

# DECRYPTUM PR 2080TI-S/8 4U

ENGINEERED FOR STABLE 24/7 OPERATION

## KEY ADVANTAGES

### TOP OF THE LINE SOLUTION FOR PASSWORD RECOVERY

We produce high-end performance systems, based on the quality components, provided by world's top manufacturers. Each system is made to be the leader in its class, showing unmatched performance in password recovery.

### CONFIDENCE AND STABILITY.

#### RESULTS DELIVERED

We don't just liquid-cool chips, like many other manufacturers do. We liquid-cool all the critical components, such as CPU, GPU, and GPU-related components, allowing them to operate in comfortable conditions, which results in long life of our devices. When it comes to quality builds, look no further.

### SILENTLY OUTPERFORMS ANY SIMILAR AIR-COOLED SOLUTION

We work closely with manufacturers of every component which we use in our device, to fine-tune the system for the high performance, silent operation, low power consumption and PUE ratio < 1,05. Simply saying, our systems are fast, silent and effective.

**190K**  
**±3%**

Passwords/sec  
in Office 2013-2019  
with Passware



Ultra-compact liquid-cooled GPU accelerated devices for password recovery and decryption

Powered by



## FEATURES

# 10%

More performance compared to similar air-cooled systems. Better cooling means less mistakes made by the chip which equals in more things done right.

