COVER PAGE FOR TEST REPORT

Product Category:	Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	NWGQ, NWGQ7
Test Procedure:	Listing
Product:	Industrial Computer
Model/Type Reference:	IPC-5120XXX-XXXXX, IPC-7120XXX-XXXXX, SYS-4W5120XXX-XXXXX, SYS-7W7120XXX-XXXXX, where X may be any alphanumeric character or blank.
Rating(s):	I/P: 100-240Vac, 50/60 Hz, 6-3 A
Standards:	UL 60950-1:2003, First Edition CSA C22.2 No. 60950-1-03 1st Ed. April 1, 2003
Applicant Name and Address:	ADVANTECH CO LTD 1 ALLEY 20 LANE 26 RUEIGUANG RD NEIHU DISTRICT TAIPEI 114 TAIWAN

This Report includes the following parts, in addition to this cover page:

1. Specific Inspection Criteria
2. Specific Technical Criteria
3. Clause Verdicts
4. Critical Components
5. Test Results
6. National Differences
7. Enclosures

Copyright © 2006 Underwriters Laboratories Inc.

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 Underwriters Laboratories Inc. ('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 provided to you involving UL Mark services are provided on behalf of Underwriters Laboratories Inc.

Test Report By:

Jill Yang
Engineer
UL International Services Limited, Taiwan Branch

Reviewed By:

Frank Liu
Section Manager
UL International Services Limited, Taiwan Branch

Copyright © 2006 Underwriters Laboratories Inc.

SPECIFIC INSPECTION CRITERIA

BA1.0	**Special Instructions to UL Representative**
BA1.1	N/A

BB1.0	**Supporting Documentation**
BB1.1	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.

BC1.0	**Markings and instructions**	
BC1.1	The following markings and instructions are provided as indicated.	
BC1.2	All clause references are from UL 60950-1:2003, First Edition.	
Standard Clause	Clause Title	Marking or Instruction Details
1.7.1	Power rating - Ratings	Ratings (voltage, frequency/dc, current)
	Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
	Power rating - Model	Model Number
1.7.8.3	Symbols - On/Off switch	All other controls to be marked with I symbol for "ON" (60417-2-IEC-5007) and O symbol for "OFF" (60417-2-IEC-5008)
	Symbols - Stand-by switch	"Stand-by" to be indicated by ⏻(60417-2-IEC-5009)
1.7.15	Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."

BD1.0	**Production-Line Testing Requirements**	
BD1.1	Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.	

Model	Component	Removable Parts	Test probe location	Test Potential V rms	V dc	Test Time, s
N/A						

BD1.2	Earthing Continuity Test Exemptions - This test is not required for the following models:	
BD1.3	Electric Strength Test Exemptions - This test is not required for the following models:	
BD1.4	Electric Strength Test Component Exemptions - The following solid-state components may disconnected from the remainder of the circuitry during the performance of this test:	

BE1.0	**Sample and Test Specifics for Follow-Up Tests at UL**
BE1.1	

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					

SPECIFIC TECHNICAL CRITERIA

UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No ..... :	E180881-A116-UL-1
Compiled by ..... :	Jill Yang
Reviewed by ..... :	Frank Liu
Date of issue ..... :	2006-06-09
Standards ..... :	UL 60950-1:2003, First Edition CSA C22.2 No. 60950-1-03 1st Ed. April 1, 2003
Test procedure ..... :	Listing
Non-standard test method ..... :	N/A
Test item description ..... :	Industrial Computer
Trademark ..... :	ADVANTECH
Model and/or type reference ..... :	IPC-5120XXX-XXXXX, IPC-7120XXX-XXXXX, SYS-4W5120XXX-XXXXX, SYS-7W7120XXX-XXXXX, where X may be any alphanumeric character or blank.
Rating(s) ..... :	I/P: 100-240Vac, 50/60 Hz, 6-3 A

Particulars: test item vs. test requirements	
Equipment mobility ..... :	movable
Operating condition ..... :	continuous
Mains supply tolerance (%) ..... :	+6%, -10%
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Class I (earthed)
Mass of equipment (kg) ..... :	9.08 for IPC-5120XXX-XXXXX; 9.66 for IPC-7120XXX-XXXXX)
Protection against ingress of water ..... :	IP 20

Possible test case verdicts:	
- test case does not apply to the test object ..... :	N / A
- test object does meet the requirement ..... :	Pass
- test object does not meet the requirement ..... :	Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator

GENERAL PRODUCT INFORMATION:	
CA1.0	**Report Summary**
CA1.1	N/A
CB1.0	**Product Description**
CB1.1	Electronic components were mounted on PWB, incorporated with an internal R/C power supply , HDD, FDD, CD-ROM, main board with CPU and housed within a metal enclosure.
CC1.0	**Model Differences**
CC1.1	- Model IPC-7120XXX-XXXXX is similar to Model IPC-5120XXX-XXXXX except for enclosure sharp and model designation. - Model SYS-4W5120XXX-XXXXX is identical to Model IPC-5120XXX-XXXXX except for model designation. - Model SYS-7W7120XXX-XXXXX is identical to Model IPC-7120XXX-XXXXX except for model designation.
CD1.0	**Additional Information**
CD1.1	N/A
CE1.0	**Technical Considerations**
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50 °C
CE1.3	The means of connection to the mains supply is: Pluggable A or B, Detachable power cord
CE1.4	The product is intended for use on the following power systems: TN
CE1.5	The equipment disconnect device is considered to be: Appliance inlet
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): USB, PS/2 of Keyboard and Mouse connectors.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950 or relevant component standard	(See appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950 and the relevant component Standard.	Pass
1.5.3	Thermal controls	No thermal control.	N/A
1.5.4	Transformers	Investigated as an element of power supply certification.	N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors in primary circuits .....:	Investigated as an element of power supply certification.	N/A
1.5.7	Double insulation or reinforced insulation bridged by components	Investigated as an element of power supply certification.	N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors		N/A
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A

1.6	**Power interface**		Pass
1.6.1	AC power distribution systems	AC power distribution systems	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		are classify as TN.	
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (See appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment	This appliance is not a hand-held equipment.	N/A
1.6.4	Neutral conductor	Neutral insulation is provided in the power supply.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	**Marking and instructions**		Pass
1.7.1	Power rating	Rating marking readily visible to operator. See below for details.	Pass
	Rated voltage(s) or voltage range(s) (V) .....:	100-240 Vac	Pass
	Symbol for nature of supply, for d.c. only .....:		N/A
	Rated frequency or rated frequency range (Hz) ....:	50/60Hz	Pass
	Rated current (mA or A).....:	6-3 A	Pass
	Manufacturer's name or trademark or identification mark .....:	Advantech Co., Ltd./ADVANTECH	Pass
	Type/model or type reference.....:	see Models and Ratings for details.	Pass
	Symbol for Class II equipment only .....:	Class I equipment.	N/A
	Other symbols.....:	Additional symbols may be provided when submitted for National Approval.	N/A
	Certification marks .....:	UL, C-UL	Pass
1.7.2	Safety instructions	Safety instructions were in English. Other languages will be provided when submitted for international approval.	Pass
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment.....:	Equipment is auto-ranging.	N/A
1.7.5	Power outlets on the equipment .....:	No outlet.	N/A
1.7.6	Fuse identification .....:	Investigated as an element of power supply certification.	N/A
1.7.7	Wiring terminals		Pass
1.7.7.1	Protective earthing and bonding terminals .....:	Investigated during separate certification of power supply.	Pass
1.7.7.2	Terminal for a.c. mains supply conductors	Appliance inlet was used.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	See below.	Pass
1.7.8.1	Identification, location and marking .....:	The marking and indication of the power switch is located so that indication of function is clear.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8.2	Colours.....:	A green LED is illuminated when the unit is operation.	Pass
1.7.8.3	Symbols according to IEC 60417 .....:	The stand-by switch is marked with the correct symbol (60417-1-IEC-5009).The mains switch is marked with the symbols: "0" and "I" (60417-1-IEC-5007 and IEC-5008).	Pass
1.7.8.4	Markings using figures.....:	Figures are not used for indicating different positions of controls.	N/A
1.7.9	Isolation of multiple power sources.....:		N/A
1.7.10	IT power distribution systems	Investigated during separate certification of power supply.	N/A
1.7.11	Thermostats and other regulating devices		N/A
1.7.12	Language .....:	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	-
1.7.13	Durability	The marking(s) withstood the required test.	Pass
1.7.14	Removable parts	No marking is located on (a) removable part(s).	Pass
1.7.15	Replaceable batteries	The equipment is provided with a replaceable lithium battery. The statement is marking close to the battery or in the serving instructions.	Pass
	Language .....:	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	-
1.7.16	Operator access with a tool .....:	No operator access areas require the use of a tool.	Pass
1.7.17	Equipment for restricted access locations .....:	No restricted access location.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	**PROTECTION FROM HAZARDS**		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	Even the INDUSTRIAL COMPUTER enclosure is disassembled, the accessible SAPS is covered by earthed metal enclosure. The construction of this metal enclosure prevents the access, using test finger, test pin or test probe to any parts having only basic insulation to ELV or hazardous voltage.	Pass
2.1.1.1	Access to energized parts	See below.	Pass
	Test by inspection.....:	Operator cannot contact with any parts with only basic insulation to ELV or hazardous voltage.	Pass
	Test with test finger.....:	The test finger was unable to contact bare hazardous parts, basic insulation, or ELV circuits.	Pass
	Test with test pin.....:	The test pin was unable to contact bare hazardous parts.	Pass
	Test with test probe.....:	No TNV circuits.	N/A
2.1.1.2	Battery compartments.....:		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V); minimum distance (mm) through insulation.....:		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards.....:	The hazardous energy circuits can't be bridged by the test finger in a straight position.	Pass
2.1.1.6	Manual controls	The equipment does not contain any knobs, handles, levers, or the like.	N/A
2.1.1.7	Discharge of capacitors in equipment	Investigated as an element of power supply certification.	N/A
	Time-constant (s); measured voltage (V) .....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	**SELV circuits**		Pass
2.2.1	General requirements	SELV levels are maintained after single fault condition. See below.	Pass
2.2.2	Voltages under normal conditions (V).....:	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V).....:	Critical fault condition in SELV verification is investigated in separate power supply evaluation.	Pass
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)	Investigated during separate certification of power supply.	N/A
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits.....:	See 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	Pass
2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuits.	N/A
	Type of TNV circuits.....:		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed.....:		-
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....:		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....:		-
2.3.5	Test for operating voltages generated externally		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.4	**Limited current circuits**		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz) .....:		-
	Measured current (mA).....:		-
	Measured voltage (V).....:		-
	Measured capacitance (mF).....:		-
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	**Limited power sources**		Pass
	Inherently limited output		Pass
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA): .....:	For USB ports, Max. Uoc = 5.16 Vdc, Isc = 3.23 A, 11.44VA. For PS2 ports, Max. Uoc = 5.13 Vdc, Isc = 1.56 A, 6.38 VA	-
	Current rating of overcurrent protective device (A):		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	**Provisions for earthing and bonding**		Pass
2.6.1	Protective earthing		Pass
2.6.2	Functional earthing	Functional earthing separated from Hazardous voltage by reinforced insulation.	Pass
2.6.3	Protective earthing and protective bonding conductors	See below.	Pass
2.6.3.1	General		Pass
2.6.3.2	Size of protective earthing conductors		Pass
	Rated current (A), cross-sectional area (mm2), AWG.....:	Rated input 6 A, min. 0.75 mm square/18AWG wire shall be used.	-
2.6.3.3	Size of protective bonding conductors		Pass
	Rated current (A), cross-sectional area (mm2), AWG.....:	Evaluated as part of the power supply.	-
2.6.3.4	Resistance (Ohm) of earthing conductors and their terminations, test current (A) .....:	Test current = 40 A. Voltage Drop = 0.75 V < 2.5V	Pass
2.6.3.5	Colour of insulation .....:	Evaluated as part of the power supply.	Pass
2.6.4	Terminals		Pass
2.6.4.1	General		Pass
2.6.4.2	Protective earthing and bonding terminals	Evaluated as part of the power supply.	Pass
	Rated current (A), type and nominal thread diameter (mm).....:		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Appliance inlet is used.	Pass
2.6.5	Integrity of protective earthing	See below.	Pass
2.6.5.1	Interconnection of equipment	No interconnection of hazardous voltages.	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses located in protective earthing conductor or protective bonding conductors.	Pass
2.6.5.3	Disconnection of protective earth	Appliance inlet is provided.	Pass
2.6.5.4	Parts that can be removed by an operator	It is not possible to disconnect earth without disconnecting mains and protective earth	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		makes earlier and breaks later than the supply connectors. No other operator removable parts with safety critical earth connection.	
2.6.5.5	Parts removed during servicing	Connections to protective earthing cannot be removed unless hazardous voltage is removed from the part simultaneously.	Pass
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding	In approved power supply.	Pass
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV	N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		Pass
2.7.1	Basic requirements	Approved power supply is used.	Pass
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3	Protection from faults not covered in 5.3 are provided by installation.	Pass
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	Pass
2.7.4	Number and location of protective devices.....:	Investigated as an element of power supply certification.	N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.8	**Safety interlocks**		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	**Electrical insulation**		Pass
2.9.1	Properties of insulating materials	Critical insulation investigation is investigated as an element of power supply certification.	Pass
2.9.2	Humidity conditioning	Test done for 120 hrs. Electric strength test was conducted after the humidity treatment.	Pass
	Humidity (%) .....:	95%.	-
	Temperature (°C).....:	40 degree C.	-
2.9.3	Grade of insulation	No flash over or breakdown of insulation. (See sub-clause 2.10, 4.5.1, and 5.2)	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10	**Clearances, creepage distances and distances through insulation**		Pass
2.10.1	General	Pollution degree 2 applicable.	Pass
2.10.2	Determination of working voltage		N/A
2.10.3	Clearances	All critical clearance in primary circuits are considered in separate power supply evaluation.	Pass
2.10.3.1	General		Pass
2.10.3.2	Clearances in primary circuit		N/A
2.10.3.3	Clearances in secondary circuits	(See 5.3.4.)	Pass
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances	See 5.3.4 for secondary circuits.	Pass
	CTI tests.....:	Material group IIIb; 100 <=CTI <175.	-
2.10.5	Solid insulation	Investigated during separate certification of power supply.	N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material	Investigated during separate certification of power supply.	N/A
	Number of layers (pcs).....:		-
	Electric strength test .....:		-
2.10.5.3	Printed boards		N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material .....:		-
	Number of layers (pcs).....:		N/A
2.10.5.4	Wound components	Investigated during separate certification of power supply.	N/A
	Number of layers (pcs).....:		N/A
	Two wires in contact inside wound component; angle between 45° and 90°.....:		N/A
2.10.6	Coated printed boards		N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C).....:		N/A
2.10.6.5	Electric strength test .....:		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test .....:		-
2.10.7	Enclosed and sealed parts .....:		N/A
	Temperature T1=T2 = Tma - Tamb +10K (°C).....:		N/A
2.10.8	Spacings filled by insulating compound.....:		N/A
	Electric strength test .....:		-
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3	**WIRING, CONNECTIONS AND SUPPLY**		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	All wires/conductors possess adequate cross-sectional areas for their intended application and Internal wiring are adequately insulated.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts, which could damage insulation.	Pass
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	Pass
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are all secured and will not reduce Clearances or Creepage distances in normal use.	Pass
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2	**Connection to an a.c. mains supply or a d.c. mains supply**		Pass
3.2.1	Means of connection	The unit is provided with an appliance inlet.	Pass
3.2.1.1	Connection to an a.c. mains supply	The unit is provided with an appliance inlet.	Pass
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits.....:		-
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320. The power cord can be inserted without difficulties and does not support the unit.	Pass
3.2.5	Power supply cords	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	Pass
3.2.5.1	AC power supply cords	See below.	Pass
	Type .....:	Type SVT or SPT-2.	-
	Rated current (A), cross-sectional area (mm²), AWG.....:	10 A maximum, 18 AWG/3C (0.75 mm^2) required.	-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N).....:		-
	Longitudinal displacement (mm).....:		-
3.2.7	Protection against mechanical damage	Cord not exposed to sharp points or edges.	Pass
3.2.8	Cord guards	The equipment does not use a non-detachable power supply cord.	N/A
	D (mm); test mass (g) .....:		-
	Radius of curvature of cord (mm) .....:		-
3.2.9	Supply wiring space		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm²) .....:		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm).....:		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	**Disconnection from the mains supply**		Pass
3.4.1	General requirement	The appliance inlet is considered to be the disconnect device.	Pass
3.4.2	Disconnect devices	Ref. to 3.4.1	Pass
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment and d.c. equipment	Disconnect device disconnects both poles simultaneously.	Pass
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.5	**Interconnection of equipment**		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits .....:	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection circuits.	N/A
4	**PHYSICAL REQUIREMENTS**		Pass
4.1	Stability		Pass
	Angle of 10°	Unit does not overbalance at 10°.	Pass
	Test: force (N) .....:		N/A
4.2	**Mechanical strength**		Pass
4.2.1	General	See below.	Pass
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	250N applied to all outer enclosure. No energy or other hazards.	Pass
4.2.5	Impact test		Pass
	Fall test	No hazardous result after steel sphere ball impact test.	Pass
	Swing test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief test	Metal enclosure used.	N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified .....:		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3	**Design and construction**		Pass
4.3.1	Edges and corners	All edges and corners judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N) .....:		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. For the protection, solder pins, cable ties and heat shrunk tubing are used.	Pass
4.3.5	Connection of plugs and sockets		N/A
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Dimensions (mm) of mains plug for direct plug-in .:		N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) .....:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	3.01 mA was measured when single fault applied (DD6 pin 1-3 short). A RTC battery with maximum abnormal charging current 5 mA was used.	Pass
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids .....:		N/A
	Quantity of liquid (l) .....:		N/A
	Flash point (°C) .....:		N/A
4.3.13	Radiation; type of radiation	Evaluated in separate component evaluation.	N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....:		-
	Measured high-voltage (kV).....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Measured focus voltage (kV) .....:		-
	CRT markings .....:		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification.....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation.....:		N/A
4.3.13.5	Laser (including LEDs)		N/A
	Laser class.....:		-
4.3.13.6	Other types .....:		N/A

