardware Root of Trust authentication and data encryption. All VideoX are fully NDA compliant.

VALIDATED  
WITH

Milestone

Genetec

Avigilon

Hanwha WAVE

NX Witness

Exacq

WHERE THE V500 SITS IN THE VIDEOX NVR LINE

Drive bays · max camera streams

|                                        |                                         |                                         |                                          |                                          |                                          |                                          |
|----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| <b>V100</b><br>2 bay · 1U<br><b>25</b> | <b>V200</b><br>4 bay · 1U<br><b>100</b> | <b>V400</b><br>8 bay · 2U<br><b>200</b> | <b>V500</b><br>12 bay · 2U<br><b>275</b> | <b>V600</b><br>16 bay · 3U<br><b>275</b> | <b>V700</b><br>24 bay · 4U<br><b>325</b> | <b>V800</b><br>36 bay · 4U<br><b>325</b> |
|----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|

MAXIMUM VIDEO STREAM RATE

3,000 Mbit/s · 288 TB raw · 240 TB usable

| Resolution             | Codec    | Camera Streams | vs. 4MP Baseline               |
|------------------------|----------|----------------|--------------------------------|
| 4MP · 2560×1440 (16:9) | H.265-20 | <b>275</b>     | Baseline VSR                   |
| 8MP · 3840×2160        | H.265-20 | <b>151</b>     | ~45% — 2× the pixels per frame |

**VSR Parameters**   **Resolution** 4MP · 2560×1440   **Frame Rate** 15 fps   **Codec** H.265-20 (Good) · ~3.2 Mbit/s  
**Recording** On motion, VMD + metadata   **Motion Activity** 75% average per day   **Retention** 30 days

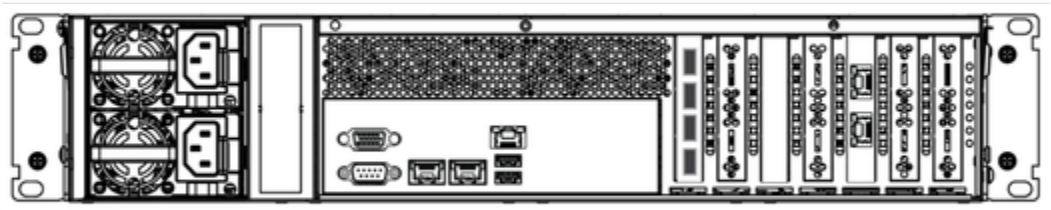
Max VSR is camera streams, not cameras — a multisensor device presents several streams. If a recording parameter changes, revise the calculation. Validated for Avigilon, Milestone, Hanwha/NXWitness and Genetec; other platforms vary.

ORDERABLE CONFIGURATIONS

| Part Number         | Drive Configuration      | Raw    | Usable · RAID 6 |
|---------------------|--------------------------|--------|-----------------|
| <b>VX5-V500-192</b> | 12 × 16TB enterprise HDD | 192 TB | <b>160 TB</b>   |
| <b>VX5-V500-240</b> | 12 × 20TB enterprise HDD | 240 TB | <b>200 TB</b>   |
| <b>VX5-V500-288</b> | 12 × 24TB enterprise HDD | 288 TB | <b>240 TB</b>   |

Three drive capacities per NVR — same chassis and performance, different retention. Usable capacity is RAID 6, excluding the mirrored OS SSD pair.

REAR I/O PANEL



GENERAL INFORMATION

Systems ship with Microsoft Windows pre-installed without media and not set up; the installer is responsible for setup, VMS installation, and configuration of users, cameras and databases. VMS installers are included but not installed. Milestone and Avigilon best practice is SQL Standard above 300 cameras — optional, not included. Client View application on server is not supported; a dedicated Client View workstation is required.

## HARDWARE INFORMATION

|                  |                                                                                                                                                                                                                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU              | AMD EPYC 9005 3.3Ghz 16/32 Core, 16C/32T, 3.3 Ghz, 64MB cache                                                                                                                                                                                                                                                                                           |
| Acceleration     | Chiplet microarchitecture · AMD Infinity Architecture & Guard · Native 512-bit data paths (AVX-512) · 614 GB/s memory bandwidth                                                                                                                                                                                                                         |
| RAM              | 32GB ECC DDR5                                                                                                                                                                                                                                                                                                                                           |
| Operating system | Windows Server 2022 or 2025 LTSC                                                                                                                                                                                                                                                                                                                        |
| VMS / OS drive   | Enterprise 3D TLC Flash SSD SATA3 Dedicated for OS/VMS                                                                                                                                                                                                                                                                                                  |
| Hard drives      | Up to 12× enterprise class 7200 RPM 3.5" HDD, 2.5 Million hour MTBF, certified 24/7, tool-less hot-swap                                                                                                                                                                                                                                                 |
| Storage capacity | Up to 288TB raw capacity                                                                                                                                                                                                                                                                                                                                |
| RAID             | RAID 0/1/5/6/10 · CacheVault battery protection                                                                                                                                                                                                                                                                                                         |
| Network          | 4 × 10GbE + 1 IPMI · Optional - 2x 10Gb SFP+ or 2x 25Gb SFP28 upgrade available                                                                                                                                                                                                                                                                         |
| Display          | VGA (Client View applications not supported on server)                                                                                                                                                                                                                                                                                                  |
| Encryption       | AMD Secure Encrypted Virtualization (SEV) · AMD Secure Memory Encryption (SME) · Cryptographically signed firmware · Data at Rest Encryption (SEDs with local or external key mgmt) · Secure Boot · Secured Component Verification (Hardware integrity check) · Secure Erase · Silicon Root of Trust · System Lockdown · TPM 2.0 FIPS, CC-TCG certified |
| Management       | Out of Band (OOB) Remote Management including: IPMI System Management, KVM Console Redirection                                                                                                                                                                                                                                                          |

## REGULATORY &amp; ENVIRONMENTAL

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Form factor    | 2U Rackmount                                                    |
| Power          | 800W · 1+1 redundant PSU PMBus 1.2                              |
| Max draw       | 800W + Platinum, Output @ 100-240V, 10-5A, 50-60Hz              |
| Cooling        | 3 × 80x38mm PWM & low-power consumption hot swap fans           |
| Dimensions     | 680mm (depth) × 430mm (width) × 88mm (height) · 17 x 26.8 x 3.5 |
| Weight         | Ship Weight W/ 12x HDDs = 40k/87lbs                             |
| Operating temp | 10- 30 C / 41 - 86 F                                            |
| Storage temp   | -40 - 65 C / -40 - 149 F                                        |
| Humidity       | 10 – 90% relative humidity (non-condensing)                     |
| Safety         | CE (class A), UKCA, FCC, RCM, UL                                |
| Trade          | NDAA Compliant, no disclosures                                  |