

Anex

Corsair AX860i

Lab ID#: 104

Receipt Date: Apr 21, 2018

Test Date: May 2, 2018

Report:

Report Date: May 5, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Flextronics
Series	AXi
Model Number	
Serial Number	17019542001008320045
DUT Notes	CP-9020037

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	50-60
Rated Power (W)	860
Type	ATX12V
Cooling	120 mm Double Ball-Bearing Fan (D12BH-12)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	71.6	3	0.8
	Watts	125		859.2	15	9.6
Total Max. Power (W)		860				

CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (600mm)	1	1	16-22AWG
4+4 pin EPS12V (650mm)	2	2	18AWG
6+2 pin PCIe (600mm+150mm) / (600mm)	2 / 2	4 / 2	16-18 / 18AWG
SATA (400mm+95mm+95mm+95mm)	2	8	18AWG
SATA (550mm+95mm+95mm+95mm)	1	4	18AWG
4 pin Molex (450mm+100mm+100mm+100mm)	2	8	18AWG
FDD Adapter (+100mm)	2	2	22AWG
C-Link USB Cable (800mm)	1	1	24-28AWG
C-Link I2C Cable (800mm)	2	2	29AWG

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	90.052%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	80.928%
Standby Power Consumption (W)	0.0615673
Average PF	0.989
Avg Noise Output	22.54 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A

TEST EQUIPMENT

Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	24.014
AC Loss to PWR_OK Hold Up Time (ms)	18.220
PWR_OK Inactive to DC Loss Delay (ms)	5.794

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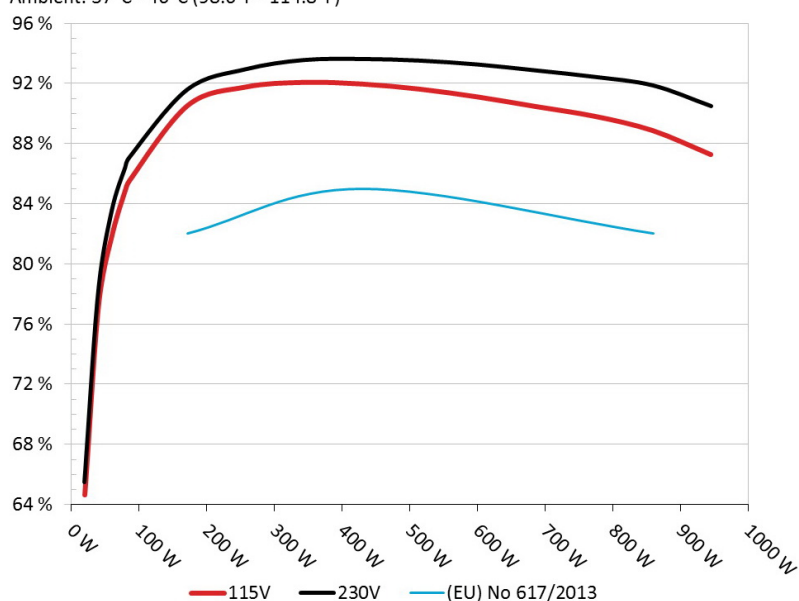
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair AX860i

Ambient: 37°C - 46°C (98.6°F - 114.8°F)