4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	**Thermal requirements**		Pass
4.5.1	Maximum temperatures	(see appended table 4.5)	Pass
	Normal load condition per Annex L.....:	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	Pass
4.5.2	Resistance to abnormal heat	Investigated as an element of power supply certification.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.6	**Openings in enclosures**		Pass
4.6.1	Top and side openings	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5 degree projection).	Pass
	Dimensions (mm).....:	Model: IPC-5120XXX-XXXXX Front Side: (1) Provided with numerous openings, each opening measured 4.0 by 4.0 mm, covering an area of 37.0 by 37.0 mm. (2) Provided with numerous openings, each opening measured 4.0 by 4.0 mm, covering an area of 37.0 by 37.0 mm. (3) Provided with numerous openings, each opening measured 8.0 by 2.0 mm maximum, covering an area of 70.5 by 11.0 mm. Rear Side: Provided with numerous openings, each opening measured 5.0 by 5.0 mm, covering an area of 124 by 117 mm. Model: IPC-7120XXX-XXXXX Front Side: (1) Provided with numerous openings, each opening measured 4.0 by 4.0 mm, covering an area of 37.0 by 37.0 mm. (2) Provided with numerous openings, each opening measured 4.0 by 4.0 mm, covering an area of 37.0 by 37.0 mm. (3) Provided with numerous openings, each opening measured 8.0 by 2.0 mm maximum, covering an area of	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		120.5 by 11.0 mm. Rear Side: Provided with numerous openings, each opening measured 5.0 by 5.0 mm, covering an area of 124 by 117 mm.	
4.6.2	Bottoms of fire enclosures	No bottom openings provided.	Pass
	Construction of the bottom.....:		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	Not transportable equipment.	N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C)/time (weeks) .....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	**Resistance to fire**		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	Method 1, selection and application of components wiring and materials	See 4.7.1.	Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	A fire enclosure covers all parts.	Pass
4.7.2.1	Parts requiring a fire enclosure	See 4.7.2	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	The fire enclosure is metal.	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures	Connectors are made of materials of Class V-2 minimum.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better. Internal wiring is UL Recognized, rated VW-1 or FT-1. (See appended table 1.5.1)	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		Pass
5.1	Touch current and protective conductor current		Pass
5.1.1	General	See below.	Pass
5.1.2	Equipment under test (EUT)	Equipment designed for connecting to only one power source.	Pass
5.1.3	Test circuit	Single phase equipment intended only for connection to star TN or TT system.	Pass
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	Pass
5.1.5	Test procedure	The touch current was measured from protective earth to metal enclosure and to output connectors .	Pass
5.1.6	Test measurements	See below.	Pass
	Test voltage (V).....:	264 Vac / 60 Hz	-
	Measured touch current (mA).....:	2.1 mA Max. for accessible enclosure and output connectors.	-
	Max. allowed touch current (mA).....:	3.5 mA (Class I movable)	-
	Measured protective conductor current (mA).....:		-
	Max. allowed protective conductor current (mA)...:		-
5.1.7	Equipment with touch current exceeding 3.5 mA..:	Touch current does not exceed 3.5 mA.	N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No TNV	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V).....:		-
	Measured touch current (mA).....:		-
	Max. allowed touch current (mA).....:		-
5.1.8.2	Summation of touch currents from telecommunication networks .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	**Electric strength**		Pass
5.2.1	General	(see appended table 5.2)	Pass
5.2.2	Test procedure	(See appended table 5.2)	Pass

5.3	**Abnormal operating and fault conditions**		Pass
5.3.1	Protection against overload and abnormal operation	(See appended table 5.3)	Pass
5.3.2	Motors	Evaluated in separate component evaluation.	N/A
5.3.3	Transformers	Evaluated as part of the power supply.	Pass
5.3.4	Functional insulation .....:	Functional insulation complies with the requirements (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Simulation of faults	(See appended table 5.3)	Pass
5.3.7	Unattended equipment		N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests.	Pass

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Test voltage (V).....:		-
	Current in the test circuit (mA).....:		-
6.1.2.2	Exclusions.....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) .....:		-
	Current limiting method.....:		-

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

A	**Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
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
A.1.1	Samples.....:		-
	Wall thickness (mm).....:		-
A.1.2	Conditioning of samples; temperature (°C) .....:		N/A
A.1.3	Mounting of samples.....:		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s).....:		-
	Sample 2 burning time (s).....:		-
	Sample 3 burning time (s).....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

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
A.2.1	Samples, material .....:		-
	Wall thickness (mm).....:		-
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	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/A
	Sample 1 burning time (s).....:		-
	Sample 2 burning time (s).....:		-
	Sample 3 burning time (s).....:		-

A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B	**Annex B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements		N/A
	Position .....:		-
	Manufacturer.....:		-
	Type .....:		-
	Rated values .....:		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) .....:		-
	Electric strength test: test voltage (V) .....:		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure	Evaluated in separate component evaluation.	N/A
B.7.2	Alternative test procedure; test time (h).....:		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V).....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C	**Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		N/A
	Position .....:		-
	Manufacturer.....:		-
	Type .....:		-
	Rated values .....:		-
	Method of protection .....:		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings .....:		N/A

D	**Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS**		Pass
D.1	Measuring instrument	Simpson 228	Pass
D.2	Alternative measuring instrument		N/A

E	**Annex E, TEMPERATURE RISE OF A WINDING**	N/A

F	**Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)**	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

G	**Annex G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V) :.....:		N/A
G.4	Determination of required withstand voltage (V) ...:		N/A
G.5	Measurement of transient levels (V) .....:		N/A
G.6	Determination of minimum clearances .....:		N/A

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A

J	**Annex J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		N/A
	Metal used .....:		

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

L	**Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)**		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass

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

N	**Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
P	**Annex P, NORMATIVE REFERENCES**		Pass
Q	**Annex Q, BIBLIOGRAPHY**		Pass
R	**Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**Annex S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**Annex T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
	.....:		-
U	**Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
	.....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**					Pass
Object/part No.	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01 Power Supply	Zippy Technology Corp.	P1G-6300P	I/P: 100-240 Vac, 60-50 Hz, 6-3A O/P: +5V/25A, +12V/16A, -12V/1.0A, +3.3V/14A, -5V/0.5A, +5VSB/1.5A	QQGQ2	UL	3-03
02 Floppy Disk Drive (Optional)	Various	Various	5/12Vdc, 1.5/1.5A maximum	NWGQ2	UL	
03 Hard Disk Drive (Optional)	Various	Various	5/12Vdc, 1.5/1.5A maximum	NWGQ2	UL	
04 CD-ROM Drive (Optional)	Various	Various	5/12Vdc, 1.5/1.5A maximum. Laser Class I	NWGQ2	UL	
05 RTC Battery	Spectrum Brands Inc.	BR2032	Maximum abnormal charging current 5mA, protected by DD6 and R335	BBCV2	UL	
06 Polyswitch for PS2 Port	Polytronics Technology Corp.	SMD1812P110TS	6Vdc, 1.1A	XGPU2	UL	3-04
06a Polyswitch for PS2 Port , alternate	Tyco Electronics Corp.	MiniSMDC110	8Vdc, 1.1A	XGPU2	UL	
07 Polyswitch for USB Port	Polytronics Technology Corp.	SMD1812P110TS	6Vdc, 1.1A	XGPU2	UL	3-04
07a Polyswitch for USB Port , alternate	Tyco Electronics Corp.	MiniSMDC110	8Vdc, 1.1A	XGPU2	UL	
07b Polyswitch for USB Port , alternate	Tyco Electronics Corp.	miniSMDC260	6Vdc, 2.6A	XGPU2	UL	
07c Polyswitch for USB Port , alternate	Polytronics Technology Corp.	SMD1812P260T	8Vdc, 2.6A	XGPU2	UL	
08 System Fan (Rear)	Delta Electronics Inc.	AFB1212H	12Vdc, 0.35A maximum, 74.41 CFM	GPWV2	UL	3-03
08a System Fan (Rear),	Delta Electronics Inc.	AFB1212SH	12Vdc, 0.8A maximum, 101.81	GPWV2	UL	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