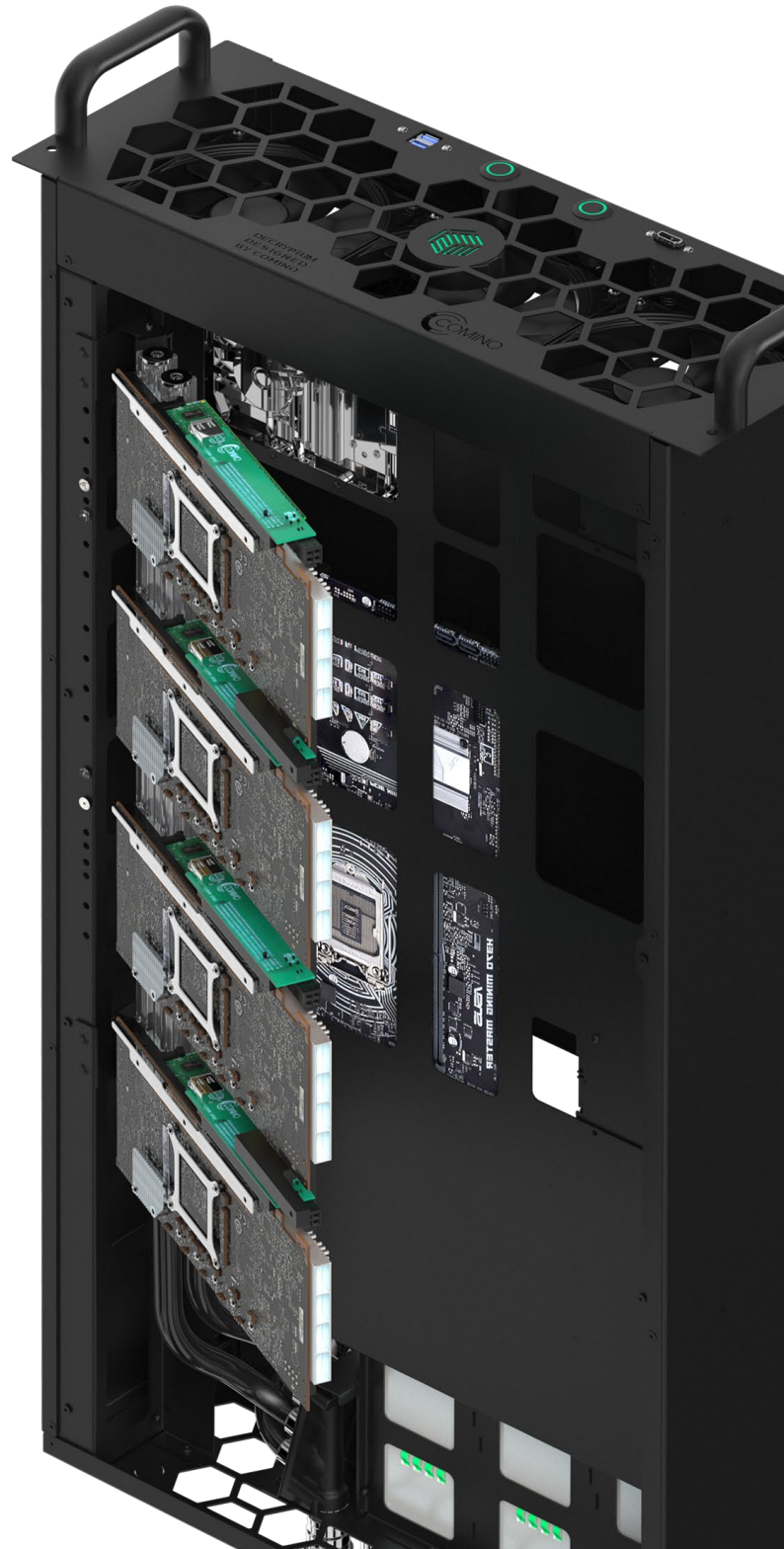
# 8 GPUs

8x Nvidia RTX 2080Ti in top DECRYPTUM configuration.



# PUE

Operate with Power Utilization Effectiveness (PUE) < 1,05.  
The less PUE number is, the more efficient the system is.  
Efficiency saves money.



