Certificate

TÜV Group Asia

Certificate no. TA 50039279 01

License Holder:
Advantech Co., Ltd.
4F, No. 108-3, Ming Chuan Rd.
Hsin Tien City, Taipei Hsien 231
Taiwan

Manufacturing Plant:
Advantech Co., Ltd.
Fl.5, No.1, Lane 169, Kang-Ning St.
Xi-Zhi, Taipei Hsien 221
Taiwan

Test report no.: ZTW1-ALD 10009176 001 **Client Reference:** FH/SPC-31163

Tested to:
EN 60601-1:1990+A1+A2+A13

Certified Product: (Panel PC) **License Fee - Units**

Type Designation:	POC-174xx-xx-xx(ADVANTECH)	10
x stands for	: alphanumeric character or blank	1
Rated Voltage	: AC 100-240V, 50-60 Hz	
Rated Current	: 4-2A max.	
Protection Class:	I	

Remark: Primary- and secondary circuits are seperated according to method 4 of clause 17.g.

Product Safety · Quality Assurance TÜV Rheinland Approved

11

Appendix: 1

Licensed Test mark: EN 60601-1

TÜV Rheinland Taiwan Ltd.
Signatures

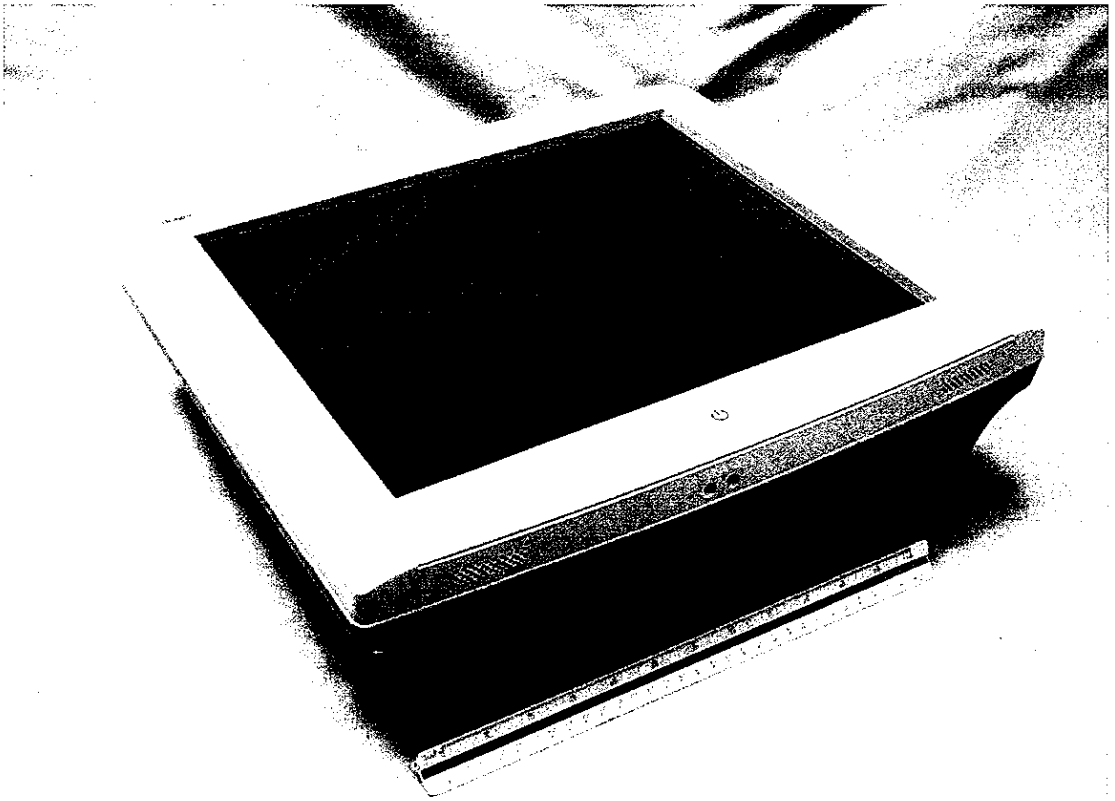
i.V. Dipl.-Ing. R. Scheller

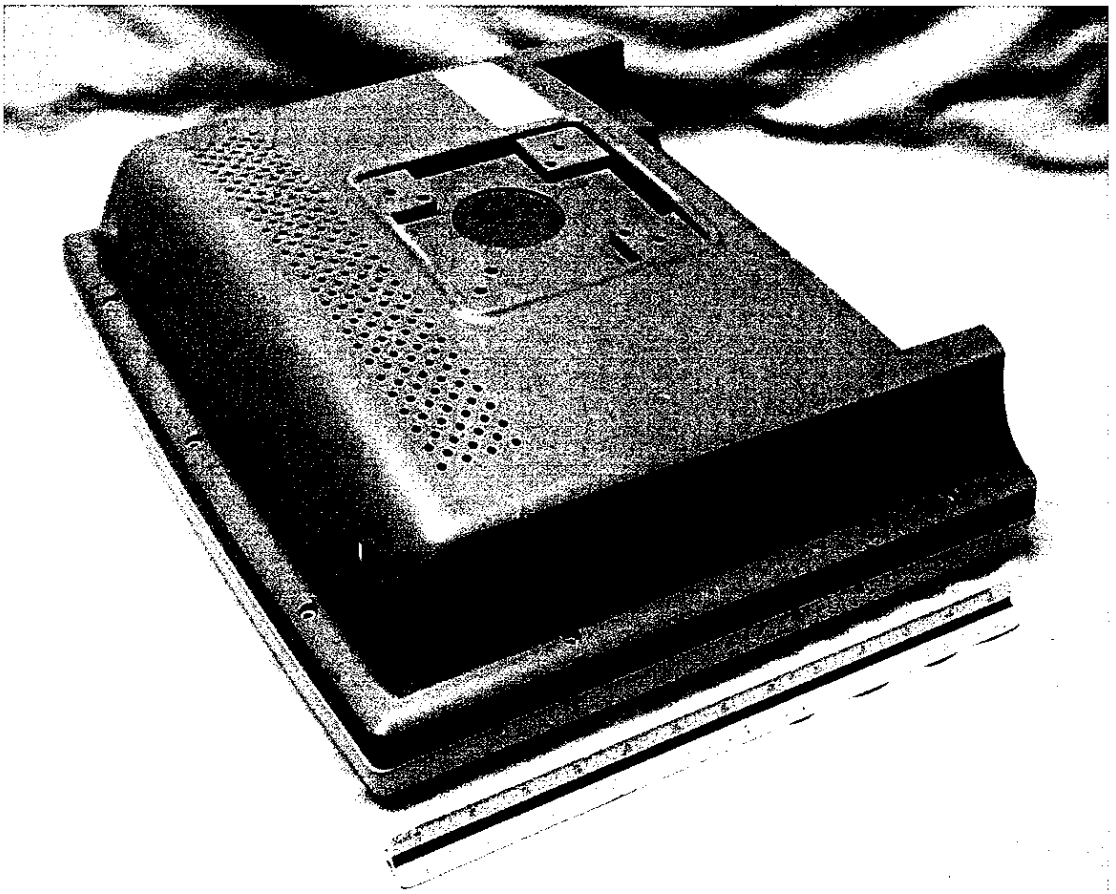
Dipl.-Ing. A. Klinker

Date of Issue (day/mo/yr) 03/03/2004

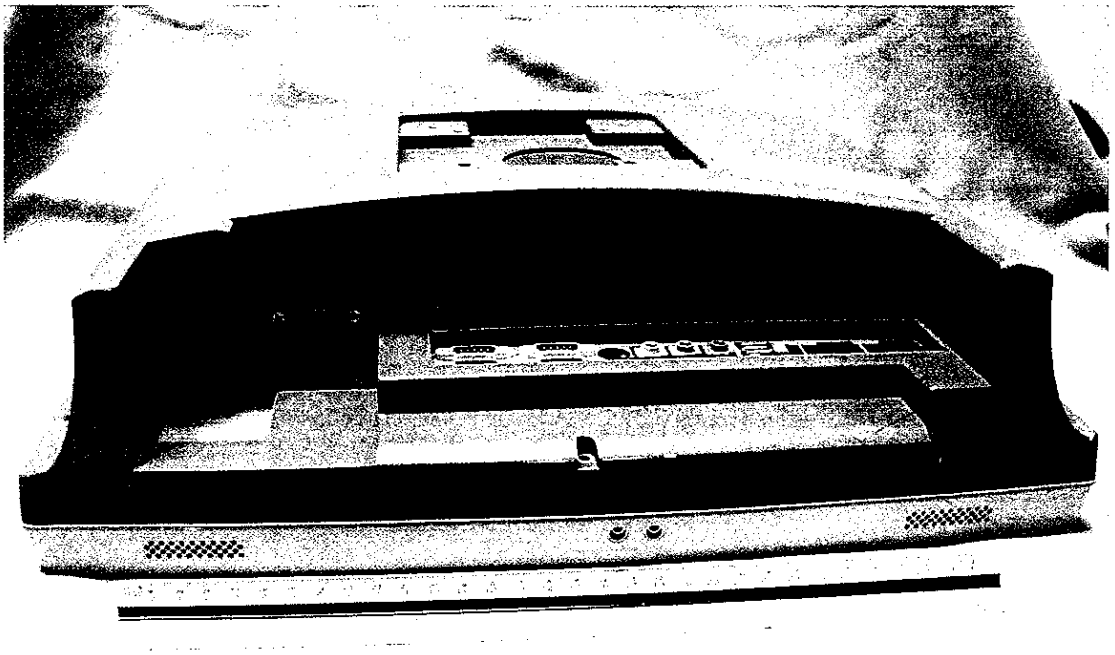
12/020 7.95Q

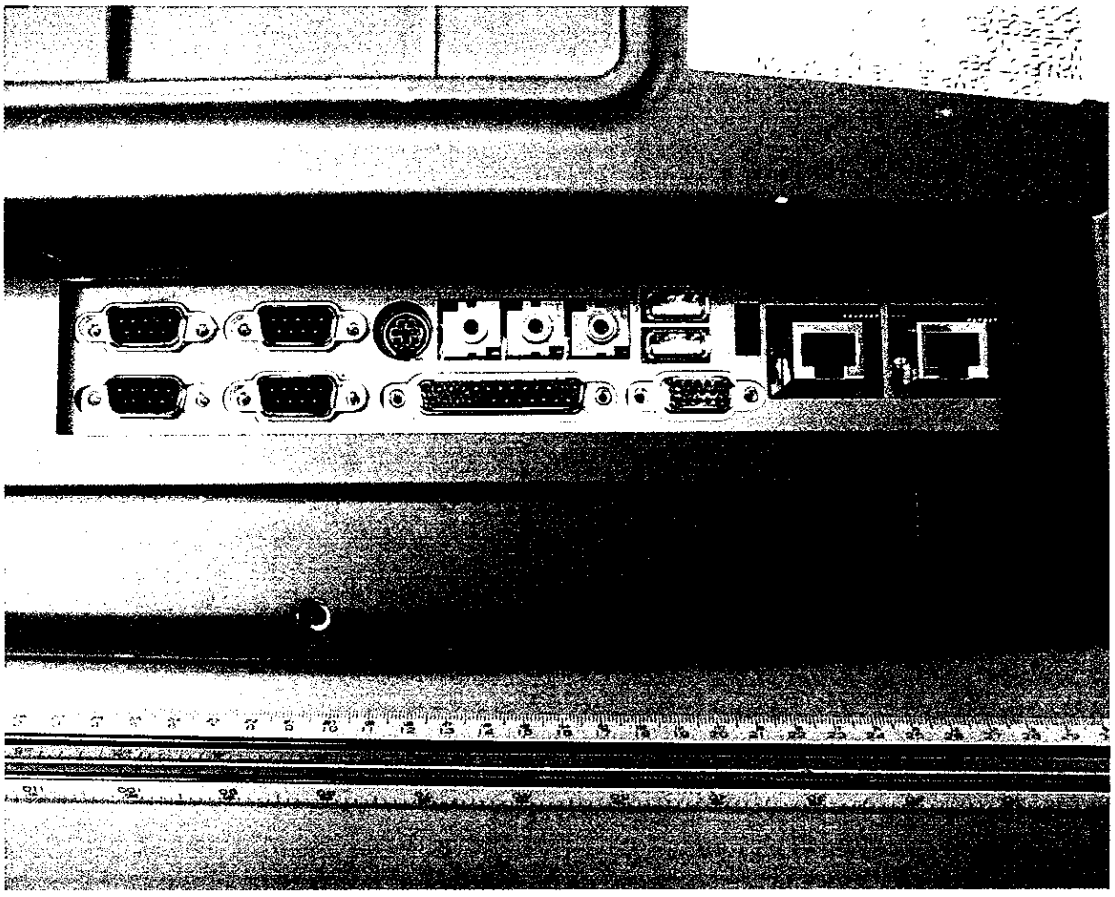
Product: **Panel PC**
Type Designation: **POC-174xx-xx-xx**
(x = any alphanumeric characters or blank)
Report Number: **10009176 001**



