EFFICIENCY AND NOISE LEVEL CERTIFICATIONS

Anex

SilverStone GM800 2U Gold

Lab ID#: SL80001936
Receipt Date: Sep 17, 2021
Test Date: Nov 12, 2021

Report: 21PS1936A
Report Date: Nov 19, 2021

DUT INFORMATION

Brand	SilverStone
Manufacturer (OEM)	TC Sure Star Computer Co.
Series	Gemini
Model Number	SST-GM800-2UGU V2
Serial Number	DXGM802G21340050
DUT Notes	SST-2M0800FCGD-A

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	13-6
Rated Frequency (Hz)	47-63
Rated Power (W)	800
Type	2U
Cooling	40mm Double Ball Bearing Fan (04028DA-12S-AUG)
Semi-Passive Operation	✗
Cable Design	Fixed cables

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289, Keithley 2015 - THD
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

RESULTS

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

230V

Average Efficiency	89.527%
Average Efficiency 5VSB	56.811%
Standby Power Consumption (W)	3.2603700
Average PF	0.932
Avg Noise Output	- dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	None

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	NaN	NaN	66.5	3.5	NaN
	Watts	NaN		798	17.5	NaN
Total Max. Power (W)		800				

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

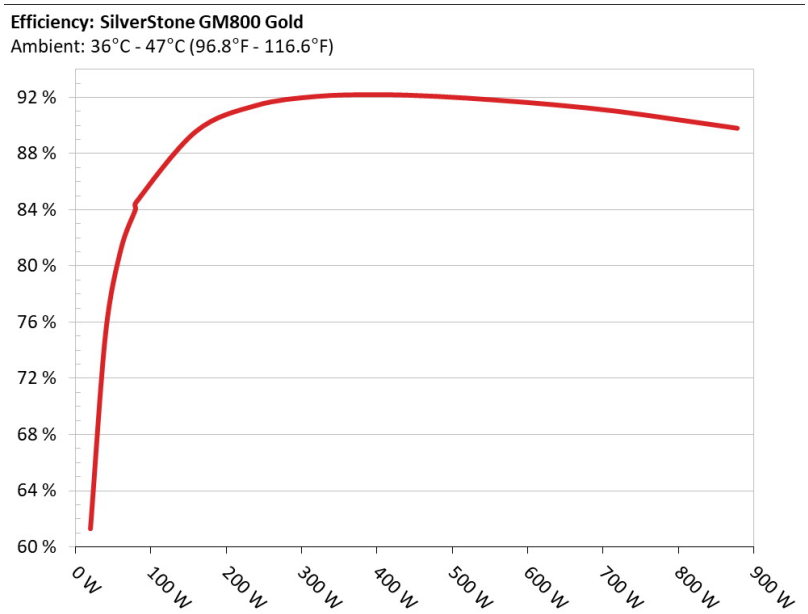
Hold-Up Time (ms)	1.5
AC Loss to PWR_OK Hold Up Time (ms)	10.7
PWR_OK Inactive to DC Loss Delay (ms)	-9.2

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

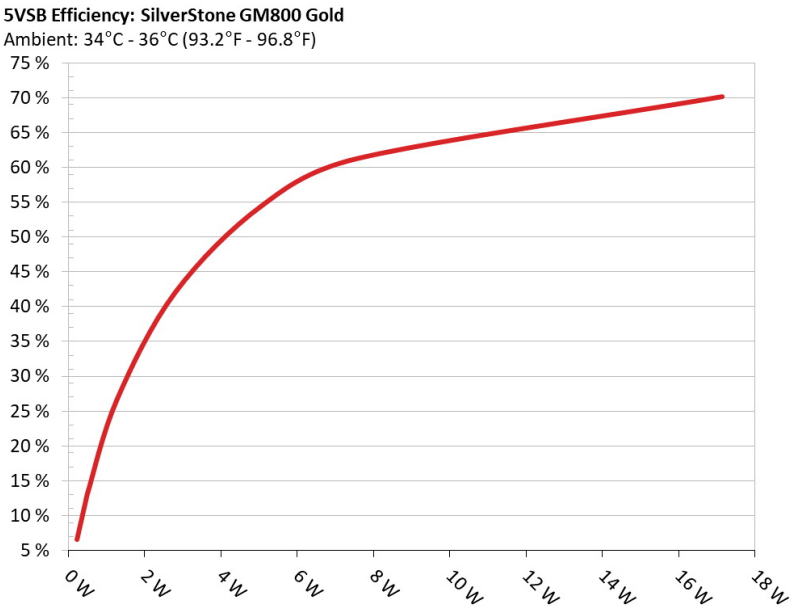
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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