SIMPLE MAINTENANCE.  
**FAST. RELIABLE. ENERGY EFFICIENT.**

## PASSWARE BENCHMARK RESULTS\*

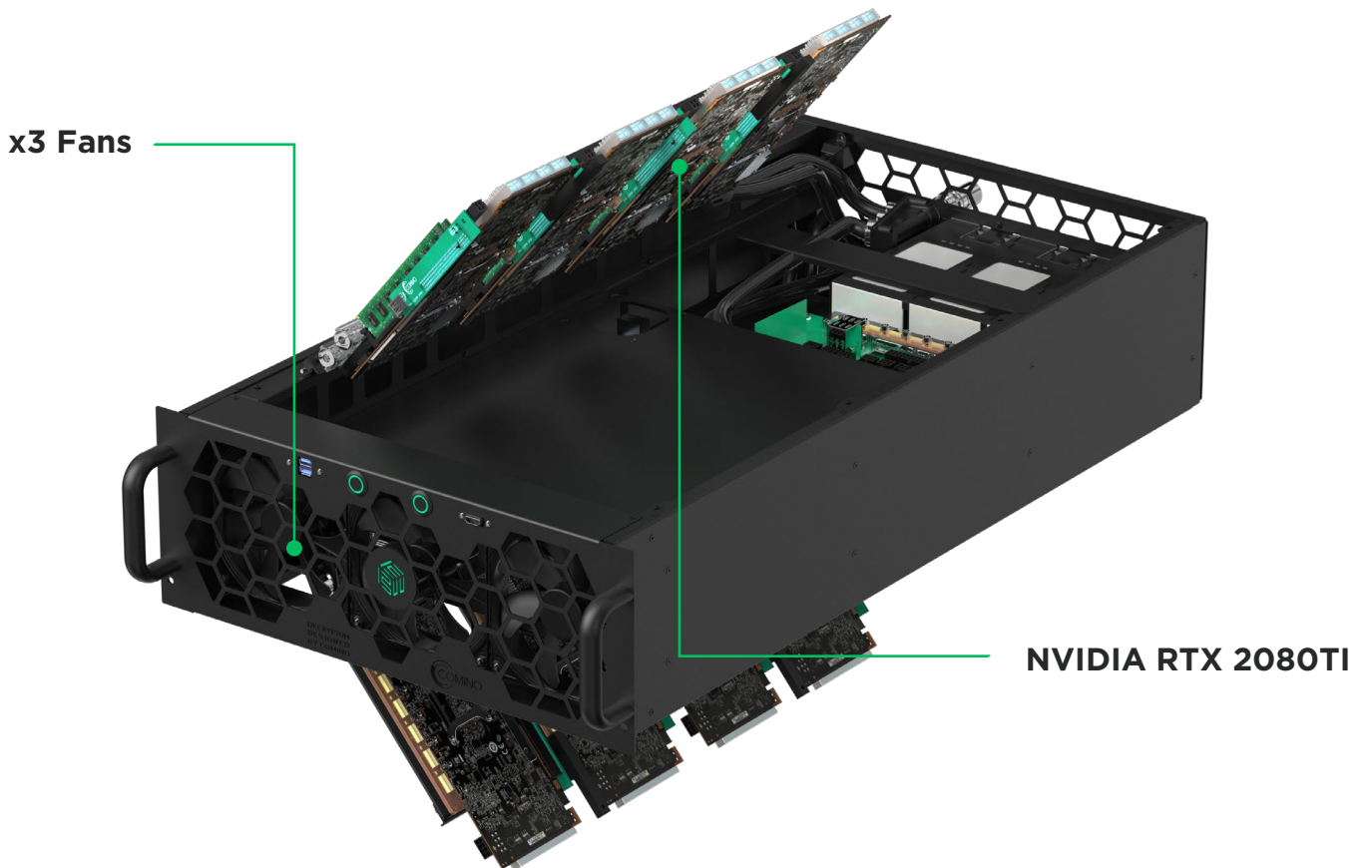
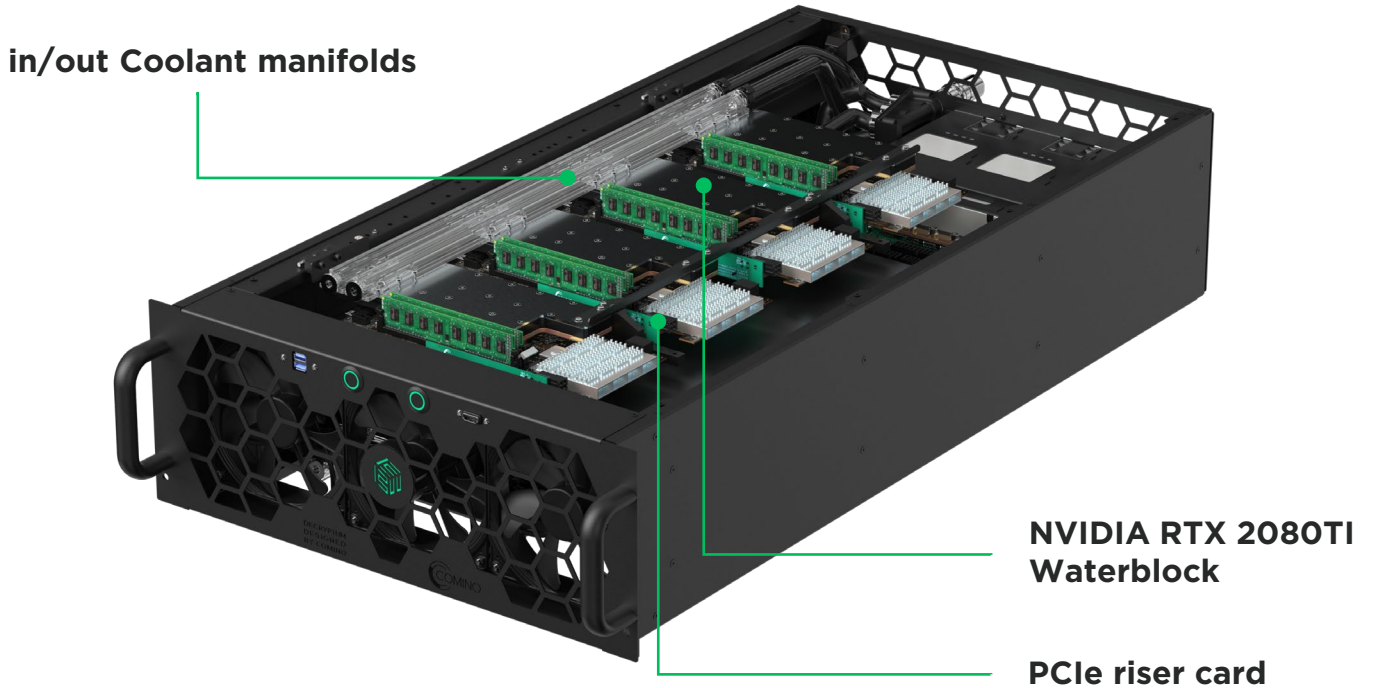
Encryption	Passwords / second
MS Office 2010	1 120 000
MS Office 2013+	190 000
macOS / FileVault2 / APFS	140 000
Apple iTunes Backup / iOS 10.x+	2 650
RAR 5.x Archive	800 000
MS Windows / BitLocker	26 600

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\* High performance mode (overall performance may vary  $\pm 3\%$ ).