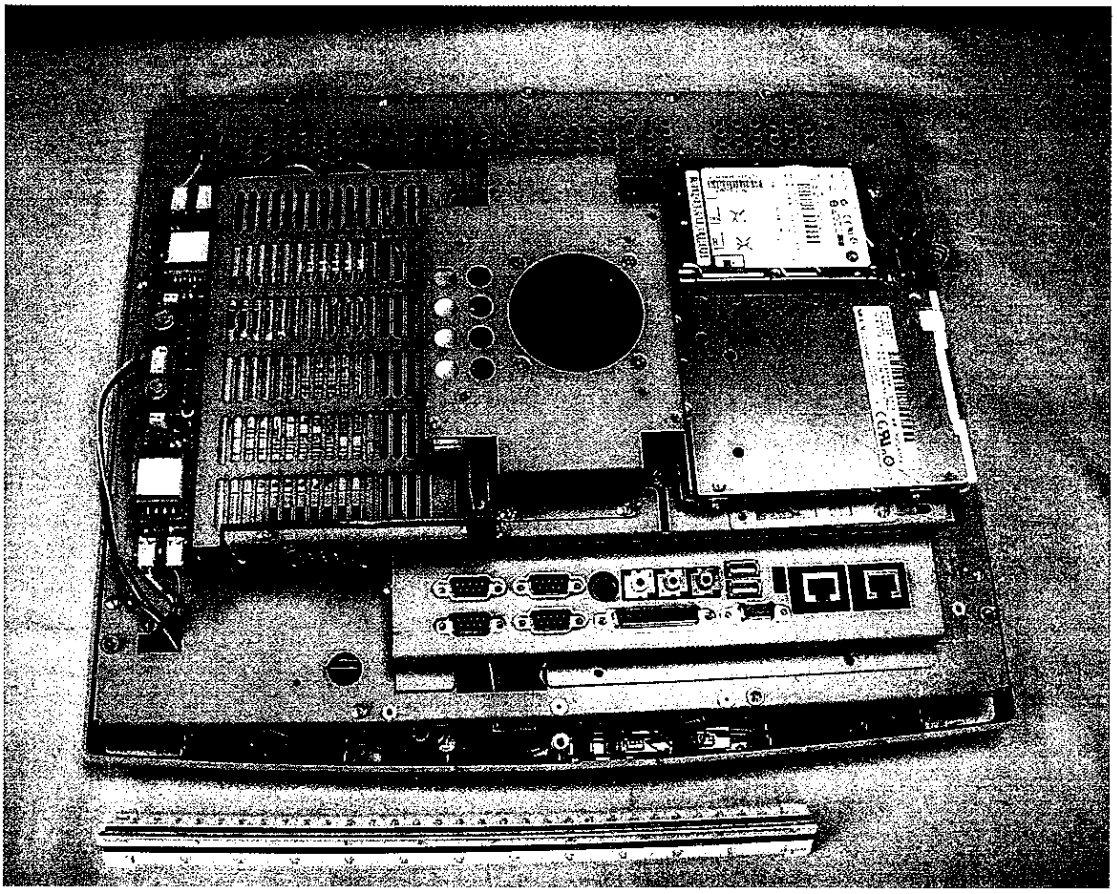


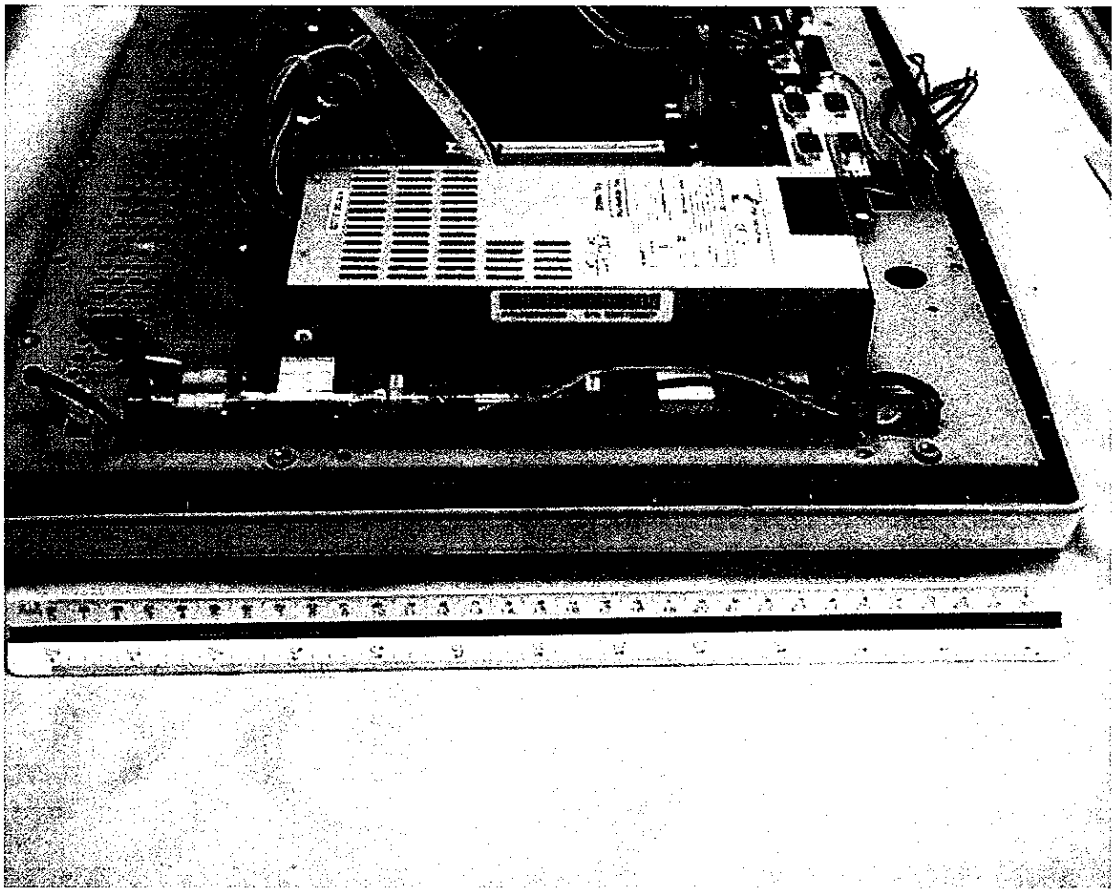
Product: **Panel PC**
Type Designation: **POC-174xx-xx-xx**
(x = any alphanumeric characters or blank)
Report Number: **10009176 001**



