

COVER PAGE FOR TEST REPORT

Product Category:	Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	NWQQ2, NWQQ8
Test Procedure:	Component Recognition
Product:	Mother Board
Model/Type Reference:	PCA-6002XX-XXXX, PCA-6003XX-XXXX, PCA-6004XX-XXXX, PCA-6005XX-XXXX, PCA-6178XX-XXXX, PCA-6179XX-XXXX, PCA-6180XX-XXXX, PCA-6181XX-XXXX, PCA-6183XX-XXXX, PCA-6184XX-XXXX, PCA-6185XX-XXXX, PCA-6186XX-XXXX, PCA-6277XX-XXXX, PCA-6278XX-XXXX, PCA-6359XX-XXXX, where X may be any alphanumeric character or blank.
Rating(s):	+ 5 Vdc / + 12 Vdc / + 5 Vsb
Standards:	UL60950, Third Edition (2000)
Applicant Name and Address:	ADVANTECH CO LTD 4TH FL 108-3 MING-CHUAN RD SHING-TIEN CITY TAIPEI HSIEN TAIWAN
This Report includes the following parts, in addition to this cover page:	
<ol style="list-style-type: none">1. Specific Inspection Criteria2. Specific Technical Criteria3. Clause Verdicts4. Critical Components5. Test Results6. National Differences7. Enclosures	

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

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UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Pursuant to the Corporate Services Agreement between UL International Services Limited and UL, UL hereby accepts and issues this Test Report.

Test Report By:

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SPECIFIC INSPECTION CRITERIA

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


BB1.0	Supporting Documentation
BB1.1	<p>The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:</p> <p>A. Authorization - The Authorization page may include additional Factory Identification Code markings.</p> <p>B. Generic Inspection Instructions -</p> <ul style="list-style-type: none"> 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. ii. 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 UL60950, Third Edition (2000).	
Standard Clause	Clause Title	Marking or Instruction Details
1.7.1	Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File
	Power rating - Model	Model Number
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.							
					Test Potential			
	Model	Component	Removable Parts	Test probe location	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 be 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	
Safety of information technology equipment	
Report Reference No	E180881-A11-UL-1
Compiled by	Alex Liang
Reviewed by	Alien Wang
Date of issue	2003-06-26
Standards	UL60950, Third Edition (2000)
Test procedure	Component Recognition
Non-standard test method	N/A
Test item description	Mother Board
Trademark	ADVANTECH Co., Ltd.
	
Model and/or type reference	PCA-6002XX-XXXX, PCA-6003XX-XXXX, PCA-6004XX-XXXX, PCA-6005XX-XXXX, PCA-6178XX-XXXX, PCA-6179XX-XXXX, PCA-6180XX-XXXX, PCA-6181XX-XXXX, PCA-6183XX-XXXX, PCA-6184XX-XXXX, PCA-6185XX-XXXX, PCA-6186XX-XXXX, PCA-6277XX-XXXX, PCA-6278XX-XXXX, PCA-6359XX-XXXX, where X may be any alphanumeric character or blank.
Rating(s)	+ 5 Vdc / + 12 Vdc / + 5 Vsb

Particulars: test item vs. test requirements

Equipment mobility: for building-in
Operating condition: continuous
Mains supply tolerance (%): No direct connection
Test for IT power systems: N/A
IT testing, phase-phase voltage (V): N/A
Class of equipment: Class III (supplied by SELV)
Mass of equipment (kg): < 0.6 kg
Protection against ingress of water: IP X0

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 mounted on PWB.	
CC1.0	Model Differences	
CC1.1	Models PCA-6002XX-XXXX, PCA-6003XX-XXXX, PCA-6004XX-XXXX, PCA-6005XX-XXXX, PCA-6178XX-XXXX, PCA-6179XX-XXXX, PCA-6180XX-XXXX, PCA-6181XX-XXXX, PCA-6183XX-XXXX, PCA-6184XX-XXXX, PCA-6185XX-XXXX, PCA-6186XX-XXXX, PCA-6277XX-XXXX, PCA-6278XX-XXXX, and PCA-6359XX-XXXX are identical to Model PCA-6186XX-XXXX except for SELV circuitry and model designation.	
CD1.0	Additional Information	
CD1.1	N/A	
CE1.0	Engineering Consideration	
CE1.2	The product was submitted and tested for use at the manufacturer's recommended ambient temperature (Tmra) of	60 degree C
CF1.0	Engineering Conditions of Acceptability	
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:	
CF1.5	The following secondary output circuits are SELV	All output connectors.
CF1.11	The power supply terminals and/or connectors are	Suitable for factory wiring only
CF1.13	The investigated Pollution Degree is.....	2
CF1.19	The following end-product enclosures are required	Electrical, Fire, Mechanical

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		Pass
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1.5	Components		Pass
1.5.1	Comply with IEC 950 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 not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950 and the relevant component Standard. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950.	Pass
	Dimensions (mm) of mains plug for direct plug-in :	Not direct plug-in unit.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N/A
1.5.3	Thermal controls	There are no thermal controller used.	N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors in primary circuits.....		N/A
1.5.7	Double or reinforced insulation bridged by components		N/A
1.5.7.1	Bridging capacitors		N/A
1.5.7.2	Bridging resistors		N/A
1.5.7.3	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	Power Interface		N/A
1.6.1	AC power distribution systems	The unit intended to be supplied by SELV.	N/A
1.6.2	Input current		N/A
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Marking and Instructions		Pass
1.7.1	Power rating	Unit not provided with means for connection to mains.	N/A
	Rated voltage(s) or voltage range(s) (V)	Optional/ See Cover page.	Pass
	Symbol for nature of supply for d.c.		N/A
	Rated frequency or frequency range (Hz)	dc	N/A
	Rated current (A)	Optional.	Pass
	Manufacturer's name/Trademark.....	Advantech Co., Ltd.	Pass
	Type/model	Mother Board/ See Cover page.	Pass
	Symbol of Class II		N/A
	Other symbols	Additional symbols may be provided when submitted for National Approval.	Pass
	Certification marks	UL, C-UL.	Pass
1.7.2	Safety instructions	Safety instructions in English. Other languages will be provided when submitted for national approval.	Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment.....		N/A
1.7.5	Power outlets on the equipment		N/A
1.7.6	Fuse identification		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A
1.7.8	Controls and indicators		N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours.....		N/A
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources.....		N/A
1.7.10	IT power system		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.11	Thermostats and other regulating devices	No thermostats or similar 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		N/A
1.7.15	Replaceable batteries	(see appended table 1.5.1)	Pass
	Language	The required warning is placed in the service manual.	-
1.7.16	Operator access with a tool	No operator access areas require the use of a tool.	N/A
1.7.17	Equipment for restricted access locations	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	N/A
2	PROTECTION FROM HAZARDS		Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in OPERATOR access areas		Pass
2.1.1.1	Access to energized parts	The unit intended to be supplied by SELV and all circuits are SELV.	Pass
	Test by inspection		N/A
	Test with test finger		N/A
	Test with test pin		N/A
	Test with test probe.....		N/A
2.1.1.2	Battery compartments.....		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V); distance (mm) through insulation		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards.....		N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in the primary circuit		N/A
	Time-constant (s); measured voltage (V)		-
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	SELV Circuits		Pass
2.2.1	General requirements	The unit intended to be supplied by SELV and all circuits are SELV.	Pass
2.2.2	Voltages under normal conditions (V)		N/A
2.2.3	Voltages under fault conditions (V)		N/A
2.2.3.1	Separation by double or reinforced insulation (method 1)		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		N/A

2.3	TNV Circuits		N/A
2.3.1	Limits		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			
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 (μ F)		-
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited Power Sources		N/A
	Inherently limited output		N/A
	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)		-
	Current rating of overcurrent protective device (A) :		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	Provisions for Earthing and Bonding		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG.....:		-
2.6.3.2	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG.....:		-
2.6.3.3	Rated current (A), type and nominal thread diameter (mm).....:		N/A
	Resistance (Ohm) of earthing conductors and their terminations, test current (A).....:		N/A
2.6.3.4	Colour of insulation		N/A
2.6.4	Terminals		N/A
2.6.4.1	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm).....:		-
2.6.4.2	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and Earth Fault Protection in Primary Circuits		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices.....:		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel:		N/A

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	Interlocks with moving parts		N/A
2.8.6	Overriding an interlock		N/A
2.8.7	Switches and relays in interlock systems		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 (V)		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.9	Electrical Insulation		Pass
2.9.1	Properties of insulating materials	Supplied by SELV and no hazardous voltages are generated.	N/A
2.9.2	Humidity conditioning		N/A
2.9.3	Requirements for insulation		N/A
2.9.4	Insulation parameters		N/A
2.9.5	Categories of insulation	Only functional insulation. See 5.3.4.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.10	Clearances, Creepage Distances and Distances Through Insulation		Pass
2.10.1	General	The unit is supplied by SELV, limited power source and considered comply with requirement of 5.3.4. Pollution degree 2 applicable.	Pass
2.10.2	Determination of working voltage		N/A
2.10.3	Clearances	Only functional insulation. See 5.3.4.	N/A
2.10.3.1	General		N/A
2.10.3.2	Clearances in primary circuit		N/A
2.10.3.3	Clearances in secondary circuits		N/A
2.10.3.4	Measurement of transient levels		N/A
2.10.4	Creepage distances	Only functional insulation. See 5.3.4.	N/A
	CTI tests.....:		-
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		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		N/A
	Number of layers (pcs).....:		N/A
	Two wires in contact inside 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			
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 $T_1 = T_2 + T_{mra} - T_{amb} + 10K$ (°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

3	WIRING, CONNECTIONS AND SUPPLY	Pass
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3.1	General	Pass
3.1.1	Current rating and overcurrent protection	Pass
3.1.2	Protection against mechanical damage	N/A
3.1.3	Securing of internal wiring	N/A
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	Non-metallic materials in electrical connections	N/A
3.1.8	Self-tapping and spaced thread screws	N/A
3.1.9	Termination of conductors	N/A
	10 N pull test	N/A
3.1.10	Sleeving on wiring	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to A.C. Mains Supplies		N/A
3.2.1	Means of connection.....:		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		N/A
3.2.5	Power supply cords		N/A
	Type.....:		-
	Rated current (A), cross-sectional area (mm ²),AWG.....:		-
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		N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g).....:		-
	Radius of curvature of cord (mm).....:		-
3.2.9	Supply wiring space		N/A

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	Rated current (A), cord/cable type, cross-sectional area (mm ²).....:		N/A
3.3.5	Rated current (A), type and nominal thread diameter (mm).....:		N/A
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

3.4	Disconnection From the A.C. Mains Supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
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		N/A
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

3.5	Interconnection of Equipment		N/A
3.5.1	General requirements		N/A
3.5.2	Types of interconnection circuits.....:		N/A
3.5.3	ELV circuits as interconnection circuits		N/A

4	PHYSICAL REQUIREMENTS		N/A
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4.1	Stability		N/A
	Angle of 10°		N/A
	Test: force (N)		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
4.2	Mechanical strength		N/A
4.2.1	General		N/A
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		N/A
4.2.5	Impact test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief		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			
Clause	Requirement + Test	Result - Remark	Verdict

4.3	Design and Construction		N/A
4.3.1	Edges and corners		N/A
4.3.2	Handles and manual controls; force (N)		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection of plugs and sockets		N/A
4.3.6	Direct plug-in equipment		N/A
	Torque (Nm).....		-
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
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		N/A
	Equipment using lasers		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		N/A
4.5.1	Temperature rises		N/A
	Normal load condition per Annex L.....		N/A
4.5.2	Resistance to abnormal heat		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.6	Openings in Enclosures		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm).....:		-
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom.....:		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature/time.....:		-

4.7	Resistance to Fire		N/A
4.7.1	Reducing the risk of ignition and spread of flame		N/A
4.7.2	Conditions for a fire enclosure		N/A
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		N/A
4.7.3.1	General		N/A
4.7.3.2	Materials for fire enclosures		N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
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IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Equipment under test (EUT)		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Test voltage (V)		-
	Measured current (mA)		-
	Max. allowed current (mA)		-
5.1.7	Equipment with touch current exceeding 3.5 mA ...		N/A
5.1.8	Touch currents to and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network		N/A
	Test voltage (V)		-
	Measured current (mA)		-
	Max. allowed current (mA)		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A

5.2	Electric Strength		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	Abnormal Operating and Fault Conditions		Pass
5.3.1	Protection against overload and abnormal operation		N/A
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
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		N/A
5.3.7	Unattended equipment		N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	Unit supplied by SELV and no hazardous Voltage generated within unit.	Pass

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
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6.1	Protection of telecommunication network service personnel, 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

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

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

6.3	Protection of Telecommunication Wiring System From Overheating		N/A
	Max. output current (A)		-
	Current limiting method.....		-

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
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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, material		-
	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			
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.2.6	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	High current arcing ignition test (see 4.7.3.2)		N/A
A.3.1	Samples, material		-
	Wall thickness (mm).....		-
A.3.5	Compliance criteria		N/A
	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)		-
	Sample 5 number of arcs to ignition (pcs)		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.4	Hot wire ignition test (see 4.7.3.2)		N/A
A.4.1	Samples, material		-
	Wall thickness (mm).....		-
A.4.5	Compliance criteria		N/A
	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
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A.6	Flammability tests for classifying materials V-0, V-1 or V-2		N/A
A.6.1	Samples, material		-
	Wall thickness (mm).....		-
A.6.5	Compliance criteria		N/A
A.6.6	Permitted retest		N/A

A.7	Flammability test for classifying foamed materials HF-1, HF-2 or HFB		N/A
A.7.1	Sample, material		-
	Wall thickness (mm).....		-
A.7.4	Compliance criteria		N/A
A.7.5	Compliance criteria, HF-2		N/A
A.7.6	Compliance criteria, HF-1		N/A
A.7.7	Compliance criteria, HBF		N/A
A.7.8	Permitted retest, HF-1 or HF-2		N/A
A.7.9	Permitted retest, HBF		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.8	Flammability test for classifying materials HB		N/A
A.8.1	Samples, material		-
	Sample thickness (mm)		-
A.8.2	Conditioning of samples; temperature (°C).....		N/A
A.8.4	Test procedure		N/A
A.8.5	Compliance criteria		N/A
A.8.6	Permitted retest		N/A

A.9	Flammability test for classifying materials 5V		N/A
A.9.1	Samples, material		-
	Sample thickness (mm)		-
A.9.4	Test procedure, test bars		N/A
A.9.5	Test procedure, test plaques		N/A
A.9.6	Compliance criteria		N/A
A.9.7	Permitted retest		N/A

A.10	Stress relief conditioning (see 4.2.7)		N/A
	Temperature (°C)		-

IEC 60950			
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 DC motors in secondary circuits		N/A
B.7	Locked-rotor overload test for DC motors in secondary circuits		N/A
B.7.1	Test procedure		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			
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

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.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
	Ionizing radiation		N/A
	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/A
	Metal used.....		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A
M.3.1.1	Frequency (f).....:		-
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

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

IEC 60950		
Clause	Requirement + Test	Result - Remark
		Verdict

TABLE: list of critical components							Pass	
1.5.1	Object/part No	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID	
S-1. Connectors and Receptacles (SEC.) (ELV, SELV)	Various		USB, PS/2, RJ-45, RS232.	--	RTRT2 or ECBT2	UL		
S-1. Connectors and Receptacles (SEC.) (ELV, SELV) - (Alternate)	--		--	Copper alloy pins housed in bodies of (QMFZ2), and V-2 minimum.	--	--		
S-2. Permanency of Marking	Various		Various	Permanently ink-stamped, silk-screened, molded in, or on self-adhesive labels.	--	--		
S-2-1. Labeling Materials	Various		Various	Rated for maximum surface temperature specified, or 40 degree C if not specified.	PGDQ2 or PGJ12	UL		
S-3. PWB	Various		Various	V-1 minimum, 105 degree C	ZPMV2	UL		
Real Time Clock Battery	Rayovac Corp.		Lithium/polycarbon monofluoride cells/ BR2325	Rated 3.3 V dc, maximum reverse current 5 mA. Reverse current protection is accomplished by series circuit of a blocking diode and a 1 K ohm resistor.	BBCV2	UL	7-01	

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)					N/A
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
supplementary information:						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements						N/A
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:							

2.10.5	TABLE: distance through insulation measurements				N/A
distance through insulation di at/of:		U r.m.s. (V)	test voltage (V)	required di (mm)	di (mm)
					.
supplementary information:					

4.5	TABLE: temperature rise measurements					N/A
	test voltage (V)					—
	t1 (°C)					—
	t2 (°C)					—
temperature rise dT of part/at:			dT (K)		required dT (K)	
temperature rise dT of winding:		R ₁ (Ω)	R ₂ (Ω)	dT (K)	required dT (K)	insulation class
supplementary information:						

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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

5.2	TABLE: electric strength tests and impulse tests		N/A
test voltage applied between:		test voltage (V)	breakdown Yes / No
supplementary information:			

IEC 60950						
Clause	Requirement + Test				Result - Remark	Verdict
5.3	TABLE: fault condition tests					Pass
	ambient temperature (°C)				--	---
	model/type of power supply.....				--	---
	manufacturer of power supply.....				--	---
	rated markings of power supply				--	---
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
Reverse Current Protection	R9 short	--	--	--	--	Reverse Current 0 mA.
Reverse Current Protection	D3 short	--	--	--	--	Reverse Current 3 mA.
Reverse Current Protection	U29 Pin 40 - Pin 41 short	--	--	--	--	Reverse Current 0 mA.
Reverse Current Protection	D25 short	--	--	--	--	Reverse Current 0 mA.
supplementary information:						
Rayovac Corp. Lithium/polycarbon monofluoride cells, Model BR2325, Rated 3.3 V dc, maximum reverse current 5 mA.						

A.6.5	TABLE: flammability test for classifying materials V-0, V-1 or V-2		N/A
sample No. / ref.	afterflame time (s) t_1 or t_2	afterflame + afterglow (s) after 2nd flame application $t_2 + t_3$	
supplementary information:			

A.6.6	TABLE: flammability re-test for classifying materials V-0, V-1 or V-2		N/A
sample No.	afterflame time (s) t_1 or t_2	afterflame + afterglow (s) after 2nd flame application $t_2 + t_3$	
supplementary information:			

IEC 60950				
Clause	Requirement + Test		Result - Remark	Verdict
A.7.4, A.7.5, A.7.6 and A.7.7	TABLE: flammability test for classifying foam materials HF-1, HF-2 or HBF			N/A
sample No. / ref.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment (for A.7.7 burning rate mm/min)
supplementary information:				

A.7.8	TABLE: flammability re-test for classifying foam materials HF-1 or HF-2			N/A
sample No.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment
supplementary information:				

A.7.9	TABLE: flammability re-test for classifying foam materials HBF			N/A
sample No.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment (for A.7.7 burning rate mm/min)
supplementary information:				

A.8.5	TABLE: flammability test for classifying materials HB		N/A
sample No.	flaming/glowing rate mm/min	flaming/glowing distance from reference mark (mm)	
supplementary information:			

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.8.6	TABLE: flammability re-test for classifying materials HB		N/A
sample No.	flaming/glowing rate mm/min	flaming/glowing distance from reference mark (mm)	
supplementary information:			

A.9.6	TABLE: flammability test for classifying materials 5V				N/A
sample	test bars		test plaques		
No./ref.	flaming + glowing time (s)	burning distance (mm)	position	flaming + glowing time (s)	burning distance (mm)
supplementary information:					

A.9.7	TABLE: flammability re-test for classifying materials 5V				N/A
sample	test bars		test plaques		
No.	flaming + glowing time (s)	burning distance (mm)	position	flaming + glowing time (s)	burning distance (mm)
supplementary information:					

Enclosure
National Differences

(Total 10 Pages including this Cover Page)

USA / Canada

- * No National Differences Declared
- ** Only Group Differences

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC60950, Third Edition (1999)			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1.		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
1.5.1	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		N/A
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 which 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
1.7.1	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

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
1.7.2	Wiring terminals supplying Class 2 outputs marked with voltage rating and "Class 2" or equivalent		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses		N/A
1.7.6	Lamp replacement information indicated on lampholder in operator access area		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor		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		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 the 2000 Ohm 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
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or the Limited Power Source definition, not interchangeable with devices of higher ratings if operator replaceable		N/A
2.5	VA for limited power source measured after 60 s of operation		N/A
2.6	Protective earthing terms applied per CEC, Part 1, Sec. 0 and NEC Art. 100		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
2.6	Units having receptacles for output a.c. power connectors which are generated from an internal separately derived source have the grounded circuit conductor suitably bonded to earth		N/A
2.6.3.3	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
2.6.3.3	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.4		N/A
2.6.4.1	Field wiring terminals for earthing conductors must be 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 appliance		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 wire requirements in addition to 2.10.5.4 and Annex U		N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection		N/A
3.1.1	All interconnecting cables protected against overcurrent and short circuit		N/A
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		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
3.2.1	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
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm ²) 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 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 must be provided to ensure the wiring is protected from abuse		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 1.5 to 4.5 m unless shorter length used when intended for a special installation		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I		N/A
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 to properly make the field connections		N/A
3.3	Field wiring terminals provided for interconnection of units for other than 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

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
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 connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention		N/A
3.3.4	Terminals suitable to 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
3.3.8	Connectors and field wiring terminals involving external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used		N/A
3.3.8	Marking located adjacent to terminals and visible during wiring		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
3.4.10	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means		N/A
3.6	Connections to a centralized DC power system comply with requirements for branch circuits in Sub-clause 3.2		N/A
3.6	Earthing of d.c. powered equipment provided		N/A
3.6	Overcurrent and earth fault protection in accordance with 2.7 either provided in equipment or as part of building installation		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
3.6	Equipment with earthed terminal (terminal for the grounded conductor) of power source connected to frame of the unit provided with special instructions and provision for earthing		N/A
3.6	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
3.6	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
3.6	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment		N/A
3.6	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
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 comply with UL 1310 or CSA 223 mechanical assembly requirements		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment comply with ANSI/NFPA 30(Table NAE. 7)		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used		N/A
4.3.13	Equipment which produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible		N/A
4.3.13	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370)		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
4.7.1	Automated information storage equipment intended to contain more than 0.76 mm ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system		N/A
4.7.3	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		N/A
4.7.3	Low smoke-producing characteristics evaluated according to UL 2043		N/A
4.7.3	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		N/A
5.1.8.1.1	Touch current due to ringing voltage for equipment containing telecommunication network leads		N/A
5.1.8.2	When multiple ports receive ringing voltage, simulated ringing applied to 3 % if ports in excess of 3		N/A
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections		N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator	Evaluated at end product use.	N/A
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 continued by shorting gap		N/A
6	Specialized instructions, as appropriate, provided for equipment which may be connected to a telecommunications network		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network		N/A

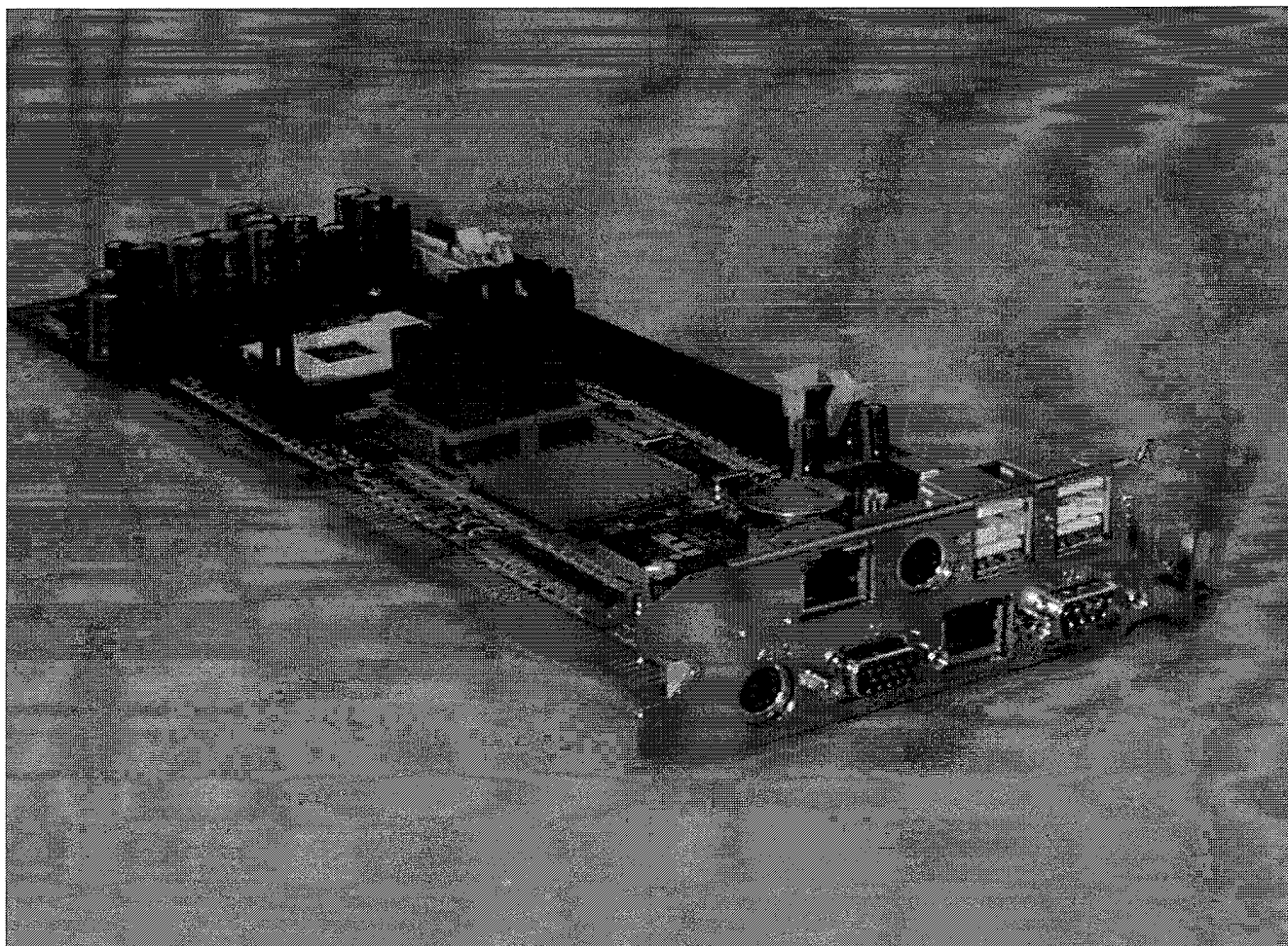
IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts connected to telecommunication network and telecommunication circuitry intentionally isolated from network		N/A
6.2.1	Digital line termination 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
Annex NAB	Equipment intended for connection to centralized d.c. power systems is required to comply with special earthing, wiring, and supply voltage tolerance requirements		N/A
Annex NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions		N/A
Annex NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions		N/A
H	Ionizing radiation measurements are 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

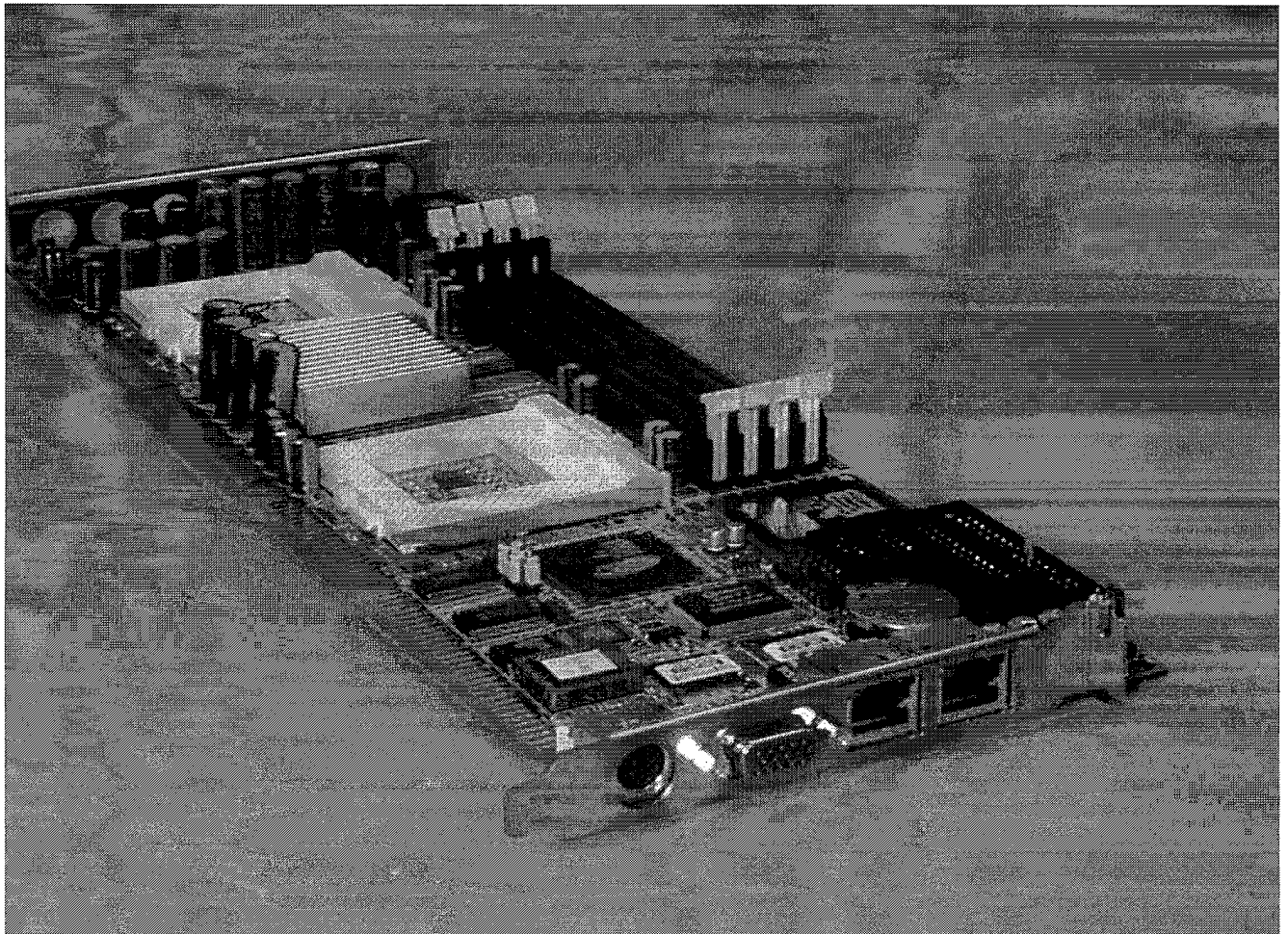
IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
M.4	Special requirements for message waiting and similar telecommunications signals		N/A

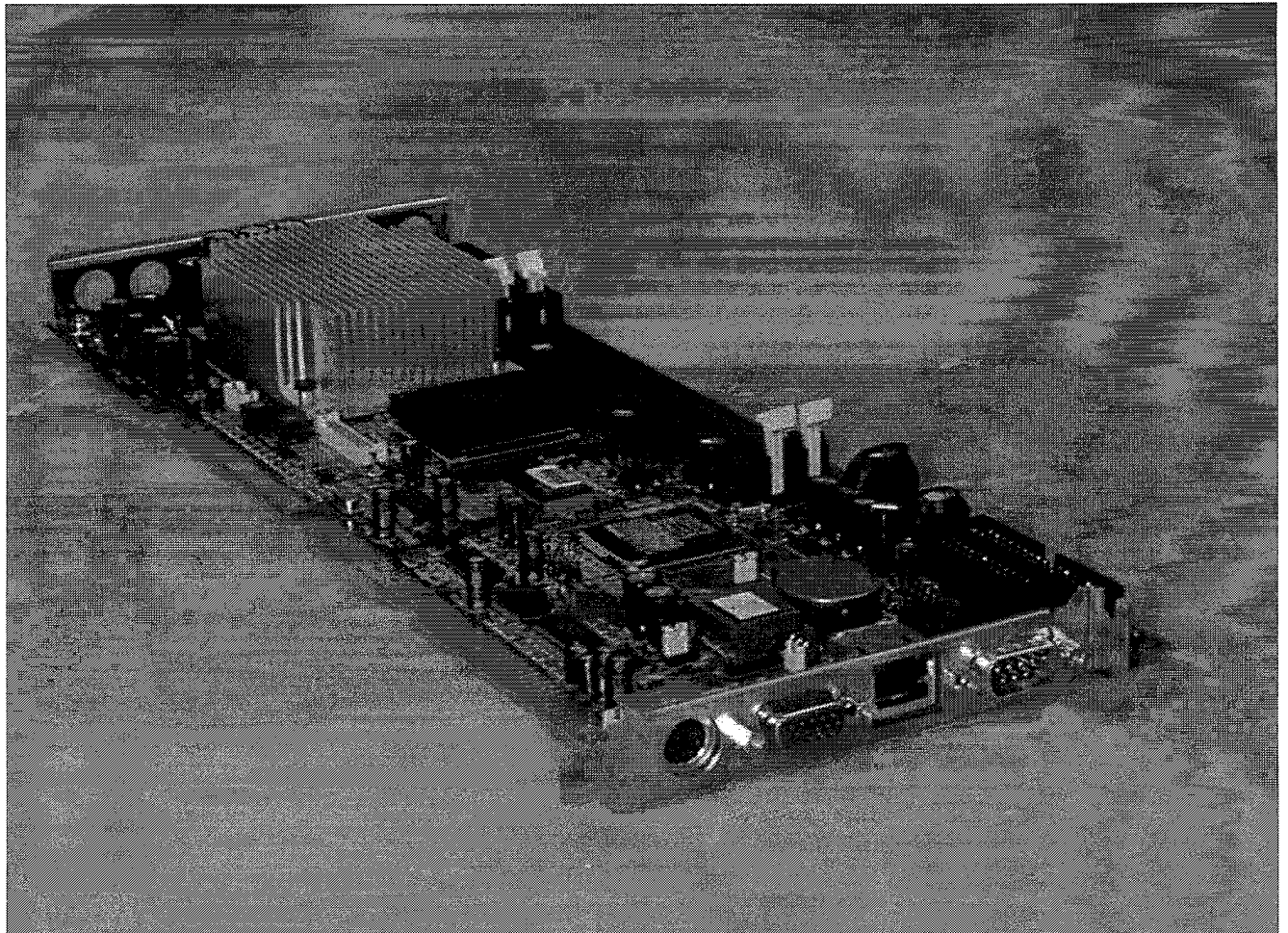
Enclosure
Photographs

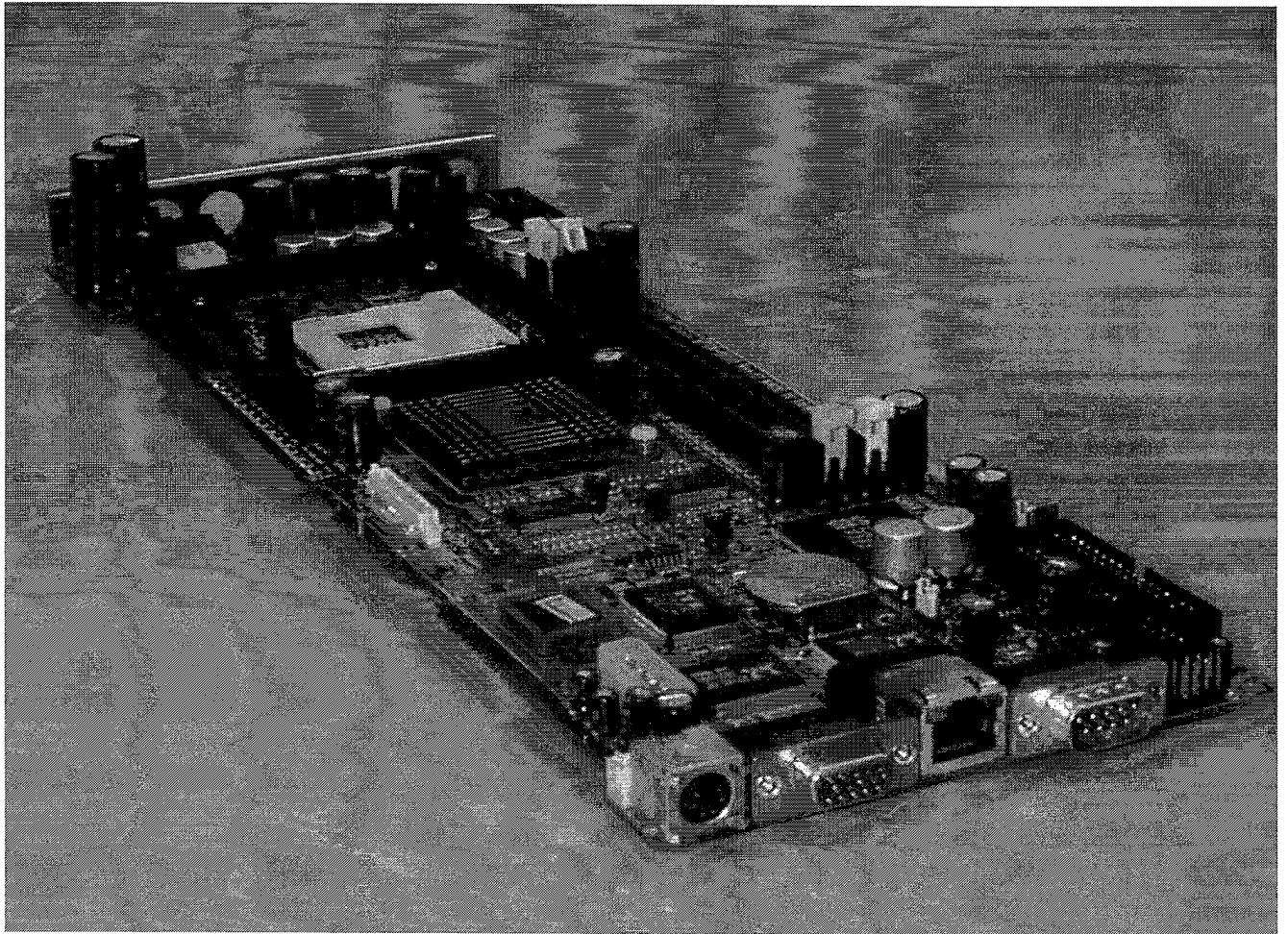
(Total 16 Pages including this Cover Page)

Supplement Id	Description
3-01	PCA-6002XX-XXXX
3-02	PCA-6003XX-XXXX
3-03	PCA-6004XX-XXXX
3-04	PCA-6005XX-XXXX
3-05	PCA-6178XX-XXXX
3-06	PCA-6179XX-XXXX
3-07	PCA-6180XX-XXXX
3-08	PCA-6181XX-XXXX
3-09	PCA-6183XX-XXXX
3-10	PCA-6184XX-XXXX
3-11	PCA-6185XX-XXXX
3-12	PCA-6186XX-XXXX
3-13	PCA-6277XX-XXXX
3-14	PCA-6278XX-XXXX
3-15	PCA-6359XX-XXXX

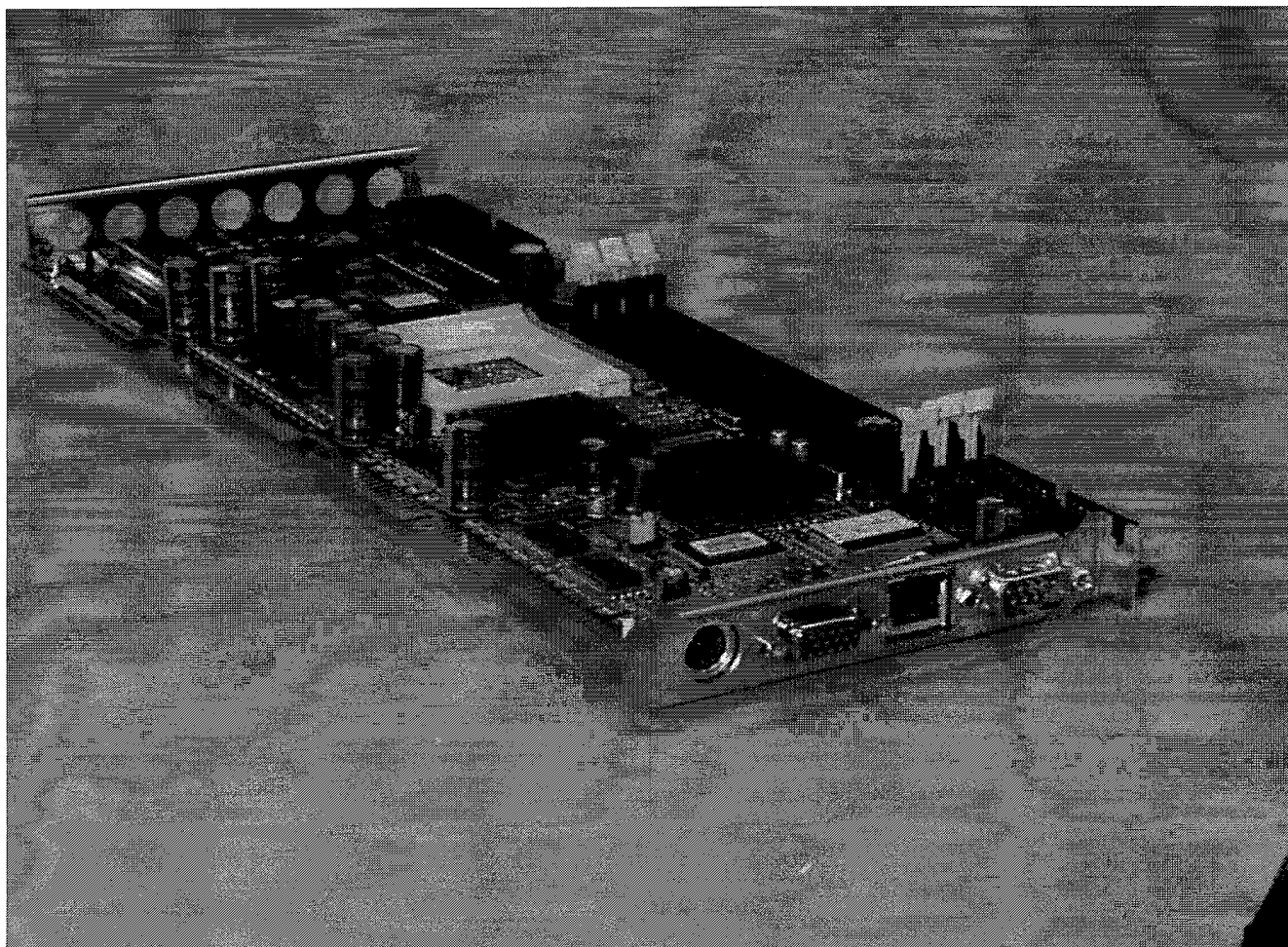


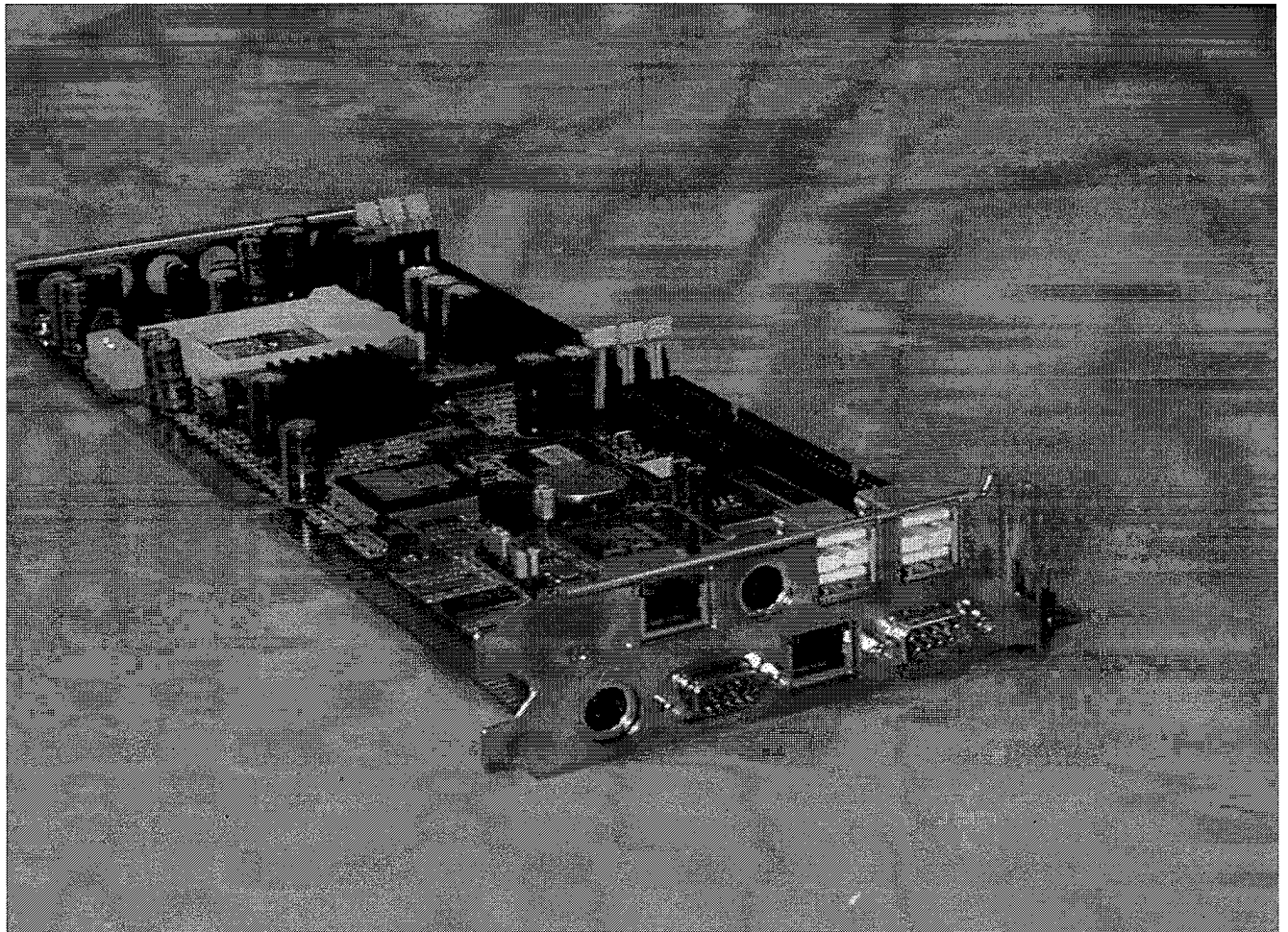


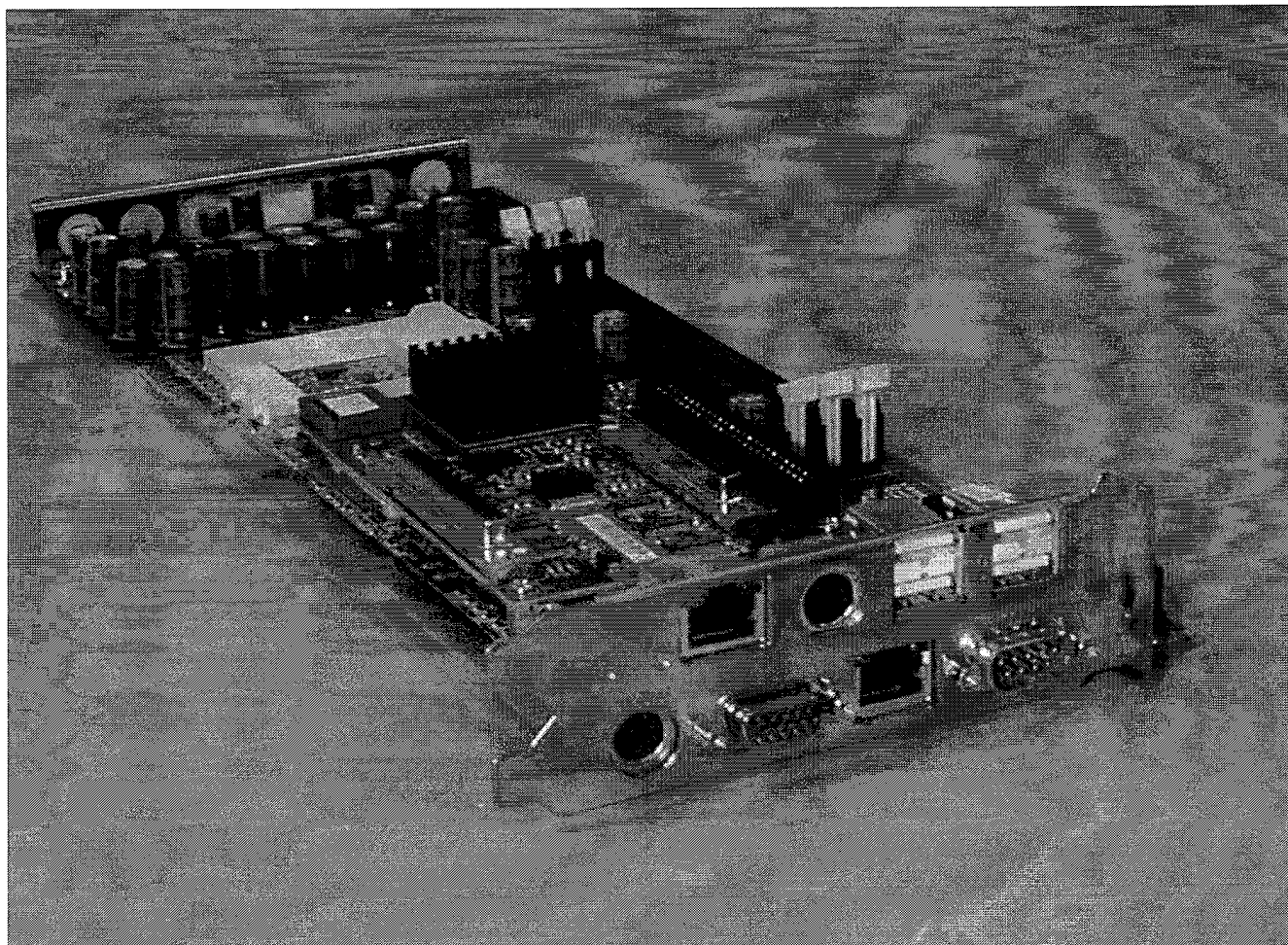


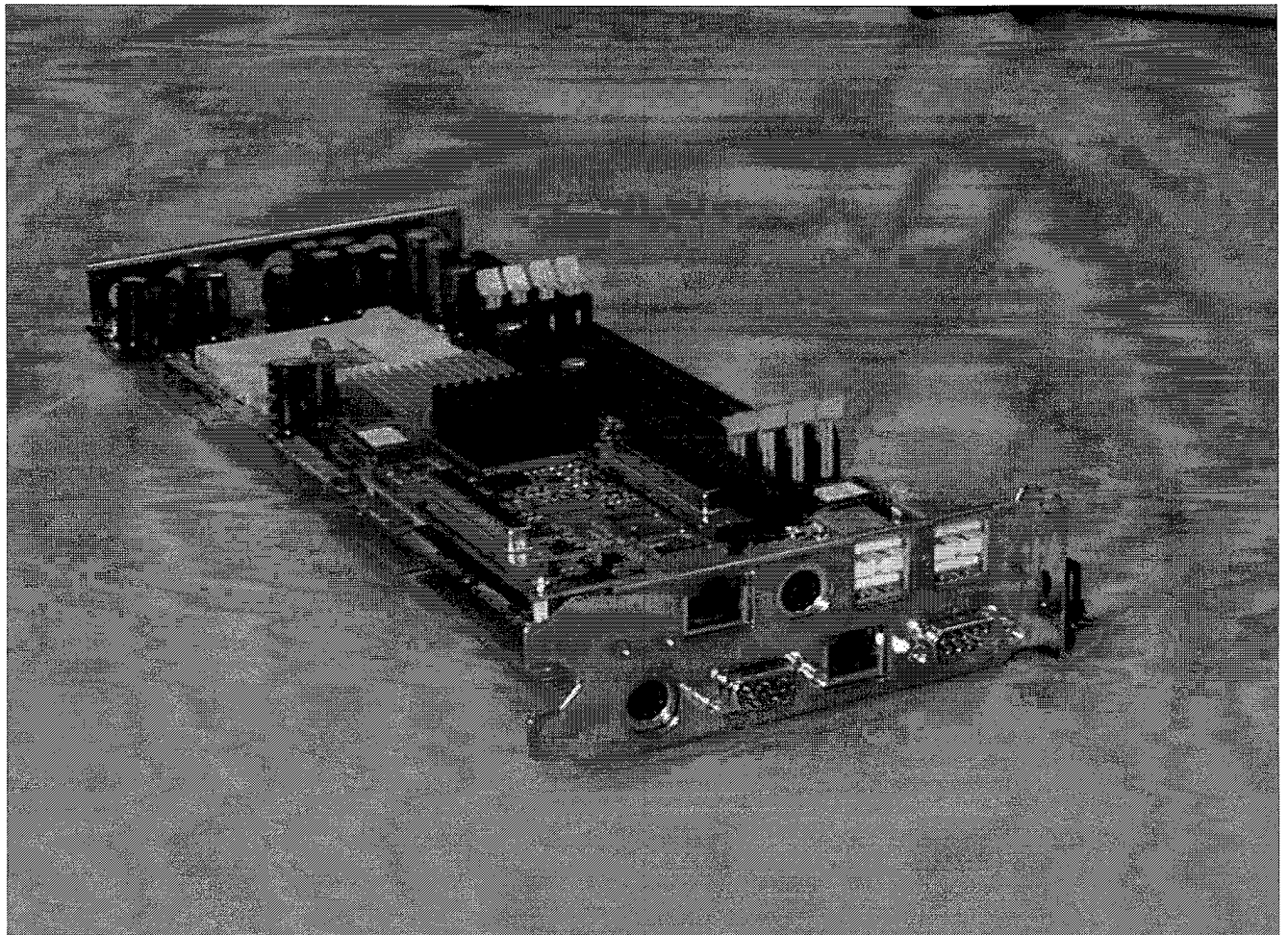


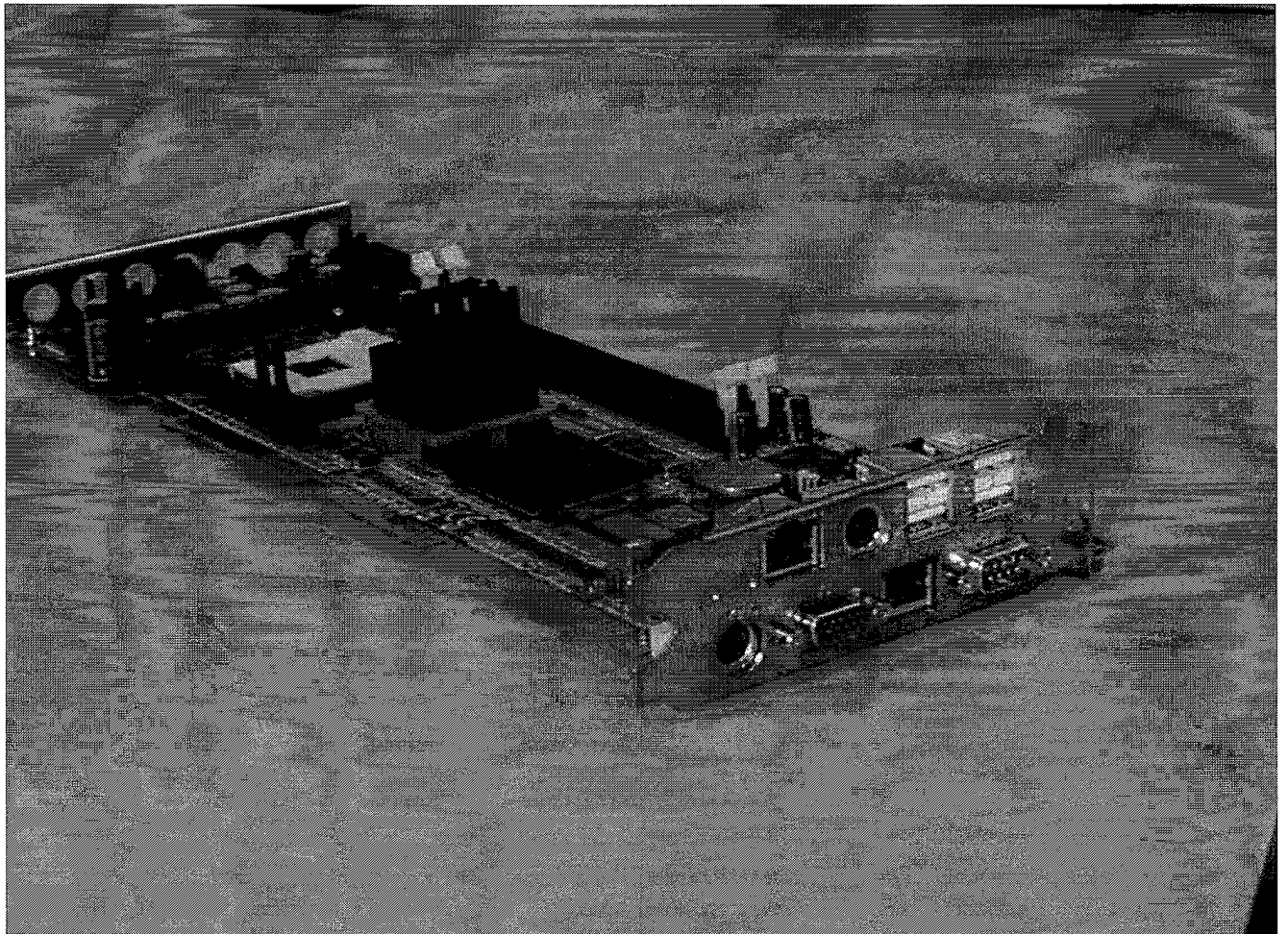


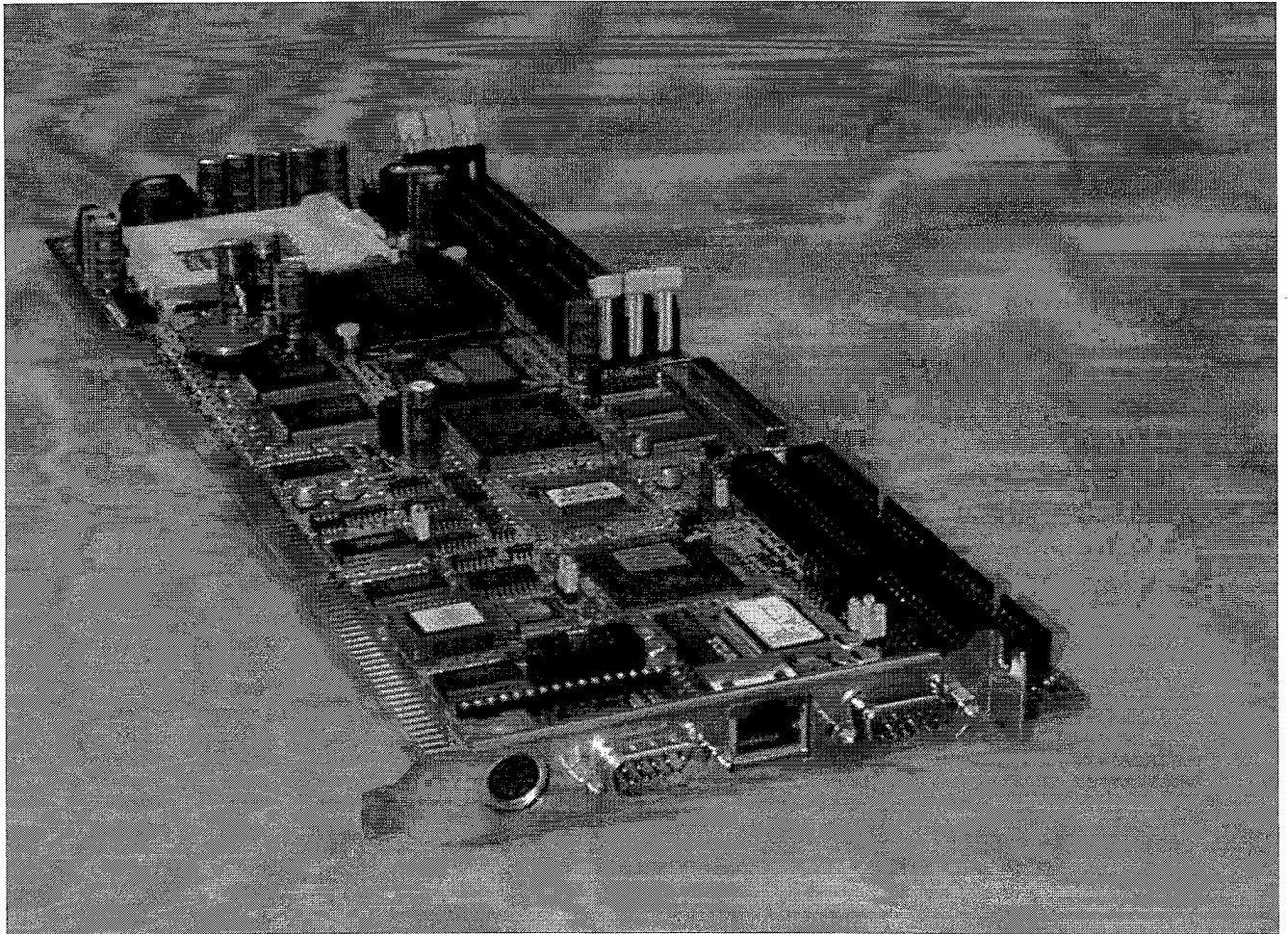


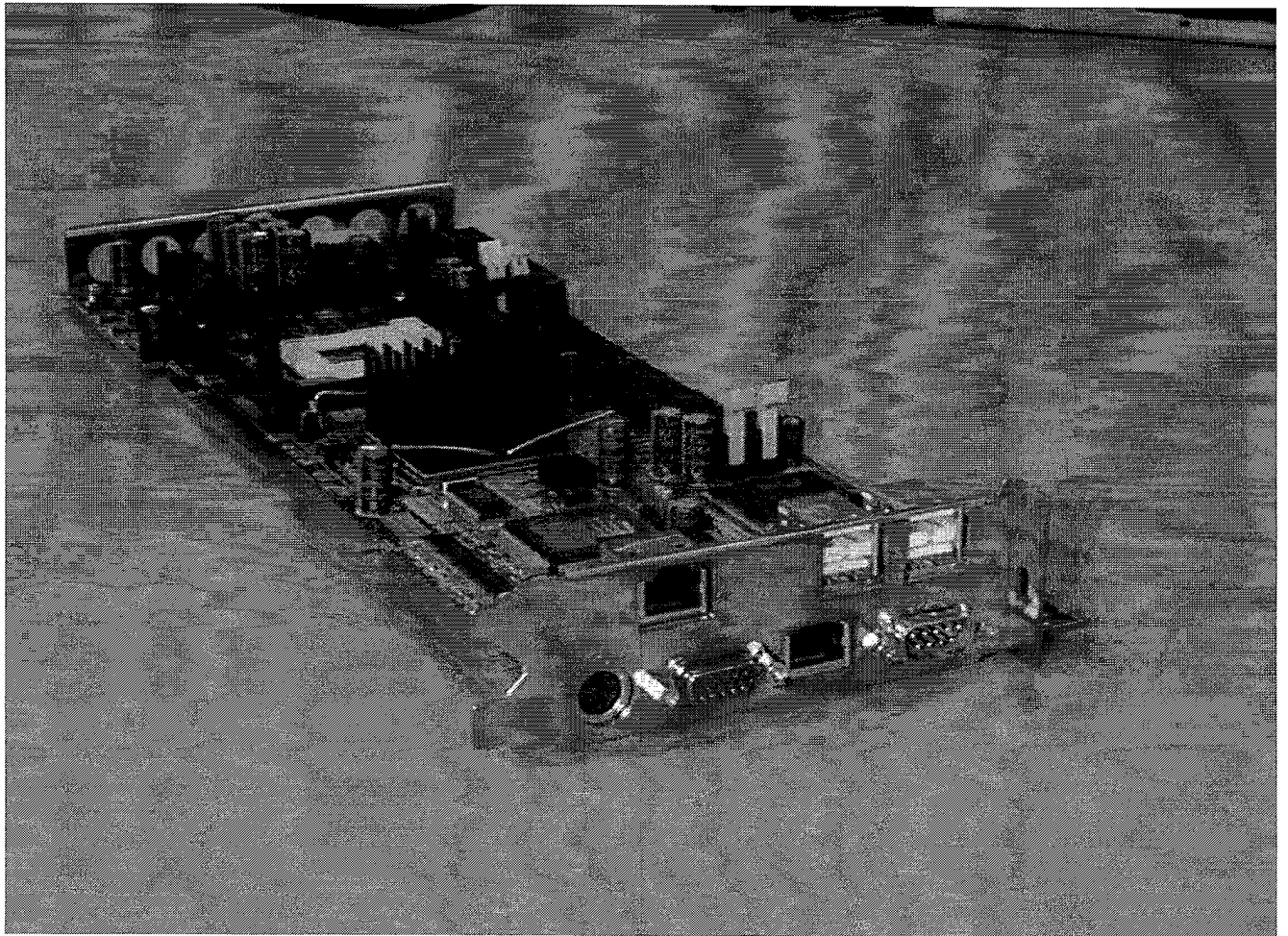


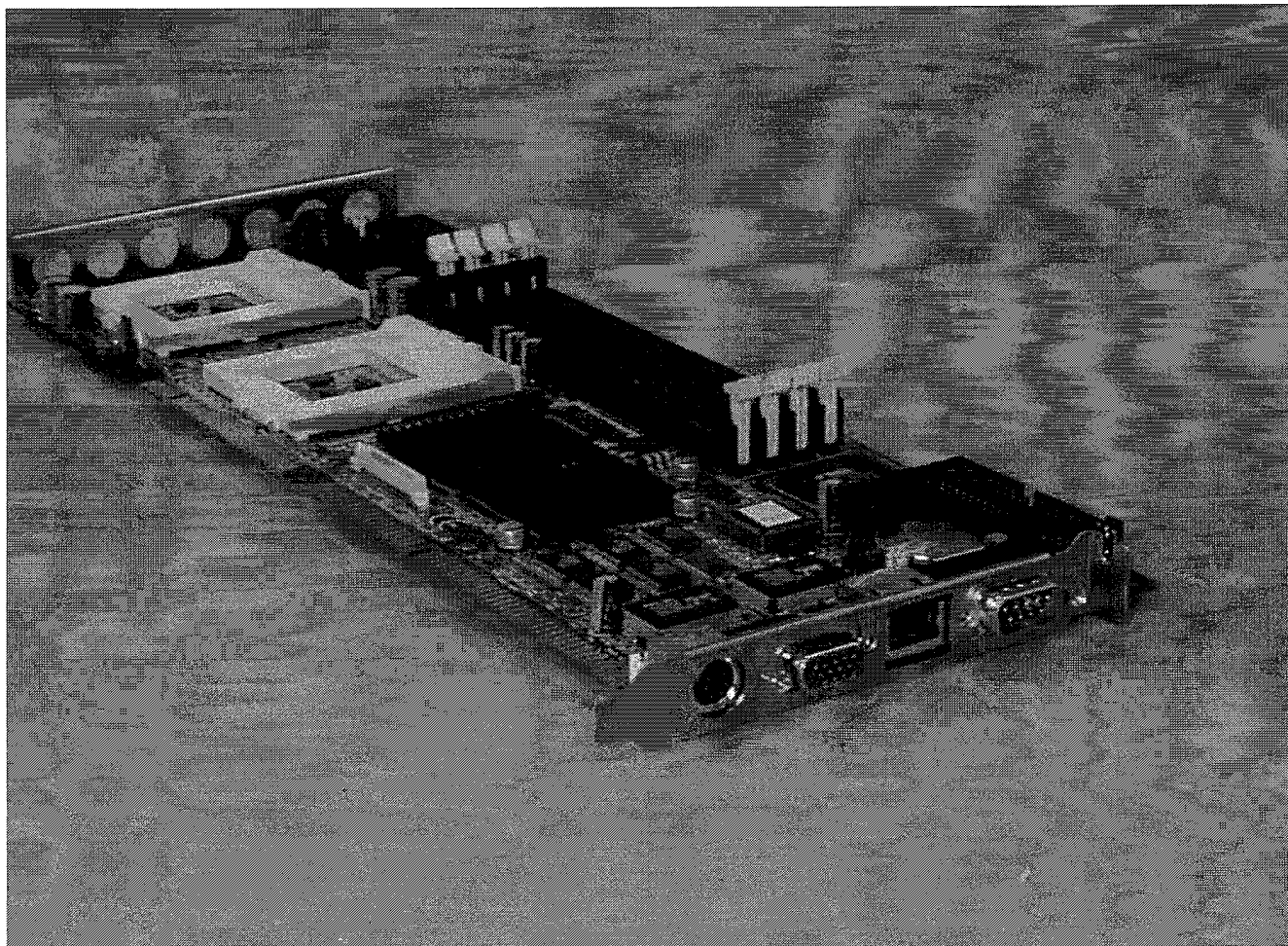


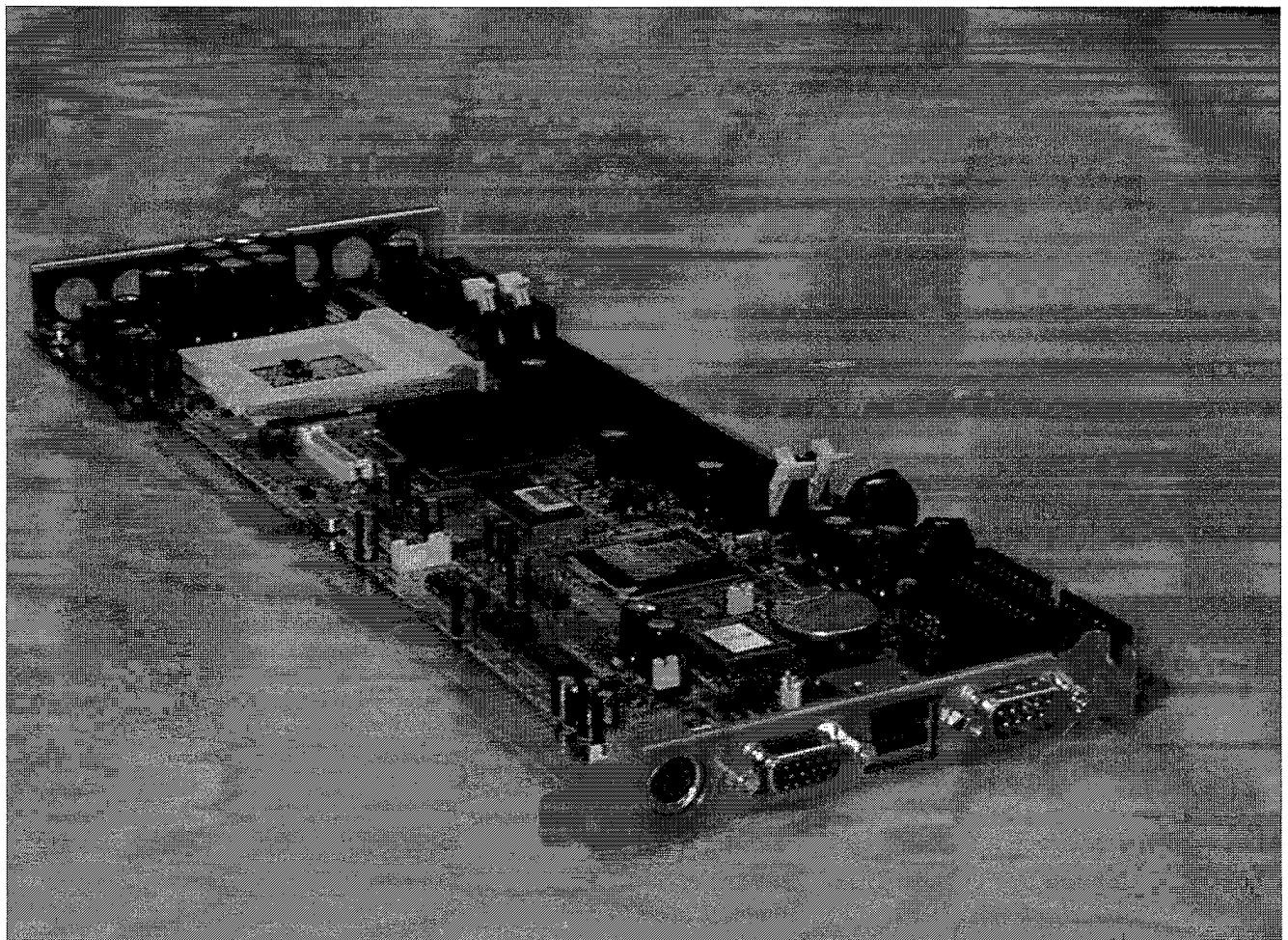


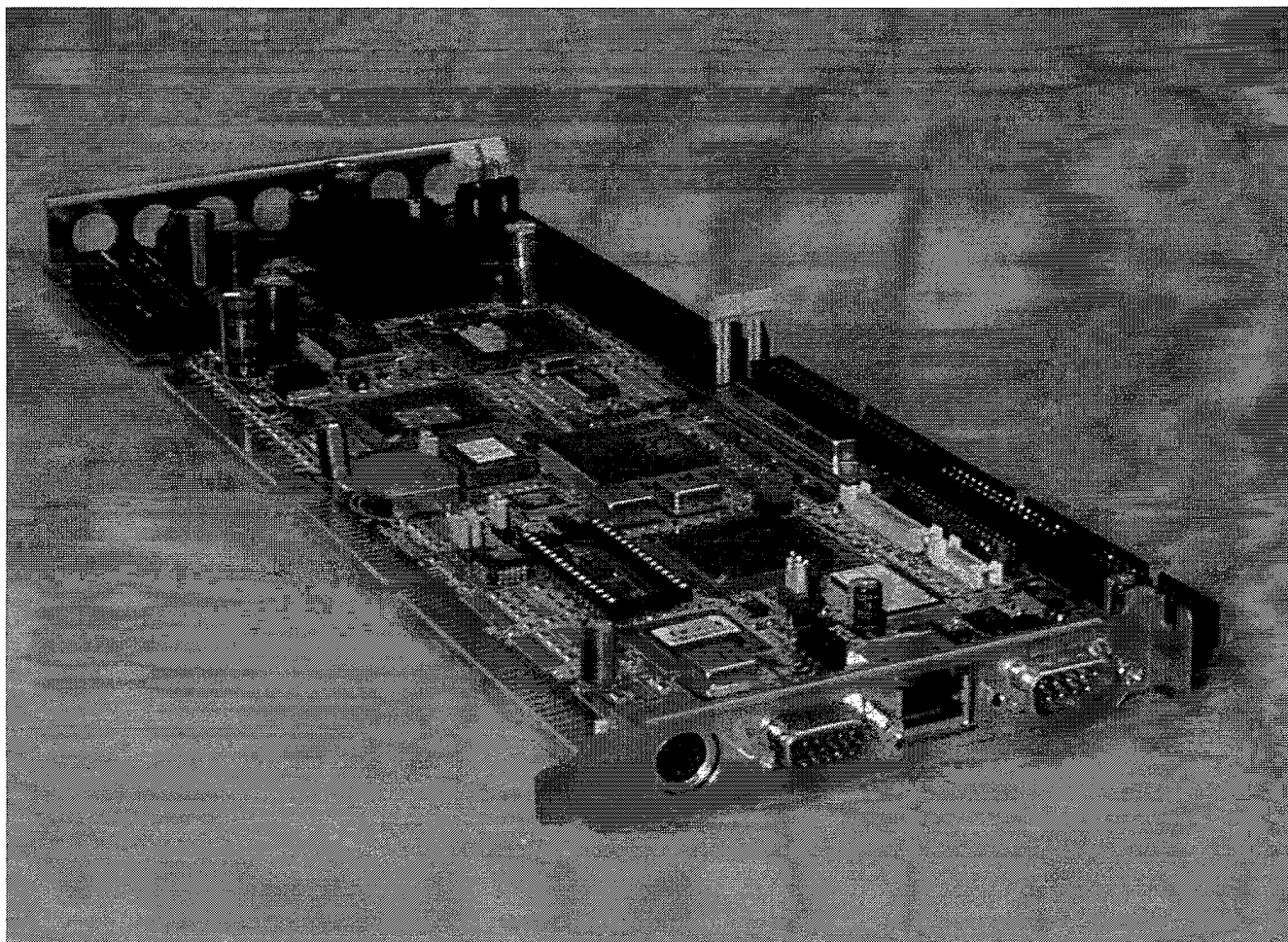












Enclosure
Miscellaneous

(Total 2 Pages including this Cover Page)

Supplement Id	Description
7-01	RTC Battery Protective component

Model:	PCA-6002XX-XXXX	PCA-6003XX-XXXX	PCA-6004XX-XXXX
RTC Battery:	BT1	BAT1	BAT1
RTC Protect Circuit:	D7, R91	DD1, R75	DD1, R75
Model:	PCA-6005XX-XXXX	PCA-6178XX-XXXX	PCA-6179XX-XXXX
RTC Battery:	BAT1	BT1	BT1 or BT2
RTC Protect Circuit:	D12, R126	D6, R222	DD3, R34
Model:	PCA-6180XX-XXXX	PCA-6181XX-XXXX	PCA-6183XX-XXXX
RTC Battery:	BT2	BT1	BT1
RTC Protect Circuit:	D1, R16	DD4, R243	D7, R118
Model:	PCA-6184XX-XXXX	PCA-6185XX-XXXX	PCA-6186XX-XXXX
RTC Battery:	BT1	BT1	BT1
RTC Protect Circuit:	D4, R46	D25, R384	D3, R9
Model:	PCA-6277XX-XXXX	PCA-6278XX-XXXX	PCA-6359XX-XXXX
RTC Battery:	BT1	BT1	BT1 or BT2
RTC Protect Circuit:	DD4, R243	DD1, R19	DD2, R136

Enclosure
Test Record

(Total 2 Pages including this Cover Page)

Supplement Id	Description
-	Test Record 1

Test Record No. 1

The following tests were conducted:

Test	Comments
Lithium Battery Reverse Current Measurement Test (4.3.8)	

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.

The manufacturer submitted representative production samples of Mother Board, Models PCA-6002XX-XXXX, PCA-6003XX-XXXX, PCA-6004XX-XXXX, PCA-6005XX-XXXX, PCA-6178XX-XXXX, PCA-6179XX-XXXX, PCA-6180XX-XXXX, PCA-6181XX-XXXX, PCA-6183XX-XXXX, PCA-6184XX-XXXX, PCA-6185XX-XXXX, PCA-6186XX-XXXX, PCA-6277XX-XXXX, PCA-6278XX-XXXX, PCA-6359XX-XXXX.

Model PCA-6186XX-XXXX was used for test purposes and is considered representative of the entire series.

WTDP: Unless otherwise noted in the above list of tests, all tests were conducted by Advantech Co., Ltd., located at Nei-Hu, Taipei and witnessed by a member of the UL staff under the WTDP program.