# DECRYPTUM PR 2080TI-S/8 4U FRONT VIEW ILLUSTRATION



## TECHNICAL SPECIFICATIONS

### DECRYPTUM FREECOOLER 4U

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**Dimensions**

482 (440) mm x 175mm (4U) x 942 (858) mm  
19.0 (17.3) in x 6.9in (4U) x 37.0 (33.8) in

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**Consumption**

110w

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**Pipe Connection Spec**

G1/4" threads on back panel Non-Spill Flat-Face  
Quick Decoupling Fittings with internal diameter  
of 6mm included

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**Power input**

110-230VAC

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**Cooling capacity**

4000W with 25°C liquid-ambient delta

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**Fans**

2 manual levels (9V, 12V)

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**Operating temperature**

Ambient Air 10-35°C (20°C - recommended)  
Coolant temperature 10-55°C

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## TECHNICAL SPECIFICATIONS

### DECRYPTUM PR 2080TI-S/8 4U

**Dimensions** 482 (440) mm x 175mm (4U) x 942 (858) mm  
19.0 (17.3) in x 6.9in (4U) x 37.0 (33.8) in

**Pipe Connection Spec** G1/4" threads on back panel Non-Spill Flat-Face  
Quick Decoupling Fittings with internal diameter  
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**GPU** [ASUS ROG STRIX RTX2080TI](#)

