

# Environmental Leadership in Storage Solutions

## Energy efficient storage solutions



For decades, big businesses have met demanding needs for transactional speeds by adding more drive systems to their data centers, in turn adding more energy cost. With annual energy costs surging into the billions of dollars industry wide - most companies are re-evaluating their data centers to encompass a major new role, energy efficiency. 2009 projections show companies will spend more money on power and cooling than the server hardware in their data centers; energy costs are now an immediate concern.

Introducing STEC's Family of Enterprise Solid State Drives. With the ability to increase performance and greatly reduce energy, cooling, maintenance and hardware costs, STEC's enterprise SSDs are quickly replacing HDDs as the solution of choice in all data centers. By significantly increasing product reliability, consuming magnitudes less power than that of an enterprise HDD and increasing performance to over 200 times that of an enterprise HDD, STEC's Family of Enterprise Solid State Drives are revolutionizing the way businesses plan for the future of their data centers.

# STEC - Energy Efficient Storage

Energy comparison between STEC Enterprise SSD Family and Enterprise HDD

## Annual Energy Cost for 100K Read IOPS

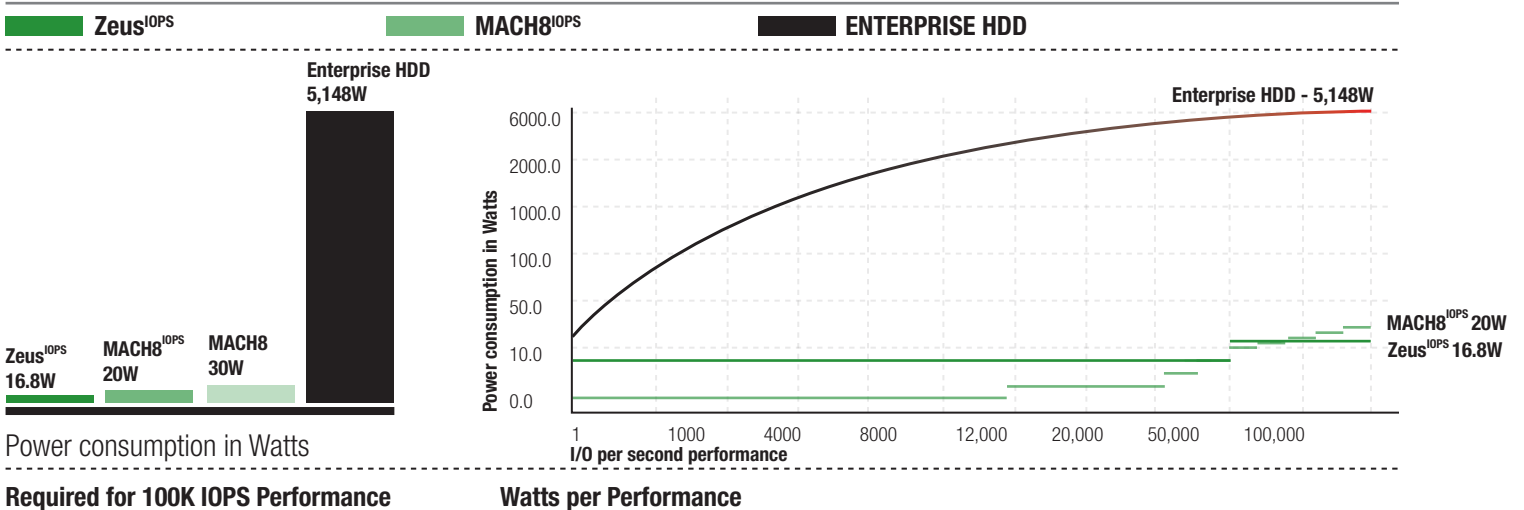
STEC Enterprise SSD vs. Enterprise HDD

| Metric  | STEC Zeus <sup>IOPS</sup>        | STEC MACH8 <sup>IOPS</sup>       | Enterprise Class HDD | Specifics                                |
|---|----------------------------------|----------------------------------|----------------------|--|
| Drives needed   | 2                                | 10                               | 286                  | Drives needed for 100K IOPS              |
| Drive enclosure(s)  | 1                                | 1                                | 20                   | 14bay Enclosures = \$2000 ea.            |
| Data center racks   | 1U - Partial                     | 1U - Partial                     | 72U - 2 Full Racks   | 42U Rack Cabinet = \$1000 ea.            |
| Cooling   | 625K BTU x 1                     | 625K BTU x 1                     | 625K BTU x 20        | 16¢ per kWh <sup>1</sup>                 |
| Power consumption (Watts)                                       | 8.4 (16.8 total)                 | 2 (20 total)                     | 18 (5,148 total)     | Total Watts for single drive/total drive |
| <b>Total energy cost</b>  | <b>\$23.54</b>                   | <b>\$28.02</b>                   | <b>\$7,215.44</b>    |  |
| <b>Total cost infrastructure and infrastructure energy cost</b> | <b>\$3,700.80</b><br>91% Savings | <b>\$3,705.28</b><br>91% Savings | <b>\$44,052.79</b>   |  |

\*IOPS (Input/Output per Second) performance: Zeus<sup>IOPS</sup> (52,000), MACH8<sup>IOPS</sup> (10,000), Enterprise HDD (350)  
<sup>1</sup>kWh based on Edison Electric Institute, "Typical Bill and Average Rates Report" Winter 2007

## Energy Consumption for 100K Read IOPS

STEC Enterprise SSD vs. Enterprise HDD



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