EMC

TEST REPORT

REPORT NO. : CE86110603
MODEL NO. : POS-560
DATE OF TEST : Nov. 19 ~ Nov. 25, 1997

PREPARED FOR : ADVANTECH CO., LTD.

ADDRESS : FL. 4, NO. 108-3, MING-CHUAN ROAD,
SHING-TIEN CITY TAIPEI HSIEN, TAIWAN

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION

NVLAP®
Accredited Laboratory

12F, NO.1, SEC.4, NAN-KING EAST RD.,
TAIPEI, TAIWAN, R.O.C.

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CERTIFICATION

Issue date: Dec. 8, 1997

Product	:	CPU BOARD	
Trade Name	:	ADVANTECH	
Model No.	:	POS-560	
Applicant	:	ADVANTECH CO., LTD.	
Standard	:	EN 55022:1994, Class A	**EN 50082-2:1995**
			EN 61000-4-2:1995
			EN 61000-4-3:1996
			EN 61000-4-4:1995
			EN 61000-4-6:1996
			EN 61000-4-8:1993
			ENV 50204:1995

We hereby certify that one sample of the designation has been tested in our facility from Nov. 19 ~ Nov. 25, 1997. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

PREPARED BY: Sharon Hsiung , DATE: 12/8/97
(Sharon Hsiung)

CHECKED BY: Paul Yang , DATE: 12/8/'97
(Paul Yang)

APPROVED BY: , DATE: 12/8/'97
(Harris W. Lai)

ADVANCE DATA TECHNOLOGY CORPORATION

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	CPU BOARD
Model No.	:	POS-560
Power Supply Type	:	Switching
Power Cord	:	N/A

Note: The EUT is a CPU board which will be used in an industrial PC. It was tested with the following configuration:

- CHASIS: ACCORD, model: POS-808
- CPU: INTEL, INTEL 166 MMX
- HDD: CONNER, model: CONNER,CP3625
- FDD: TEAC, model: FD-235HF
- POWER SUPPLY: ACCORD, model: APC080CF
- VGA CARD: C&T, model: 65550 Chips
- I/O BOARD: SMC, model: 37C6690F
- LAN CARD: UMC, model: 9008
- MAIN CHIPSET: SIS, model: 5571

The EUT was tested with the following kind of processing speed of CPU:

INTEL 166 MMX Speed: 166 MHz (the frequency of clock generator is 66.6 MHz)

The video resolution of 1024x768 was used during the test.

For more detailed features description, please refer to ATTACHMENT 1 - TECHNICAL DESCRIPTION OF EUT and User's Manual.

2.2 GENERAL DESCRIPTION OF APPLIED STANDARD

According to the manufacturer's specification, the EUT was tested with the requirements of the following standards:

EN 55022:1994, Class A

EN50 082-2:1995

EN 61000-4-2:1995

EN 61000-4-3:1996

EN 61000-4-4:1995

EN 61000-4-6:1996

EN 61000-4-8:1993

ENV 50204:1995

All tests are performed and recorded as per above standards.

2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories are used to form representative test configuration during the tests.

FOR EMISSION TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1	COLOR MONITOR	ADI	937G	649015T00102094A	Shielded Signal (1.5m) Nonshielded Power (1.3m)
2	KEYBOARD	BTC	5139	853300109	Shielded Signal (1.8m)
3	PRINTER	HP	2225C+	2949S63865	Shielded Signal (1.2m) Nonshielded Power (1.9m)
4	PRINTER	HP	2225C+	3208S05355	Shielded Signal (1.2m) Nonshielded Power (1.9m)
5	MODEM	DATATRONICS	1200CK	07-503067	Shielded Signal (1.2m) Nonshielded Power (1.9m)
6	MODEM	DATATRONICS	1200CK	07-503066	Shielded Signal (1.2m) Nonshielded Power (1.9m)
7	MOUSE	COMPAQ	M-S28-6MD	LCA53206262	Shielded Signal (1.8m)
8	PERSONAL COMPUTER	ACER	PT75WB	TJ53521	Nonshielded Power (1.8m)
9	MONITOR	ADI	PV-448	604012V00100237A	Shielded Signal (1.8m)
10	KEYBOARD	FORWARD	FDA-102A	4001383	Shielded Signal (1.8m)
11	LAN CARD	INTEL	PILA8465	N/A	N/A
12	ETHERNET HUB	ACCTON	EN2040	N/A	Nonshielded Signal (10m) Nonshielded Power (1.9m)