**Graphics processor family** NVIDIA

**Graphics processor** TU102-300-K2-A1

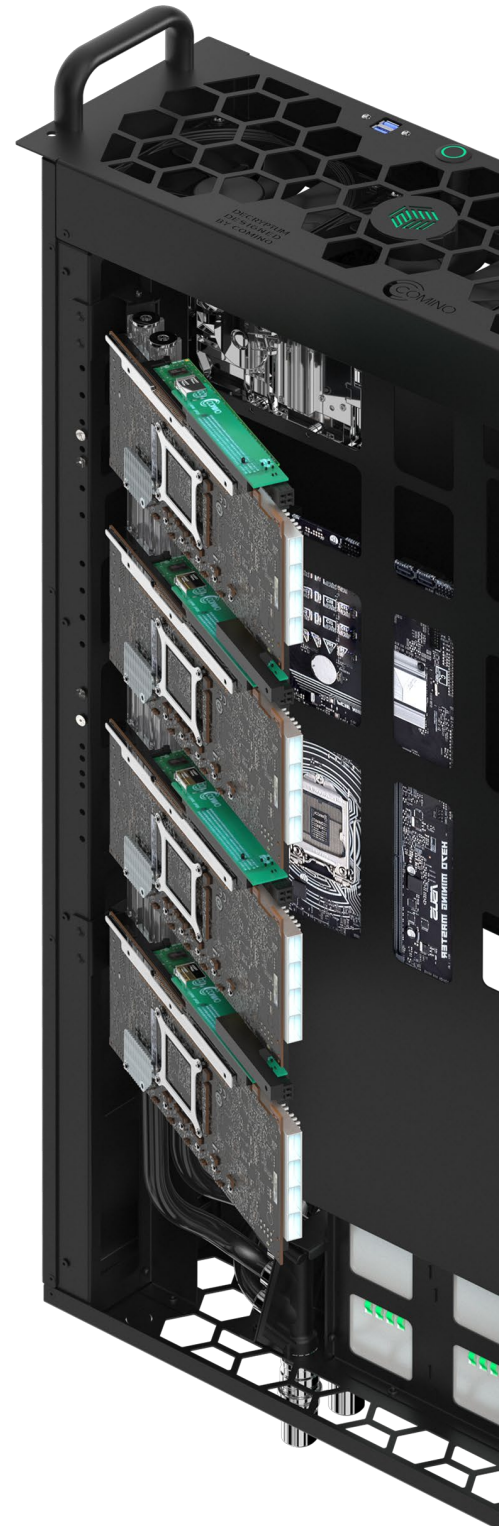
**GPU Base Clock** 1350 MHz

**GPU Boost Clock (OC mode)** 1560 MHz

**CUDA cores** 4352

**CUDA support** Yes

**Maximum resolution** 7680 x 4320 pixels



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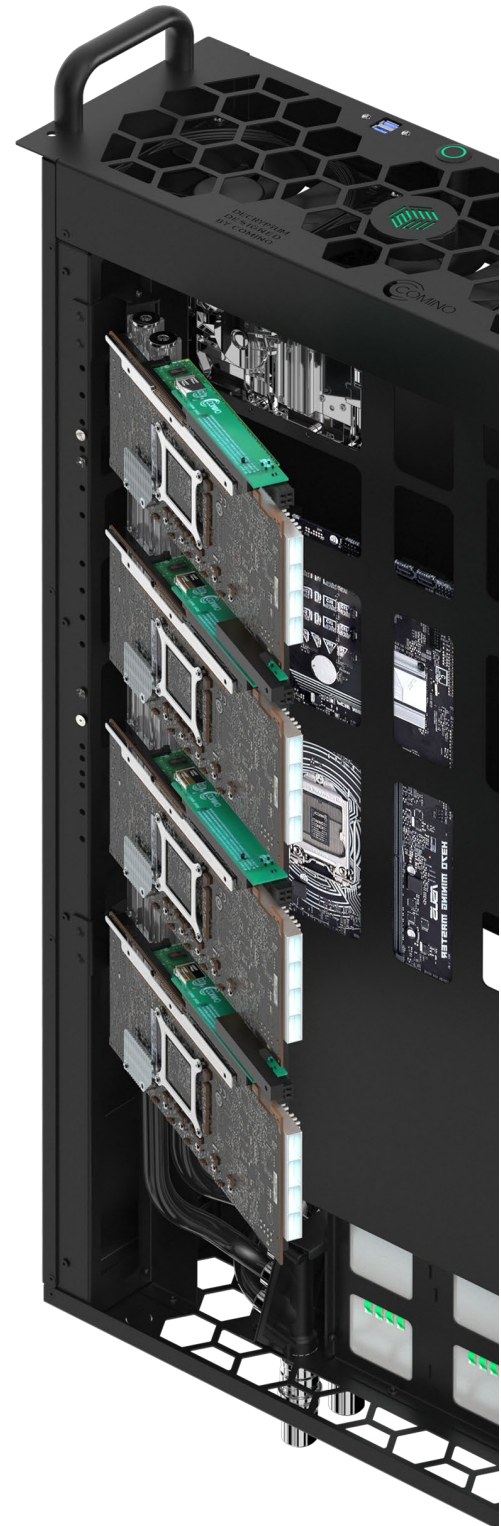
<b>Memory Interface</b>	352-bit
<b>Discrete graphics adapter memory</b>	11 GB
<b>Memory speed</b>	14 Gbit/s
<b>Memory clock speed</b>	14000 MHz
<b>Memory bus</b>	352 bit
<b>Graphics adapter memory type</b>	GDDR6
<b>CPU</b>	<b><a href="#">Intel® Core™ i9-9900K</a></b>
<b>Socket</b>	LGA 1151v2
<b>Lithography</b>	14 nm
<b>Number of Cores</b>	8



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<b>Number of Threads</b>	16
<b>Processor Base Frequency</b>	3.60 GHz
<b>Max Turbo Frequency</b>	5.00 GHz
<b>Cache</b>	16 MB SmartCache
<b>Bus Speed</b>	8 GT/s DMI3
<b>Motherboard</b>	<a href="#">Intel LGA-1151 ATX</a>
<b>Motherboard Chipset</b>	Intel® H370 Chipset
<b>CPU Socket support</b>	LGA 1151v2 (14nm Processor support)
<b>RAM Support</b>	2 x DIMM, Max. 32GB, DDR4 2666/2400/2133 MHz Non-ECC, Un- buffered Memory (Supports Intel® Extreme Memory Profile (XMP))
<b>PCIe expansion slots</b>	1x Full size 16x PCIe Slot 20x PCIe-over- USB ports





