

Test Report No.: LD89060710A	Page 1 of 8
Client	
Name : ADVANTECH CO., LTD.	
Address : Fl. 4, No. 108-3, Ming-Chuan Rd., Shing Tien City, Taipei, Taiwan, R.O.C.	
Test Item : INDUSTRIAL COMPUTER	
Identification : SPC-201-SCA, SPC-201, IPC-613-SCA, IPC-613	
Testing laboratory	
Name : Advance Data Technology Corporation	
Address : No. 46, Lane 504, Chung Hsiao Road, Lin Kou Hsiang, Taipei, R.O.C.	
Test specification	
Standard : EN 60 950:1992 + A1:1993 + A2:1993 + A3:1995 + A4:1996 + A11: 1997	
Test Result : The test item passed.	
Tested By :	
_____ Signature <u>Roy Chou</u> Name in block letters	_____ Date
Reviewed By.....	
_____ Signature <u>Edward Chiueh</u> Name in block letters	_____ Date
Other Aspects:	
The completed test report includes the following documents:	
■ EN 60 950 report (7 pages)	
Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.	

Particulars: test item vs. test requirements

Equipment mobility.....: Movable
 Operating condition.....: Continuous
 Tested for IT power systems.....: No
 IT testing, phase-phase voltage (V).....: N/A
 Class of equipment.....: Class I
 Mass of equipment (kg).....: 19 kgs
 Protection against ingress of water.....: IPX0

Test case verdicts

Test case does not apply to the test object.....: N(.A.)
 Test item does meet the requirement: P(ass)
 Test item does not meet the requirement.....: F(ail)
:

Testing

Date of receipt of test item: August 14, 2000
 Date(s) of performance of test.....: August 18, 2000

General remarks

This test report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

Brief description of the test equipment:

1) The test sample is same as Report no. LD89060710 except Approval Power Supply.

2) Build-in Approval Power Supply.

Zippy Technology Corp., Model P2U-6300P

Input: 100-240 Vac, 50/60 Hz, 6.0 A

Output: +5 Vdc/35A, -5 Vdc/0.5A, +12 Vdc/16A, -12 Vdc/1.0A, +3.3 Vdc/20A, +5 VSB/1.2A

3)Normal load Condition:

PC operation normally with CD-ROM, FDD, HDD, Mother Board, Cooling Fan and two add-on dummy load card(5V: 5A, 12V: 0.5A).

EN 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		
---	---------	--	--

1.5	Components		
1.5.1	Comply with IEC 950 or relevant component standard	Components, which were found to affect safety aspects, are complied with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or nation standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
	Dimensions (mm) of mains plug for direct plug-in :	---	N
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)	---	N
1.5.3	Transformers	The power transformer used are suitable for their intended application and comply with the relevant requirements of the standard and particularly Annex C	P
1.5.4	High voltage components (component; manufacturer; flammability)	No high voltage components provided.	N
1.5.5	Interconnecting cables	Interconnecting cable for Interconnection is carrying only SELV voltages on an energy level below 240 VA. Except for the insulation material, there is no further requirements to the o/p interconnection cable.	P
1.5.6	Mains capacitors	X-capacitor is located on approval power supply and meets the applicable requirements and/or tests in IEC 60384-14	P

EN 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.6	Power interface		
1.6.1	Steady state input current	Highest load according to 1.2.2.1 for this equipment is the operation with normal load (CPU, HDD, FDD and CD-ROM are in highest load). The operator can connect additional options like a parallel printer. The output power of max. 0.5W is considered to be negligible. (see appended table)	P
	Current deviation during normal operating cycle	< +10%	P
1.6.2	Voltage limit of hand-held equipment	The appliance equipment is not a hand-held equipment.	N
1.6.3	Neutral conductor insulated from earth and body	The neutral is not identified in the equipment. Basic insulation for rated voltage between primary phases and earthed parts.	P
1.6.4	Components in equipment intended for IT power system	The equipment was not applied for the IT power system.	N
1.6.5	Mains supply tolerance (V)	+6% -10% for specifies a rating of AC 100-240V at 50/60 Hz. Relevant tests were done with the range of 90-254V at 50/60Hz	P

EN 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					P
object/part No.	manufacturer/ trademark	Type/model	technical data	standard	Mark(s) of conformity ¹⁾	
Power Supply	EMACS	P2U-6300P	Input: 100-240 Vac, 50/60 Hz, 6.0 A Output: +5 Vdc: 35A -5 Vdc: 0.5A +12 Vdc: 16A -12 Vdc: 1.0A +3.3 Vdc:20A +5 VSB: 1.2A	EN60950	TUV	
¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance						

EN 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.6	TABLE: electrical data (in normal conditions)					P
Fuse #	Irated (A)	U (V)	P (W)	I (A)	Ifuse (mA)	condition/status
N/A	---	90V/50Hz	97.7	1.08	1.08	Normal load condition
N/A	---	90V/60Hz	97.8	1.09	1.09	Normal load condition
N/A	6	100V/50Hz	96.7	0.96	0.96	Normal load condition
N/A	6	100V/60Hz	96.9	0.97	0.97	Normal load condition
N/A	6	240V/50hz	91.6	0.41	0.41	Normal load condition
N/A	6	240V/60hz	92.3	0.42	0.42	Normal load condition
N/A	---	254V/50hz	89.5	0.68	0.68	Normal load condition
N/A	---	254V/60Hz	89.5	0.68	0.68	Normal load condition

5.1	TABLE: temperature rise measurements			P
	test voltage (V)	90/ 254/ 240 opening blocked		—
	t1 (°C)			—
	t2 (°C)			—
temperature rise dT of part/at:		dT (K)	Required dT (K)	
Ambient		29 /29 /29		
Power Supply T1 Coil		10/10/32	40	
Power Supply T1 Core		10/10/30	40	
Power Supply Chassis		5/5/20	---	
CPU1 Heatsink		9/8/20	---	
CPU2 Heatsink		4/4/14	---	
RTC Battery body		2/1/13	---	
U3 Body		5/4/16	---	
U2 heatsink		3/3/14	---	
F.D.D. body		0/0/12	---	
CD-ROM		3/3/15	---	
H.D.D. Body		0/0/3	---	
Enclosure Inside		3/3/12	10	

EN 60950			
Clause	Requirement + Test	Result - Remark	Verdict

Max. Operating Temp.: 50

The temperature were measures under worst case normal mode as described in 1.6.1 at voltages described in 1.6.5.

5.2	TABLE: leakage current measurement			P
Condition	Current L-enclosure(mA)	Current N-enclosure(mA)	Comments	
Switch ON	0.9	0.9		

5.3	TABLE: electric strength measurements			P
test voltage applied between:		Test voltage (V)	Breakdown	
Primary and secondary		DC 4242V	No	
Primary and Ground		DC 2121V	No	