

TEST REPORT

Report No.: S23033101604001

Product: Notebook

Model No.: H4 V5.1, H5 V4.1, H4 V5.x, H5 V4.x (x can be A~Z or 1~9)

Applicant: MONSTER COMPUTER TECHNOLOGY GMBH.

Address: Alexanderplatz 2, 10178 Berlin Germany.

Issued by: Shenzhen NTEK Testing Technology Co., Ltd.

Lab Location: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang
Street, Bao'an District, Shenzhen 518126 P.R. China

Tel: 400-800-6106, 0755-2320 0050 / 2320 0090

ERP

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TEST REPORT

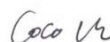
ECODESIGN REQUIREMENTS FOR COMPUTERS AND COMPUTER SERVERS

Report reference No. : S23033101604001

Tested by
(printed name and signature) : Elvis Chen



Approved by
(printed name and signature) : Coco Li



Date of issue : 2023-05-05

Testing Laboratory Name : Shenzhen NTEK Testing Technology Co., Ltd.

Address : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

Testing location : (Same as above)

Applicant's Name : MONSTER COMPUTER TECHNOLOGY GMBH.

Address : Alexanderplatz 2, 10178 Berlin Germany.

Test specification

Standard : COMMISSION REGULATION (EU) No 617/2013

Test procedure : Desktop and notebook computers — Measurement of energy consumption in accordance with EN 62623:2013;
Measuring the energy consumption of personal computing products in accordance with ECMA-383 (3rd Edition / December 2010).

Non-standard test method : N/A

Test Report Form No. : ERP-No 617-01

Test Report Form(s) Originator : ---

Master TRF : 2014-6-05

Test item description : Notebook

Manufacturer : MONSTER COMPUTER TECHNOLOGY GMBH.

Address : Alexanderplatz 2, 10178 Berlin Germany.

Trademark : TULPAR

Model and/or type reference : H4 V5.1, H5 V4.1, H4 V5.x, H5 V4.x (x can be A~Z or 1~9)

Model difference : All model totally same, only different the model name and colour for market

Rating(s) : Input: 19V $\overline{\text{---}}$ 3.15A (Supplied by AC adapter)
or 11.55Vdc, 4780mAh, 55.20Wh (Supplied by rechargeable internal lithium battery)

Test item particulars..... :	
Classification..... :	Class III
Supply Connection..... :	No direct connection to the AC mains supply, powered by external switching power supply
Possible test case verdicts:	
- test case does not apply to the test object..... : N/A	
- test object does meet the requirement..... : P (Pass)	
- test object does not meet the requirement..... : F (Fail)	
Testing..... :	
Date of receipt of test item	2023-04-25
Date (s) of performance of tests	2023-04-26 to 2023-05-04
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
General product information:	
All the test result carried on two model: H4 V5.1 and H5 V4.1 in this report. H4 V5.1 used CPU(i5), H4 V5.1 used CPU(i7),	
This equipment is classified as Notebook computers and power by an external power supply (EPS), efficiency of EPS is investigated in seprate test report and It's required Efficiency Level "VI".	
Information of external power supply	
Model name: H4 V5.x H5 V4.x	
Manufacturer: SHENZHEN SHI YING YUAN ELECTRONICS CO LTD	
Input: 100-240Vac, 50/60Hz, 1.3A Max	
Output: 19.0VDC, 3.15A, 59.85W	
Test conditions:	
Test room	
The testing was carried out in a room that has an air speed close to the UUT of ≤ 0.5 m/s, and the ambient temperature was maintained at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ throughout the test. Relative Humidity is 30%-75%.	
Test voltage and frequency	
Equipment is tested under 230 V at 50 Hz. The THD of the supply voltage when supplying the equipment in the specified mode was not exceeding 2%, up to and including the 13th harmonic. Input voltage and frequency are within ± 1 percent of the specified.	
Test conclusion :	
The product meets the energy efficiency standard set out in COMMISSION REGULATION (EU) No 617/2013 for computers and computer servers.	