Note: 1. The EUT system acted as Server PC and communicated with support units 6-11 which acted as HOST PC and systems of communication partner. They communicated with each other via support unit 11 using nonshielded RJ 45 cables. The RJ-45 cable between EUT system and support unit 11 is 10m in length and the RJ-45 cable between support unit and HOST PC is 1.5m in length.

2. Two 2.2m RS-232 cables were connected to the COM ports of EUT system to form two open loop cables.

FOR IMMUNITY TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1	COLOR MONITOR	ACER	7156i	N/A	Shielded Signal (1.3m) Nonshielded Power (3.1m)
2	KEYBOARD	BTC	5140	158049046	Shielded Signal (1.5m)
3	MOUSE	HP	M-S34	LZA72270336	Shielded Signal (1.8m)
4	PRINTER	HP	C2145A	SG5AH1511	Shielded Signal (1.9m) Nonshielded Power (1.8m)
5	PRINTER	HP	C2145A	SG5BN160GY	Shielded Signal (2.0m) Nonshielded Power (1.8m)
6	MODEM	GVC	F-114V/R6	853E100	Shielded Signal (1.25m) Nonshielded Power (1.25m)
7	MODEM	HAYES	5300AP	A1425300K045	Shielded Signal (1.2m) Nonshielded Power (1.7m)
8	PERSONAL COMPUTER	ACER	PT75WB	TJ53521	Nonshielded Power (1.8m)
9	COLOR MONITOR	ACTION	MV-0951	N/A	Shielded Signal (1.5m) Nonshielded Power (1.5m)
10	KEYBOARD	HP	C3758A	C3758-60223	Shielded Signal (1.8m)
11	LAN CARD	ACCTON	EN1657	N/A	N/A
12	ETHERNET HUB	ACCTON	ETHER HUB-8S	N/A	Shielded Signal (15m) Nonshielded Power (1.8m)

Note: 1. The EUT system acted as Server PC and communicated with support units 6-11 which acted as HOST PC and systems of communication partner. They communicated with each other via support unit 11 using nonshielded RJ 45 cables. The RJ-45 cable between EUT system and support unit 11 is 10m in length and the RJ-45 cable between support unit and HOST PC is 1.5m in length.

2. Two 2.2m RS-232 cables were connected to the COM ports of EUT system to form two open loop cables.

2.4 TEST SETUP

Please refer to the photos of test configuration in Item 6.

3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

RADIATED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8590L	3544A01042	May 5, 1998
HP Preamplifier	8447D	2944A08313	March 24, 1998
ROHDE & SCHWARZ TEST RECEIVER	ESVS 30	841977/008	Oct. 5, 1998
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 28, 1998
CHASE BiLOG Antenna	CBL6111A	1647	Aug. 2, 1998
EMCO Turn Table	1016	1722	N/A
EMCO Tower	1051	1263	N/A
Open Field Test Site	Site 4	ADT-R04	Aug. 1, 1998

Note: 1. The measurement uncertainty is less than +/- 4dB, which is calculated as per NAMA's document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESHS30	828765/002	July 31, 1998
ROHDE & SCHWARZ Artificial Mains Network	ESH2-Z5	828075/003	July 28, 1998
EMCO-L.I.S.N.	3825/2	90031627	July 28, 1998
Shielded Room	Site 5	ADT-C05	N/A

Note: 1. The measurement uncertainty is less than +/- 3dB, which is calculated as per NAMA's document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