INFO

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

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.233W	6.602%	0.085
	5.193V	3.529W		230.26V
2	0.09A	0.465W	12.228%	0.091
	5.172V	3.803W		230.26V
3	0.55A	2.804W	42.043%	0.144
	5.101V	6.67W		230.25V
4	1A	5.069W	54.473%	0.181
	5.07V	9.306W		230.25V
5	1.5A	7.564W	61.242%	0.212
	5.044V	12.352W		230.25V
6	3.499A	17.13W	70.128%	0.276
	4.896V	24.427W		230.25V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

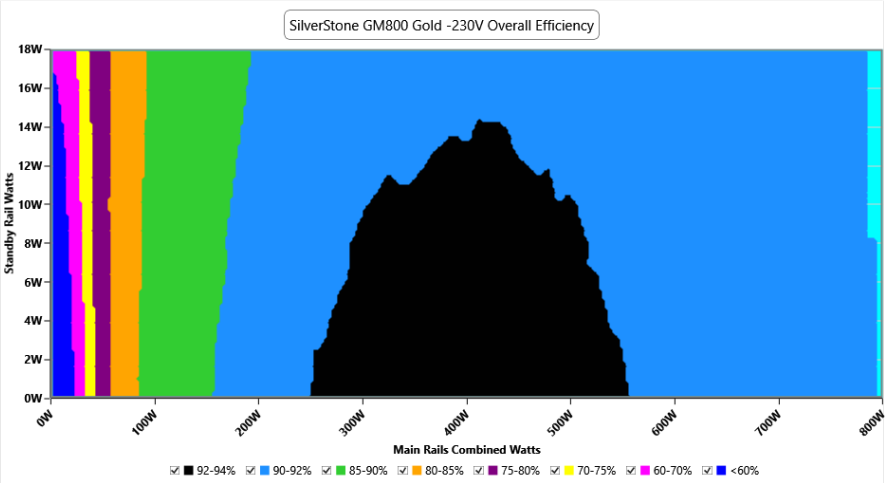
230V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

EFFICIENCY GRAPH 230V



INFO

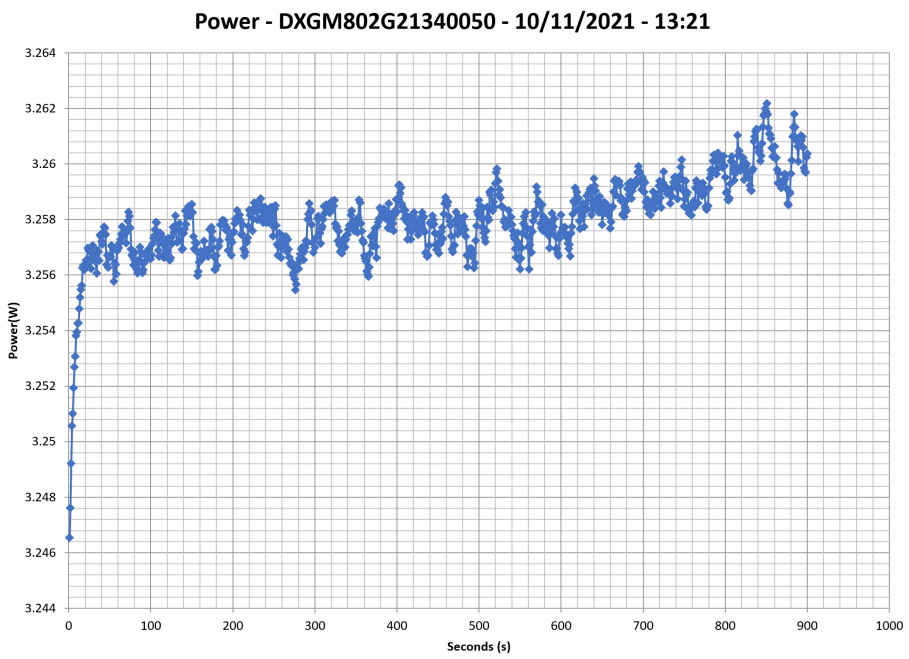
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