Test results

COMMISSION REGULATION (EU) No 617/2013			
Clause	Requirement + Test	Result - Remark	Verdict
1	E _{TEC} value		P
1.1	Annual total energy consumption (E _{TEC} in kWh/year) shall not exceed: (for Desktop computer and integrated desktop computer)		N
	- Stage 1 limit: From 1 July 2014		N
	(a) Category A computer: 133.00;		N
	(b) Category B computer: 158.00;		N
	(c) Category C computer: 188.00;		N
	(d) Category D computer: 211.00.		N
	- Stage 2 limit: From 1 January 2016		N
	(a) Category A computer: 94.00;		N
	(b) Category B computer: 112.00;		N
	(c) Category C computer: 135.00;		N
	(d) Category D computer: 150.00.		N
1.2	Annual total energy consumption (E _{TEC} in kWh/year) shall not exceed: (for notebook computer)		P
	- Stage 1 limit: From 1 July 2014		N
	(a) Category A computer: 36.00;		N
	(b) Category B computer: 48.00;		N
	(c) Category C computer: 80.50;		N
	- Stage 2 limit: From 1 January 2016		P
	(a) Category A computer: 27.00;		P
	(b) Category B computer: 36.00;		N
	(c) Category C computer: 60.50;		N
2	Sleep mode		P
2.1	Sleep mode and/or another condition that provides the functionality of sleep mode and which does not exceed the applicable power demand requirements for a sleep mode.		P
2.2	Desktop computers and integrated desktop computers		N
	- Power consumption limit:≤5.0W		N
	Notebook computers.		P
	- Power consumption limit:≤3.0W		P

COMMISSION REGULATION (EU) No 617/2013			
Clause	Requirement + Test	Result - Remark	Verdict
2.3	Desktop computers and integrated desktop computers where idle state power demand is less than or equal to 10,00 W are not required to have a discrete system sleep mode.		N
2.4	WOL functionality enabled in sleep mode:		N
	(a) an additional allowance of 0,70 W		N
	(b) it must be tested with a WOL functionality both enabled and disabled and must comply with both requirements.		N
2.5	Where a product is placed on the market without Ethernet capability, it shall be tested without WOL enabled.		N
3	Lowest power state		P
3.1	Measured power consumption lowest power state mode:		P
	- Power consumption limit: ≤0.5W		P
3.2	Power state or mode which does not exceed the applicable power demand requirements for the lowest power state when it is connected to the mains power source.		N
3.3	Information or status display, an additional allowance of 0,50 W can be applied.		N
4	OFF mode		P
4.1	Measured power consumption off mode:		P
	Power consumption limit: ≤1.0W		P
4.2	A product shall provide off mode and/or another condition which does not exceed the applicable power demand requirements for off mode when it is connected to the mains power source.		N
4.3	WOL functionality enabled in off mode:		N
	(a) an additional allowance of 0,70 W		N
	(b) it must be tested with a WOL functionality both enabled and disabled and must comply with both requirements.		N
4.4	Without Ethernet capability, it shall be tested without WOL enabled		N
5	Internal Power Supply Efficiency		N
5.1	All computer internal power supplies shall not perform at less than:		N
5.1.1	Desktop computer, integrated desktop computer, desktop thin client, workstation, and small- scale server		N
	a) 85 % efficiency at 50 % of rated output power;		N

COMMISSION REGULATION (EU) No 617/2013			
Clause	Requirement + Test	Result - Remark	Verdict
	b) 82 % efficiency at 20 % and 100 % of rated output power;		N
	c) Power factor = 0,9 at 100 % of rated output power.		N
5.1.2	Computer servers		N
5.1.2.1	All multi-output (AC-DC) power supplies shall not perform at less than:		N
	(a) 85 % efficiency at 50 % of rated output;		N
	(b) 82 % efficiency at 20 % and 100 % of rated output.		N
5.1.2.2	All multi-output (AC-DC) power supplies shall not perform at less than:		N
	(a) power factor 0,8 at 20 % of rated output;		N
	(b) power factor 0,9 at 50 % of rated output;		N
	(c) power factor 0,95 at 100 % of rated output.		N
5.1.2.3	All single output (AC-DC) power supplies with rated output of not more than 500 W shall not perform at less than:		N
	(a) 70 % efficiency at 10 % of rated output;		N
	(b) 82 % efficiency at 20 % of rated output;		N
	(c) 89 % efficiency at 50 % of rated output;		N
	(d) 85 % efficiency at 100 % of rated output.		N
5.1.2.4	All single output (AC-DC) power supplies with rated output of not more than 500 W shall not perform at less than:		N
	(a) power factor 0,8 at 20 % of rated output;		N
	(b) power factor 0,9 at 50 % of rated output;		N
	(c) power factor 0,95 at 100 % of rated output.		N
5.1.2.5	All single output (AC-DC) power supplies with rated output greater than 500 W but not more than 1 000 W shall not perform at less than:		N
	(a) 75 % efficiency at 10 % of rated output;		N
	(b) 85 % efficiency at 20 % and 100 % of rated output;		N
	(c) 89 % efficiency at 50 % of rated output.		N
5.1.2.6	All single output (AC-DC) power supplies with rated output greater than 500 W but not more than 1 000 W shall not perform at less than:		N
	(a) power factor 0,65 at 10 % of rated output;		N

COMMISSION REGULATION (EU) No 617/2013			
Clause	Requirement + Test	Result - Remark	Verdict
	(b) power factor 0,8 at 20 % of rated output;		N
	(c) power factor 0,9 at 50 % of rated output;		N
	(d) power factor 0,95 at 100 % of rated output.		N
5.1.2.7	All single output (AC-DC) power supplies with rated output of more than 1 000 W shall not perform at less than:		N
	(a) 80 % efficiency at 10 % of rated output;		N
	(b) 88 % efficiency at 20 % and 100 % of rated output;		N
	(c) 92 % efficiency at 50 % of rated output.		N
5.1.2.8	All single output (AC-DC) power supplies with rated output of more than 1 000 W shall not perform at less than:		N
	(a) power factor 0,8 at 10 % of rated output;		N
	(b) power factor 0,9 at 20 % of rated output;		N
	(c) power factor 0,9 at 50 % of rated output;		N
	(d) power factor 0,95 at 100 % of rated output		N
6	Power Management Enabling		P
	The computer shall offer a power management function, or a similar function which, when the computer is not providing the main function or when other energy-using products are not dependent on its functions, automatically switches the computer into a power mode that has a lower power demand than the applicable power demand requirement for sleep mode.	Activate within 5 minutes of user inactivity.	P

Product Information

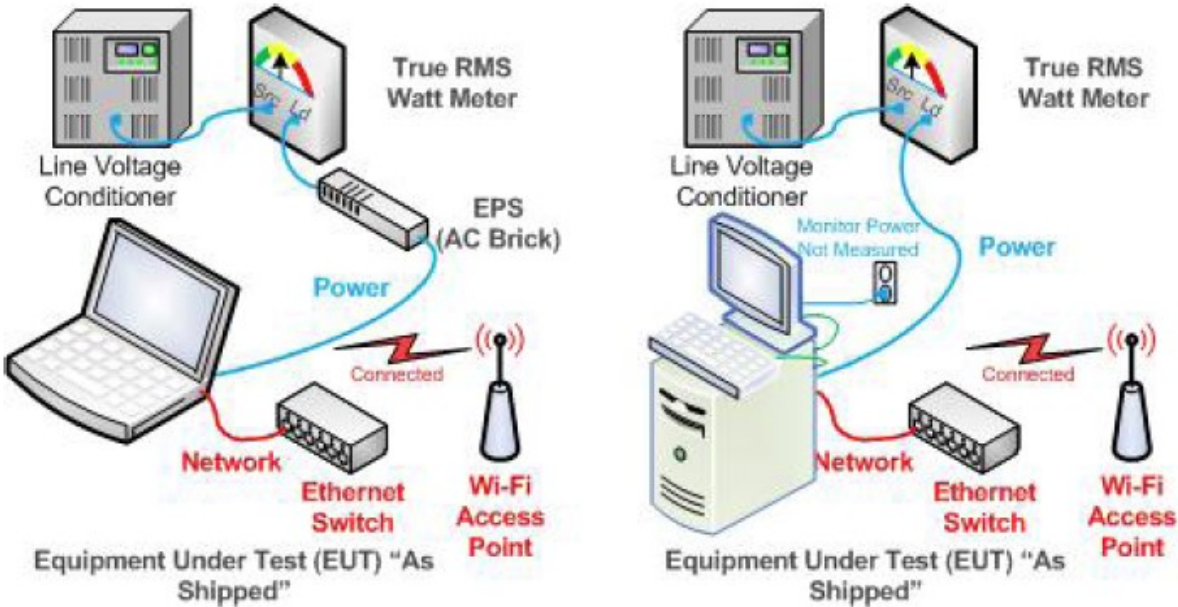
Product type	Notebook
Operating System	Windows 11
Power supply	External –Comply with (EC) No 2019/1782 Model: H4 V5.x H5 V4.x Manufacture: SHENZHEN SHI YING YUAN ELECTRONICS CO LTD Input: 100-240Vac, 50/60Hz , 0.5A Output: 19VDC 3.15A, 59.85W
Main board brand and model number	MONSTER/EM_IDL528_V4.0
Processor brand and model number	Intel/ Intel_i5-1235U for model: H4 V5.1 Intel/ Intel_i7-1255U for model: H5 V4.1
Number of processors	10
Number of cores	10
Speed per core	1.3GHz for model: H4 V5.1 1.7GHz for model: H5 V4.1
System memory	8GB
Total Capacity(GB)	256GB
Video Card (GPU) Brand / Model:	Intel Iris Xe Graphics G7 (80EU)
Integrated or discrete GPU	<input checked="" type="checkbox"/> Integrated(iGfx) <input type="checkbox"/> Discrete(dGfx) <input type="checkbox"/> Switchable
Number of discrete GPUs installed	N/A
GPU data width	N/A
GPU data frequency	1.2GHz for model: H4 V5.1 1.25GHz for model: H5 V4.1
FB_BW	N/A
Display Sleep Mode Default Time Uopn Shipment(min)	5mins
WOL Wake on Lan) Enabled from Sleep	<input type="checkbox"/> Enabled <input type="checkbox"/> Disabled <input checked="" type="checkbox"/> N/A
WOL(Wake on Lan) Enable from Off	<input type="checkbox"/> Enabled <input type="checkbox"/> Disabled <input checked="" type="checkbox"/> N/A
For notebook computers only	
Battery pack removed during test	N/A
If no then: Fully charged battery pack used	P
Notebook screen diagonal dimension	14inch

Power measurement

Operation condition	Caculated power (W)	Limit From 1 January 2016	Remark
Off mode	0.32W	1.0W	P
Idle mode	4.23W	--	P
Sleep mode	1.99W	3.0W	P
Lower power state mode	0.32W	0.5W	P
ETEC(kWh/year)	$E_{TEC} = (8760/1000) \times (0.60 \times P_{off} + 0.10 \times P_{sleep} + 0.30 \times P_{idle})$ $= 14.54 \text{ kWh/years}$	27.0 kWh/year	P
Note: Test result for H4 V5.1 (i5 CPU)			

Operation condition	Caculated power (W)	Limit From 1 January 2016	Remark
Off mode	0.28W	1.0W	P
Idle mode	6.12W	--	P
Sleep mode	1.90W	3.0W	P
Lower power state mode	0.28W	0.5W	P
ETEC(kWh/year)	$E_{TEC} = (8760/1000) \times (0.60 \times P_{off} + 0.10 \times P_{sleep} + 0.30 \times P_{idle})$ $= 19.22 \text{ kWh/years}$	27.0 kWh/year	P
Note: Test result for H5 V4.1 (i7 CPU)			

Test Setup



Test equipment used

Equipment No.	Name of Equipment	Calibration Due Date	Remarks
LSS-010	AC Power source	2023-09-22	Shenzhen WEST, WE-3130
LSS-144	Power meter	2023-06-27	YOKOGAWA, WT310E
LSS-283	Temperature and Humidity Recorder	2024-03-13	YUWEN, DWL-20
LSS-020	Stop watch	2024-03-13	HuiBo, pc396
LSS-238	Luminance Meter	2024-03-27	KONICA MINOLTA , LS-150

Photo documentation



Fig. 1 Overall view

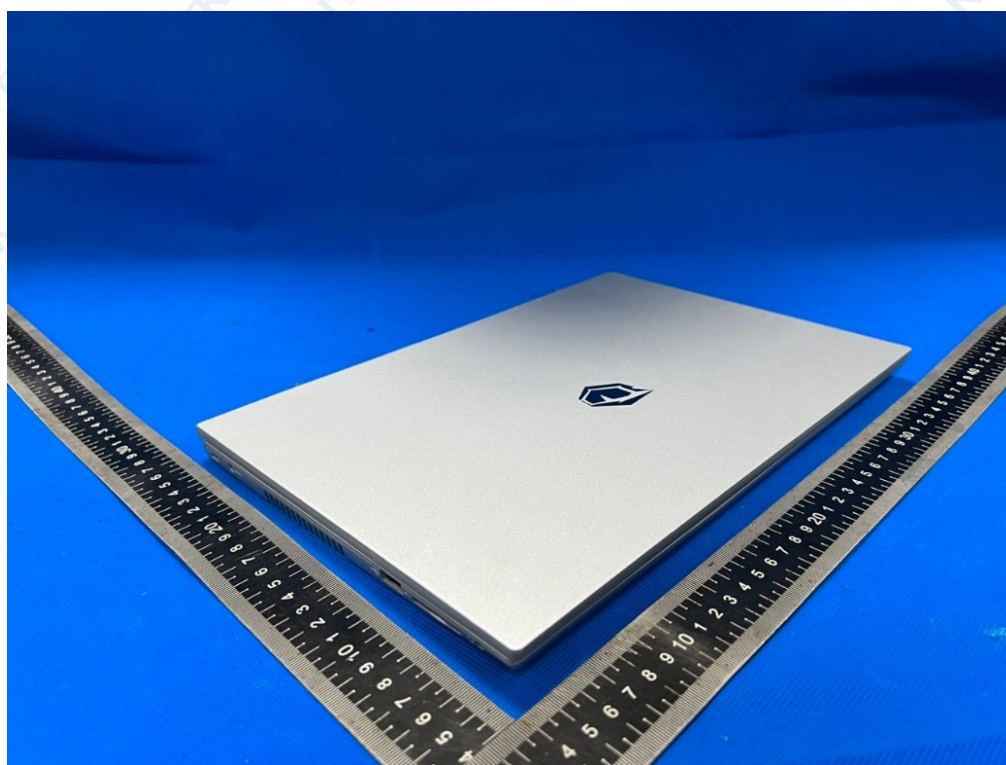


Fig. 2 External view

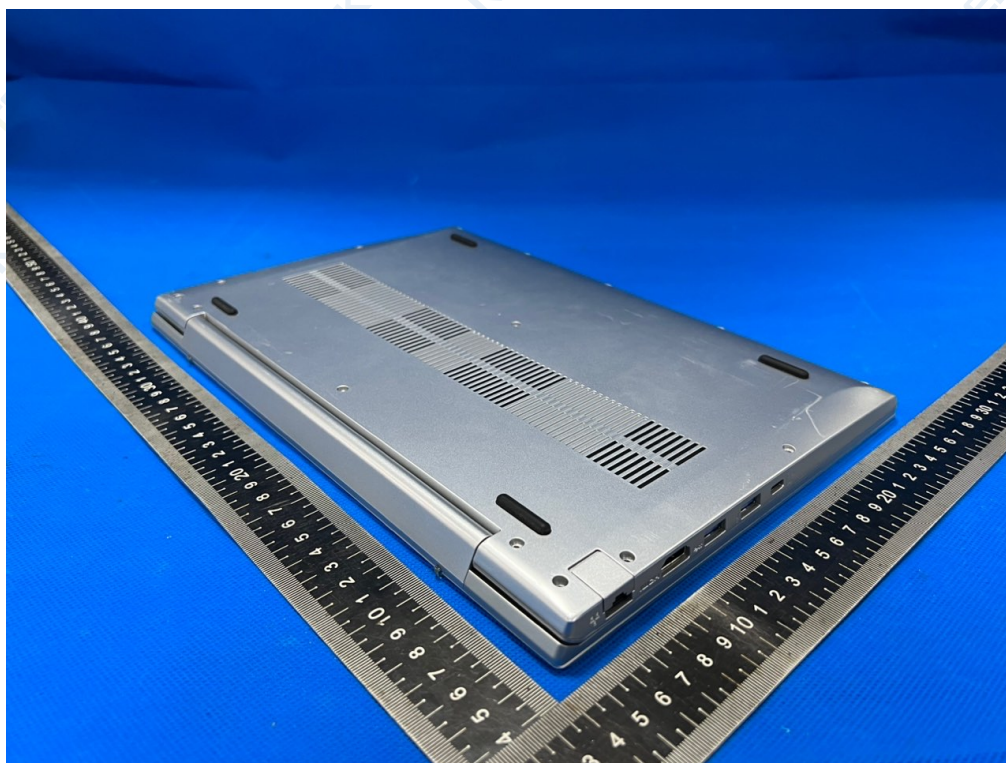


Fig. 3 External view



Fig. 4 External view



Fig. 5 Adapter label view

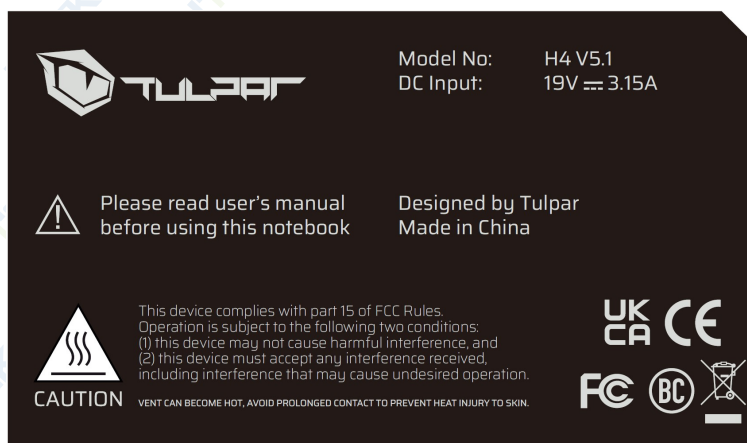


Fig. 6 Label (Model: H4 V5.1)

=====END OF TEST REPORT=====