3.2 TEST INSTRUMENTS (IMMUNITY)

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
KeyTek, ESD Test System	2000	9105240/41	Aug. 10, 1998
KeyTek, ESD Simulator	MZ-15/EC	92022232	June 12, 1998
KeyTek, EFT Generator	CE-40	9508257	Sept. 9, 1998
KeyTek, Capacitive Clamp	CE-40-CCL	9508259	Sept. 9, 1998
ROHDE & SCHWARZ Signal Generator	SMY01	840490/009	Sept. 29, 1998
KALMUS Power Amplifier	LA1000V	091995-1	N/A
KALMUS Power Amplifier	757LC	091995-2	N/A
HOLADAY Field Probe	HI-4422	89915	Oct. 12, 1998
EMCO BiconiLog Antenna	3141	1001	N/A
COMTEST Compact Full Anechoic Chamber (7x3x3 m)	CFAC	ADT-S01	Aug. 4, 1998

Note: The calibration interval of the above test instruments is 12 months.
And the calibrations are traceable to NML/ROC and NIST/USA.

4. TEST RESULTS (EMISSION)

4.1 RADIO DISTURBANCE

Product Family Standard	:	EN 55 022, Class A
Frequency Range	:	0.15 - 30 MHz (Conducted Emission)
		30 - 1000 MHz (Radiated Emission)
Input Voltage	:	230 Vac, 50 Hz
Temperature	:	22 ℃
Humidity	:	51 %
Atmospheric Pressure	:	1060 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -4.9 dB at 0.157 MHz Minimum passing margin of radiated emission: -2.2 dB at 267.31 MHz

4.1.1 EUT OPERATION CONDITION

1. Turn on the power of all equipments.
2. Server PC (EUT system) and communication PC runs a test program to enable all functions.
3. Server PC (EUT system) transmitted messages to and received messages from the communication PC via the RJ-45 cable connected between EUT and communication PC.
4. Server PC (EUT system) sent "H" messages to monitor and monitor displayed "H" patterns on screen.
5. Server PC (EUT system) sent "H" messages to printer, then printer printed them on paper.
6. Repeat steps 3-6.

4.1.2TEST DATA OF CONDUCTED EMISSION

EUT: **CPU BOARD** MODEL: **POS-560**

6 dB Band Width: 10 kHz

TEST PERSONNEL: John Liao

Freq.	L Level		N Level		Limit		Margin [dB (μV)]			
[MHz]	[dB (μV)]		[dB (μV)]		[dB (μV)]		L		N	
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV
0.157	70.30	60.70	71.10	61.10	79.00	66.00	-8.7	-5.3	-7.9	-4.9
0.211	63.10	-	63.80	-	79.00	66.00	-15.9	-	-15.2	-
0.261	58.00	-	59.10	-	79.00	66.00	-21.0	-	-19.9	-
0.837	39.40	-	39.10	-	73.00	60.00	-33.6	-	-33.9	-
7.079	44.70	-	46.50	-	73.00	60.00	-28.3	-	-26.5	-
10.220	44.50	-	48.40	-	73.00	60.00	-28.5	-	-24.6	-

Remarks:
1. "*": Undetectable
2. Q.P. and AV. are abbreviations of quasi-peak and average individually.
3. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
4. The emission level of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value

