

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	NWQQ, NWQQ7 (Information Technology Equipment Including Electrical Business Equipment)
Product:	UP SQUARE Gateway System
Model:	UPS-GWS01C2-1432-MITEL
Rating:	Input: 5 Vdc, 4 A. (optional)
Applicant Name and Address:	AAEON TECHNOLOGY INC 5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN DIST NEW TAIPEI 231 TAIWAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Jones Chang

Reviewed by: Vincent Lai

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
 - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
 - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
 - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

This equipment is a UP SQUARE Gateway System, which is intended to use within information technology equipment.

This equipment consists of electronic components mounted on PCB and housed with metal chassis and secured together by screws.

Model Differences

N/A

Technical Considerations

- Equipment mobility : movable
- Connection to the mains : not directly connected to the mains
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : N/A
- Mains supply tolerance (%) or absolute mains supply values : No direct connection
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class III (supplied by SELV)
- Considered current rating of protective device as part of the building installation (A) : N/A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : up to 2000 meters
- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : Approximately 0.43 kg
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 degree C

- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All output ports
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
- LEDs provided in the product are considered low power devices: Yes
- Based upon the product specification provided by the manufacturer, this unit is intended to be supplied by an UL Listed power supply with minimum Tma 40 degree C, Non-hazardous energy, SELV output rated 5 Vdc, 4 A minimum.

Additional Information

N/A

Additional Standards

The product fulfills the requirements of: N/A

Markings and instructions

Clause Title	Marking or Instruction Details
Inter-connecting cables - External detachable	Listee's Name and Part number (Marking or Instruction)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."
Power rating - Ratings (Optional)	Ratings (voltage, frequency/dc, current)

Special Instructions to UL Representative

For Power Adaptor without listing Mfr./Model (Various/Interchangeable) in Critical Component table:
The Field Representative should verify the Tma (maximum ambient temperature) is minimum 40 degree C from the updated version of UL which was/were certified by UL60950-1, 2nd edition, 2014-10-14 (provided from customer).

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
-	-	-	-	-	-	-

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models.

Electric Strength Test Exemptions - This test is not required for the following models:

All models.

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

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Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
-	-	-	-	-	-

1.5.1	TABLE: list of critical components					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01. Power adapter	Powertron Electronics Corp.	PA1024-050IB400	I/P: 100-240Vac, 0.6A Max., 50-60Hz O/P: 5Vdc, 4A, Tma = 40 degree C	QQGQ/7	UL	
01a. Power adapter (Alternate)	Interchangeable	Interchangeable	O/P: 5Vdc, 4A min., Tma = 40 degree C min.	QQGQ/7	UL	
02. Metal enclosure	Interchangeable	Interchangeable	Aluminum, 1.0 mm thick min. See Diagrams 4-01, 4-02.	--	--	
03. RTC Battery (CN1)	Interchangeable	CR2032	Maximum abnormal charge current 10mA. Provided R161 with 1.0K ohm resistance and D1 diode for reverse charging protection	BBCV2	UL	
04. Power Distribution Switch (U21, U25) (For USB ports used)	RICHTEK TECHNOLOGY CORP	RT9742CGJ5F, RT9742DGJ5F, RT9742CNGJ5F, RT9742DNGJ5F, RT9742CGJ5, RT9742DGJ5, RT9742CNGJ5, RT9742DNGJ5	Volts: 2.7 - 6.0 Vdc; Prot. Current: 3 A.	QVGS2	UL	
05. PTC (F2, F3) (For HDMI ports and DP ports used)	FUZETEC TECHNOLOGY CO LTD	FSMD110-0805RZ	6Vdc, 1.1A	XGPU2	UL	
06. PWB	Interchangeable	Interchangeable	V-1 minimum, 105 degree C minimum.	ZPMV2	UL	
07. Internal wiring (secondary SELV circuits) (except wireless wire) (Optional)	Interchangeable	Interchangeable	Minimum 60 degree C, 5V minimum, maximum 3.05 m long, jacketed, VW-1 or FT-1 or better	AVLV2	UL	
08. Connectors and	Interchangeable	Interchangeable	Minimum 5V	ECBT2, RTRT2	UL	

