LVD Test Report

Project No.	50718201-LV
Equipment	Embedded Control PC
Trade Name	AAEON
Model No.	AEC-6850
Issued Date	Sep. 05, 2005

Issued to
AAEON Technology Inc.
5F,No.135,Lane 235,Pao Chiao Rd., Hsin-Tien City,
Taipei,Taiwan, R.O.C.

Declaration :

CCS represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A**.

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(Tested By): Safety Engineer

(Reviewed By) : Reviewer

(Authorized Signature) : Safety Lab. Supervisor

Compliance Certification Services Inc.
No.11, Wu-Gong 6th Rd, Wu Gu Industrial Park,
Taipei Hsien, Taiwan
TEL：886-2-2299-9720 FAX：886-2-2299-1792

TEST REPORT **EN 60950-1：2001** **Safety of Information Technology Equipment including Electrical Business Equipment**	
Report reference No. ……..	50718201-LV
Tested by (+ signature) ……..	See Cover Sheet
Approved by (+ signature) …….	See Cover Sheet
Date of receipt……..	2005-08-16
Test duration	2005-08-22 to 2005-08-23
Testing laboratory ……	Compliance Certification Services Inc.
Location……	No.11, Wu-Gong 6th Rd, Wu Gu Industrial Park, Taipei Hsien, Taiwan
Applicant……..	AAEON Technology Inc.
Address:……...	5F,No.135,Lane 235,Pao Chiao Rd., Hsin-Tien City, Taipei,Taiwan, R.O.C.
Standards……	EN 60950-1:2001
	IEC 60950-1:2001
Procedure deviation……..	N/A
Non-standard test method……	N/A
Type of test equipment ……	Embedded Control PC
Trade mark……..	AAEON
Model/Type designation……	AEC-6850
Manufacturer……..	AAEON Technology Inc.
	5F,No.135,Lane 235,Pao Chiao Rd., Hsin-Tien City, Taipei,Taiwan, R.O.C.
Rating……..	15Vdc, 7A
Copyright TRF……	This test report is based on a blank TRF(Test Report Form Ref. No. 1950 C, dated 95-10) that was prepared by KEMA. The copyright of blank test report is belong to the CCB body of KEMA.

Test item particulars:	
Equipment mobility	Movable
Operating Condition.....	Continuous
Tested for IT power systems.....	No
IT testing, phase-phase voltage (V).....	N/A
Class of equipment.....	Class III
Mass of equipment.(Kg).....	Approx. 3.04kg.
Protection against ingress of water.....	IPX0
Possible test case verdicts:	
-Test case does not apply to the test object.	N(.A.)
-Test object does meet the requirement.	P(ass)
-Test object does not meet the requirement.	F(ail)
General Remarks:	
"(see remark #) refers to a remark appended to the report.	
“(see appended table)” refers to a table appended to the report.	
Throughout this report a point is used as the decimal separator	
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 testing laboratory.	

Comments:

Brief description of the test sample:

In this era of information explosion, the advertising of consumer products will not be confined to the family television, but will also spread to high-traffic public areas, like department stores, the bus, transportation station, the supermarket etc. The advertising marketing industry will resort to every conceivable means to transmit product information to consumers. System integrators will need a multifunction device to satisfy commercial needs for such public advertising.

Being a control center, the AEC-6850 is suitable for public multimedia entertainment services. Equipped with a high efficiency heat conduction mechanism, which is patented in Germany, the AEC-6850 supports up to Pentium® M 1.8GHz processor.

The AEC-6850 is compact in size but has attractive and flexible extension capabilities such as a 6-in-one card reader, 3 USB2.0 ports, VGA, TV-out, DVI, 5.1CH Audio, 2 COM ports and an optional IEEE 1394(FireWire) port.

Power with Switch power supply:

model: FSP105-AGB by FSP GROUP INC. I/P:100-240Vac, 2A, 50-60Hz, O/P:15Vdc, 7A approval by TUV

Unless otherwise specified, all tests were performed on model: AEC-6850 to represent other similar models. The test sample is pre-production without serial numbers.

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
1	**GENERAL**		**P**
1.5	Components		**P**
1.5.1	Comply with IEC 60950 or relevant component standard	Components that were found to affect safety aspects comply with the requirements of this standard or with the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	**P**
1.5.2	Evaluation and testing components	Components that were certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	**P**
1.5.3	Thermal controls	No thermal controls.	**N**
1.5.4	Transformers	This equipment is powered by SELV power source, no transformer in this equipment.	**N**
1.5.5	Interconnecting cables	No interconnecting cables.	**N**
1.5.6	Capacitors in primary circuits	No X capacitor or Y capacitor is used.	**N**
1.5.7	Double or reinforced insulation bridged by components	See below.	**N**
1.5.7.1	Bridging capacitors	No bridging capacitors.	**N**
1.5.7.2	Bridging resistors	No bridging resistors.	**N**
1.5.7.3	Accessible parts	Class III equipment.	**N**
1.5.8	Components in equipment for IT power systems	Class III equipment.	**N**
1.6	Power interface		**P**
1.6.1	AC power distribution systems	No supply from the mains.	**N**
1.6.2	Input current	see appended table 1.6.2	**P**
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	**N**
1.6.4	Neutral conductor	Class III equipment.	**N**
1.7	Marking and instructions		**P**
1.7.1	Power rating	See below	**P**
	Rated voltage(s) or voltage range(s) (V)	15Vdc	**P**
	Symbol for nature of supply for d.c.	Optional. IEC 60417, Symbol No. 5031 used.	**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
	Rated frequency or frequency range (Hz)	Dc	**N**
	Rated current (A)	7A	**P**
	Manufacturer's name/Trade mark	See Attachment - B	**P**
	Type/Model Number	See Attachment - B	**P**
	Symbol of Class II	Class III equipment	**N**
	Other symbols	Additional symbols or markings do not cause misunderstanding	**P**
	Certification marks	CE	**P**
1.7.2	Safety instructions	The users manual contains information for operation, installation, servicing, transport, storage and technical data.	**P**
1.7.3	Short duty cycles	Equipment is designed for continuous operation..	**N**
1.7.4	Supply voltage adjustment	No voltage setting/frequency setting device	**N**
1.7.5	Power outlets on the equipment	No outlet	**N**
1.7.6	Fuse identification	No fuse-holders.	**N**
1.7.7	Wiring terminals	See below	**N**
1.7.7.1	Protective earthing and bonding terminals	Class III equipment	**N**
1.7.7.2	Terminal for a.c. mains supply conductors	Class III equipment	**N**
1.7.8	Controls and indicators	No controls are used on the equipment.	**N**
1.7.8.1	Identification, location and marking	The marking and indication of the power switch is located that indication of function is clearly.	**P**
1.7.8.2	Colours	The colors used for LED are indicating the following function: Green (Normal operation of signal) Red (HDD operation of signal)	**P**
1.7.8.3	Symbols according to IEC 60417	No Symbols	**N**
1.7.8.4	Markings using figures	No indicators for different positions.	**N**
1.7.9	Isolation of multiple power sources	Not applicable	**N**
1.7.10	IT power system	Not intended for use on IT power systems.	**N**
1.7.11	Thermostats and other regulating devices	No thermostats or other regulating devices.	**N**
1.7.12	Language	Instructions and marking in English.	**P**

