

## SnapStream Server – Power Requirements and Thermal Output

All SnapStream servers are equipped with dual hot-swap power supplies that are both redundant, and load-balancing. A single unit may be replaced without a system power-down. They also support auto detection of 100-240V and 50-60Hz power. Below are the server configurations and their respective power consumption statistics.

Storage Level	Chassis Size	Total Number of Drives	Power Supply Used	Idle Draw Watts	Idle Draw Amps	Max Draw Watts	Max Draw Amps	Power Off Draw
3 TB	3U	7	Dual 800 Watts	190	1.6	240	2.0	30 Watts
6 TB	3U	11	Dual 800 Watts	250	2.1	300	2.5	30 Watts
9 TB	3U	16	Dual 800 Watts	325	2.7	375	3.1	30 Watts
12 TB	4U	20	Dual 900 Watts	385	3.2	435	3.6	30 Watts
15 TB	4U	24	Dual 900 Watts	445	3.7	495	4.1	30 Watts

### Best Practices

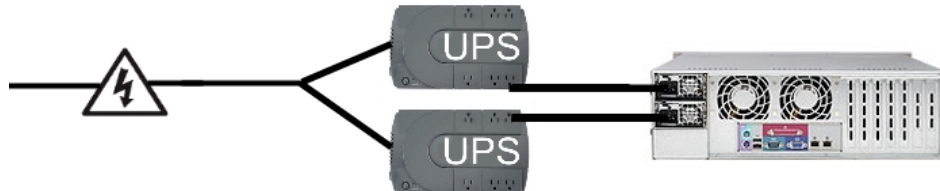
#### *Minimal Configuration*

Each system power supply unit plugged into an ‘uninterrupted power supply’ (UPS) or ‘battery backup unit’ (BBU.) Protection provided for single system power supply unit failure, and minor power outages or failures.



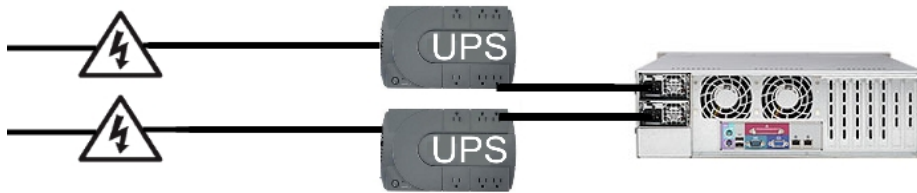
#### *Better Configuration*

Each system power supply unit plugged into a separate UPS or BBU. Protection provided for single system power supply unit failure, power outages, and single UPS/BBU failure.



#### *Best Configuration*

Each system power supply unit plugged into its own UPS/BBU, each of which is powered by separate, independent circuits. Protection provided for single system power supply unit failure, power outages, single UPS/BBU failure, and single facility circuitry failure.



### *UPS VA Recommendations*

When deciding on UPS hardware, it is important to choose a solution with the appropriate VA rating. This rating allows you to calculate the prospective uptime of a server in the event of a power failure, based on the power draw of the system. Listed below are some approximate times for our servers based on UPS hardware with standard VA ratings.

#### **Single UPS Configuration (All times approximate)**

Storage Level	Idle Draw Watts	Max Draw Watts	500VA	800VA	900VA	1200VA	1500VA
3 TB	190	240	3 min	15 min	15 min	20 min	22 min
6 TB	250	300	3 min	15 min	15 min	20 min	22 min
9 TB	325	375	N/A	10 min	10 min	13 min	15 min
12 TB	385	435	N/A	6 min	6 min	9 min	12 min
15 TB	445	495	N/A	6 min	6 min	9 min	12 min

#### **Dual UPS Configuration (All times approximate)**

Storage Level	Idle Draw Watts	Max Draw Watts	500VA	800VA	900VA	1200VA	1500VA
3 TB	190	240	9 min	25 min	27 min	33 min	38 min
6 TB	250	300	9 min	25 min	27 min	33 min	38 min
9 TB	325	375	9 min	25 min	27 min	33 min	38 min
12 TB	385	435	3 min	15 min	15 min	22 min	24 min
15 TB	445	495	3 min	15 min	15 min	22 min	24 min

\*These calculations are a conservative estimate based on maximum power draw with a full CPU load.

## Thermal Output

The following displays the thermal output statistics of SnapStream Servers based on wattage consumed. 1 watt has an energy output of 3.41 BTU/h (British Thermal Units per Hour.) This formula can be used to calculate an estimation of the thermal output of SnapStream Servers based on their power usage profile.

*\* These numbers do not account for loss due to any instances of insulation, for example, the vacuum sealed portions of hard drives, component embedded in silicon PCB, or any other factors that would variably lower the actual total output. Values rounded to the tenth decimal place. Avg calculated at a theoretical breakdown of [idle x 75% + load x 25%]*

Storage Level	Chassis Size	Draw Consumed @ Idle	Draw Consumed @ Load	Thermal Output @ Idle	Thermal Output @ Load
3 TB	3U	190 Watts	240 Watts	647.9 BTU/h	818.4 BTU/h
6 TB	3U	250 Watts	300 Watts	852.5 BTU/h	1023 BTU/h
9 TB	3U	325 Watts	375 Watts	1108.3 BTU/h	1278.8 BTU/h
12 TB	4U	385 Watts	435 Watts	1312.9 BTU/h	1483.4 BTU/h
15 TB	4U	445 Watts	495 Watts	1517.5 BTU/h	1687.9 BTU/h