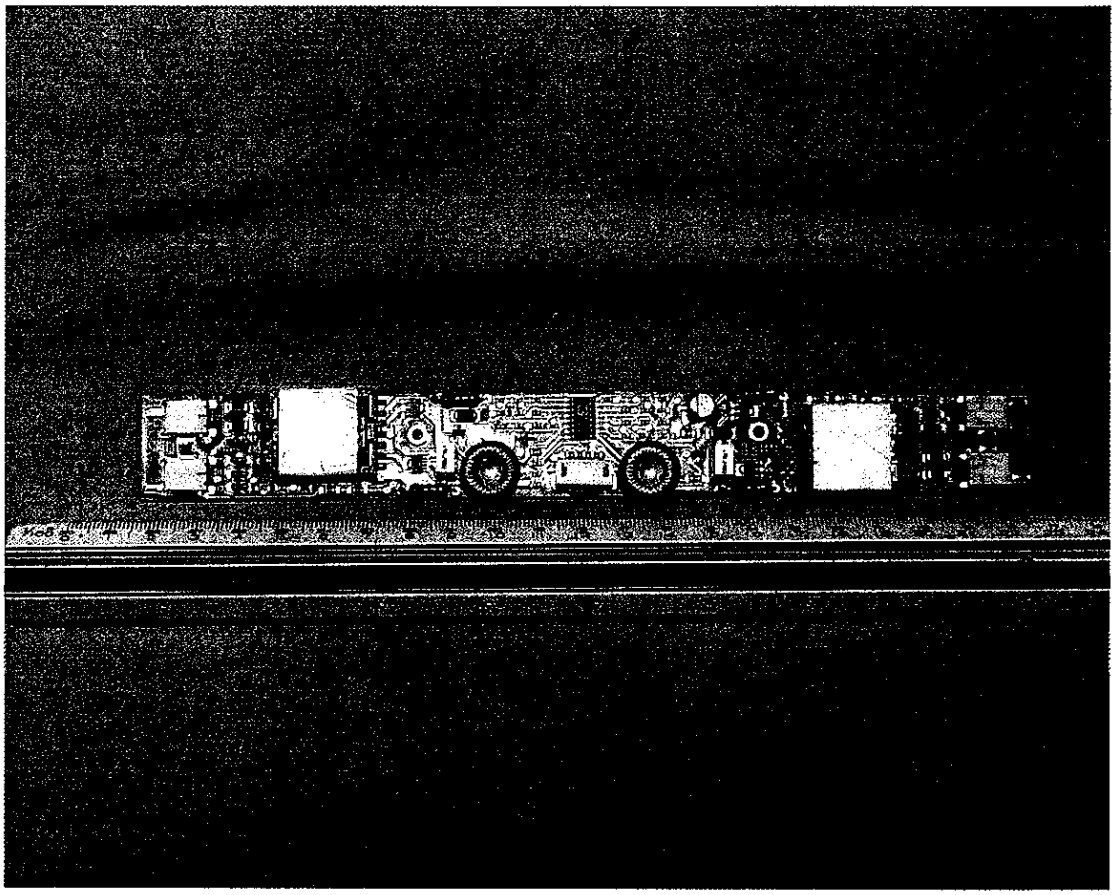


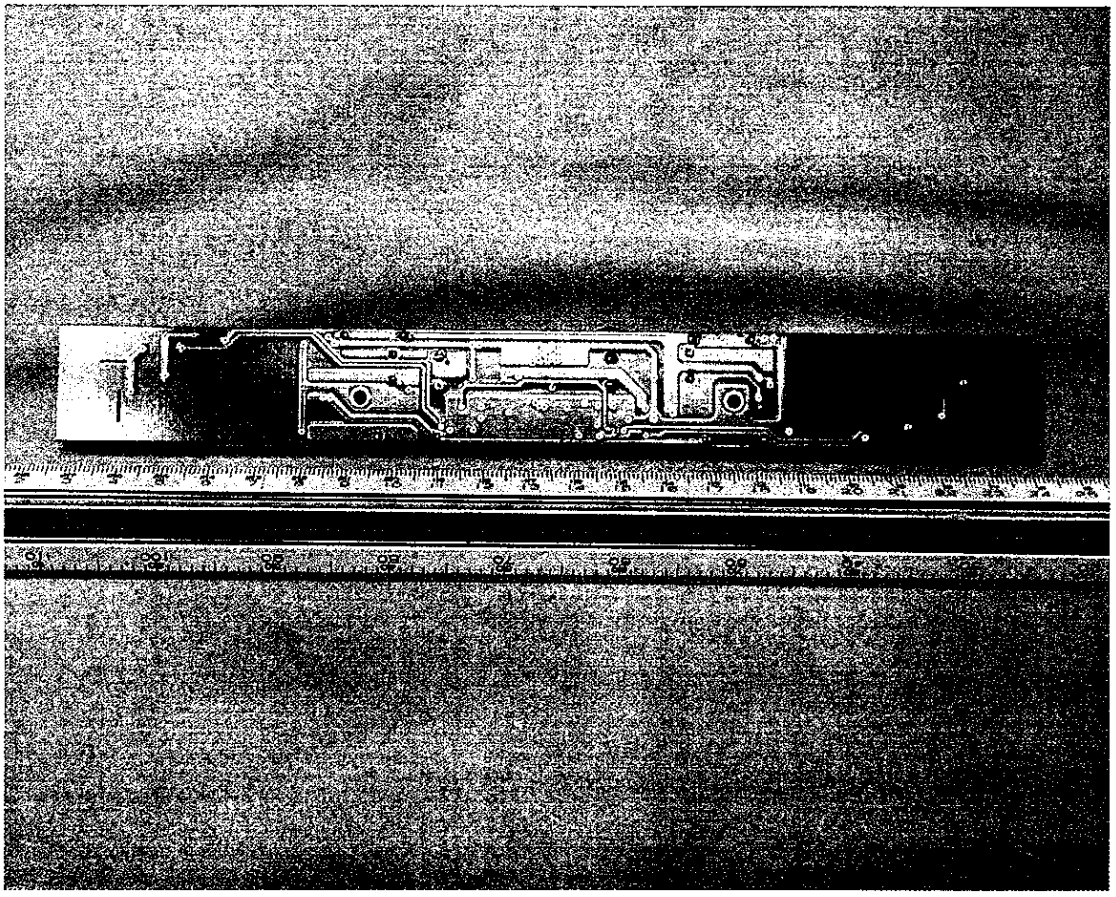
Product: **Panel PC**
Type Designation: **POC-174xx-xx-xx**
(x = any alphanumeric characters or blank)
Report Number: **10009176 001**





Product:	**Panel PC**
Type Designation:	**POC-174xx-xx-xx** **(x = any alphanumeric characters or blank)**
Report Number:	**10009176 001**





TUV Rheinland **D-51105 Cologne** **Am Grauen Stein** **Konstantin Wille Str. 1**	Gen. –Ausw. -Nr. Anlage-Nr. TA 50039279	Aktenzeichen (to be filled in by TUV Rheinland) Please submit 2 copies of this form! 10009167 001 1	TÜV
Constructional Data Form for Electromedical Devices according to EN 60601-1			Page 1 of 8

1.1 Applicant	:	Advantech Co., Ltd.			
(full address)		4F., No. 108-3, Ming Chuan Rd, Hsin Tien City, Taipei Hsien 231, Taiwan.			
1.2 Production Facility(1)		Advantech Co., Ltd.			
(full address)		5th FL No 1, Lane 169 Kang-Ning Street, Xi-Zhi City, Taipei Hsien Taiwan.			
2.1 Kind of Device	:	Panel PC			
2.2 Type Designation	:	POC-174xx-xx-xx (Where the x can be any alphanumeric character or blank)			
2.3 Rated Voltage	:	(1) 100-240 Vac		2.4 Current Type:	(1) AC
2.5 Rated Frequency	:	(1) 50-60 Hz		2.6 Rated Current:	(1) 4-2 A max.
2.7 RF-Frequency	:	--		2.8 Power Output:	--
2.9 Operation Mode	:	Cont.	~~short-time~~	~~intermit~~	
2.10 Style (table-top, standing, built-in, o.s.)	:	--			
2.11 Classification	:	a) class: I	b) type: --	c) internally powered:	☐ Yes ☒ No
2.12 Moisture protection	:	Ordinary	~~drip proof~~	~~splash proof~~	~~Water tight~~
2.13 Mains connection	:	~~fixed power cord~~	~~permanent connection~~		appliance inlet
2.14 AP/APG category	:	☐ Yes ☒ No		PTB No.:	
2.15 Materials	:	a) Enclosure: min. 80°C, V-1 or batter b) PCB: V-1 or better, min. 105°C			
2.16 External connectors:		Yes			
2.17 Schematic no. and date of issue	:	--			
2.18 Separation between Primary and Secondary	:	Double or Reinforced Insulation			
2.19 Ambient	:	0-40°C			

Cologne, date MAR 03 2004 TUV Rheinland Product Safety GmbH Medizintechnik	February 26, 2004 (Date)	Taipei, Taiwan (City) (Stamp and signature of applicant)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
PCB	--	--	V-1 or better, 105°C min.	UL94	UL
Enclosure material	Chi Mei	PA-765A	V-1 or better , 80°C min.	UL 94	UL
LCD Panel	AU Optronics Couporation	M170EN07	TFT type, SVGA 17 inch	--	--
HDD Drive (Optional)	Fujitsu	MHT2020AT	5Vdc, 0.55A max.	EN 60950	TÜV, UL
FDD Drive (Optional)	NEC	FD3238T	5Vdc, 1.5A max.	EN 60950	TÜV, UL
CD / DVD-ROM / CD-RW Drive (Optional)	Quanta Storage Inc.	SCR-242	5Vdc, 1.5A	EN 60950	TÜV, UL
Class I Laser Product	Toshiba Corp	XM-7004Bxx, XM-1902Bxx	5Vdc, 1.5A	EN 60950	TÜV, UL
TÜV Rheinland Group	Quanta Storage Inc	SDR-XXXX	5Vdc, 1.8A max.	EN 60950	TÜV, UL
	Matsushita	SR-8175-C, SR-8176-C	5Vdc, 1.8A max.	EN 60950	TÜV, UL
Lithium Battery	Toshiba	CR2032	3 V, max. Abnormal Charging Current 10mA	UL 1642	UL
	Rayovac	BR2032	3 V, max. Abnormal Charging Current 4 mA	UL 1642	UL
	Sony	CR2032	3 V, max. Abnormal Charging Current 10 mA	UL 1642	UL
	Vic-Dawn Enterprise Co Ltd	CR2032	3 V, max. Abnormal Charging Current 10 mA	UL 1642	UL
	Mitsubishi Electric Corp	CR2032	3 V, max. Abnormal Charging Current 10 mA	UL 1642	UL
	Matsushita	CR2032	3 V, max. Abnormal Charging Current 5 mA	UL 1642	UL
System Fan	ADDA	AD0612MB-G76	12V, 0.13A, 12.0 CFM	EN 60950	TUV, UL
	ADDA	AD0612LB-G76	12V, 0.11A, 11.7 CFM	EN 60950	TUV, UL
Inverter	Lecerf Technology Co., Ltd	LV-1701LC-A	I/P: 12V, 1.8A, Output: 680Vrms, 13mA.	--	--
- Transformer (T1, T2)	Lecerf Technology Co., Ltd	X08-C-1	Class 105°C	--	--

Cologne, date MAR 03 2004 TUV Rheinland Product Safety GmbH Medizintechnik	February 26, 2004 (Date)	Taipei, Taiwan (City) (Stamp and signature of applicant)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
Polyswitch (L6)(for VGA connector)	Polytronics	SMD0805P020 T(+)	9Vdc, 0.2A, (Ih), 0.5A (It)	IEC 60730-1	UL, TUV
Polyswitch (FS5) (for PS2 connector)	Tyco Corp. (Raychem)	miniSMDC110	8 Vdc, 1.1 A	IEC 60730-1	UL, TUV
Power Supply	FSP Croup Inc	FSP180-50MP	Input: 100-240Vac, 4A, 50-60Hz. DC Output: +3.3V/16.8A, +5V/12A, +12V/12A, +5Vsb/2.0A, -12V/0.8A	--	CB
1. Enclosure	--	--	Metal, thick 0.6 mm	--	--
2. PCB	--	--	Min. 94V-0, min. 130°C	UL 94	UL
3. Appliance Inlet	Hua Feng	HF-301	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E164798)
	Rong Feng	SS-7B, SS-120	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E102641)
	Supercom	SC-9	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E152973)
	Inalways	0711, 0707-1, 0707	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E94191) VDE
	Singatron	AC-008A	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E67635)
	Rich Bay	R-301SN, R-301	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E128780)
	Kautt & Bux KG	SFF330	10A, 250V	IEC 60320-1	VDE
	Solteam	ST-01	10A, 250V	IEC 60320-1 / UL498	VDE / UL (E200241)
4. Y-capacitors (CY1, CY2, EC2, EC3) (Optional)	Matsushita	NS-A, RS, TS, ECQ-UV	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E62674)
(CY1, CY2: secured on inlet) (EC2, EC3: loc. on E-board)	Murata	KC, KH	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E37921)
	Pan Overseas	AC, AH	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E146544)
	Sam Hwa	SC	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E97754)
	Welson	KL	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E104572)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
	TDK	CS, CD	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E37861)
	Rifa	PHE 289M, PHE 271Y	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E100117)
	Samsung [Netron]	AD, AA	Max. 220pF, Min. 400Vac	IEC 60384-14 2ed. [UL1414]	VDE [UL (E87113)
	Iskra	KNB2520	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E103619)
	Siemens [Epcos]	B81122 series	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. [UL1414]	VDE [UL (E97863)
	Success	SE, SF, SB	Max. 220pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E114280)
5. X-capacitors (CX) (Optional) (Secured on inlet)	Pilkor	PCX2 335M	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E165646)
	Taishing	MPX	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E64032)
	Matsushita	ECQ-UL	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E62674)
	Iskra	KNB1530, KNB1560, KNB1520	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414 IEC 60384-14 2ed.	VDE / UL (E145156) VDE
	Roederstein (ERO)	F1772	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E76297)
	Okaya	RE, LE, PA series	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E78644)
	UTX [Dong Guan Qi Shi Sin Yu]	HQX	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. [UL1414]	VDE [UL (E2241300)
	Nitsuko	CFKC	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E84015)
	Teapo	XG-VP, XG-VS	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E81959)
	Thomson	QX	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed.	VDE
	Chiefcon	CKX	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E209251)
	Rifa	PHE 830M, PHE 840M	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E73869)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
	Siemens [Epcos]	B81130	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. [UL1414]	VDE [UL (E97863)]
	Farad	FXK	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E178496)
	Hua Jung	MKP	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E149075)
	Philips	PCX2 335	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed.	VDE
	Cheng Tung	CTX	Max. 0.68µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E193049)
6. Fuse (EF1, EF2)	Conquer	MST	T4A, 250V	IEC 60127-3 / UL248	VDE / UL (E82636)
	Wickmann-Werke	392	T4A, 250V	IEC 60127-3 / UL248	VDE / UL(E67006)
7. X-capacitor (EC1) (Optional) (Loc. on E-board)	Pilkor	PCX2 335M	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E165646)
	Taishing	MPX	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E64032)
	Matsushita	ECQ-UL	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E62674)
	Iskra	KNB1530, KNB1560, KNB1520	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414 IEC 60384-14 2ed.	VDE / UL (E145156) VDE
	Roederstein (ERO)	F1772	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E76297)
	Okaya	RE, LE, PA series	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E78644)
	UTX [Dong Guan Qi Shi Sin Yu]	HQX	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. [UL1414]	VDE [UL (E2241300)
	Nitsuko	CFKC	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E84015)
	Teapo	XG-VP, XG-VS	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E81959)
	Thomson	QX	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed.	VDE
	Chiefcon	CKX	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E209251)
	Rifa	PHE 830M, PHE 840M	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E73869)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
	Siemens [Epcos]	B81130	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. [UL1414]	VDE [UL (E97863)
	Farad	FXK	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E178496)
	Hua Jung	MKP	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E149075)
	Philips	PCX2 335	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed.	VDE
	Cheng Tung	CTX	Max. 0.1µF, Min. 250V	IEC 60384-14 2ed. / UL1414	VDE / UL (E193049)
8. Bleeder Resistor (ER10) (Loc. on E-board)	--	--	560 kΩ, 1/4W Loc. after fuse	--	--
9. Bleeder Resistor (RX) (Secured on inlet)	Tai	RD	560 kΩ, 1/4W Loc. before fuse	IEC 60065	N
10. Y-capacitors (C3, C4) (Optional)	Matsushita	NS-A, RS, TS, ECQ-UV	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E62674)
	Murata	KC, KH	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E37921)
	Pan Overseas	AC, AH	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E146544)
	Sam Hwa	SC	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E97754)
	Welson	KL	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E104572)
	TDK	CS, CD	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E37861)
	Rifa	PHE 289M, PHE 271Y	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E100117)
	Samsung [Netron]	AD, AA	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. [UL1414]	VDE [UL (E87113)
	Iskra	KNB2520	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E103619)
	Siemens [Epcos]	B81122 series	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. [UL1414]	VDE [UL (E97863)
	Success	SE, SF, SB	Max. 470pF, Min. 250Vac	IEC 60384-14 2ed. / UL1414	VDE / UL (E114280)
11. Storage capacitor (C7)	--	--	120µF, 450V, min. 105°C	--	--

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
12. Photo coupler (IC3, EU5, EU6)	Toshiba	TLP732	dti= 0.4 mm	IEC 60950	FI
(EU5, EU6: on C-board)	Vishay	CNR 21	dti> 2 mm	VDE 0884 IEC 60950 UL1577	VDE FI UL(E76222)
	Fairchild	H11....	dti> 0.5 mm	VDE 0884 IEC 60950 UL1577	VDE FI UL(E90700)
13. Choke (EL1, EL2) (Optional) (Loc. on E-board)	SPI	8LM00376	130°C	--	--
14. Choke (L1) (Optional)	SPI	8LM00258	130°C	--	--
15. Choke (L6) (Optional)	SPI	8LM00257	130°C	--	--
16. Choke (L8) (Optional)	SPI	8LM00375	130°C	--	--
17. Choke (L12) (Optional)	SPI	8LA00057	130°C	--	--
18. Transformer (T1)	SPI	8TG00107	Class B	--	--
19. Transformer (T2)	SPI	8TC00164	Class B	--	--
20. Varistor (M1) (Optional)	Centra	CNR-07D471K	300Vac, 385Vdc	UL1449	UL (E150709)
	Song Long	07D471K, SAS-471KD07	300Vac, 385Vdc	UL1449	UL (E171541)
	Matsushita	V7241U	300Vac, 385Vdc	UL1449	UL (E86821)
	Thinking	TVR07471	300Vac, 385Vdc	UL1449	UL (E173642)
	Joyin	JVR07N471K	300Vac, 385Vdc	UL1449	UL (E153360)
	Ceramate	GNR07D471K	300Vac, 385Vdc	UL1449	UL (E166389)
	Uppermost	V07K300	300Vac, 385Vdc	UL1449	UL (E105157)
	Epcos	S07K150	300Vac, 385Vdc	UL1449	UL (E97877)
	Maida	Z151-03	300Vac, 385Vdc	UL1449	UL (E86730)
	AVX	VF07M10241K	300Vac, 385Vdc	UL1449	UL (E84108)
21. DC fan	Sunonwealth	KDE1204PKBX	12Vdc, 0.13A, 10.8CFM	IEC 60950 / UL507	TUV / UL (E77551)

TÜV Rheinland Group

Cologne, date MAR 03 2004 TUV Rheinland Product Safety GmbH Medizintechnik	February 26, 2004 (Date)	Taipei, Taiwan (City) (Stamp and signature of applicant)

object/part No.	Manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
	Protechnic / Rotechnic	MGA4012ZB-A20	12Vdc, 0.22A, 11.09CFM	IEC 60950 / UL507	TUV / UL (E187236)

Cologne, date MAR 03 2004 TUV Rheinland Product Safety GmbH Medizintechnik	February 26, 2004 (Date)	Taipei, Taiwan (City) (Stamp and signature of applicant)