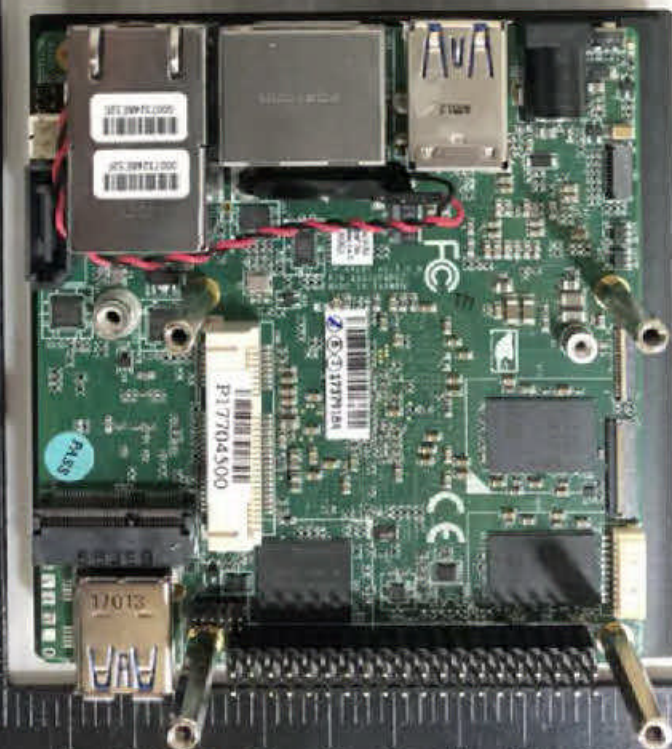
Receptacles (secondary ELV/SELV circuits)						
08a. Connectors and Receptacles (secondary ELV/SELV circuits) (Alternate)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated V-2 minimum	QMFZ2	UL	
08b. Connectors and Receptacles (secondary ELV/SELV circuits) (Alternate)	Interchangeable	Interchangeable	2 provided. (RJ-45)	DUXR or DUXR2	UL	
09. Interconnecting Cable (Optional)	Interchangeable	Interchangeable	Minimum 60 degree C, 5V minimum, maximum 3.05 m long, jacketed, VW-1 or FT-1 or better	AVLV2	UL	
10. Interconnecting Cable (Optional)	Interchangeable	Interchangeable	Maximum 3.05 m long, jacketed, type CMP, CMR, CMG, CM, CMX, CMUC, or CMH.	DUZX	UL	
11. Interconnecting Cable (Optional)	Interchangeable	Interchangeable	--	DUXR	UL	
12. Label	Interchangeable	Interchangeable	70 degree C if maximum surface temperature not specified.	PGDQ2 or PGJ12	UL	