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Clause	Requirement - Test	Result - Remark	Verdict
1.7.13	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth for 15sec. and then again for 15sec. with the cloth soaked with HEXANE. After this test there was no damage to the label. The marking on the label did not fade. There was not curling nor lifting of the label edge.	**P**
1.7.14	Removable parts	No removable parts.	**N**
1.7.15	Replaceable batteries	The warning for lithium batteries are marked in both the operating and the service instruction	**P**
	Language	English	—
1.7.16	Operator access with a tool	No operator access with a tool.	**N**
1.7.17	Equipment for restricted access locations	No restricted access locations.	**N**
2	**PROTECTION FROM HAZARDS**		**P**
2.1	Protection from electric shock and energy hazards		**P**
2.1.1	Protection in operator access areas	See below.	**P**
2.1.1.1	Access to energized parts	No access with test finger to any parts with only SELV circuits.	**P**
	Test by inspection	Ditto	**P**
	Test with test finger	Ditto	**P**
	Test with test pin	Ditto	**P**
	Test with test probe	No TNV circuits.	**N**
2.1.1.2	Battery compartments	No battery compartments.	**N**
2.1.1.3	Access to ELV wiring	SELV circuits, no ELV wiring in operator accessible area.	**N**
	Working voltage (V); distance (mm) through insulation		**---**
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	**N**
2.1.1.5	Energy hazards	No energy hazards in operator access area The connector is below 240VA	**N**
2.1.1.6	Manual controls	No manual controls.	**N**
2.1.1.7	Discharge of capacitors in the primary circuit	No primary circuit.	**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
2.1.2	Protection in service access areas	No Access with test pin or finger to any parts , the test pin or finger cannot touch hazardous voltage through any opening of the whole enclosure.	**N**
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	**N**
2.2	SELV circuits		**P**
2.2.1	General requirements	Class III equipment, SELV circuits are maintained after single fault condition. Insulating materials used are solid or laminated, having adequate thickness and adequate creepage distance over their surfaces and there are adequate clearances through air.	**P**
2.2.2	Voltage under normal conditions (V)	All accessible voltage are less 42.4V peak or 60Vdc and are classified as SELV.	**P**
2.2.3	Voltage under fault conditions (V)	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120Vdc were not exceeded for a period longer than 0.2s.	**P**
2.2.3.1	Separation by double or reinforced insulation (method 1)	Class III equipment.	**N**
2.2.3.2	Separation by earthed screen (method 2)		**N**
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		**N**
2.2.4	Connection of SELV circuits to other circuits		**N**
2.3	TNV circuits	No TNV circuits.	**N**
2.3.1	Limits		**N**
2.3.2	Separation from other circuits and from accessible parts		**N**
	Used insulation		—
2.3.3	Separation from hazardous voltages		**N**
	Used insulation		—
2.3.4	Connection of TNV circuits to other circuits	SELV circuits are not connected to other circuits.	**N**
	Used insulation		—
2.3.5	Test for operating voltages generated externally		**N**
2.4	Limited current circuits	No Limited current circuits.	**N**
2.4.1	General requirements		**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
2.4.2	Limit values		**N**
2.4.3	Connection of limited current circuits to other circuits		**N**
2.5	Limited power source		**P**
	Inherently limited output	Tested on the secondary connector	**P**
	Impedance limited output		**N**
	Overcurrent protective device limited output		**N**
	Regulating network limited output under normal operating and single fault condition		**N**
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		**N**
	Output voltage(V), output current(A), apparent power(VA) …….. :	For USB, Voc = 5.083V, Isc = 1.51A, P = 5.25VA For LVDS, Voc = 5.104V, Isc = 6.46A, P = 14.52VA For PS2, Voc = 5.056V, Isc = 1.39A, P = 5.15VA For VGA, Voc = 5.117V, Isc = 1.42A, P = 5.38VA	—
	Current rating of overcurrent protective device(A)		—
2.6	Provisions for earthing and bonding		**N**
2.6.1	Protective earthing	Class III equipment	**N**
2.6.2	Functional earthing	Class III equipment	**N**
2.6.3	Protective earthing and protective bonding conductors	Class III equipment	**N**
2.6.3.1	Size of protective earthing conductors		**N**
	Rated current (A), cross-sectional area (mm^2), AWG		—
2.6.3.2	Size of protective bonding conductors		**N**
	Rated current (A), cross-sectional area (mm^2), AWG		—
2.6.3.3	Rated current (A), type and nominal thread diameter (mm)		**N**
	Resistance (Ω) of earthing conductors and their terminations, test current (A)		**N**
2.6.3.4	Colour of insulation		**N**
2.6.4	Terminals	Class III equipment	**N**