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Tested by John Liao

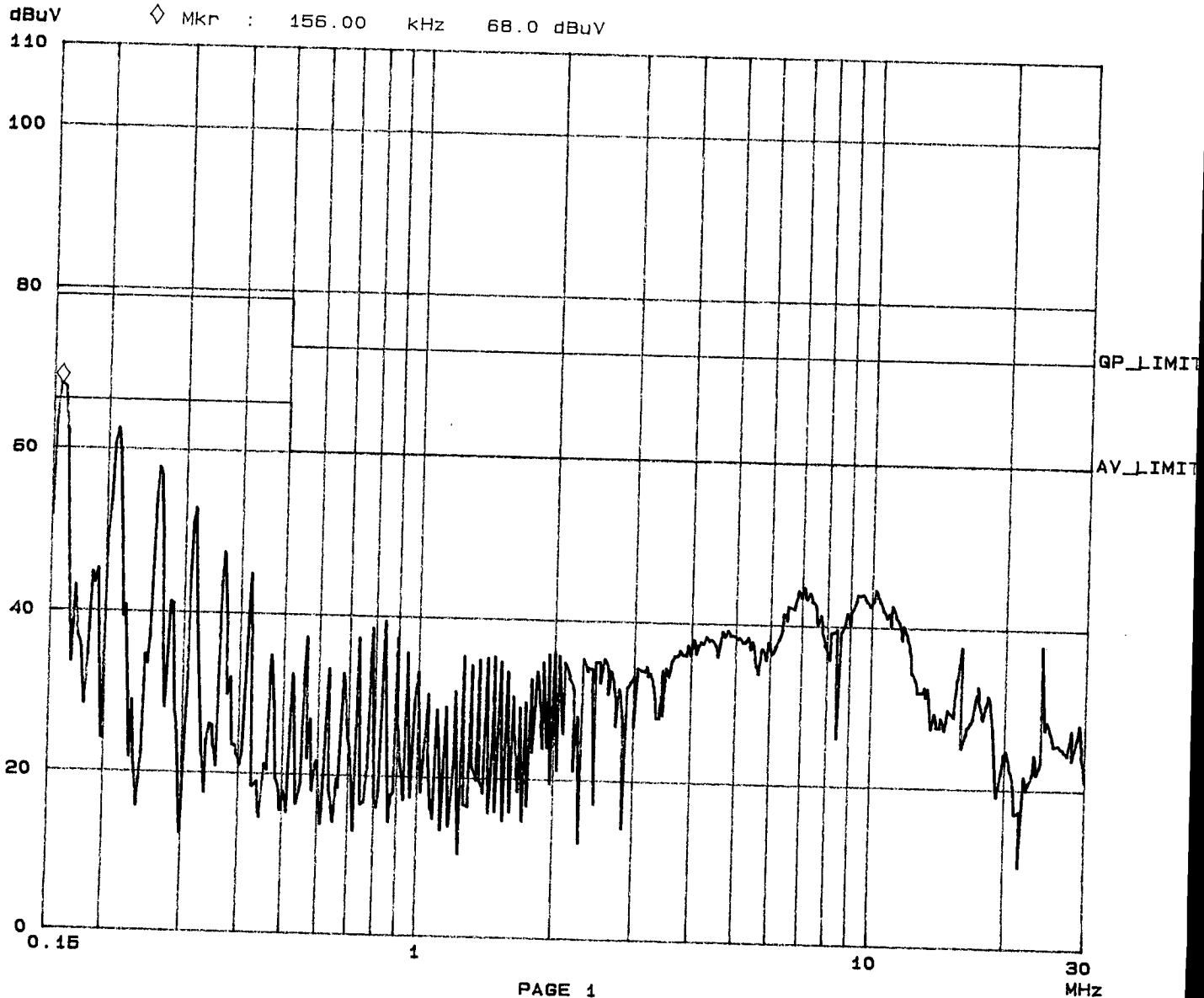
19. Nov 97 15: 25

ADT CO. SITE 5
CISPR 22 CLASS A

EUT: Model: POS-560
Operator: John Liao
Test Spec: LISN : L
Comment: 230V AC/50Hz
FULL SYSTEM

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	450k	3k	10k	PK	0.05ms	10dBLN	OFF	60dB
450k	5M	3k	10k	PK	0.05ms	10dBLN	OFF	60dB
5M	30M	3k	10k	PK	0.05ms	10dBLN	OFF	60dB