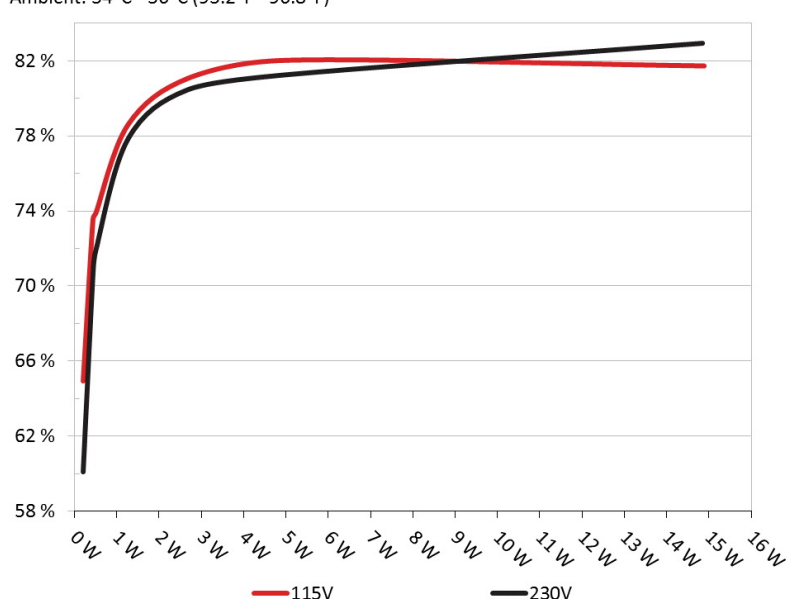
INFO

The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY

5VSB Efficiency: Corsair AX860i

Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.211	64.923%	0.046
	5.048V	0.325		115.08V
2	0.088A	0.442	73.544%	0.083
	5.046V	0.601		115.09V
3	0.532A	2.676	78.892%	0.325
	5.031V	3.392		115.09V
4	3.001A	14.844	81.727%	0.527
	4.946V	18.163		115.08V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.211	60.114%	0.015
	5.048V	0.351		230.24V
2	0.087A	0.441	70.560%	0.027
	5.046V	0.625		230.25V
3	0.532A	2.677	75.836%	0.139
	5.031V	3.530		230.25V
4	3.001A	14.845	82.910%	0.384
	4.946V	17.905		230.26V

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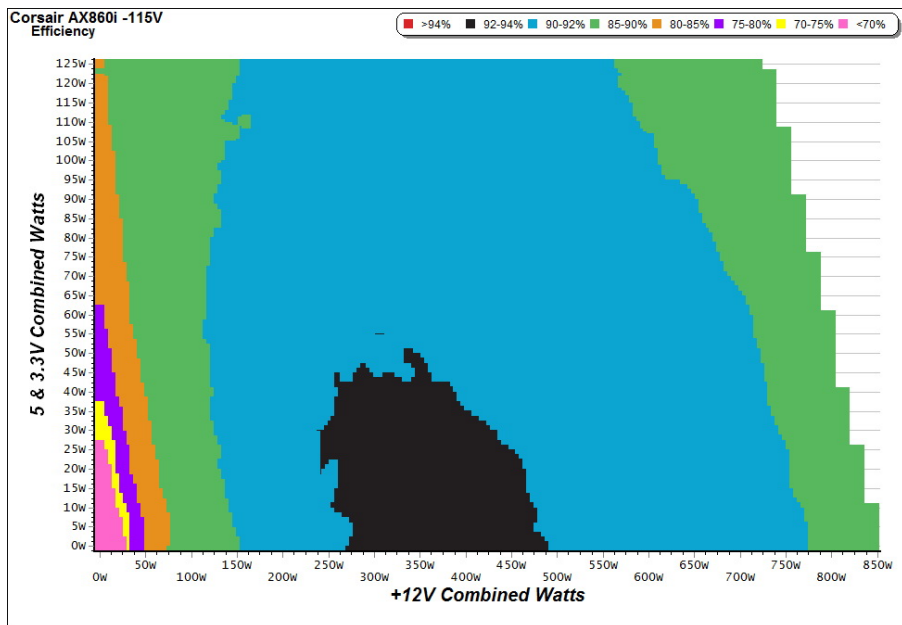
115V

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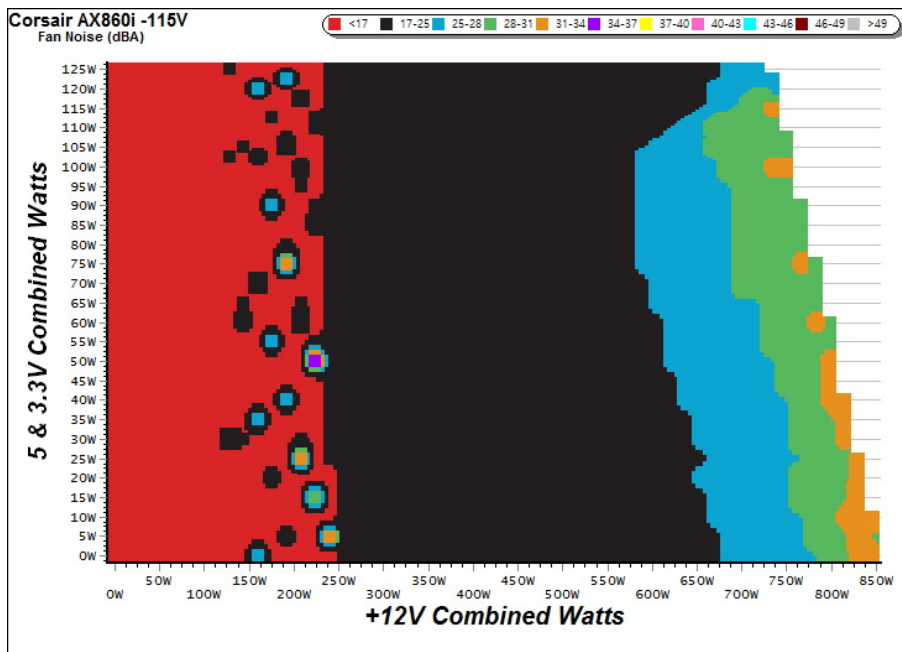
EFFICIENCY GRAPH 115V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 115V



INFO

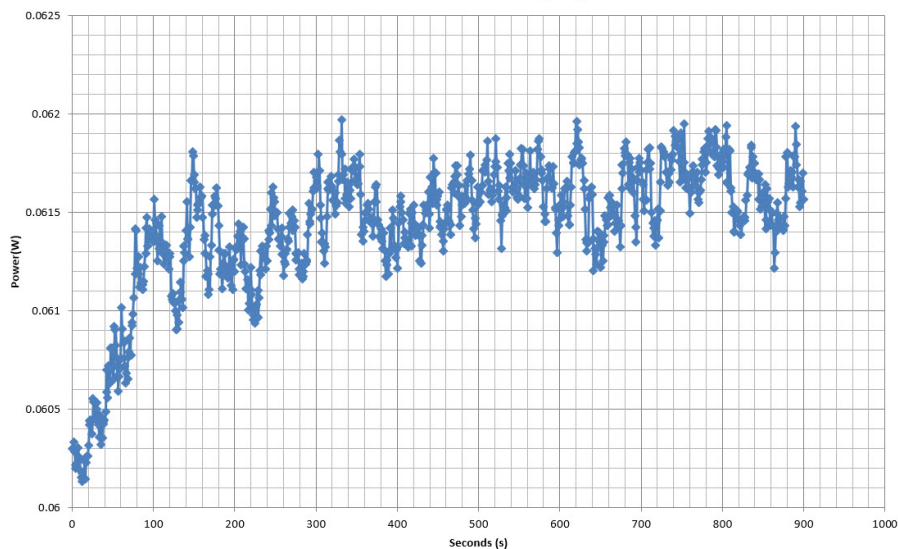
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 17019542001008320045 - 03/05/2017 - 09:19



INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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10-110% LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	5.340A	2.004A	2.001A	1.006A	85.820	85.542%	0	0	46.15°C	0.943
	12.024V	4.999V	3.294V	4.973V	100.325				42.79°C	115.12V
2	11.722A	3.002A	3.009A	1.205A	171.657	90.515%	300	17.5	41.43°C	0.982
	12.013V	4.988V	3.287V	4.960V	189.645				48.79°C	115.12V
3	18.425A	3.510A	3.519A	1.411A	257.934	91.749%	350	17.6	40.09°C	0.991
	12.039V	4.993V	3.293V	4.962V	281.129				50.02°C	115.13V
4	25.116A	4.007A	4.003A	1.611A	343.748	92.055%	418	17.7	40.18°C	0.995
	12.047V	4.993V	3.293V	4.958V	373.415				49.24°C	115.13V
5	31.486A	4.991A	5.014A	1.810A	429.631	91.947%	512	17.9	40.75°C	0.996
	12.043V	5.003V	3.289V	4.964V	467.256				50.80°C	115.13V
6	37.856A	6.007A	6.011A	2.014A	515.641	91.603%	656	18.4	41.39°C	0.997
	12.042V	4.996V	3.293V	4.953V	562.893				56.30°C	115.13V
7	44.226A	7.016A	7.008A	2.224A	601.563	91.081%	736	19.1	42.35°C	0.998
	12.040V	4.988V	3.296V	4.941V	660.467				54.97°C	115.13V
8	50.591A	8.016A	8.022A	2.426A	687.507	90.444%	1048	26.1	42.54°C	0.998
	12.040V	4.991V	3.290V	4.943V	760.148				53.87°C	115.14V
9	57.398A	8.527A	8.556A	2.429A	773.545	89.802%	1312	32.3	43.49°C	0.998
	12.038V	4.984V	3.284V	4.937V	861.394				54.51°C	115.14V
10	63.945A	9.054A	9.050A	3.049A	859.331	88.856%	1660	38.7	44.77°C	0.998
	12.036V	4.974V	3.280V	4.910V	967.103				56.01°C	115.15V
11	71.069A	9.058A	9.049A	3.054A	945.269	87.261%	1900	42.0	46.11°C	0.998
	12.038V	4.973V	3.282V	4.910V	1083.272				59.24°C	115.15V
CL1	0.099A	15.020A	15.003A	0.004A	125.684	84.900%	0	0	43.66°C	0.972
	12.013V	4.988V	3.303V	5.012V	148.037				54.26°C	115.14V
CL2	71.536A	1.003A	1.005A	1.001A	874.279	89.170%	1264	31.5	44.62°C	0.998
	12.036V	4.983V	3.290V	4.962V	980.466				57.29°C	115.16V

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20-80W LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	PF/AC Volts
1	1.213A	0.493A	0.482A	0.195A	19.638	64.658%	0	0	0.777
	12.037V	5.011V	3.302V	5.003V	30.372				115.10V
2	2.455A	0.991A	1.000A	0.401A	39.805	77.192%	0	0	0.848
	12.033V	5.008V	3.299V	4.995V	51.566				115.11V
3	3.696A	1.488A	1.513A	0.601A	59.893	81.898%	0	0	0.904
	12.029V	5.004V	3.298V	4.988V	73.131				115.12V
4	4.928A	2.002A	1.999A	0.802A	79.855	84.931%	0	0	0.935
	12.026V	5.000V	3.295V	4.980V	94.023				115.12V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	4.4 mV	4.7 mV	7.1 mV	3.6 mV	Pass
20% Load	16.8 mV	5.1 mV	7.5 mV	4.4 mV	Pass
30% Load	8.1 mV	6.7 mV	7.2 mV	6.7 mV	Pass
40% Load	10.3 mV	10.2 mV	7.8 mV	8.9 mV	Pass
50% Load	11.5 mV	11.3 mV	7.5 mV	10.4 mV	Pass
60% Load	13.1 mV	13.1 mV	8.9 mV	12.3 mV	Pass
70% Load	15.9 mV	12.2 mV	8.3 mV	11.0 mV	Pass
80% Load	16.5 mV	9.2 mV	8.7 mV	7.3 mV	Pass
90% Load	19.6 mV	9.9 mV	9.4 mV	7.8 mV	Pass
100% Load	21.5 mV	11.4 mV	10.8 mV	9.3 mV	Pass
110% Load	26.3 mV	20.1 mV	12.9 mV	17.8 mV	Pass
Crossload 1	13.4 mV	5.8 mV	8.1 mV	4.5 mV	Pass
Crossload 2	22.2 mV	11.9 mV	11.3 mV	9.3 mV	Pass

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Power specifications label

CERTIFICATIONS 115V



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