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Clause	Requirement - Test	Result - Remark	Verdict
2.6.4.1	Protective earthing and bonding terminals		**N**
	Rated current (A), type and nominal thread diameter (mm)		—
2.6.4.2	Separation of the protective earthing conductor from protective bonding conductors		**N**
2.6.5	Integrity of protective earthing	Class III equipment	**N**
2.6.5.1	Interconnection of equipment		**N**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		**N**
2.6.5.3	Disconnection of protective earth		**N**
2.6.5.4	Parts that can be removed by an operator	No such parts	**N**
2.6.5.5	Parts removed during servicing	No such parts	**N**
2.6.5.6	Corrosion resistance	No such parts	**N**
2.6.5.7	Screws for protective bonding	No such parts	**N**
2.6.5.8	Reliance on telecommunication network	No telecommunication network	**N**
2.7	Overcurrent and earth fault protection in primary circuits.		**N**
2.7.1	Basic requirements	Class III equipment	**N**
2.7.2	Faults not covered in 5.3		**N**
2.7.3	Short-circuit backup protection		**N**
2.7.4	Number and location of protective devices		**N**
2.7.5	Protection by several devices		**N**
2.7.6	Warning to service personnel		**N**
2.8	Safety interlocks		**N**
2.8.1	General principles		**N**
2.8.2	Protection requirements		**N**
2.8.3	Inadvertent reactivation		**N**
2.8.4	Fail-safe operation		**N**
2.8.5	Interlocks with moving parts		**N**
2.8.6	Overriding an interlock		**N**
2.8.7	Switches and relays in interlock systems		**N**
2.8.7.1	Contact gaps (mm)		**N**
2.8.7.2	Overload test		**N**

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Clause	Requirement - Test	Result - Remark	Verdict
2.8.7.3	Endurance test		**N**
2.8.7.4	Electric strength test (V)		**N**
2.8.8	Mechanical actuators		**N**
2.9	Electrical insulation		**P**
2.9.1	Properties of insulating materials	Evaluated as port of approved switch power supply.	**N**
2.9.2	Humidity conditioning	Class III equipment.	**N**
2.9.3	Requirements for insulation	Class III unit supplied by switch power supply. Only Functional insulation required. Refer 5.3.4	**N**
2.10	Clearance, creepage distances and distances through insulation		**P**
2.10.1	General	See below	---
2.10.2	Determination of working voltage	To be considered	---
2.10.3	Clearances	Only functional insulation	**P**
2.10.3.1	General		**N**
2.10.3.2	Clearance in primary circuits	No primary circuits.	**N**
2.10.3.3	Clearance in secondary circuits	Functional insulation only.	**P**
2.10.3.4	Measurement of transient levels	Not directly connected to mains.	**N**
2.10.4	Creepage distance	Functional insulation only.	**P**
	CTI tests	CTI rating for all materials of minimum 100.	---
2.10.5	Solid insulation	No used such parts in equipment.	**N**
2.10.5.1	Minimum distance through insulation	Class III equipment.	**N**
2.10.5.2	Thin sheet material	No used such parts in equipment.	**N**
2.10.5.3	Printed boards	Not applied for.	**N**
2.10.5.4	Wound components	No used such parts in equipment.	**N**
2.10.6	Coated printed boards	No coated printed boards.	**N**
2.10.6.1	General		**N**
2.10.6.2	Sample preparation and preliminary inspection		**N**
2.10.6.3	Thermal cycling		**N**
2.10.6.4	Thermal ageing		**N**
2.10.6.5	Electric strength test		**N**