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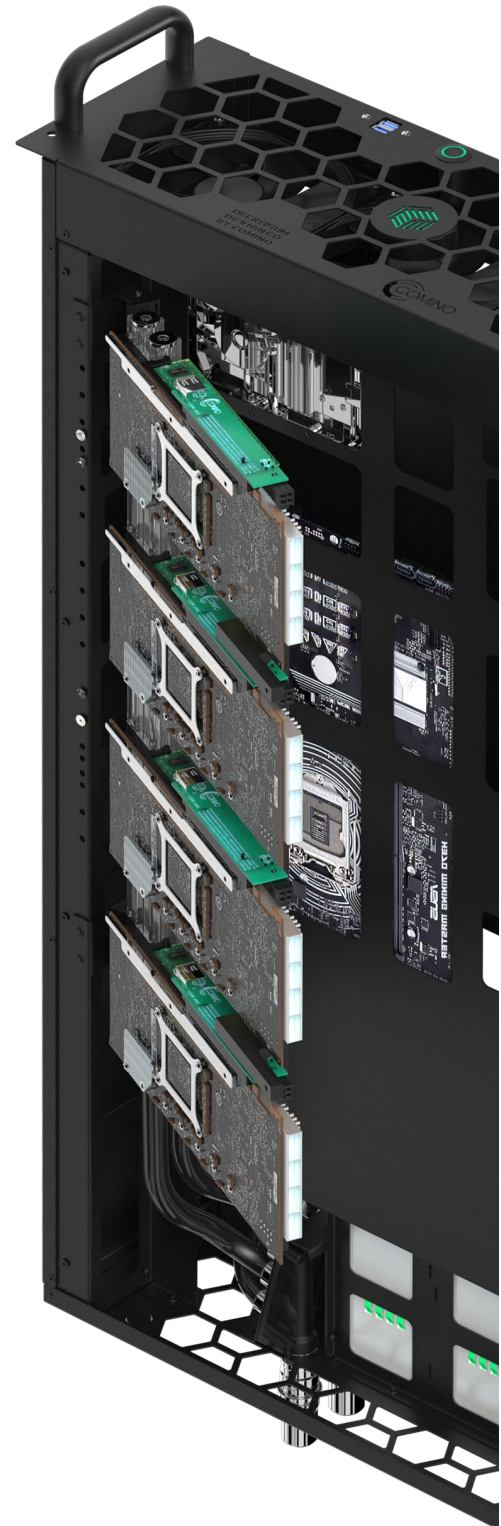
<b>Storage</b>	2x SATA 6Gb/s port(s)
<b>Graphic</b>	<p>Integrated Graphics Processor          Multi-VGA output support: HDMI/DVI-D ports</p> <ul style="list-style-type: none"> <li>• Supports HDMI with max. resolution 4096x2160 @ 24Hz/ 2560x1600@ 60 Hz</li> <li>• Supports DVI-D with max. resolution 1920x1200 @ 60 Hz</li> </ul> <p>Maximum shared memory of 1024 MB (for iGPU exclusively)</p>
<b>LAN</b>	Intel® I219V, 1x Gigabit LAN Controller(s)
<b>Form Factor</b>	ATX Form Factor 30.5 cm x 23.1 cm 12 in x 9.1 in
<b>RAM</b>	32GB, DDR4 2666MHz Non-ECC, Un-buffered Memory
<b>Storage</b>	2.5 SATA-3 6Gb/s 256 Gb SSD 3.5 SATA-3 6Gb/s 1TB HDD 7200rpm
<b>Power Supply</b>	
<b>Backplane monitoring interface</b>	USB
<b>Backplane monitoring protocol</b>	SMB/I2C



## TECHNICAL SPECIFICATIONS

### DECRYPTUM PR 2080TI-S/8 4U

<b>Backplane connectivity</b>	ATX
<b>Maximum installed CRPS modules</b>	3
<b>Maximum total powerload</b>	4800w
<b>Length of CRPS modules</b>	185mm
<b>CRPS modules power</b>	1600w max
<b>CRPS modules certificate</b>	80 Plus Platinum
<b>Input conditions</b>	110-240V 50/60Hz (Line-to-line connection)
<b>Power Consumption</b>	3.4 – 4.0kW
<b>Liquid-cooling</b>	6 double-sided fullcover waterblocks for 12x nVidia RTX2080Ti (copper coldplates remove heat from GPU chip, memory, VRM) 1 CPU waterblock
<b>Operating System</b>	Linux/Windows 10 Pro



## TECHNICAL SPECIFICATIONS

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**Network Connectivity** 1 LAN port 1000Mbps (1 per 1)

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**Operating temperature** Ambient Air 10-35°C (20°C - recommended)

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**Lan Network Recommendations** 1x Switch per one rack cabinet (3 in Total) Switch: [Switch Juniper EX2300-24t](#) or similar GbE Port Density per System: 28 (24 host ports + four-port SFP/SFP+ uplinks) GbE Certified rj45 patch cords

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**Rack Recommendations** 19" Rack 120cm deep with 42U available Mounting holes are provided for installing manifolds for the liquid cooling system on both sides of the rack

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**Rack AC Power Recommendations** 220V AC power source with 4x C13 or 4x Schuko power sockets for each device setup Total: 4x for 1 System (3x 1600W for each 4U GPU-Server and 1x 110W for each 4U Freecooler module) 20 sockets total for 1 rack, 24kW for 5 device setup

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## EXTRAS

- Each system consists of 4U GPU-Server and 4U Freecooler module, total of 8U per one system
- Decryptum devices fit into standard 19" Racks (120cm deep)
- 4x AC Power Sockets (220V/110V) are needed for device setup (3x 1600W for 4U Decryptum server and 1x 200W for 4U Freecooler module)
- Ambient Temperature Range +5C° - +35C°
- Decryptum servers can be connected to an external liquid cooling system instead of 4U Freecooler block to achieve even better PUE

