

**SYNECTICS**

# Synergy PSN Ultra

## Outstanding storage density and resilience for your video surveillance data.

With up to 775TB of RAID protected storage, Synergy PSN Ultra is ideally suited for hyperscale systems with exceptional video storage needs. The outstanding storage density minimises the hardware footprint and running costs, and the enterprise-grade hardware platform features redundant components to enhance your system uptime.



## Why Choose the Synergy PSN Ultra?

### Designed for Video

Extensive hardware testing and OS optimisation ensures consistent performance out of the box, even under high demand.

### Resiliency

The enterprise-grade hardware features virtualisation, multiple RAID volumes, and redundant components to enhance the resilience of your storage system.

### Health Monitoring

Automatic alerts of any hardware events that require action, and highlights affected video streams, ensuring optimal system resilience and uptime is maintained.

### Simplified Installation

Advanced configuration of virtualisation, RAID volumes, and Synergy software is automatically managed by the hardware, reducing the installation time.

### Storage Capacity

60x 16TB HDDs allow up to 775TB of RAID-protected storage data per server, offering up to 7.75PB of storage in a typical server rack.

### Minimised Footprint

High storage density reduces the physical hardware footprint for hyperscale systems, as well as energy and cooling costs for the storage system.

## Key Features

- Up to 775TB of RAID storage in three RAID 6 volumes
- 60x 14TB or 16TB enterprise HDDs
- Up to 345 streams, and up to 2.1Gbps of inbound data throughput, per server
- 80 Plus Platinum rated PSUs for high power efficiency
- Three RAID controllers, three network adapters, two redundant OS SSDs, and two redundant PSUs for additional hardware resiliency
- Optimised Windows Server 2022 operating system, featuring advanced virtualisation for additional resiliency

# Specifications

## GENERAL

Dimensions <sup>*1</sup> (W x H x D)	4U rack-mountable server 435 mm x 175.7 mm x 953 mm (17.1" x 6.9" x 37.5") Depth inclusive of rack rails: 1013mm (39.9")
Gross Weight (Excluding HDDs and rack rails)	47kg (103.6 lbs)
Approximate weight (Including HDDs and rack rails)	100kg (~220 lbs)
Operating Temperature	0°C (32°F) - 35°C (95°F) Recommended: 18°C (64°F) - 22°C (72°F)
Operating Humidity	5% - 95% non-condensing
Certifications and Approvals <sup>*2</sup>	CE, FCC
Operating System	Windows Server 2022 (3x VMs included)
CPU	2x Intel Xeon Silver 8-core
RAM	256GB (8x 32GB modules)
Host OS Storage	480GB SATA SSD – RAID 1 hot swappable
Video Storage	60x top-mounted HDD bays Up to 775TB storage – 3x 258TB RAID 6 volumes

## POWER

Hot Swap PSUs	2x 1600W PSU modules
PSU Efficiency	80 Plus Platinum
Typical Power Consumption (Based on Maximum Configuration)	1000w (3412 BTUs per hour)

## CONNECTIVITY

Networking <sup>*3</sup> (Standard)	<b>Video networking team<sup>*3</sup></b> 2x 10Gbps SFP+ (onboard) 2x 10Gbps SFP+ (network adapter)  <b>Management/configuration network</b> 2x 1Gbps RJ45 (network adapter)
Out-Of-Band (OOB) Networking (Dedicated Management and Health Toolset)	1x RJ45
USB	Front: 2x USB 3.0 Type-A Rear: 2x USB 3.0 Type-A
Serial	Unused
Video	1 x VGA

## PRODUCT FUNCTIONALITY

Maximum Inbound Data Throughput <sup>*4</sup>	2.1Gbps throughput, 700Mbps per VM
Maximum Outbound Data Throughput <sup>*4</sup>	1.405Gbps throughput, 635Mbps per VM
Maximum Recorded Video Channels <sup>*4</sup>	345 channels total, 115 channels per VM
Maximum Concurrent Recorded Video Playback	40 channels per VM, 120 per PSN Ultra <sup>*5</sup>
System Health Monitoring	Yes
Out-Of-Band Management with IP-KVM	Yes
SNMP Alarm Support	Yes
Synectics Backfiller Support	Yes
Multicast Video Support	Yes
H.264 and H.265 Video Support	Yes
Performance Optimised 4K Sector Size for HDDs	Yes
Tool-less HDD Replacement	Yes

<sup>\*1</sup> 1.5m (59") rack depth recommended <sup>\*2</sup> Certifications pending <sup>\*3</sup> VLANs must be configured in line with the product documentation. Minimum 2x SFP+ links recommended for redundancy configuration may impact maximum inbound/outbound data throughput and maximum recorded video channels. <sup>\*4</sup> Multicast video streams required. RMS-RTP video forwarding not supported <sup>\*5</sup> Based on 5.5Mbps streams at 1x playback speed

**PART CODES**

SY-PSNULTRA-V1-678TB-R6x3	Synergy PSN ULTRA V1 - 4U – 678TB (3x 225TB RAID 6) 14TB HDD
SY-PSNULTRA-V1-775TB-R6x3	Synergy PSN ULTRA V1 - 4U – 775TB (3x 258TB RAID 6) 16TB HDD

**SPARE PART CODES**

SY-HDD-SAS-4KN-14TB	14TB Enterprise HDD – SAS 4Kn
SY-HDD-SAS-4KN-16TB	16TB Enterprise HDD – SAS 4Kn
85-1180-0000	Intel E10GSFPSRX SFP+ SR Module (Extended Temp)
85-1180-0001	Intel E10GSFPSR SFP+ SR Module
85-1180-0002	Intel E10GSFPLR SFP+ LR Module