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Clause	Requirement - Test	Result - Remark	Verdict
2.10.6.6	Abrasion resistance test		**N**
2.10.7	Enclosed and sealed parts	No hermetically sealed components.	**N**
2.10.8	Spacings filled by insulating compound	No such parts.	**N**
2.10.9	Component external terminations	See sub-clause 2.10.3 to 2.10.4	**N**
2.10.10	Insulation with varying dimensions	No such parts used.	**N**
3	**WIRING, CONNECTIONS AND SUPPLY**		**P**
3.1	General		**P**
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring that is PVC insulated, rated VW-1, min. 80 C, 300V. internal wiring gauge is suitable for current intended to be carried.	**N**
3.1.2	Protection against mechanical damage	No primary power distribution.	**P**
3.1.3	Securing of internal wiring	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	**N**
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage.	**N**
3.1.5	Beads and ceramic insulators	Not used.	**N**
3.1.6	Screws for electrical contact pressure	No electrical contact pressure by screwed connection.	**N**
3.1.7	Non-metallic materials in electrical connections	All current carrying connection are metal to metal	**P**
3.1.8	Self-tapping and spaced thread screws	No self-tapping or spaced thread screw.	**N**
3.1.9	Termination of conductors	The connection of conductors is soldered, crimped, push-in and similar means.	**N**
3.1.10	Sleeving on wiring	No sleeving used.	**N**
3.2	Connection to a.c. mains supples	No connection to primary power for Class III equipment	**N**
3.2.1	Means of connection		**N**
3.2.2	Multiple supply connections	Only one supply connection.	**N**
	Number of conductors, diameter (mm) of cable and conduits		—
3.2.3	Permanently connected equipment		**N**
3.2.4	Appliance inlets	No appliance inlet used.	**N**
3.2.5	Power supply cords		**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
	Type		—
	Rated current (A), cross-sectional area (mm^2), AWG		—
3.2.6	Cord anchorages and strain relief		**N**
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage		**N**
3.2.8	Cord guards		**N**
	D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		**N**
3.3	Wiring terminals for connection of external conductors		**N**
3.3.1	Wiring terminals		**N**
3.3.2	Connection of non-detachable power supply cords		**N**
3.3.3	Screw terminals		**N**
3.3.4	Rated current (A), type and nominal thread diameter (mm)		**N**
3.3.5	Rated current (A), type and nominal thread diameter (mm)		**N**
3.3.6	Wiring terminals design		**N**
3.3.7	Grouping of wiring terminals		**N**
3.3.8	Standard wire		**N**
3.4	Disconnection from the a.c. mains supply		**N**
3.4.1	General requirement	The equipment is connected to primary power through an approved power supply.	**N**
3.4.2	Disconnect devices		**N**
3.4.3	Permanently connected equipment		**N**
3.4.4	Parts which remain energized		**N**
3.4.5	Switches in flexible cords		**N**
3.4.6	Single-phase equipment		**N**
3.4.7	Three-phase equipment		**N**
3.4.8	Switches as disconnect devices		**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
3.4.9	Plugs as disconnect devices		**N**
3.4.10	Interconnected equipment		**N**
3.4.11	Multiple power source		**N**
3.5	Interconnection of equipment		**P**
3.5.1	General requirements	Only SELV circuits are connected to other equipment.	**P**
3.5.2	Types of interconnection circuits	Interconnection circuit of SELV through the connector. No ELV circuit interconnection	**P**
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	**N**
4	**PHYSICAL REQUIREMENTS**		**P**
4.1	Stability	Movable	**P**
4.1.1	Angle of 10°	The unit is intended to a stable mechanical Construction and does not overbalance.	**P**
4.2	Mechanical strength		**P**
4.2.1	General	Equipment shall have adequate mechanical strength and shall be so constructed as to remain safe in the meaning of this standard when subjected to handing as may be expected.	**P**
4.2.2	Steady force test, 10N	10N applied to components.	**N**
4.2.3	Steady force test, 30N	No internal enclosure.	**N**
4.2.4	Steady force test, 250N	250N applied to external enclosure.	**P**
4.2.5	Impact test	500g steel sphere ball fall, from 1.3m high onto outer plastic enclosure near power supply circuit.	**P**
4.2.6	Drop test	Movable equipment.	**N**
4.2.7	Stress relief		**N**
4.2.8	Cathode ray tubes	No cathode ray tubes	**---**
	Picture tube separately certified		**N**
	Picture tubes > 16 cm intrinsically protected		**N**
	Non-intrinsically protected tubes > 16 m used with protective screen		**N**
	Intrinsically protected tubes : tests on 12 samples		**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
	Samples subject to ageing : 6		**N**
	Samples subject to implosion test : 6		**N**
	Samples subject to mechanical strength test (steel ball) : 6		**N**
	Non-intrinsically protected tubes tested		**N**
4.2.9	High pressure lamps	No high pressure lamp.	**N**
4.2.10	Wall or ceiling mounted equipment		**N**
	force (N)		**N**

4.3	Design and construction		**P**
4.3.1	Edges and corners	All edges and corners judged to be sufficiently well rounded.	**P**
4.3.2	Handles and manual controls; force (N)	None that would cause hazard.	**N**
4.3.3	Adjustable controls	No adjustable controls.	**N**
4.3.4	Securing of parts	No connection likely to be exposed to mechanical stress are provided in unit	**P**
4.3.5	Connection of plugs and sockets	IEC60083 and IEC60320 connectors are not used in equipment.	**N**
4.3.6	Direct plug-In equipment	No direct plug-In equipment.	**N**
4.3.7	Heating elements in earthed equipment	No heating elements.	**N**
4.3.8	Batteries	The reverse polarity installation is prevented by construction RTC battery. Reverse component D8 and R30, when short one of them, maximum reverse current 0.01mA	**P**
4.3.9	Oil and grease	No oil and grease.	**N**
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	**N**
4.3.11	Containers for liquids or gases	No container for liquid or gases.	**N**
4.3.12	Flammable liquids	No flammable liquids.	**N**
4.3.13	Radiation; type of radiation	No ionizing radiation, laser or flammable liquids presents.	**N**
4.3.13.1	General		**N**
4.3.13.2	Ionizing radiation		**N**
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		**N**
4.3.13.4	Human exposure to ultraviolet (UV) radiation		**N**

EN 60950-1 : 2001			
Clause	Requirement - Test	Result - Remark	Verdict
4.3.13.5	Laser (including LEDs)	The equipment does not generate ionizing radiation. The HDD, FDD, DVD-R/RW and DVD ROM drives used for this equipment are separately approved and checked with the appliance.	**P**
4.3.13.6	Other types		**N**
4.4	Protection against hazardous moving parts		**N**
4.4.1	General		**N**
4.4.2	Protection in operator access areas		**N**
4.4.3	Protection in restricted access locations		**N**
4.4.4	Protection in service access areas		**N**
4.5	Thermal requirements		**P**
4.5.1	Temperature rise	See appended table 4.5.1	**P**
4.5.2	Resistance to abnormal heat	No thermoplastic parts on which parts at hazardous voltage are directly mounted.	**N**
4.6	Openings in enclosures		**P**
4.6.1	Top and side openings	Enclosure	**P**
	Dimensions (mm)	Not applicable	—
4.6.2	Bottom of fire enclosures	Not applicable	**N**
	Construction of the bottom	Not applicable	—
4.6.3	Doors or covers in fire enclosures	No door or cover.	**N**
4.6.4	Openings in transportable equipment	Movable equipment	**N**
4.6.5	Adhesives for constructional purposes	No adhesives for constructional purpose.	**N**
4.7	Resistance to fire		**P**
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	**P**
4.7.2	Conditions for a fire enclosure	A FIRE ENCLOSURE is required when temperatures of part under fault conditions could be sufficient for ignition.	**P**
4.7.2.1	Parts requiring a fire enclosure		**N**