alternate			CFM			
08b System Fan (Rear), alternate	Delta Electronics Inc.	EFB1212H	12Vdc, 0.41A maximum, 72.04 CFM	GPWV2	UL	
08c System Fan (Rear), alternate	Delta Electronics Inc.	EFB1212SH	12Vdc, 0.75A maximum, 102.06 CFM	GPWV2	UL	
08d System Fan (Rear), alternate	Adda Corp.	AD1212HB-A73GL	12Vdc, 0.37A, 85.2 CFM	GPWV2	UL	
08e System Fan (Rear), alternate	Yate Loon Electronics Ltd.	D12BH-12	12Vdc, 0.3A maximum, 77.2 CFM	GPWV2	UL	
09 System Fan (Front)	Delta Electronics Inc.	EFB0412VHD	12Vdc, 0.18A maximum, 9.25 CFM	GPWV2	UL	
09a System Fan (Front), alternate	Delta Electronics Inc.	AFB0412SHB	12Vdc, 0.35A maximum, 13.4 CFM	GPWV2	UL	
09b System Fan (Front), alternate	Delta Electronics Inc.	AFB0412HHB	12Vdc, 0.2A maximum, 10.31 CFM	GPWV2	UL	
10 CPU Fan	Delta Electronics Inc.	AFB0712HHB	12Vdc, 0.45A maximum, 28.92 CFM	GPWV2	UL	3-03
10a CPU Fan, alternate	Delta Electronics Inc.	AFB0912VH	12Vdc, 0.6A maximum, 62.52 CFM	GPWV2	UL	
11 Enclosure for Model IPC-5120XXX-XXXXX	--	--	Metal, 1.0 mm thick min., overall 320 by 300 by 163 mm	--	--	3-01
12 Enclosure for Model IPC-7120XXX-XXXXX	--	--	Metal, 1.0 mm thick min., overall 380 by 300 by 163 mm	--	--	3-09
13 Front Bezel Model IPC-5120XXX-XXXXX	Various	Various	HB Minimum, 1.3 mm thick min. overall 320 by 21.5 by 163 mm	QMFZ2	UL	3-01
14 Front Bezel Model IPC-7120XXX-XXXXX	Various	Various	HB Minimum, 1.3 mm thick min. overall 380 by 21.5 by 163 mm	QMFZ2	UL	3-09
15 PWB	Various	Various	V-1 minimum, 105 degree C	ZPMV2	UL	
16 Internal wiring	Various	Various	Routed away from sharp edges, moving parts. FEP, PTFE, PVC, TFE, neoprene or surface marked VW-1	AVLV2	UL	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

17 Label	Various	Various	65 degree C if max. surface temperature not specified.	PGDQ2 PGJI2	UL	
18 Interconnecting Cable (Optional)	Various	Various	60 degree C minimum, 30 V minimum, maximum 3.05 m long, jacketed, VW-1 or FT-1	AVLV2	UL	
19 Power supply cord (Optional)	Various	Various	Type SVT or SPT-2, minimum 125 V, 10 A, with NEMA 5-15P or 250 V, 10 A, with NEMA 6-15P. Other end (connected to unit) (with cord-connected body, grounding type, suitable for cord size, rating not less than that of attachment plug)	ELBZ	UL	
20. Connectors and Receptacles (secondary ELV/SELV circuits)	--	Metal/Plastic	Copper alloy pins housed in bodies of plastic rated V-2 min.	QMFZ2, ECBT2, RTRT2	UL	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)						Pass
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status	
--	--	90V/50Hz	189	2120	2120	Maximum normal load	
--	--	90V/60Hz	189	2130	2130	Maximum normal load	
--	6.0	100V/50Hz	186	1850	1850	Maximum normal load	
--	6.0	100V/60Hz	186	1860	1860	Maximum normal load	
--	3.0	240V/50Hz	173	730	730	Maximum normal load	
--	3.0	240V/60Hz	173	740	740	Maximum normal load	
--	--	254V/50Hz	172	695	695	Maximum normal load	
--	--	254V/60Hz	172	700	700	Maximum normal load	
--	--	264V/50Hz	171	1100	1100	Maximum normal load	
--	--	264V/60Hz	171	1050	1050	Maximum normal load	
supplementary information:							
"Maximum normal load" was defined as follows: Unit crossed reading and writing data between HDD and CD-ROM drive, each USB loaded 2.5W and working continuously.							

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					Pass
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
--	--	--	--	--	--	--
supplementary information:						
All critical clearance and creepage distances in primary circuit are considered in separate power supply evaluation. Only functional insulation is required.						

2.10.5	TABLE: distance through insulation measurements			N/A
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)
supplementary information:				

4.5	TABLE: temperature rise measurements						Pass
	test voltage (V).....	See below .	See below.	---	---	---	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	t1 (°C)	---	---	---	---	---	—
	t2 (°C)	---	---	---	---	---	—
maximum temperature T of part/at:		T (°C)					allowed Tmax (°C)
--		90 Vac, 60 Hz (original)	90Vac, 60 Hz (Shift to 50 degree C)	264Vac, 50 Hz (original)	264Vac, 50 Hz (Shift to 50 degree C)	--	--
Ambient		24.9	50	24.6	50	--	--
L5 coil		45.7	70.8	43.6	69.0	--	105
L2 coil		47.5	72.6	43.0	68.4	--	105
C10A body		47.6	72.7	42.8	68.2	--	85
PWB under TH2		65.8	90.9	56.0	81.4	--	105
PWB under BD1		59.4	84.5	46.5	71.9	--	105
C9 body		45.0	70.1	42.8	68.2	--	85
LD1 coil		49.6	74.7	42.6	68.0	--	105
T2 core		48.2	73.3	47.0	72.4	--	90
T2 coil		50.0	75.1	78.3	73.7	--	90
T1 coli		55.0	80.1	54.2	79.6	--	90
T1 core		50.2	75.3	49.1	74.5	--	90
U4 body		49.4	74.5	48.5	73.9	--	100
U5 body		49.5	74.6	48.6	74.0	--	100
C1 body		44.9	70.0	43.8	69.2	--	85
AC inlet		43.2	68.3	42.4	67.8	--	70
C8 body		37.7	62.8	36.9	62.3	--	85
Mail borad		--	--	--	--	--	--
C126 body		57.1	82.2	55.6	81.0	--	85
PWM under U19		40.6	65.7	40.0	65.4	--	105
PWB under CPU		66.3	91.4	64.8	90.2	--	105
PWB under U14		62.9	88.0	61.4	86.8	--	105
L26 body		79.1	104.2	77.5	102.9	--	105
RTC body		37.0	62.1	36.4	61.8	--	100
HDD body		36.9	62.0	36.4	61.8	--	--
DVD-ROM body		32.1	57.2	31.4	56.8	--	--
Enclosure inside near top		39.9	65.0	37.0	62.4	--	--
Enclosure outside near top		35.6	60.7	33.5	58.9	--	95
Metal enclosure outside near top		30.6	55.7	29.5	54.9	--	70
Test Duration		2.56 hrs	2.56 hrs	3.06 hrs	3.06 hrs	--	--
temperature T of winding:			R_1 (Ω)	R_2 (Ω)	T (°C)	allowed Tmax (°C)	insulation class
--			--	--	--	--	--

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

supplementary information:

Comments:
The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.1 at voltages as described in 1.6.5.
With a specified ambient temperature of 50 degree C, the maximum. temperature is calculated as follows:
Winding components:
- class A Tmax(degree C) = 100 degree C - 10 degree C = 90 degree C

Components with:
- maximum. absolute temp. of 105 degree C (Line choke), Tmax(degree C) = 105 degree C
- maximum. absolute temp. of 85 degree C (Capacitor), Tmax(degree C) = 85 degree C
- maximum. absolute temp. of 105 degree C (PCB), Tmax(degree C) = 105 degree C

- when no class of insulation is given, minimum. insulation 105 degree C assumed.

User accessible area:
- material is metal (70 degree C), Tmax(degree C)= 70 degree C
- material is plastic (95 degree C), Tmax(degree C)= 95 degree C

4.5.2	**TABLE: ball pressure test of thermoplastics**		N/A
	allowed impression diameter (mm) ..... :		—
part		test temperature (°C)	impression diameter (mm)
supplementary information:			

4.7	**TABLE: resistance to fire**			Pass
part	manufacturer of material	type of material	thickness(mm)	flammability class
PWB	Various	Various	--	V-1
Enclosure	--	--	1.0 mm	Metal
Front Bezel	--	--	1.3 mm	HB
supplementary information:				
Refer to Table 1.5.1 Critical component list				

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	**TABLE: electric strength tests, impulse tests and voltage surge tests**		Pass
test voltage applied between:		test voltage (V) a.c./d.c.	breakdown Yes / No
Primary to SELV		4242 dc	No
Primary to Earth		3023 dc	No
supplementary information:			
- The Test Voltage was obtained per Table 5B. - The test was conducted immediately after the Humidity Test, Impact Test and each Abnormal Operation Test. - The maximum Working Voltage in power supply P1G-6300P, 780 Vpk.			

5.3	**TABLE: fault condition tests**					Pass
	ambient temperature (°C) ..... :				See below of test record.	—
	model/type of power supply..... :				(See appended table 1.5.1)	—
	manufacturer of power supply ..... :				(See appended table 1.5.1)	—
	rated markings of power supply..... :				(See appended table 1.5.1)	—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
--	--	--	--	--	--	5.3.1 Abnormal operation test
Ventilation openings	Blocked	240	5.9 hrs	--	--	NB, NC, NT, Ambient: 24.2 degree C, T1 coil: 68.7 degree C, T1 core: 68.6 degree C, T2 coil: 90.6 degree C, T2 core: 81.0 degree C, U4 body: 102.3 degree C, U5 body: 106.2 degree C
System fan (small)	Stalled	240	2.3 hrs	--	--	NB, NC, NT, CT, Ambient: 24.3 degree C, T1 coil: 56.3 degree C, T1 core: 51.4 degree C, T2 coil: 51.2 degree C, T2 core: 49.6 degree C, U4 body: 50.8 degree C, U5 body: 50.9 degree C
System fan (Large)	Stalled	240	4.6 hrs	--	--	NB, NC, NT, Ambient: 24.7 degree C, T1 coil: 77.2 degree C, T1 core: 64.0 degree C, T2 coil: 86.0 degree C, T2 core: 75.8 degree C, U4 body: 84.0 degree C, U5

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

						body: 93.8 degree C
CPU fan	Stalled	240	2.8 hrs	--	--	NB, NC, NT, Ambient: 22.8 degree C, T1 coil: 61.1 degree C, T1 core: 61.0 degree C, T2 coil: 90.6 degree C, T2 core: 74.1 degree C, U4 body: 96.8 degree C, U5 body: 104.9 degree C
Power fan	Stalled	240	2.5 hrs	--	--	NB, NC, NT, CT, Ambient: 23.0 degree C, T1 coil: 50.5 degree C, T1 core: 45.4 degree C, T2 coil: 48.9 degree C, T2 core: 47.0 degree C, U4 body: 50.4 degree C, U5 body: 51.7 degree C
--	--	--	--	--	--	5.3.6 Overload of operator accessible connector test
PS/II (Mouse) pin 1, 2, 4, 6	Overload	240	--	--	--	Open Voltage: 0V, C
PS/II (Mouse) pin 3	Overload	240	1sec	--	--	Open Voltage: 5.08V; Maximum Current: 10mA, B
PS/II (Mouse) pin 5	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 1700mA, NB, NC, NT
PS/II (Keyboard) pin 1, 2, 4, 6	Overload	240	--	--	--	Open Voltage : 0V, C
PS/II (Keyboard) pin 3	Overload	240	1sec	--	--	Open Voltage: 5.08V; Maximum Current: 10mA, B
PS/II (Keyboard) pin 5	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 1650mA, NB, NC, NT
USB 1 pin 1	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 4050mA, NB, NC, NT
USB 1 pin 2, 3, 4	Overload	240	--	--	--	Open Voltage : 0V, C
USB 2 pin 1	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 4050mA, NB, NC, NT
USB 2 pin	Overload	240	--	--	--	Open Voltage : 0V, C

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2, 3, 4						
USB 3 pin 1	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 4100mA, NB, NC, NT
USB 3 pin 2, 3, 4	Overload	240	--	--	--	Open Voltage : 0V, C
USB 4 pin 1	Overload	240	1hr	--	--	Open Voltage: 5.11V; Maximum Current: 4100mA, NB, NC, NT
USB 4 pin 2, 3, 4	Overload	240	--	--	--	Open Voltage : 0V, C
Audiox3 All pins	Overload	240	--	--	--	Open Voltage : 0V, C
RS232 All pins	Overload	240	--	--	--	Open Voltage : 0V, C
RJ45x2 All pins	Overload	240	--	--	--	Open Voltage : 0V, C
VGA pin 1-8, 10, 11, 13, 14	Overload	240	--	--	--	Open Voltage : 0V, C
VGA pin 9	Overload	240	1hr	--	--	Open Voltage: 5.15V; Maximum Current: 2000mA, NB, NC, NT
VGA pin 12, 15	Overload	240	1sec	--	--	Open Voltage: 2.88V; Maximum Current: 10mA, B
Printer pin 1-9, 14, 16	Overload	240	1sec	--	--	Open Voltage: 4.46V; Maximum Current: 30mA, NB, NC, NT
Printer pin 10-13, 15	Overload	240	1sec	--	--	Open Voltage: 4.46V; Maximum Current: 10mA, B
Printer pin 17-25	Overload	240	--	--	--	Open Voltage : 0V, C

supplementary information:

Comments Key: NB: No indication of dielectric breakdown; NC: Cheesecloth remained intact; NT: Tissue paper remained; CT: Constant Temperature Obtained; A - Circuit measures 10 K Ohm or more series impedance; B - Circuit measures less than 12.5 mA; C - Circuit measures 0 Voltage; I max = Maximum available current including a short circuit after one hour of operation.

Enclosure
National Differences

(Total 10 Pages including this Cover Page)

USA / Canada

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2001, First Edition			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		Pass
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.	Interconnecting cables comply with the relevant requirements.	Pass
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	circuit classification requirements (e.g., TNV-2)		
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1	Screw shell of Edison-base lampholder tied to the neutral conductor.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.	No TNV circuits.	N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if neither a) or b) are applicable, the current rating of the circuit is taken as 20 A.		Pass
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.4	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.4 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	cable sizes for overcurrent and short circuit protection.		
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		Pass
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		Pass
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.	Power supply cords have attachment plugs rated not less than 125% of the rated current of the equipment.	Pass
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm²) and not less than 152 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		Pass
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		Pass
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other then LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	connection of No. 10 AWG (5.3 mm²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	marked to indicate the presence of radiation where readily visible.		
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).	Evaluated in separate component evaluation.	N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m^3 of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m^2 or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.	Internal wiring is UL Recognized, rated VW-1 or FT-1(where needed).	Pass
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.	(See appended table 5.3)	Pass
5.3.6	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.8.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.	No TNV.	N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	telecommunication network.		
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts connected to telecommunication network and telecommunication circuitry intentionally isolated from network.		N/A
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
6.5	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A

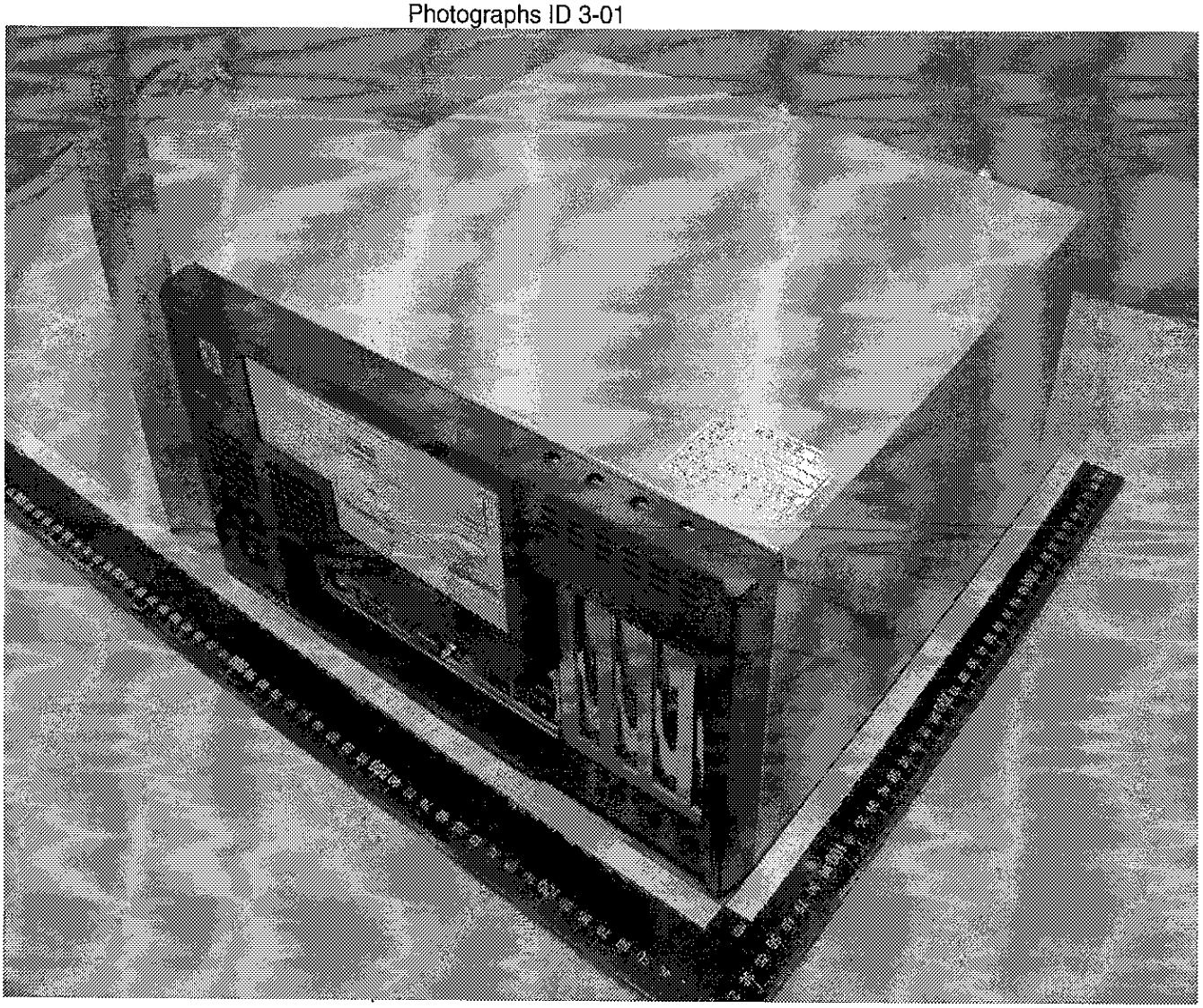
IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A

Enclosure

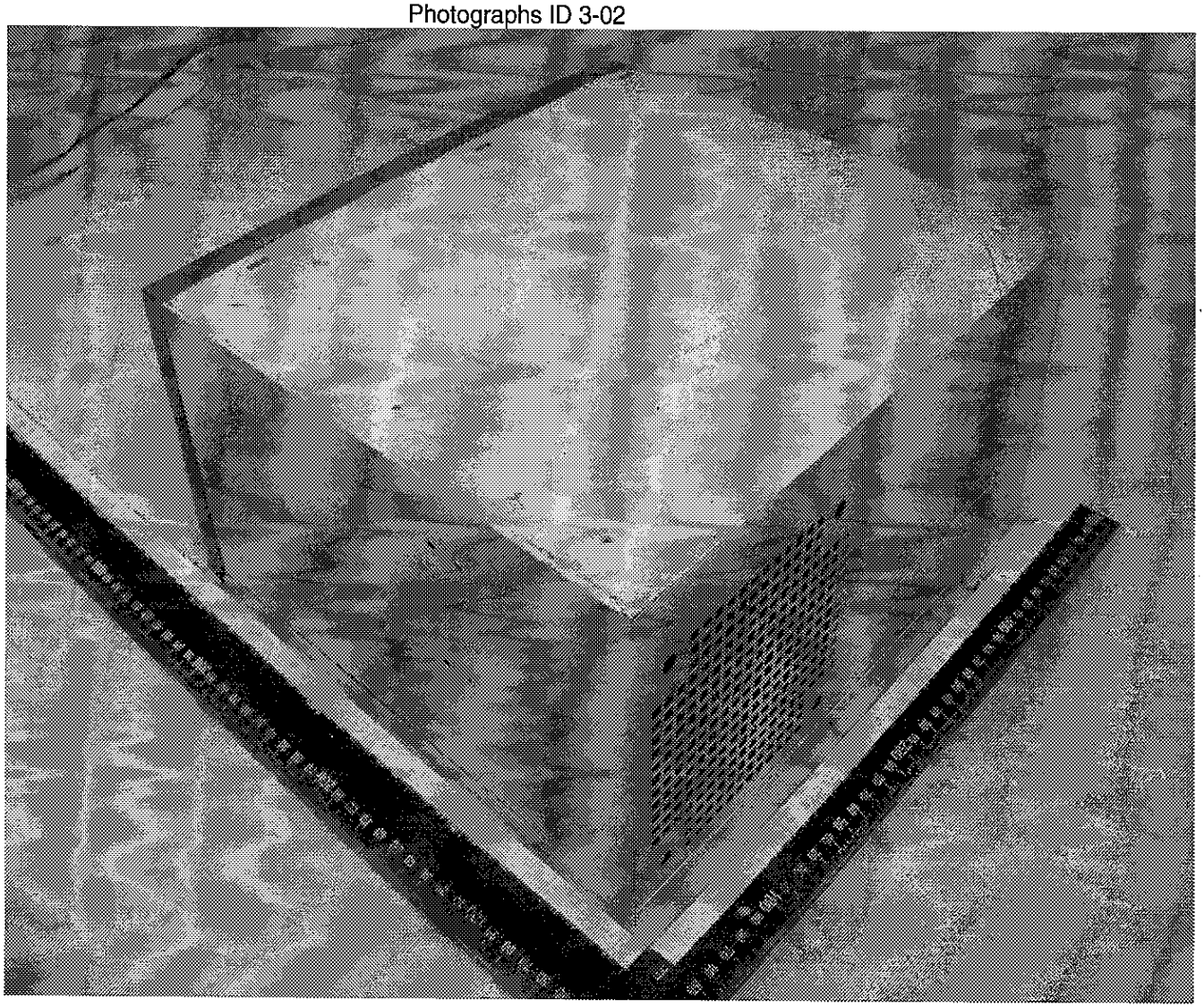
Photographs

Supplement Id	Description
3-01	Enclosure front view
3-02	Enclosure rear view
3-03	Internal view
3-04	Mainboard component side
3-05	Mainboard solider side
3-09	Enclosure Front view
3-10	Enclosure Rear view

Photographs ID 3-01

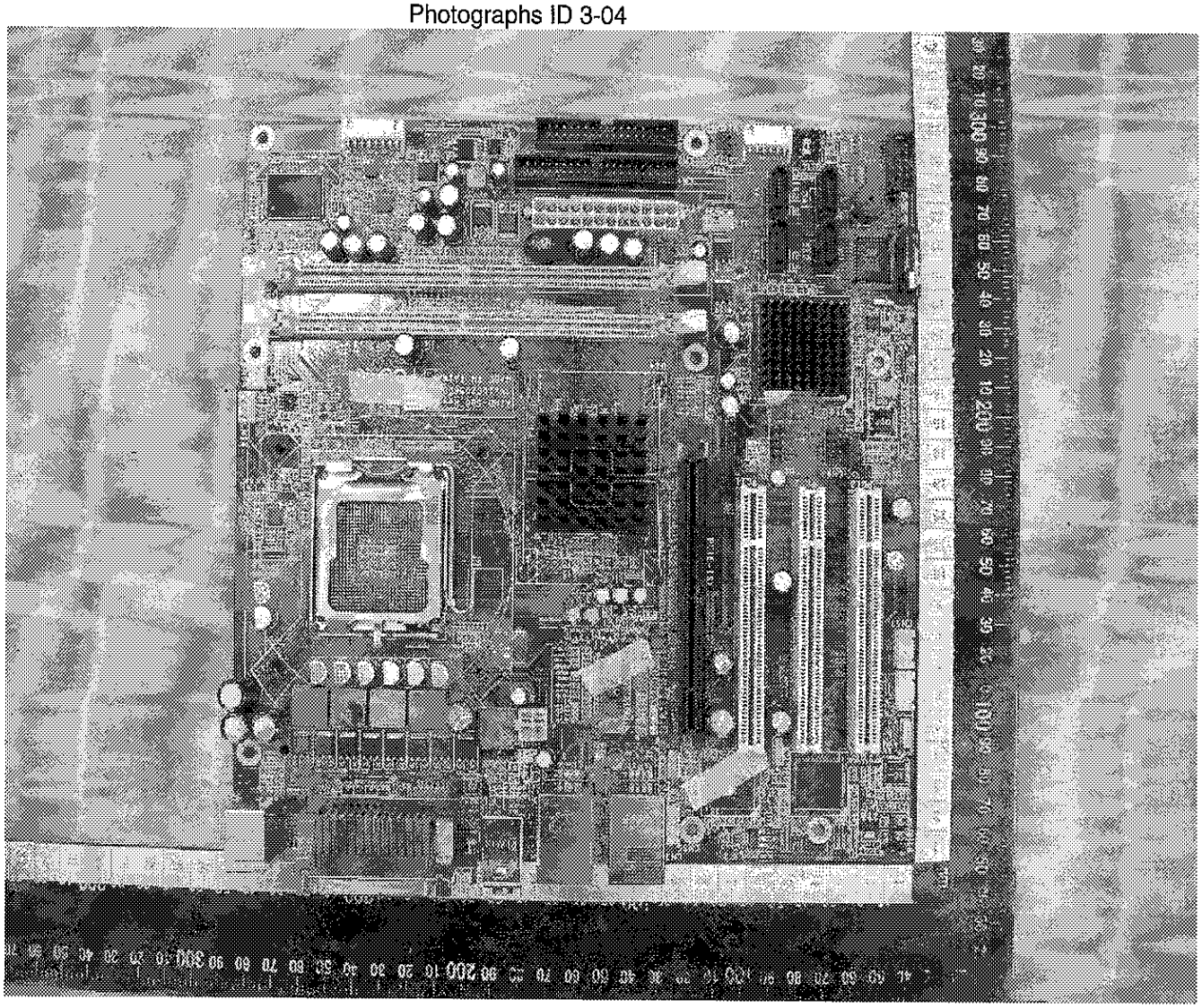


Photographs ID 3-02

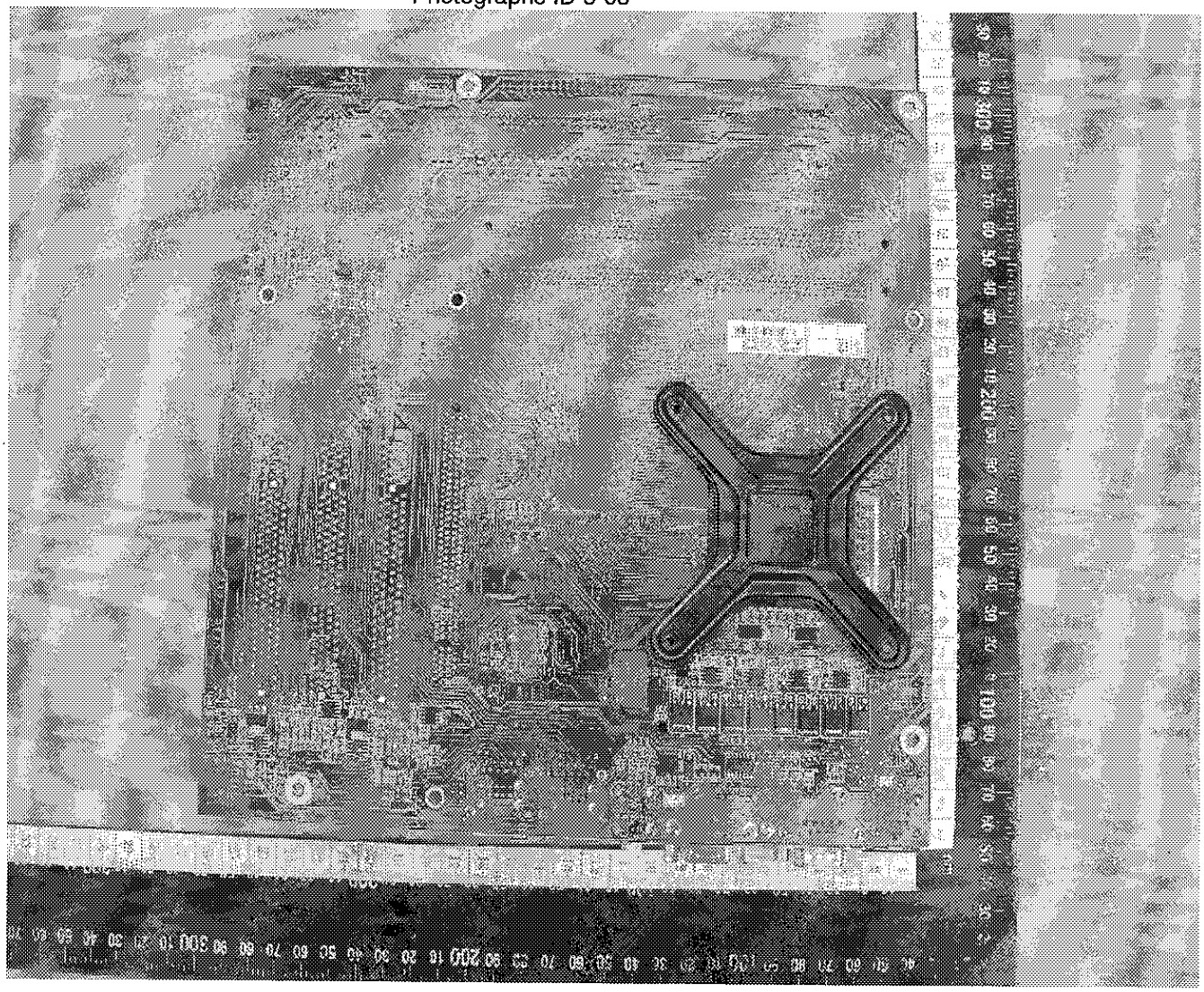


Photographs ID 3-03

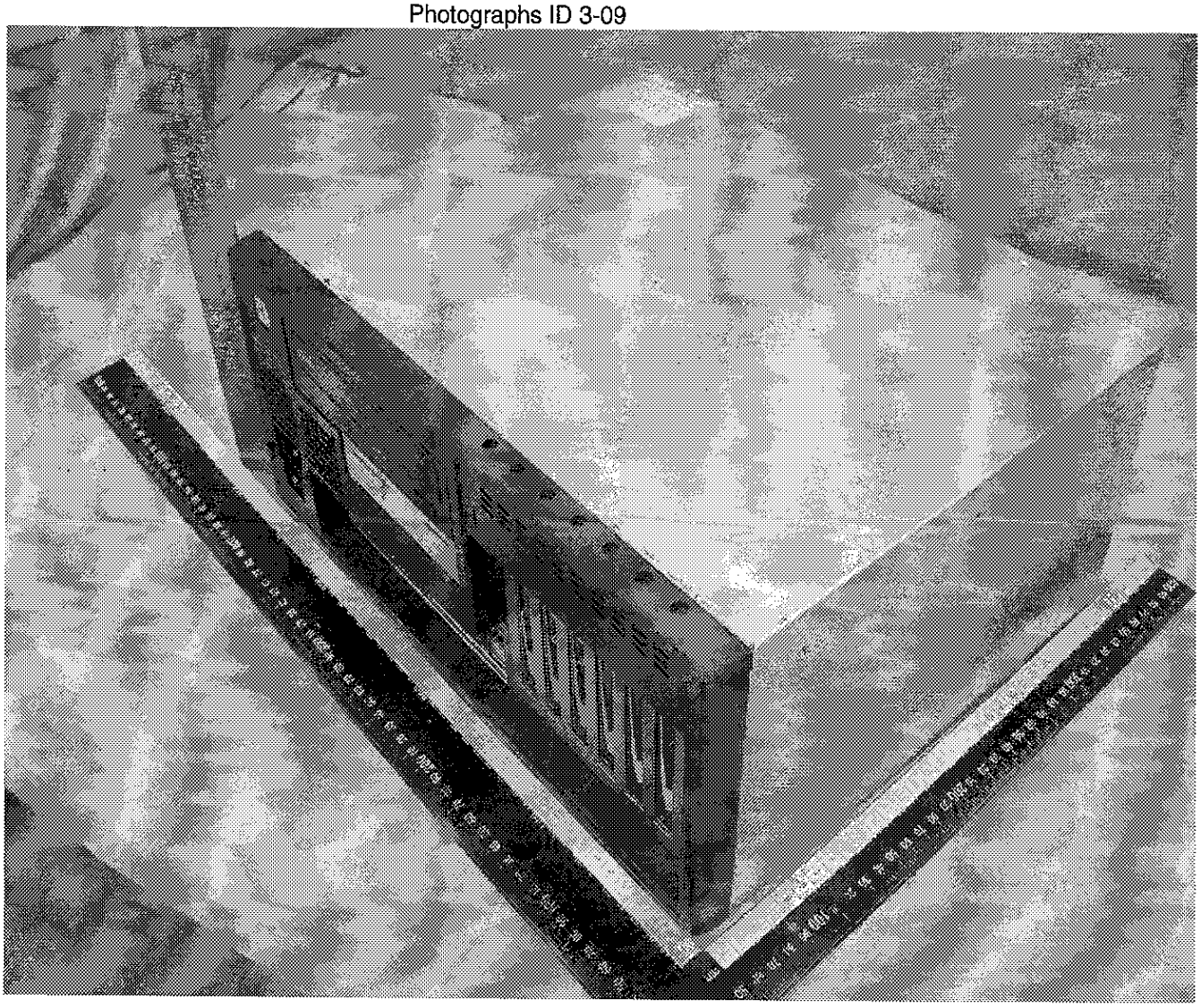
Photographs ID 3-04



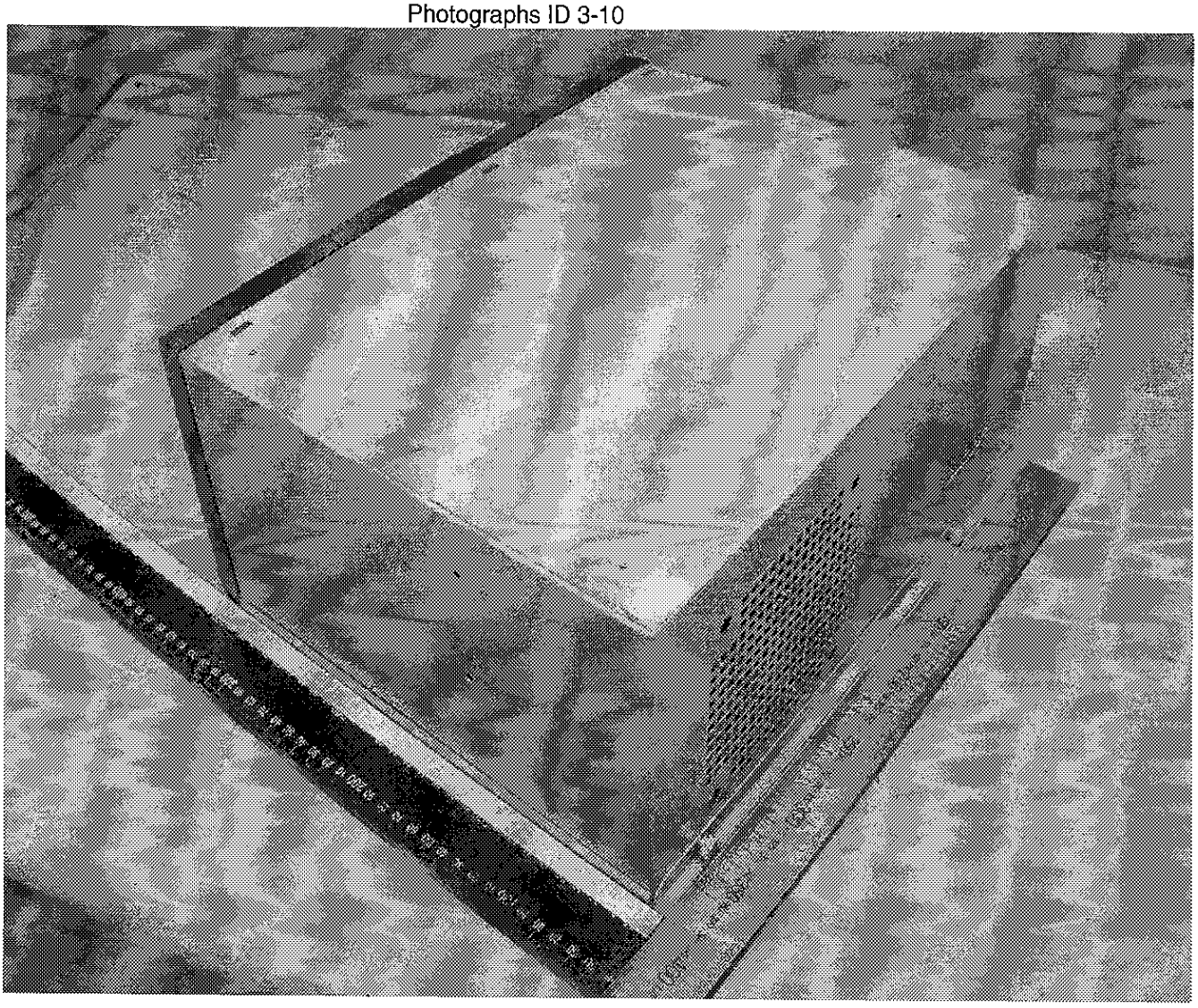
Photographs ID 3-05



Photographs ID 3-09



Photographs ID 3-10

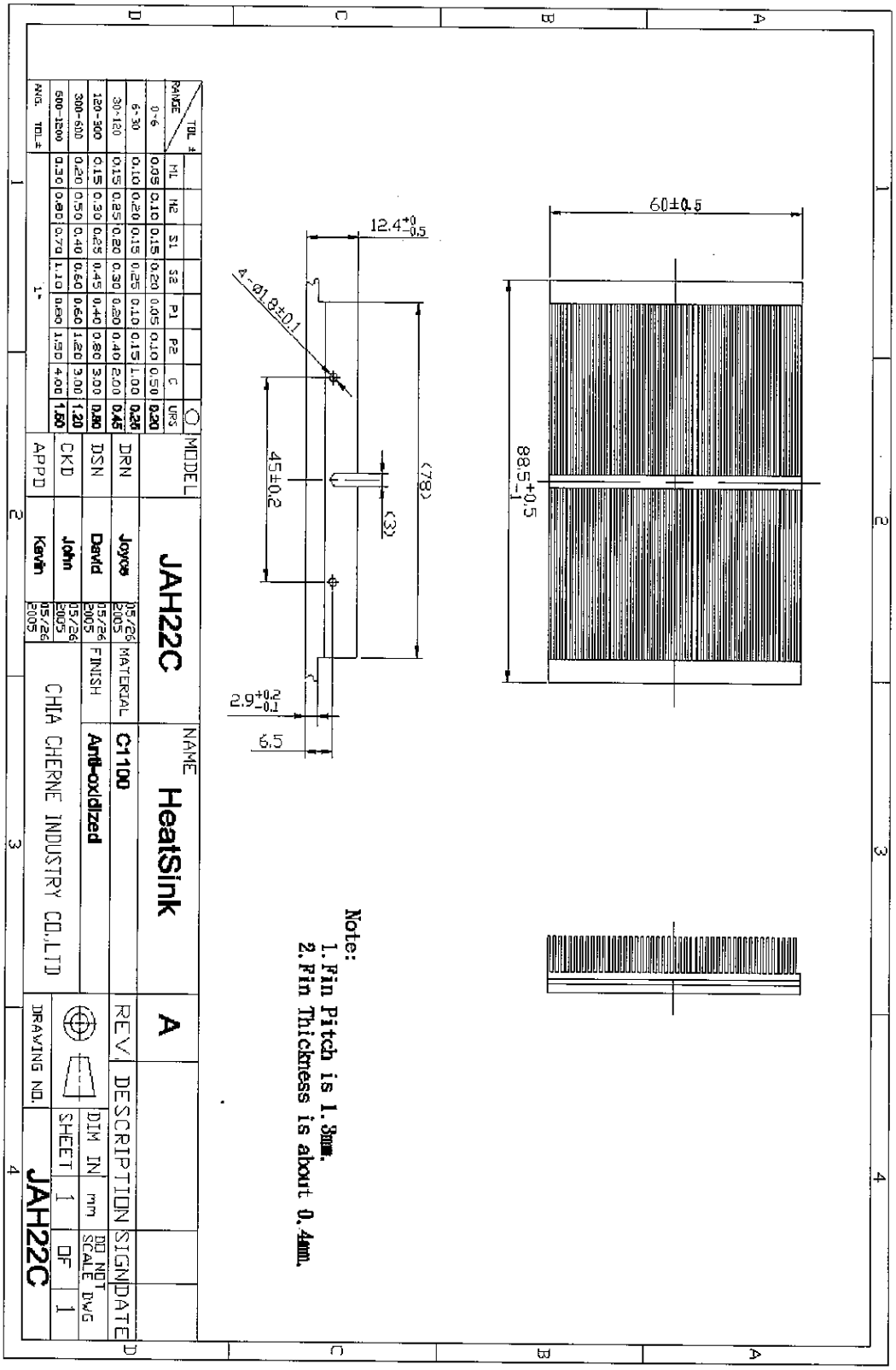


Enclosure

Diagrams

Supplement Id	Description
4-01	Heaksink of CPU

Diagrams ID 4-01



Enclosure

Test Record

Description
Test Record 1
CRD
Datasheet

Test Record No. 1

- The results of this investigation indicate that the products evaluated comply with the applicable requirements in the U.S. and Canadian (Bi-National) Standard for Information Technology Equipment - Safety - Part 1: General Requirements, CAN/CSA-C22.2 No. 60950-1-03 * UL 60950-1, First Edition, including revisions through revision date November 26, 2003. - The manufacturer submitted representative production samples of Industrial Computer , Models IPC-5120XXX-XXXXX, IPC-7120XXX-XXXXX, SYS-4W5120XXX-XXXXX and SYS-7W7120XXX-XXXXX. - Tests performed on Model IPC-5120XXX-XXXXX was considered to be representative of Models IPC-7120XXX-XXXXX. - Unless otherwise noted, all tests were conducted by Advanced Data Technology Corporation, and under the CAP program. - Tests noted by the intials "UL" were witnessed by UL staff member.

The following tests were conducted:

Test	Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	"UL"
Limited Power Source Measurements (2.5)	"UL"
Earthing II (2.6.3.4, 2.6.1)	
Humidity (2.9.1, 2.9.2, 5.2.2)	
Stability (4.1)	
Steady Force (4.2.1 - 4.2.4)	
Impact (4.2.5, 4.2.1)	"UL"
Battery Overcharge/Discharge (4.3.8)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Touch Current (Single-Phase/ Polyphase; TN/TT System) (5.1, Annex D)	
Electric Strength (5.2.2)	"UL"
Abnormal Operation (5.3.1 - 5.3.8.2)	
Overload of Operator Accessible Connector (5.3.6)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard.