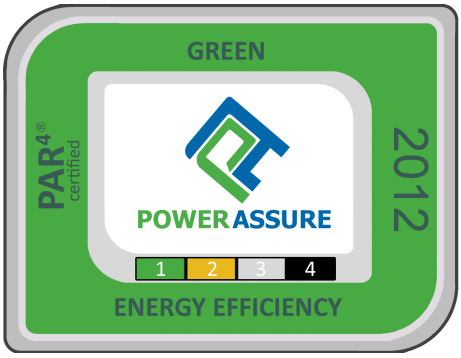
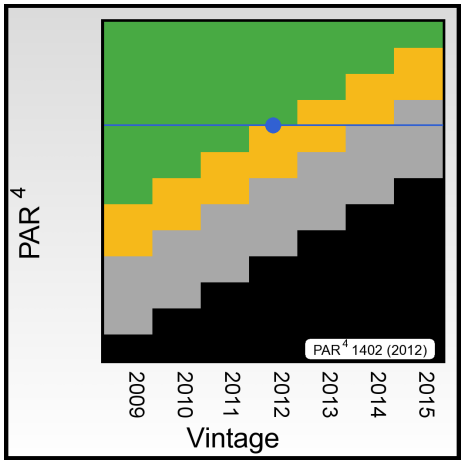
PAR$^{4®}$ - Energy Efficiency Certification

Sample Card Number: PA20130905223900001
Date: 2013-09-05



Machine Specification:

Lopoco LP-6200 LP-6200-6H
1 intel Xeon E5-2630L @2GHz, 6 cores
2 Kingston 9965525-024.A00LF 8GB @1333MHz
4 Intel SSDSA2M160 SATA 160GB @1333RPM
1 generic low-power @200W

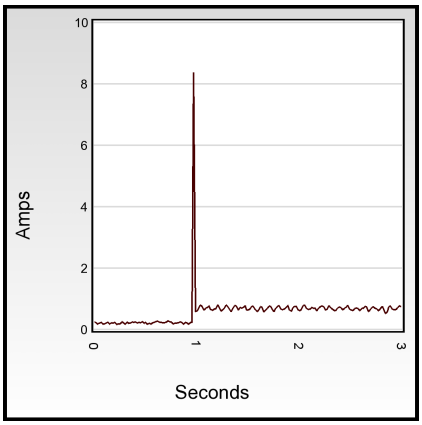


Results:

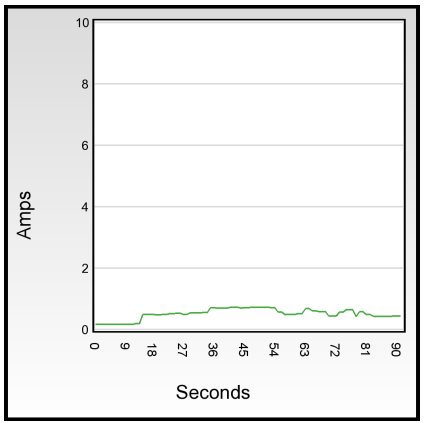
Vintage PAR^4:	1,402
Vintage Year:	2012
PAR^4 Rating:	GREEN
Absolute PAR^4	2,002
3 Year Cost (Est):	$163.54

Power Consumption Details				
OFF	**IDLE**	**LOADED**	**PEAK**	**BOOT TIME**
4.672W	**39.91W**	**151.5W**	**151.5W**	**84s**
122V	121.9V	122V	122V	
0.165A	0.478A	1.443A	1.443A	
0.2PF	0.7PF	0.9PF	0.9PF	

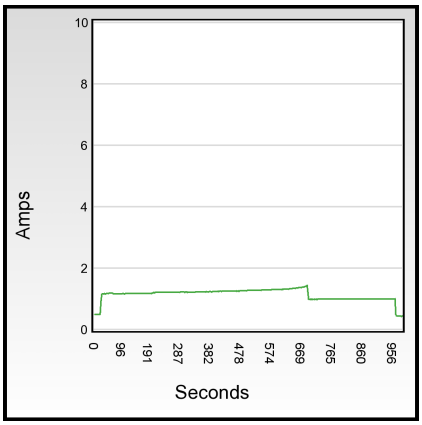
Power Spike



Boot Cycle



PAR$^{4®}$ Test



System Under Test

Hardware	
Manufacturer	Lopoco
Product Family	LP-6200
Product	LP-6200-6H
Version	1.0
CPU Count	1
CPU Manufacturer	intel
CPU Model	Xeon E5-2630L
CPU Speed	2GHz
CPU Cores	6
Core Threads	2
Total Logical Processors	12
RAM Count	2
RAM Manufacturer	Kingston
RAM Model	9965525-024.A00LF
RAM Speed	1333MHz
RAM Size	8GB
Hard Drive Count	4
Hard Drive Manufacturer	Intel
Hard Drive Model	SSDSA2M160
Hard Drive Type	SATA
Hard Drive Size	160GB
Hard Drive Speed	1,333RPM
LAN Count	0
LAN Manufacturer	
LAN Model	
LAN Type	
Power Supply Count	1
Power Supply Manufacturer	generic
Power Supply Model	low-power
Power Supply Rating	200Watts

Benchmark	
Operating System	Power Assure ArchLinux
Measurement Client Version	PALabs Energy Efficiency Measurement Client v.7.0.7.2378
Transactions per Second	161,500,000
Absolute PAR4®	2002
Vintage	2012
Vintage PAR4®	1402
Ambient Air Temperature	24°C / 75°F

Notes

Measurement Devices

Power Analyzer	
Power Meter ID	4243246
Hardware Vendor	Tektronix
Power Meter	DPO5034
Serial Number	C010756
Connectivity	GP-IB
Calibration Label	Tektronix
Calibration Date	2011-09-04
Certified By	Zhongyuan Cao

Oscilloscope	
Oscilloscope ID	4243246
Hardware Vendor	Tektronix
Oscilloscope	DPO5034
Serial Number	C010756
Connectivity	GP-IB
Calibration Label	Tektronix
Calibration Date	2011-09-04
Certified By	Zhongyuan Cao

Electrical Data

	Average Power (W)	Average Voltage (V)	Average Current (A)	Average Power Factor
Off	4.672	122	0.165	0.23
Idle	39.91	121.9	0.478	0.68
Loaded	151.5	122	1.443	0.86

Average Voltage	Average Power Factor
121.9V	0.9PF

DISCLAIMER

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PAR4®

The PAR4 process is protected by United States Patent 7970561. Other patents pending.
For more information about PAR4 visit www.par4.org

MACHINE SETTINGS

Unless noted otherwise, all machine settings (e.g. BIOS configuration) are at their factory defaults. Default enabling of advanced features (e.g. power saving, hyper-threading and over-clocking) vary from manufacturer to manufacturer and machine/model to machine/model. Where optional hardware devices (e.g. disk drives) are installed, they are assumed to be powered on and running, but are not specifically exercised by the tests performed.

POWER CONSUMPTION

Power consumption is measured at an ambient temperature (machine air inlet) of 72-76°F (22.2-24.4°C). Higher ambient (air inlet) temperatures will typically cause increased power consumption on machines with variable speed fans. If you are using these results to determine maximum power consumption and the ambient temperature in your data center is outside the stated range, you are advised to re-test in your own environment.

COST ESTIMATE

The estimated cost of running the specified machine configuration over three years, running in the IDLE state for 80% of the time and the LOADED state for 20% of the time, and assuming electricity costs of US$ 0.10 (ten cents) per KWh.