Enclosures

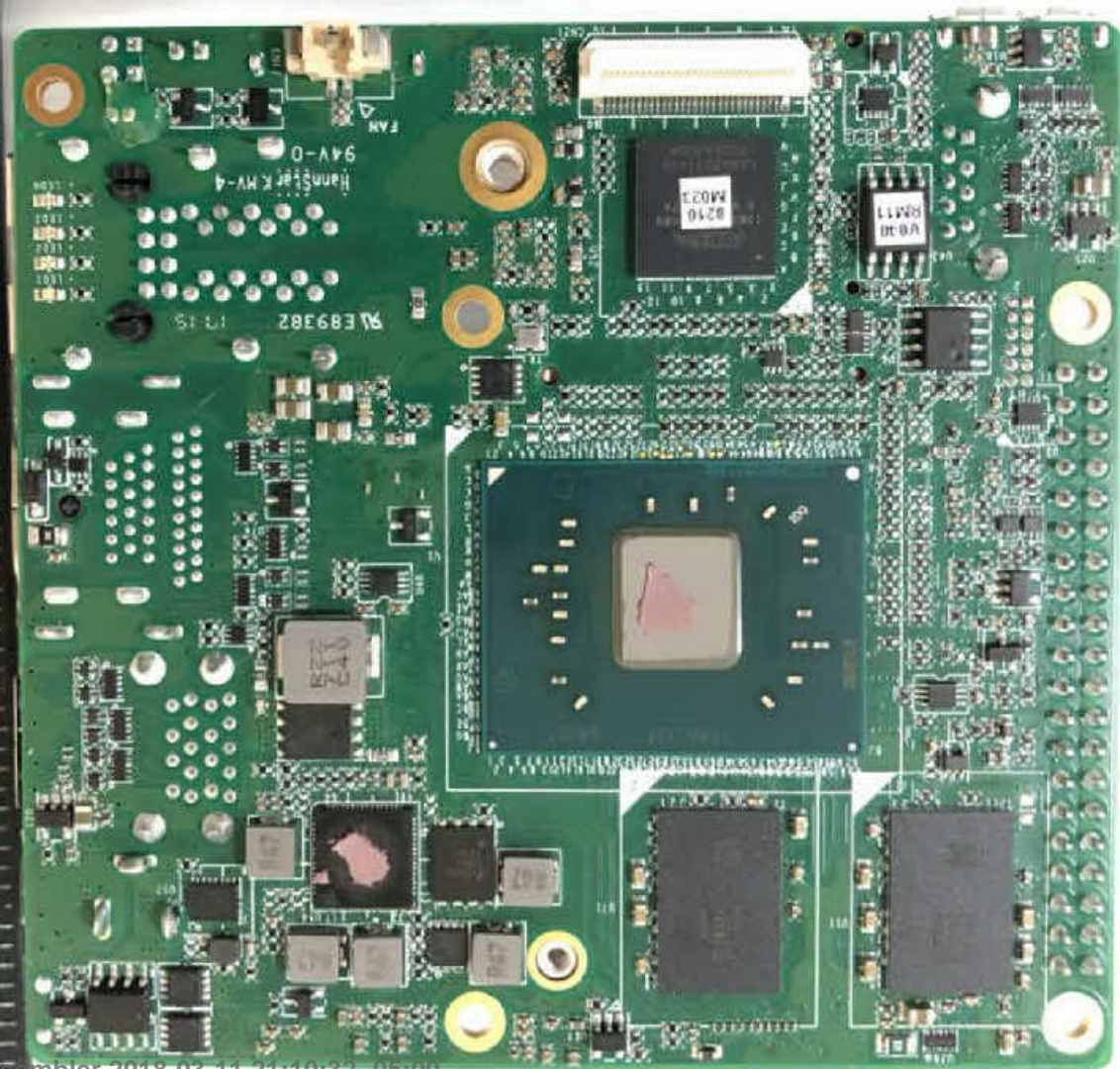
<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Overall view-1
Photographs	3-02	Overall view-2
Photographs	3-03	Internal view-1
Photographs	3-04	Internal view-2
Photographs	3-05	Main Board view-1
Photographs	3-06	Main Board view-2
Diagrams	4-01	Metal enclosure - Base
Diagrams	4-02	Metal enclosure - Heat sink