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Clause	Requirement - Test	Result - Remark	Verdict
4.7.2.2	Parts no requiring a fire enclosure	The power source supplier switch power supply, which connected component in the secondary circuit. the component are mounted on PCB material of flammability rating V-0 min. the fire enclosure are not require.	**P**
4.7.3	Materials	See append table 1.5.1	**P**
4.7.3.1	General	See append table 1.5.1	**P**
4.7.3.2	Materials for fire enclosures	See append table 1.5.1	**P**
4.7.3.3	Materials for components and other parts outside fire enclosures	See sub-clause 4.7.2	**N**
4.7.3.4	Materials for components and other parts inside fire enclosures.	Internal components except small parts are V-2 or better.	**P**
4.7.3.5	Materials for air filter assemblies	No air filter assemblies	**N**
4.7.3.6	Materials used in high-components	No high voltage components.	**N**
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	Touch current and protective conductor current		**N**
5.1.1	General	Class III equipment	**N**
5.1.2	Equipment under test (EUT)		**N**
5.1.3	Test circuit		**N**
5.1.4	Application of measuring instrument		**N**
5.1.5	Test procedure		**N**
5.1.6	Test measurements		**N**
	Test voltage (V)		—
	Measured current		—
	Max. allowed current (mA)		—
5.1.7	Equipment with touch current		**N**
	Exceeding 3.5 mA		—
5.1.8	Touch currents to and from telecommunication networks.	No TNV.	**N**
5.1.8.1	Limitation of the touch current to a telecommunication network	No TNV	**N**
	Test voltage (V)		—
	Measured current (mA)		—
	Max. allowed current (mA)		—

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Clause	Requirement - Test	Result - Remark	Verdict
5.1.8.2	Summation of touch current from telecommunication networks	No TNV	**N**
5.2	Electric strength		**N**
5.2.1	General	Class III equipment	**N**
5.2.2	Test procedure		**N**
5.3	Abnormal operating and fault conditions		**P**
5.3.1	Protection against overload and abnormal operation	Class III equipment	**N**
5.3.2	Motors	The motors in Hard Disk, CD-ROM, CD-RW and DVD-ROM drive used for this equipment are separately approved and checked with the appliance	**P**
5.3.3	Transformers	No safety isolation transformer in this equipment	**N**
5.3.4	Functional insulation	Method c consider. Due to ● No risk of fire, due to all component are mounted on PCB material of flammability rating V-0 and EUT is supplied by limit power source. ● No risk of electric energy shock.	**P**
5.3.5	Electromechanical components	No electromechanical components.	**N**
5.3.6	Simulation of faults	Blocked ventilation openings.	**N**
5.3.7	Unattended equipment	No thermostat, temperature limiter or thermal cut-cut.	**N**
5.3.8	Compliance criteria for abnormal operating and fault conditions	See appended table 4.5.1 for temperature.	**P**
5.3.8.1	During the tests	No fire, no emit and no shrinkage, distortion or loosening if any enclosure part was noticeable on the equipment.	**P**
5.3.8.2	After the tests	No fire,No danger.	**P**
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		**N**
6.1	Protection of telecommunication network service personnel, and users of other equipment connected to the network, from hazards in the equipment.		**N**
6.1.1	Protection from hazardous voltages		**N**
6.1.2	Separation of the telecommunication network from earth		**N**
6.1.2.1	Requirements		**N**
	Test voltage (V)		—

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Clause	Requirement - Test	Result - Remark	Verdict
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		**N**
6.2	Protection of equipment users from overvoltages on telecommunication networks		**N**
6.2.1	Separation requirements		**N**
6.2.2	Electric strength test procedure		**N**
6.2.2.1	Impulse test		**N**
6.2.2.2	Steady-state test		**N**
6.2.2.3	Compliance criteria		**N**
6.3	Protection of telecommunication wiring system from overheating		**N**
	Max. output current (A)		—
	Current limiting method		—
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		**N**
7.1	Protection of cable distribution system service personnel, and users of other equipment connected to the system, from hazards voltage in the equipment.		**N**
7.2	Protection of equipment users from overvoltages on the cable distribution system		**N**
7.3	Insulation between primary circuits and cable distribution systems		**N**
7.3.1	General		**N**
7.3.2	Voltage surge test		**N**
7.3.3	Impulse test		**N**
A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		**N**
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment(see 4.7.3.2)		**N**
A.1.1	Samples		**N**
	Wall thickness(mm) …….. :		—
A.1.2	Conditioning of samples; temperature(℃) …. :		**N**
A.1.3	Mounting of samples …….. :		**N**
A.1.4	Test flame		**N**

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Clause	Requirement - Test	Result - Remark	Verdict
A.1.5	Test procedure		**N**
A.1.6	Compliance criteria		**N**
	Sample 1 burning time(s) …….. :		—
	Sample 2 burning time(s) …….. :		—
	Sample 3 burning time(s) …….. :		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		**N**
A.2.1	Samples		**N**
	Wall thickness(mm) …….. :		—
A.2.2	Conditioning of samples; temperature(℃) ... :		**N**
A.2.3	Mounting of samples …….. :		**N**
A.2.4	Test flame		**N**
A.2.5	Test procedure		**N**
A.2.6	Compliance criteria		**N**
	Sample 1 burning time(s) …….. :		—
	Sample 2 burning time(s) …….. :		—
	Sample 3 burning time(s) …….. :		—
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		**N**
	Sample 1 burning time(s) …….. :		—
	Sample 2 burning time(s) …….. :		—
	Sample 3 burning time(s) …….. :		—
A.3	High current arcing ignition test (see 4.7.3.2)		**N**
A.3.1	Samples		**N**
	Wall thickness(mm) …….. :		—
A.3.2	Test circuit		**N**
A.3.3	Test electrodes		**N**
A.3.4	Test procedure		**N**
A.3.5	Compliance criteria		**N**
	Sample 1 number of arcs to ignition(pcs) ..... :		—
	Sample 2 number of arcs to ignition(pcs) .... :		—
	Sample 3 number of arcs to ignition(pcs) .... :		—
	Sample 4 number of arcs to ignition(pcs) .... :		—

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Clause	Requirement - Test	Result - Remark	Verdict
	Sample 5 number of arcs to ignition(pcs) .... :		—
A.4	Hot wire ignition test(see 4.7.3.2)		**N**
A.4.1	Samples		**N**
	Wall thickness(mm) ……..……... :		—
A.4.2	Test circuit		**N**
A.4.3	Mounting of samples ……... :		**N**
A.4.4	Test procedure		**N**
A.4.5	Compliance criteria		**N**
	Sample 1 ignition time (s)…… :		—
	Sample 2 ignition time (s)…….. :		—
	Sample 3 ignition time (s)…… :		—
	Sample 4 ignition time (s)…… :		—
	Sample 5 ignition time (s)…… :		—
A.5	Hot flaming oil test(see 4.6.2)		**N**
A.5.1	Mounting of samples ……..... :		**N**
A.5.2	Test procedure		**N**
A.5.3	Compliance criterion ……... :		**N**
A.6	Flammability tests for classifying materials V-0, V-1or V-2		**N**
A.6.1	Samples		**N**
	Wall thickness(mm) ……..…… :		—
A.6.2	Conditioning of samples temperature(℃) .... :		**N**
A.6.3	Mounting of samples …… :		**N**
A.6.4	Test procedure		**N**
A.6.5	Compliance criteria		**N**
A.6.6	Permitted retest		**N**
A.7	Flammability test for classifying foamed materials HF-1, HF-2 or HFB		**N**
A.7.1	Sample		**N**
	Wall thickness(mm) ……..…… :		—
A.7.2	Conditioning of samples; temperature (℃) …… ..…….... :		**N**
A.7.3	Test procedure		**N**
A.7.4	Compliance criteria		**N**

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Clause	Requirement - Test	Result - Remark	Verdict
A.7.5	Compliance criteria, HF-2		**N**
A.7.6	Compliance criteria, HF-1		**N**
A.7.7	Compliance criteria, HBF		**N**
A.7.8	Permitted retest, HF-1 or HF-2		**N**
A.7.9	Permitted retest, HBF		**N**
A.8	Flammability test for classifying materials HB		**N**
A.8.1	Samples		**N**
	Sample thickness(mm) ……..…. :		—
A.8.2	Conditioning of samples; temperature (℃) ……..…. :		**N**
A.8.3	Mounting of samples ……..…. :		**N**
A.8.4	Test procedure		**N**
A.8.5	Compliance criteria		**N**
A.8.6	Permitted retest		**N**
A.9	Flammability test for classifying materials 5V		**N**
A.9.1	Samples		**N**
	Sample thickness(mm) ……..…. :		—
A.9.2	Conditioning of samples temperature (℃)….. :		**N**
A.9.3	Test flame		**N**
A.9.4	Test procedure, test bars		**N**
A.9.5	Test procedure, test plaques		**N**
A.9.6	Compliance criteria ……..…. :		**N**
A.9.7	Permitted retest		**N**
A.10	Stress relief conditioning(see 4.2.7)		**N**
	Temperature(℃) ……..…. :		—

B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS**		**N**
B.1	General requirements		**N**
	Position ……..…. :		—
	Manufacturer ……..…. :		—
	Type ……..…. :		—
	Rated values ……..…. :		—

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Clause	Requirement - Test	Result - Remark	Verdict
B.2	Test conditions		**N**
B.3	Maximum temperatures		**N**
B.4	Running overload test		**N**
B.5	Locked-rotor overload test		**N**
	Test duration(days) ……..…… :		—
	Electric strength test: test voltage(V) ….. :		—
B.6	Running overload test for DC motors in secondary circuits		**N**
B.7	Locked-rotor overload test for DC motors in secondary circuits		**N**
B.7.1	Test procedure		**N**
B.7.2	Alternative test procedure; test time(h) … :		**N**
B.7.3	Electric strength test		**N**
B.8	Test for motors with capacitors		**N**
B.9	Test for three-phase motors		**N**
B.10	Test for series motors		**N**
	Operating voltage(V) …….. :		—
C	**ANNEX C, TRANSFORMERS(see 1.5.4 and 5.3.3)**		**N**
	Position …….. :		—
	Manufacturer …….. :		—
	Type …….. :		—
	Rated values …….. :		—
C.1	Overload test		**N**
C.2	Insulation		**N**
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		**N**
D.1	Measuring instrument		**N**
D.2	Alternative measuring instrument		**N**
E	**ANNEX E, TEMPERATURE RISE OF A WINDING(see 1.4.13 and 4.5.1) Thermocouple method used.**		**N**
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES**		**N**

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Clause	Requirement - Test	Result - Remark	Verdict

G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		**N**
G.1	Summary of the procedure for determining minimum clearances		**N**
G.2	Determination of mains transient voltage (V) ……..…… :		**N**
G.3	Determination of telecommunication network transient voltage(V) …….. :		**N**
G.4	Determination of required withstand voltage(V) …….. :		**N**
G.5	Measurement of transient levels(V) ……. :		**N**
G.6	Determination of minimum clearances … :		**N**

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		**N**
	Lonizing radiation		**N**
	Measured radiation(mR/h) ……..... :		—
	Measured high-voltage (kV).....……..... :		—
	Measured focus voltage (kV).....……..... :		—
	CRT markings.....……..... :		—

J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		**N**
	Metal used ……..…… :		—

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)**		**N**
K.1	Making and breaking capacity		**N**
K.2	Thermostat reliability; operating voltage(V) ……..…… :		**N**
K.3	Thermostat endurance test; operating voltage(V) ……..…… :		**N**
K.4	Temperature limiter endurance; operating voltage(V) ……..…… :		**N**
K.5	Thermal cut-out reliability		**N**
K.6	Stability of operation		**N**

L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)**		**N**
L.1	Typewriters		**N**
L.2	Adding machines and cash registers		**N**
L.3	Erasers		**N**

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Clause	Requirement - Test	Result - Remark	Verdict

L.4	Pencil sharpeners		**N**
L.5	Duplicators and copy machines		**N**
L.6	Motor-operated files		**N**
L.7	Other business equipment		**N**

M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		**N**
M.1	Introduction		**N**
M.2	Method A		**N**
M.3	Method B		**N**
M.3.1	Ringing signal		**N**
M.3.1.1	Frequency(Hz) ……..... :		**N**
M.3.1.2	Voltage(V) ……..... :		**N**
M.3.1.3	Cadence; time(s), voltage(V) ……..... :		**N**
M.3.1.4	Single fault current(mA) ……..... :		**N**
M.3.2	Tripping device and monitoring voltage …:		**N**
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N**
M.3.2.2	Tripping device		**N**
M.3.2.3	Monitoring voltage(V) ……..... :		**N**

U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		**N**
	Separate test report		**N**

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS(see 1.6.1)**		**N**
V.1	Introduction		**N**
V.2	TN power systems		**N**
V.3	TT power systems		**N**
V.4	IT power systems		**N**

1.5.1	Table: List of critical components				**P**
Object/Part No.	Manufacturer	Type/Model	Technical Data	Standard	Approved By
Enclosure Material	--	--	Metal	--	--
P.C.B.	--	--	V-1 or better	UL94/UL796	UL
Switch power supply	FSP GROUP INC	FSP105-AGB	I/P:100-240Vac, 2A, 50-60Hz O/P:15Vdc, 7A	EN60950 IEC60950	TUV
HDD	--	--	5Vdc, 0.7A	--	--
CD-ROM	Teac Corporation	CD-224E-C20	5Vdc, 1.5A	EN60950 IEC60950	TUV
RTC battery	HITACHI MAXELL LTD	CR2032	3.7Vdc, 210mAh	UL1642	UL

1.6.2	Table: Input current test data				**P**
No.	Voltage	Frequency	Ampere	Rating	Note
1.	15.04V	dc	2.382A	7A	Normal operation

4.5.1	Table: Heating test data		**P**
Test	Operating Condition	a. Maximum Normal Load (48Vdc)	
Test Item	a		
Thermocouple Locations	T(℃)	Require T(℃)	
1.L1 body	79.9	105	
2.PWB near L1	80.7	105	
3.C32 body	61.6	105	
4.L3 body	59.9	105	
5.RAM body	68.6	--	
6.PWB near U35	69.3	105	
7.PWB near U4	70.6	105	
8.PWB near U1	62.3	105	
9.HDD body	53.7	--	
10.Enclosure outside	52.3	70	
11.Ambient	40	--	

Comment:
The measure were measured under worst case normal mode as described in 1.2.2.1 and described in 1.6.1 at voltage as described in 1.6.5.
With specified ambient temperature of 40°C the max.temperature rise was caculatated as follow
Electrolyte capacitor or components with:
Max. absolute temperature of 105°C
Print circuit board with:
Max. absolute temperature of 105°C
Surface of equipment which may be touched:
Metal → Max. absolute temperature of 70°C

5.3	TABLE: fault condition tests						**P**
No.	Component No.	Fault	test voltage	test time	fuse No.	fuse current (A)	Result
1	R30	Short	15Vdc	10min	--	--	Maximum reverse current 0mA
2	D8 pin2, pin3	Short	15Vdc	10min	--	--	Maximum reverse current 0.01mA

Attachment

Attachment - A.	EUT Photos
Attachment - B.	Product ID Label
Attachment - C.	Measuring Instrument List
Attachment - D.	Sample of CE Declaration

Attachment –A.

EUT Photos

This Appendix-A. attached with total 4 pages EUT photograph, not including this page. EUT photos exhibition are follows

Photo # 1 Front View

Photo # 2 Real View

Photo # 3-6 Unit Partially Disassembled View

Photo # 7 Accessory View

Photo # 1 Front View

Photo # 2 Real View

Photo # 3 Unit Partially Disassembled View

Photo # 4 Unit Partially Disassembled View

Photo # 5 Unit Partially Disassembled View

Photo # 6 Unit Partially Disassembled View

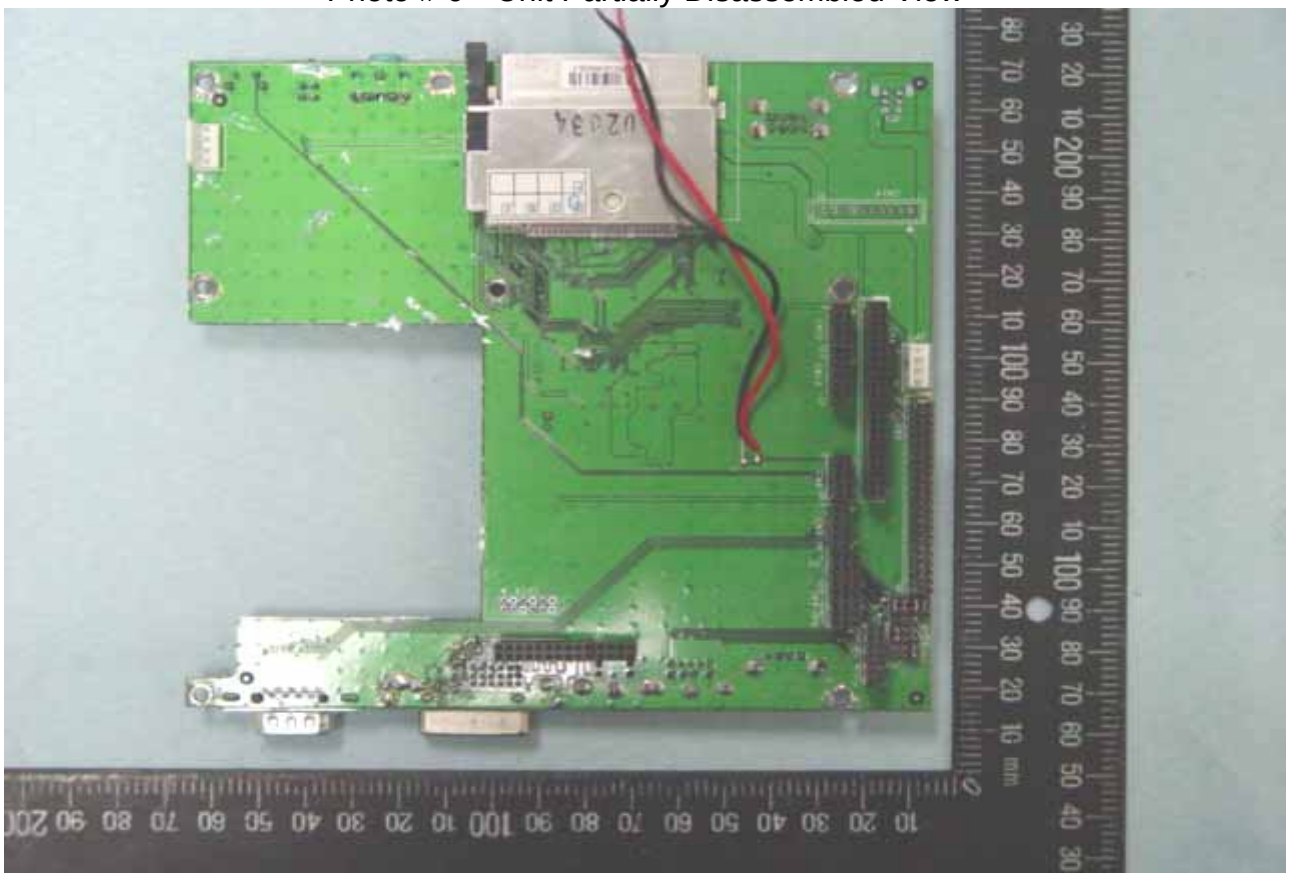

Photo # 7 Accessory View

Attachment - B.

Product ID Label

This Appendix-B. attached with total 1 page Product ID Label drawing/sample, not including this page.

AAEON Technology Inc.

AEC-6850

FC CE

Embedded control PC.Celeron M 1.3GHz.Fanless.
AC.CardReader

Rating:15Vdc@7A

L/N : A05A00
CPU : HDD :
Memory :
Option :

MADE IN TAIWAN

Attachment - C.

Measuring Instrument List

This Appendix-C. attached with total 1 page
Measuring Instrument List, not including this page.

ID NO	Instrument Type	Manufacture	Model Series No.	Scope	Calibration Date	Due Date
CR05	Hybrid Recorder	YOKOGAWA	DR130-02-24-1D 27D839890	-200~400℃ 20 Chance	12.Jan.2005	11.Jan.2006
VM01	Multi-Meter	BRYMEN	BM817 044470022	DC / AC 10Hz~125KHz/10 A	10.Jan.2005	09.Jan.2006
EL05	DC. ELE Load Current Voltage	PRODIGIT	3321A 411020210	60V/60A	25.Jan.2005	24.Jan.2006
MB01	Steel Ball	-	H910502201	500g	18.Mar.2005	17.Mar.2006
MF01	Push Pull Gauge	ALGOL	NK-300 39403	0~30Kg	23.Mar.2005	22.Mar.2006
TM01	Timer	TOPPA	2617P162 4519P607	1/1000 SEC	25.Mar.2005	24.Mar.2006

Attachment - D.

Sample of CE Declaration

Company Letter Head

CE Declaration of Conformity

For the following equipment:
(Product Name)
(Model Designation) is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC), Low-voltage Directive (73/23/EEC) and the Amendment Directive (93/68/EEC). For the evaluation regarding the Directives, the following standards were applied:
The following importer/manufacturer is responsible for this declaration:

(Company Name, Importer)	**(Company Name, Manufacturer)**
(Company Address, Importer)	**(Company Address, Manufacturer)**
Person responsible for this declaration:	**Person responsible for this declaration:**
(Name, Surname, Importer)	**(Name, Surname, Manufacturer)**
(Position/Title)	**(Position/Title)**
(Legal Signature)	**(Legal Signature)**
(Place) (Date)	**(Place)** **(Date)**