VAMPIRE POWER -230V



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

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

10-110% LOAD TESTS 230V

Test	Main Rail	Standby Rail	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
10%	6.157A	0.992A	79.777	84.063%	38.46°C	0.847
	12.145V	5.04V	94.902		42.28°C	230.28V
20%	12.667A	1.196A	159.572	89.583%	39.28°C	0.908
	12.124V	5.018V	178.127		43.73°C	230.27V
30%	19.199A	1.394A	239.376	91.443%	40.45°C	0.933
	12.104V	5.02V	261.777		45.24°C	230.27V
40%	25.745A	1.601A	319.182	92.089%	41.76°C	0.947
	12.087V	4.997V	346.601		46.85°C	230.27V
50%	32.279A	1.809A	398.388	92.217%	42.27°C	0.958
	12.063V	4.975V	432.013		47.67°C	230.27V
60%	38.988A	2A	478.535	92.097%	42.87°C	0.964
	12.020V	4.955V	519.6		48.68°C	230.27V
70%	45.704A	2.229A	558.061	91.826%	43.45°C	0.969
	11.970V	4.932V	607.738		49.73°C	230.26V
80%	52.572A	2.337A	637.826	91.482%	44.28°C	0.974
	11.914V	4.918V	697.218		51.18°C	230.26V
90%	59.519A	2.445A	717.594	91.04%	44.85°C	0.977
	11.855V	4.906V	788.217		52.49°C	230.26V
100%	66.125A	3.634A	797.574	90.442%	45.49°C	0.979
	11.797V	4.814V	881.864		53.56°C	230.25V
110%	73.312A	3.639A	877.636	89.823%	46.78°C	0.982
	11.733V	4.807V	977.075		55.58°C	230.25V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold

20-80W LOAD TESTS 230V

Test	Main Rail	Standby Rail	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
10W	1.562A	0.195A	19.994	61.271%	35.89°C	0.577
	12.159V	5.139V	32.632		37.23°C	230.31V
20W	3.167A	0.293A	39.995	75.154%	36.24°C	0.727
	12.156V	5.116V	53.217		38.16°C	230.3V
30W	4.773A	0.392A	59.992	81.112%	37.1°C	0.802
	12.150V	5.103V	73.962		39.36°C	230.29V
40W	6.374A	0.491A	79.917	84.498%	37.59°C	0.846
	12.145V	5.087V	94.579		40.25°C	230.28V

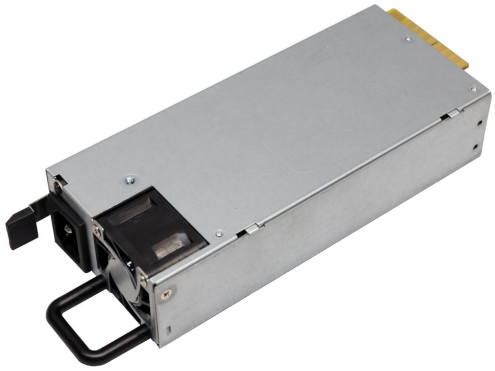
RIPPLE MEASUREMENTS 230V

Test	Main Rail	Standby Rail	Pass/Fail
10% Load	24.3 mV	15.0 mV	Pass
20% Load	35.0 mV	17.1 mV	Pass
30% Load	49.3 mV	30.2 mV	Pass
40% Load	66.1 mV	31.9 mV	Pass
50% Load	127.4 mV	36.0 mV	Fail
60% Load	183.5 mV	43.5 mV	Fail
70% Load	200.0 mV	43.1 mV	Fail
80% Load	200.0 mV	45.8 mV	Fail
90% Load	200.0 mV	47.9 mV	Fail
100% Load	599.7 mV	55.9 mV	Fail
110% Load	693.2 mV	57.1 mV	Fail

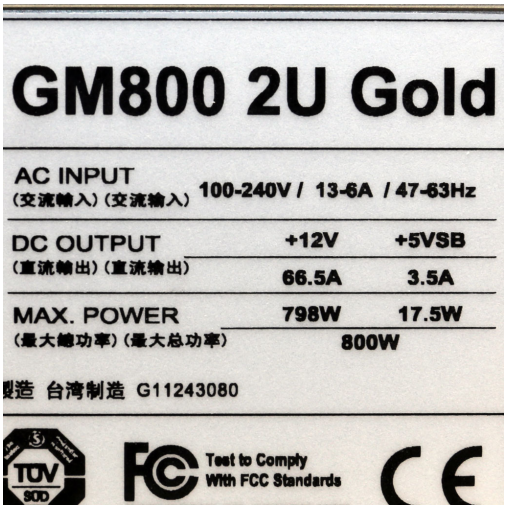
www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

SilverStone GM800 2U Gold



Top side



Power specifications label

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus