INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
COMMISSION ELECTROTECHNIQUE INTERNATIONALE (CEI)

Ref. Certif. No.
DK-6765/A1

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTÈME CEI D'ESSAIS DE CONFORMITÉ ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product *Produit*	**Industrial Computer**
Name and address of the applicant *Nom et adresse du demandeur*	**Advantech Co Ltd** **4th Fl, 108-3 Ming-Chuan Rd** **Shing-Tien City, Taipei Hsien Taiwan**
Name and address of the manufacturer *Nom et adresse du fabricant*	**Advantech Co Ltd** **4th Fl, 108-3 Ming-Chuan Rd** **Shing-Tien City, Taipei Hsien Taiwan**
Name and address of the factory *Nom et adresse de l'usine*	**See Appendix**
Rating and principal characteristics *Valeurs norminales et caractéristiques principales*	**115/230 Vac, 50/60 Hz, 9/5A, Class I**
Trade mark (if any) *Marque de fabrique (si elle existe)*	**ADVANTECH**
Model/type Ref. *Ref. de type*	**IPC-6608XX-XXXXX**
Additional information (if necessary) *Information complémentaire (si nécessaire)*	**IP20. Where X may be any alphanumeric character or blank. This CB certificate is an appendix is an appendix to CB certificate No. 6765 issued 2003-06-30 due to add of alternative compone**
A sample of the product was tested and found to be in conformity with *Un échantillon de ce produit a été essayé et a été considéré conforme à la*	PUBLICATION **IEC 60950:1999** EDITION **3rd**
as shown in the Test Report Ref. No. which form part of this certificate *comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce certificat*	**E180881-A21-CB-1 with Amendment 1 2004-04-27**

This CB Test Certificate is issued by the National Certification Body
Ce Certificate d'essai OC est établi par l'Organisme National de Certification

UL International Demko A/S
Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Date **2004-05-06**

Signature

Karina Christiansen
Certification Manager

Internal Ref.:
Jakob Petersen

An Affiliate of
Underwriters Laboratories Inc.®

Appendix to
CB Certificate No. 6765/A1

Production Site:

1) Advantech Co., Ltd.
5th, Fl. 1, Lane 169 Kang-Ning Street, Xi-Zhi Town Taipei Hsien, Taiwan.

2) Advantech Co., Ltd.
3rd Fl, 10 Lane 130, Ming Chuan Rd, Hsin-Tien City, Taipei Hsien, Taiwan.

3) Superior Co., Ltd.
Tiensong Area, Qingxing Town, Dongguan, Guangdong, China.

4) Advantech Co., Ltd.
No. 600, Han-Pu Road, Yu-Shan, Kun-Shan, Jiang Su, China.

Herlev, 2004-05-06

Karina Christiansen
Certification Manager

UL International Demko A/S
Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

COVER PAGE FOR TEST REPORT

Test Item Description:	Industrial Computer
Model/Type Reference:	IPC-6608XX-XXXXX, where X may be any alphanumeric character or blank.
Rating(s):	I/P : 115/230Vac, 50/60 Hz, 9/5A
Standards:	IEC60950, Third Edition (1999)
Applicant Name and Address:	ADVANTECH CO LTD 4TH FL 108-3 MING-CHUAN RD SHING-TIEN CITY TAIPEI HSIEN TAIWAN
Factory Location(s):	1) ADVANTECH CO., LTD. 5TH, FL. 1, LANE 169 KANG-NING STREET, XI-ZHI TOWN TAIPEI HSIEN, TAIWAN. 2) ADVANTECH CO., LTD. 3RD FL, 10 LANE 130, MING CHUAN RD, HSIN-TIEN CITY, TAIPEI HSIEN 231, TAIWAN. 3) SUPERIOR CO., LTD. TIENSONG AREA, QINGXING TOWN, DONGGUAN, GUANGDONG, CHINA. 4) ADVANTECH CO., LTD. NO. 600, HAN-PU ROAD, YU-SHAN, KUN-SHAN, JIANG SU, CHINA.

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

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

The original report was modified on 2004-04-27 to include the following changes/additions:
- This test report shall be read in conjunction with the original report, number:
1. E180881-A21-CB-1, issued June 30, 2003, with CB Certificate (DK-6765), issued June 30, 2003.
- This test report has been amended, due to:
1. Adding alternate power supply and DC fans
- Only limited tests were deemed necessary.
1. Input Test.
2. Earthing Test II
3. Enclosure Push Test
4. Impact Test
5. Heating Test
6. Touch Current Test
7. Electric Strength Test
8. Abnormal Operation Test

All applicable tests according to the above standard(s) have been carried out.
Test results are valid only for the tested equipment.
This Test Report can be reproduced only in whole.
Amendments and corrections can be reproduced only with the original CB Test Report.
Written permission from UL International Demko A/S is required if the test report is copied in part.

TEST REPORT
IEC 60950
Safety of information technology equipment

Report Reference No ..... :	E180881-A21-CB-1
Compiled by (+ signature) ..... :	Rasul M. Balacu
Reviewed by (+ signature) ..... :	Jakob Petersen
Approved by (+ signature) ..... :	Jakob Petersen
Date of issue ..... :	2003-06-30
CB Testing Laboratory ..... :	UL International Demko A/S
Address ..... :	Lyskaer 8, 2730, Herlev, Denmark
Testing location/procedure ..... :	CBTL [x] SMT [ ] TMP [ ] WMT [ ]
Address ..... :	UL International Demko A/S, Lyskaer 8, 2730, Herlev, Denmark
Applicant's name ..... :	ADVANTECH CO LTD
Address ..... :	4TH FL 108-3 MING-CHUAN RD SHING-TIEN CITY TAIPEI HSIEN TAIWAN
Test specification:	
Standard ..... :	IEC60950, Third Edition (1999)
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	I950___F/00-03
TRF originator ..... :	FIMKO
Master TRF ..... :	dated 00-02

Test item description ..... :	Industrial Computer
Trade Mark ..... :	ADVANTECH
Model/Type reference ..... :	IPC-6608XX-XXXXX, where X may be any alphanumeric character or blank.
Manufacturer ..... :	Same as Applicant
Rating ..... :	I/P : 115/230Vac, 50/60 Hz, 9/5A

Marking Plate - Refer to Enclosure titled Miscellaneous for copy.

Particulars: test item vs. test requirements	
Equipment mobility	movable
Operating condition	continuous
Mains supply tolerance (%)	+10%, -10%
Test for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class I (earthed).
Mass of equipment (kg)	10.76 Kg
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	P(Pass)
- test object does not meet the requirement	F(Fail)

General remarks:

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by a NCB in accordance with IECEE 02.

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report a point is used as the decimal separator.

General Product Information:	
Report Summary	
The original report was modified on 2004-04-27 to include the following changes/additions: - This test report shall be read in conjunction with the original report, number: 1. E180881-A21-CB-1, issued June 30, 2003, with CB Certificate (DK-6765), issued June 30, 2003. - This test report has been amended, due to: 1. Adding alternate power supply and DC fans - Only limited tests were deemed necessary. 1. Input Test. 2. Earthing Test II 3. Enclosure Push Test 4. Impact Test 5. Heating Test 6. Touch Current Test 7. Electric Strength Test 8. Abnormal Operation Test	
Product Description	
Power Supply, HDD, FDD, CD-ROM, CPU and mainboard with metal enclosure.	
Model Differences	
N/A	
Additional Information	
The CPU was Model Pentium 4, 2.0 GHz.	
Technical Considerations	
The product was submitted and tested for use at the manufacturer's recommended ambient temperature (Tmra) of:	50¢X
The power supply means are:	Pluggable A or B, Detachable power cord
The product is intended for use on the following systems:	TN
The equipment disconnect device is considered to be:	Appliance inlet
The following circuit locations (with circuit/schematic designation) were investigated as a limited power source:	PS/2 port.
Engineering Conditions of Acceptability	

When installed in an end-product, consideration must be given to the following:

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Comply with IEC 950 or relevant component standard	(see appended table 1.5.1).	Pass
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
1.7.1	Certification marks ..... :	UL, C-UL	Pass
1.7.4	Supply voltage adjustment ..... :	Voltage selector selects between 115 V and 230 V and is a simple control near the inlet. The equipment is auto-ranging. (Only when Model IPC-610-XXX-XXXXX with power supply model PRM401PFC)	Pass
2.6.3.3	Resistance (Ohm) of earthing conductors and their terminations, test current (A) ..... :	Test current = 40 A. Voltage Drop=0.4V, 0.01 ohm.	Pass
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	No hazard as result from impact test	Pass
4.5.1	Temperature rises	(see appended table).	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
4.6.1	Dimensions (mm) ..... :	Front - 60 openings, each measures 20 by 3 mm maximum. Rear - 41 openings, each measures 16 by 2 mm.	-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Pass
5.1.6	Test measurements	See below	Pass
	Measured current (mA) ..... :	Max. 0.46 mA .	-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**				Pass
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
Power Supply	Delta Electronics Inc.	DPS-300GB-1	I/P: 100-120/200-240Vac, 47/63Hz, 9/4.5A. O/P: +5V/30A, -5V/0.3A, +12V/15A, -12V/0.8A, 3.3V/28A, +5Vsb/2.0A	UL 60950, IEC 60950	UL, TUV, TUV-Rh CB cert. No. JPTUV-002869
Power Supply	FSP Group Inc.	FSP250-60ATV(PF)	I/P: 115/230Vac, 60/50Hz, 10/5A. O/P: +5V/27A, -5V/0.3A, +12V/13A, -12V/0.8A, 3.3V/20A, +5Vsb/2.0A	UL 60950, IEC 60950	UL, TUV, Nemko CB cert. No. NO 15217
Hard Drive (Optional)	Various	--	+5/+12Vdc, 1.5/1.8A maximum.	UL 60950, EN 60950	UL, TUV, Demko
Floppy Drive (Optional) (two provided)	Various	--	+5/+12Vdc, 1.5/1.8A maximum.	UL 60950, EN 60950	UL, TUV, Demko
CD-ROM Drive (Optional)	Various	--	+5/+12Vdc, 1.5/1.8A maximum.	UL 60950, EN 60825-1	UL, TUV, Demko
RTC Battery	Rayovac Corp.	BR2335, BR2032, BF2325	3.0Vdc, 300mAh	UL1416	UL, --
RTC Battery	Mitsubishi Chemical Corp.	CR2032	3.0Vdc, 300mAh	UL1416	UL, --
RTC Battery	Sanyo Energy (U.S.A) Corp.	CR2032	3.0Vdc, 300mAh	UL1416	UL, --
Protective device (Polyswitch) for PS/2 port	Raychem Corp.	SMD-150-2018	5Vdc, 1.1A	--	UL, --
Protective device (Pigtail fuse) for PS/2 port	Littelfuse Inc.	251	125V, 3A	IEC 60127-3	UL, VDE
System Fan	Delta electronics inc	AFB1212SH-F00	+12Vdc, 0.8A, 113 CFM	UL 507, EN 60950	UL, TUV
System Fan	Adda Corp.	AD1212HB-A73GL	+12Vdc, 0.37A, 85.2CFM	UL 507, EN 60950	UL, TUV

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

System Fan	Delta electronics inc	EFB1212SH-F00	+12Vdc, 0.75A, 114 CFM	UL 507, EN 60950	UL, TUV
System Fan	Delta electronics inc	WFB1212SH-F00	+12Vdc, 0.45A, 86.5 CFM	UL 507, EN 60950	UL, TUV
System Fan	Adda Corp.	AD1212HB-A71GL	+12Vdc, 0.37A, 85.2CFM	UL 507, EN 60950	UL, TUV
CPU Fan	Nidec Corp.	F06G-12B1S1	+12Vdc, 0.07A	UL 507, EN 60950	UL, TUV
CPU Fan	Dynaeon Industrial Co., Ltd.	DF1206BH	+12Vdc, 0.30A	UL 507, EN 60950	UL, TUV
Enclosure	Various	--	Painted sheet steel. Overall measured 412 by 315 by 175 mm; 1 mm thick min	--	--, --
PWB	Various	--	Rated V-1 or better, 105¢X	UL 796	UL, --
Table below for employing alternate Power Supply and DC Fans on Mar. 2004	--	--	--	--	--, --
Power Supply	FSP Group Inc.	FSP300-60PLN(3)	I/P: 100-240 Vac, 50-60 Hz, 10A. O/P: +5V/30A, -5V/0.3A, +12V/18A, -12V/0.8A, +3.3V/28A, +5Vsb/2.0A	UL 60950, IEC 60950	UL, TUV, Nemko CB cert. No. NO 15238
System Fan	Delta electronics inc	AFB1212H-F00	+12Vdc, 0.35A max., 82.67 CFM	UL 60950, EN 60950	UL, TUV
System Fan	Yate Loon Electronics Co., Ltd.	D12BH-12	+12Vdc, 0.3A max., 77.2CFM	UL 60950, EN 60950	UL, TUV
System Fan	Delta electronics inc	EFB1212H-F00	+12Vdc, 0.41A max., 82.28 CFM	UL 60950, EN 60950	UL, TUV
[1]) an asterisk indicates a mark which assures the agreed level of surveillance					

IEC 60950			
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
In SPS	-	103.5v/50Hz	64.3	769	-	Maximum normal load
In SPS	-	103.5v/60Hz	63.9	791	-	Maximum normal load
In SPS	9	115v/50Hz	62.2	807	-	Maximum normal load
In SPS	9	115v/60Hz	63.9	811	-	Maximum normal load
In SPS	-	126.5v/50Hz	61.1	827	-	Maximum normal load
In SPS	-	126.5v/60Hz	63.1	838	-	Maximum normal load
In SPS	-	207v/50Hz	72.2	484	-	Maximum normal load
In SPS	-	207v/60Hz	72.8	502	-	Maximum normal load
In SPS	5	230v/50Hz	76.5	425	-	Maximum normal load
In SPS	5	230v/60Hz	76.5	451	-	Maximum normal load
In SPS	-	253v/50Hz	76.2	485	-	Maximum normal load
In SPS	-	253v/60Hz	76.8	477	-	Maximum normal load
Power Supply, Delta Electronics Inc., Type DPS-300GB-1B.	-	-	-	-	-	-
-	-	104	162	1600	-	Max. Normal Load, 50 Hz
-	-	104	163	1600	-	Max. Normal Load, 60 Hz
-	9	115	161	1480	-	Max. Normal Load, 50 Hz
-	9	115	161	1470	-	Max. Normal Load, 60 Hz
-	5	230	156	810	-	Max. Normal Load, 50 Hz
-	5	230	156	800	-	Max. Normal Load, 60 Hz
-	-	253	154	740	-	Max. Normal Load, 50 Hz
-	-	253	154	740	-	Max. Normal Load, 60 Hz
-	-	-	-	-	-	Test below for employing alternate Power Supply and DC Fans on Mar. 2004
F1	-	103v/50Hz	109.8	1084	1084	Maximum normal load
F1	-	103v/60Hz	109.5	1088	1088	Maximum normal load
F1	9	115v/50Hz	108.4	964	964	Maximum normal load
F1	9	115v/60Hz	108.5	973	973	Maximum normal load
F1	5	230v/50Hz	104.9	496	496	Maximum normal load
F1	5	230v/60Hz	104.8	506	506	Maximum normal load
F1	-	253v/50Hz	104.7	464	464	Maximum normal load
F1	-	253v/60Hz	104.7	480	480	Maximum normal load
supplementary information:						

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	**TABLE: temperature rise measurements**		Pass
	test voltage (V) ..... :	See below	
	t1 (¢XC ..... :	--	
	t2 (¢XC ..... :	--	

temperature rise dT of part/at:	dT (K)	required dT (K)
Power Supply, Delta, Type DPS-300GB-1B.	104V, 60Hz, 1 hr/253V, 50Hz, 2 hr	--
T1 Coil	11/13	40
T2 Coil	13/15	40
Hard Disk Body	7/9	-
CD-Rom Body	11/13	-
Floppy-Disk Body	18/19	-
PC Enclosure	2/3	20
Ambient	-/-	-
Test below for employing alternate Power Supply and DC Fans on Mar. 2004	103V/253V	--
Ambient	27.7¢XC27.5y	--
Power Supply L1 coil	11.5/10.6	55
Power Supply C6 body	5.6/5.7	35
Power Supply T1 core	8.4/8.6	40
Power Supply T1 coil	12.6/12.7	40
Power Supply T2 core	9.9/9.9	40
Power Supply T2 coil	10.0/10.2	40
Power Supply PWB under HS1	5.5/5.6	55
Power Supply L3 coil	18.1/18.0	55
Mainboard PWB under CPU	17.9/18.0	55
Mainboard PWB under U19	12.6/12.9	55
Mainboard PWB under U2	7.7/8.0	55
Mainboard PWB under U20	12.4/12.8	55
Mainboard C50 body	14.1/14.3	35
Mainboard PWB L16 coil	18.0/18.4	55
Mainboard PWB BT1 body	8.7/9.1	-
HDD body	12.6/12.6	-
CD-ROM body	5.2/5.3	-
FDD body	6.5/6.5	-
Enclosure outside near power supply	4.9/5.2	20

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

5.2	**TABLE: electric strength tests and impulse tests**		Pass
test voltage applied between:		test voltage (V)	breakdown Yes / No
Primary to SELV		DC 4242	No
Primary to Earth		DC 3000	No
Test below for employing alternate Power Supply and DC Fans on Mar. 2004		-	-
Primary to SELV		DC 4242	No
Primary to Earth		DC 3393	No
supplementary information:			

5.3	**TABLE: fault condition tests**						Pass
	ambient temperature (¢XC ..... :				25		
	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	
Fan	Stalled	240	1.5 hr	-	-	NC, NT, NB. Max. Temperature at T2 Coil 46 degree C	
Ventilation openings	Blocked	240	40 min	-	-	NC, NT, NB. Max. Temperature at T2 Coil 47 degree C	
-	-	-	-	-	-	Test below for employing alternate Power Supply and DC Fans on Mar. 2004	
Ventilation openings	Blocked	230 / 60Hz	4.4 hrs	F1	0.505	NB, NC, NT, CT	
System fan	Stalled	230 / 60Hz	3.6 hrs	F1	0.505	NB, NC, NT, CT	
Power fan	Stalled	230 / 60Hz	2.9 hrs	F1	0.505	NB, NC, NT, CT	
CPU fan	Stalled	230 / 60Hz	3.8 hrs	F1	0.505	NB, NC, NT, unit shutdown	
supplementary information:							
NB - No indication of dielectric breakdown; NC - Cheesecloth remained intact; NT - Tissue paper remained intact; CT - Constant temperature was obtained; B - Circuit measures less than 12.5 mA; C - Circuit measures 0 Volts.							

Enclosure

National Differences

(Total 6 Pages including this Cover Page)

Argentina
Australia / New Zealand
Austria**
Belgium**
Brazil*
China
Czech Republic*
Denmark
Finland
France**
Germany
Greece**
Group
Hungary*
India*
Ireland
Israel*
Italy**
Japan
Korea
Malaysia*
Netherlands**
Norway
Poland*
Portugal*
Russia*
Singapore
Slovakia*
Slovenia*
South Africa*
Spain
Sweden
Switzerland
Turkey*
USA / Canada
Ukraine*
United Kingdom
Yugoslavia*

* No National Differences Declared
** Only Group Differences

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Singapore - Differences to IEC60950, Third Edition (1999)			
2.9.2	(a) After the first paragraph, insert the following: Under tropical conditions, the duration of the humidity conditioning is 5 days (120h) at a temperature: 40 ¡Ó 2¢XC with relative humidit 90% to 95%. Conditions described in IEC Publications 60068-2-3: 1969 - "Test Ca: Damp Heat, Steady State" (temperature: 40 ¡Ó 2¢XC, relative humidity: 90% t 95 %) apply to insulation to be used under tropical conditions. The additional requirement on humidity conditioning is drawn from Clause 10.2 of IEC 60065: 1998		N/A
2.10.6.5	Delete "(48 h)" Explanation: To be consistent with 2.9.2		N/A
3.2.8	Replace "23¢XC ¡Ó 2¢XC" by "27¢XC ¡Ó		N/A
General	IT Power Systems are not allowed in the Republic of Singapore and all clauses related to IT Power Systems are not applicable. For a.c. power distribution systems, only TN-S and TT systems are allowed		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

China - Differences to IEC60950, Third Edition (1999)			
1.4.5	The tolerance of rated voltage in IEC 60950 from +6% to -10% is changed by GB4943-2001 to tolerance of +10% and -10%		N/A
1.7.1	Markings for supply voltage and frequency shall include China's mains voltage. According to GB4943-2001 a single rated voltage is expressed as 220 V		N/A
1.7.1	- When a rated voltage range is given, the range covers 220 V		Pass
1.7.1	- When a variety of rated voltages or rated voltage ranges are given, one of them is 220 V, and unit shall be set as 220 V when shipped from the factory		N/A
1.7.1	- Rated frequency is 50 Hz or rated frequency range includes 50Hz		Pass
1.7.1	- A unit not provided with a means for direct connection to the AC mains supply does not need not be marked with any electrical rating		N/A
1.7.12	According to GB4943-2001 instructions and equipment markings related to safety are provided in standardized Chinese		N/A
3.2.1	Power supply plugs that are connecting equipment to AC mains supply are in accordance with requirements of Chinese standard GB1002		N/A

Korea - Differences to IEC60950, Third Edition (1999)			
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains comply with the Korean requirement (KSC 8305)		N/A
7	Addition: EMC. The apparatus shall complies with the relevant CISPR requirements	It should be provided in national approval.	N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
Japan - Differences to IEC60950, Third Edition (1999)			
1.2.4.101	Addition: Definition of CLASS 0I EQUIPMENT	The unit cannot use in the Class 0I application.	N/A
1.2.12.1	Replacement: FLAMMABILITY CLASSIFICATION OF MATERIALS: "The recognition of the burning behaviour of materials and their ability to extinguish if ignited. Materials are classified as in 1.2.12.2 to 1.2.12.9, and 1.2.12.101 when tested in accordance with annex A"		N/A
1.2.12.101	Addition: Definition of VTM CLASS MATERIAL	The unit cannot use in the Class 0I application.	N/A
1.7.101	Addition:Marking for CLASS 0I EQUIPMENT The following instruction is indicated on the visible place of the mains plug or the main body: "Provide an earthing connection"		N/A
1.7.101	The following instruction is indicated on the visible place on the main body or written in the operating instructions: "Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains."		N/A
2.1.1.1	Replace: "IEC 60083" by "IEC 60083 or JIS C 8303" in 2.1.1.1 b)		N/A
2.6.3.1	Add the following after 1st paragraph: "This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT"		N/A
2.6.4.1	Replace 2nd sentence in 1st paragraph: "For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal"		N/A
2.6.5.4	Replace 1st sentence: "Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:"		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
2.6.101	Addition:Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing not used for equipment having a rated voltage exceeding 150 V	The unit cannot use in the Class 0I application.	N/A
2.6.101	For plugs with a lead wire for earthing, the lead wire is not earthed by a clip		N/A
2.6.101	CLASS 0I EQUIPMENT provided with an earthing terminal or lead wire for earthing in the external where easily visible		N/A
3.2.5	Delete the following statement from a note 1 in Table 3B: "For RATED CURRENT up to 3A, a nominal cross-sectional area of 0.5 mm2 is permitted in some countries provided that the length of the cord does not exceed 2 m"		N/A
4.2.8	Add the following informative remark after the last sentence: "IEC 61965 is also applicable instead of IEC 60065"		N/A
4.5.1	Add the following to note 5) of Table 4A, Part 2: "With regard to Table 4A, insulating materials complying with Japanese requirements (refer to Japanese differences for IEC 60335-1 3rd Edition in CB Bulletin 101B) are also acceptable"		N/A
4.5.1	Add a note reference 7) to "50", in the right column of Table 4A, Part 1 and add a note 7 to Table 4A, Part 2 as follows: "7) This value apply only to wiring or cords complying with relevant IEC standards. Others comply with Japanese requirements (refer to Japanese differences for IEC 60335-1 3rd Edition in CB Bulletin 101B)"		N/A
4.7.3.2	Add the following in 7th paragraph: "- for thin materials, e.g., flexible printed boards, etc., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better"		N/A
5.1.6	Replace Table 5A to include maximum TOUCH CURRENT values for CLASS 0I EQUIPMENT		N/A
5.3.8.2	Replace 3rd Item as follows: "- BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or 0I EQUIPMENT;"		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
Annex A	Add the subclause A.101titled: "Flammability tests for classifying materials VTM" and the following: "Thin sheet materials shall comply with ISO 9773"		N/A
Annex G	Add to the Note for Table G.1. "2. In Japan, MAINS TRANSIENT VOLTAGE for equipment with a Nominal AC MAINS SUPPLY VOLTAGE of 100V is to be decided based on the column where Nominal AC MAINS SUPPLY VOLTAGE in Table G.1 is 150V"		N/A
Annex P	Add: "IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes"		N/A
Annex U	Replace 2nd paragraph as follows: "This annex covers to round winding wires having diameters between 0.05 mm and 5.00 mm"		N/A
U.2.1	Replacement:Electric strength "The test sample is prepared per IEC 60851-5:1997, 4.4.1 (for a twisted pair and subjected to the test of 5.2.2, with a test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V, or; - for REINFORCED INSULATION, 6000 V"		N/A
U.2.2	Replacement:Flexibility and adherence Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameter of Table U.1 (mm)		N/A
U.2.2	Test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard and not less than: - 1500 V for BASIC INSULATION or SUPPLEMENTARY INSULATION, or; - 3000 V for REINFORCED INSULATION		N/A

Argentina - Differences to IEC60950, Third Edition (1999)			
1.7.12	Language of safety markings/instructions is Spanish	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	N/A