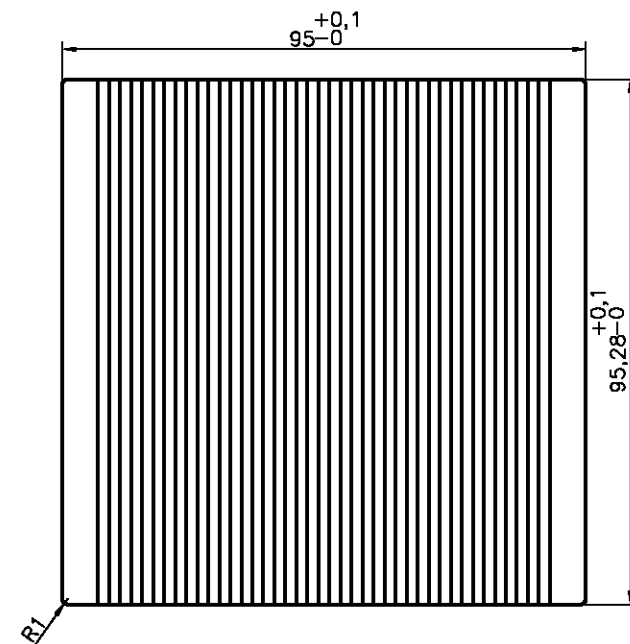
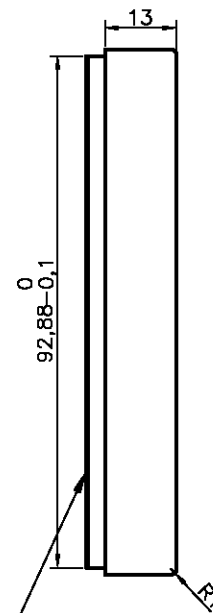
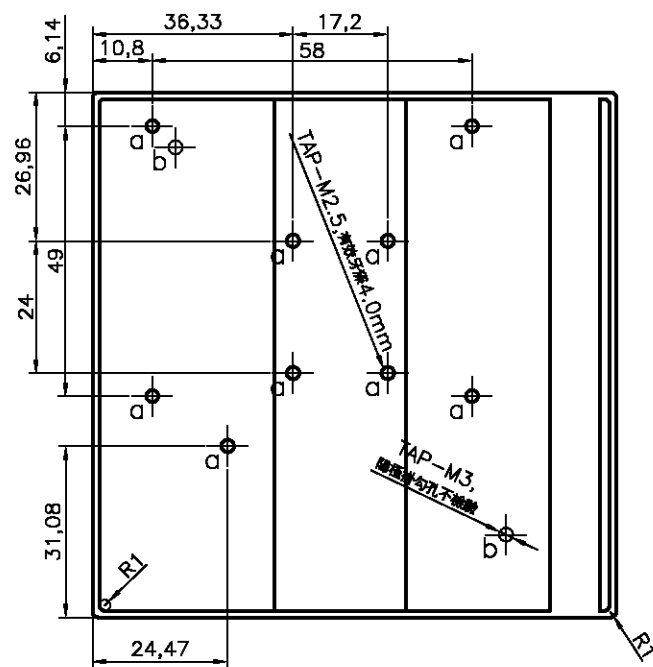
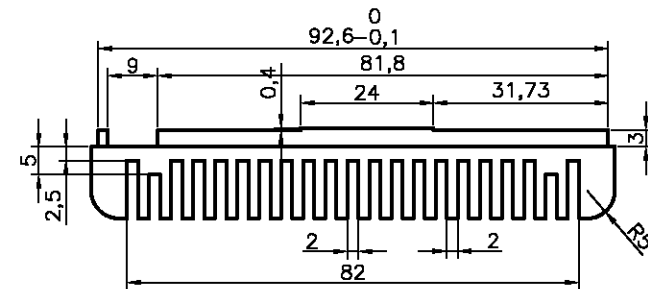











ITEM	DATE	REMARK	DESIGNED	APPROVED
1				
2				
3				



此面噴砂不要求,其餘面噴砂#120

GENERAL TOL. >0 ±0.1 >10 ±0.2 >50 ±0.3 >200 ±0.5 >500 ±0.8	MATERIAL: AL6063	PART No. M16UPS1000			 AAEON Technology Inc. <i>An ALPS Company</i>	
	SPEC.: N/A	DWG No. M16UPS1000				
	FINISH: 噴砂 / 陽極處理黑色	APPROVED	CHECKED	DESIGNED	NAME Heat Sink	
	UNIT: MM			Allen Hsu	Allen Hsu	MODEL No. UPS-GWS01
	SCALE: 1:1		2017.07.03	2017.07.03	REV. 0.0	SHEET: 1 / 1

Test Record No. 1

- The manufacturer submitted representative production sample of UP SQUARE Gateway System, Model UPS-GWS01C2-1432-MITEL.

- All tests of the product were not considered necessary based upon previous evaluation under the CB scheme. The CB Scheme Test Certificate Ref. No. DK-70690-UL, dated 2018-02-13, and Test Report No. CB2031712086A, dated 2018-02-09, were prepared by UL(Demko).

- The CRD is not considered necessary, since the construction review has been completed during the CB certification.

The following tests were waived:

Test	Rationale for Waiving
Input: Single-Phase (1.6.2)	Refer to CB Report
Durability of Marking (1.7.11)	Refer to CB Report
Limited Power Source Measurements (2.5)	Refer to CB Report
Steady Force (4.2.1 - 4.2.4)	Refer to CB report
Impact (4.2.5, 4.2.1, Part 22 10.2)	Refer to CB report
Lithium Battery Reverse Current Measurement (4.3.8)	Refer to CB report
Heating (4.5.1, 1.4.12, 1.4.13)	Refer to CB report
Abnormal Operation (5.3.1 - 5.3.9)	Refer to CB report
Overload of Operator Accessible Connector (5.3.7)	Refer to CB report

Issue Date: 2018-03-02

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Report Reference #

E231775-A83-UL

Revision Date: 2018-03-09

Test Record

Test Record No. 2

Correction of the chassis drawing and based on the results of previous investigation.