File No. CE8611060 3

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Tested by John Liao

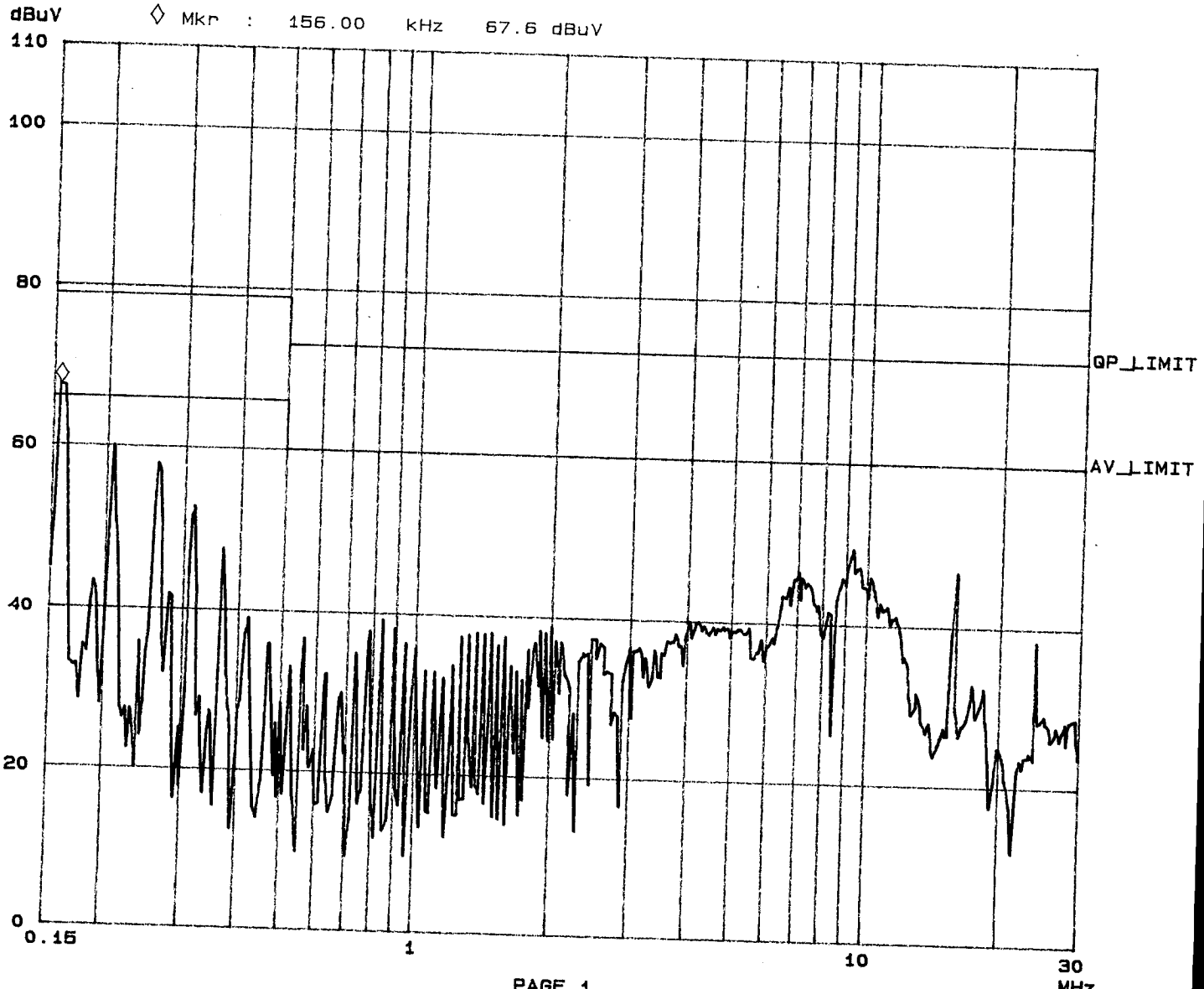
19. Nov 97 15: 33

ADT CO. SITE 5
CISPR 22 CLASS A

EUT: Model: POS-560
Operator: John Liao
Test Spec: LISN : N
Comment: 230V AC/50Hz
FULL SYSTEM

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	450k	3k	10k	PK	0.05ms	10dBLN	OFF	60dB
450k	5M	3k	10k	PK	0.05ms	10dBLN	OFF	60dB
5M	30M	3k	10k	PK	0.05ms	10dBLN	OFF	60dB



4.1.3 TEST DATA OF RADIATED EMISSION

EUT: **CPU BOARD** MODEL: **POS-560**

ANTENNA: CHASE BILOG CBL6111A POLARITY: Horizontal

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

TEST PERSONNEL: John Liao

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
133.67	14.2	14.2	28.4	40.0	-11.6
167.09	11.4	13.9	25.3	40.0	-14.7
185.91	11.3	10.1	21.4	40.0	-18.6
197.54	11.5	11.2	22.7	40.0	-17.3
200.50	11.6	12.7	24.3	40.0	-15.7
267.32	14.8	26.9	41.7	47.0	-5.3
287.05	15.4	14.7	30.1	47.0	-16.9
334.15	16.3	17.7	34.0	47.0	-13.0

REMARKS :
1. Emission level (dBuV/m) = Correction Factor(dB/m) +Meter Reading (dBuV).
2. Correction Factor(dB/m) = Ant. Factor(dB/m)+Cable loss(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value

TEST DATA OF RADIATED EMISSION

EUT: **CPU BOARD** MODEL: **POS-560**

ANTENNA: CHASE BILOG CBL6111A POLARITY: Vertical

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

TEST PERSONNEL: John Liao

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
133.67	12.3	14.7	27.0	40.0	-13.0
167.07	11.3	20.4	31.7	40.0	-8.3
262.71	16.1	25.5	41.6	47.0	-5.4
267.31	15.8	29.0	44.8	47.0	-2.2
271.95	15.5	21.8	37.3	47.0	-9.7
334.14	15.6	18.6	34.2	47.0	-12.8
400.97	19.6	14.6	34.2	47.0	-12.8

REMARKS :
1. Emission level (dBuV/m) = Correction Factor(dB/m) +Meter Reading (dBuV).
2. Correction Factor(dB/m) = Ant. Factor(dB/m)+Cable loss(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value

5. TEST RESULTS (IMMUNITY)

5.1 GENERAL DESCRIPTION

Basic Standard	:	EN 61000-4-2	(Electrostatic Discharge Test, ESD)
		EN 61000-4-3	(Radiated Radio-Frequency Disturbance Test, RS)
		EN 61000-4-4	(Electrical Fast Transient/Burst Test, EFT)
		EN 61000-4-6	(Conducted Radio Frequency Disturbances Test, CS)
		EN 61000-4-8	(Power Frequency Magnetic Field Test)
		ENV 50204	(Radio-Frequency Electromagnetic Field, Pulse modulated)
Generic Standard	:	EN 50 082-2	
Input Voltage	:	230 Vac, 50 Hz	
Temperature	:	22 ℃	
Humidity	:	58 %	
Atmospheric Pressure	:	1060 mbar	

5.2 PERFORMANCE CRITERIA DESCRIPTION

Criterion A - The apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion B -The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion C -Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls.

5.3 EUT OPERATION CONDITION

Same as item **4.1.1**.

5.4 TEST RESULT OF ELECTROSTATIC DISCHARGE (ESD)

Basic Standard	:	EN 61000-4-2
Generic Standard	:	EN 50082-2
Discharge Impedance	:	300 ohm / 150 pF
Discharge Voltage	:	Air Discharge - 8 kV(Direct) Contact Discharge - 4 kV(Direct/Indirect)
Polarity	:	Positive/Negative
Number of Discharge	:	Minimum 10 times at each test point
Discharge Mode	:	Single Discharge
Discharge Period	:	1 second minimum
Test Personnel	:	Tim Yang

Test Result		Remarks
Criterion A	PASS	Model: POS-560

OBSERVATION DESCRIPTION

Direct Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Contact Discharge	Air Discharge
8	+/-	1 ~ 5	N/A	Note 1
4	+/-	4 ~ 5	Note 1	N/A

Description of test point:

1. FDD
2. Power Switch
3. All LEDs
4. I/O Ports
5. Metal case

Indirect Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Horizontal Coupling	Vertical Coupling
4	+/-	1 ~ 4	Note 1	Note 1

Description of test point:

1. Front side
2. Left side
3. Right side
4. Rear side

Description of test result:

Note 1: There was no change compared with initial operation during the test.

5.5 TEST RESULT OF RADIATED ELECTROMAGNETIC FIELDS (RS)

Basic Standard	:	EN 61000-4-3
Generic Standard	:	EN 50082-2
Frequency range	:	80 MHz - 1000 MHz
Field strength	:	10 V/m
Modulation	:	1kHz Sine Wave, 80%, AM Modulation
Frequency step	:	1 % of fundamental
Polarity of Antenna	:	Horizontal and Vertical
Test distance	:	3 m
Test Personnel	:	

Test Result		Remarks
Criterion A	PASS	Model: POS-560

Note: Four sides of EUT are verified separately.

Description of test result:

There was no change compared with initial operation during the test.

5.6 TEST RESULT OF ELECTRICAL FAST TRANSIENT (EFT)

Basic Standard	:	EN 61000-4-4
Generic Standard	:	EN 50082-2
Test Voltage	:	Power Line - 2 kV
		Signal/Control Line - 1 kV
Polarity	:	Positive/Negative
Impulse Frequency	:	5 kHz
Tr / Tn	:	5/50 ns
Burst Duration	:	15 ms
Burst Period	:	300 ms
Test Duration	:	Not less than 1 min.
Test Personnel	:	

Test Result		Remarks
Criterion A	**PASS**	Model: POS-560

OBSERVATION DESCRIPTION

Test Point	Polarity	Test Level (kV)	Result
L1	+/−	2	Note 1
L2	+/−	2	Note 1
GND	+/−	2	Note 1
Signal/Control Line	+/−	1	Note 1

Description of test result:

Note 1: There was no change compared with initial operation during the test.

5.7 TEST RESULT OF CONDUCTED RADIO FREQUENCY DISTURBANCES (CS)

Basic Standard	:	EN 61000-4-6
Generic Standard	:	EN 50082-2
Frequency range	:	0.15 MHz - 80 MHz
Field strength	:	10 V/m
Modulation	:	1kHz Sine Wave, 80%, AM Modulation
Frequency step	:	1 % of fundamental
Coupled cable	:	Power Mains, Unshielded
Coupling device	:	CDN-M3 (3 wires)
Test Personnel	:	

Test Result		Remarks
Criterion A	PASS	Model: POS-560

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

5.8 TEST RESULT OF POWER FREQUENCY MAGNETIC FIELD

Basic Standard	:	EN 61000-4-8
Generic Standard	:	EN 50082-2
Frequency range	:	50Hz
Field strength	:	50 A/m
Observation Time	:	1 minute
Inductance coil	:	Rectangular type, 1mx1m
Test Personnel	:	

Test Result		Remarks
Criterion A	**PASS**	Model: POS-560

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

5.9 TEST RESULT OF RADIO-FREQUENCY ELECTROMAGNETIC FIELD, PULSE MODULATED

Basic Standard	:	ENV 50204
Generic Standard	:	EN 50082-2
Frequency range	:	900 +/- 5 MHz
Field strength	:	10 V/m
Modulation	:	200Hz, Square Wave, 50% Duty Cycle
Dewell Time	:	30 second
Polarity of Antenna	:	Horizontal and Vertical
Test distance	:	3 m
Test Personnel	:	

Test Result		Remarks
Criterion A	PASS	Model: POS-560

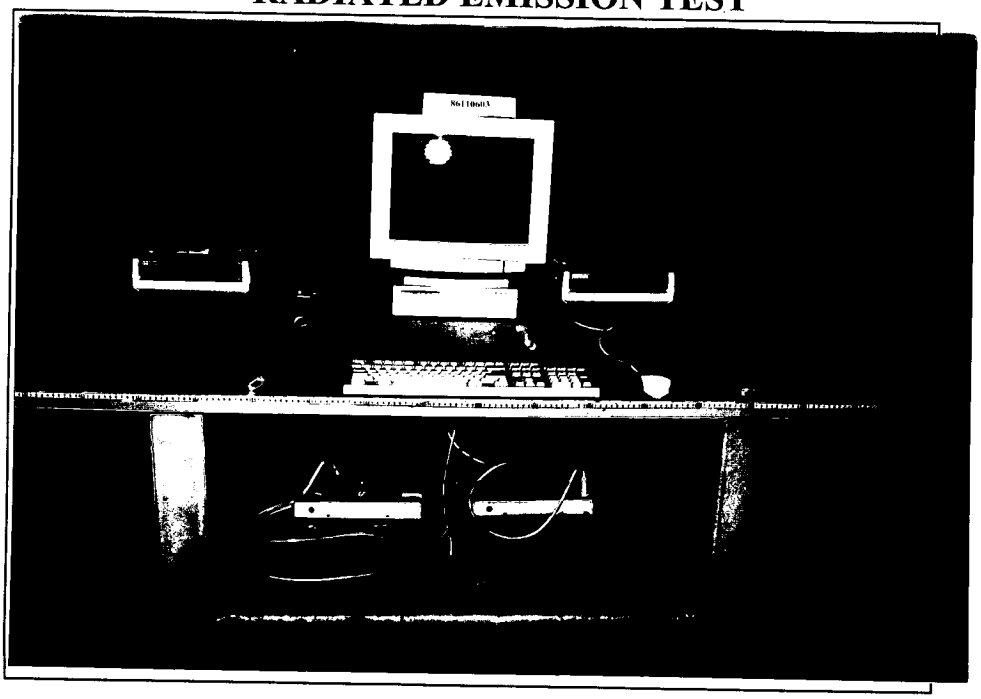
Note: Four sides of PC system are verified separately.

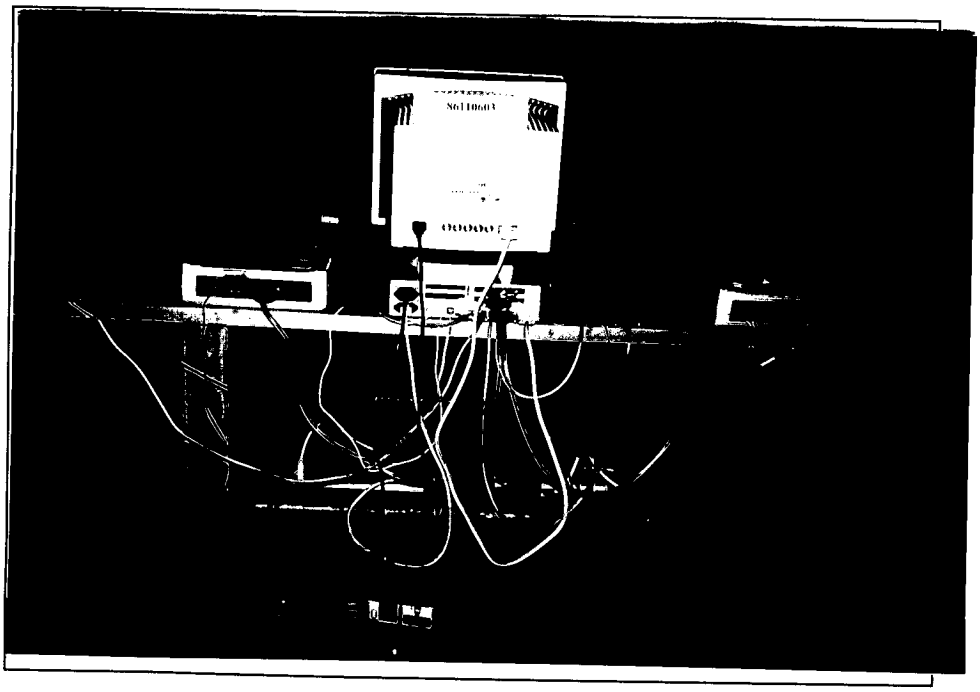
OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

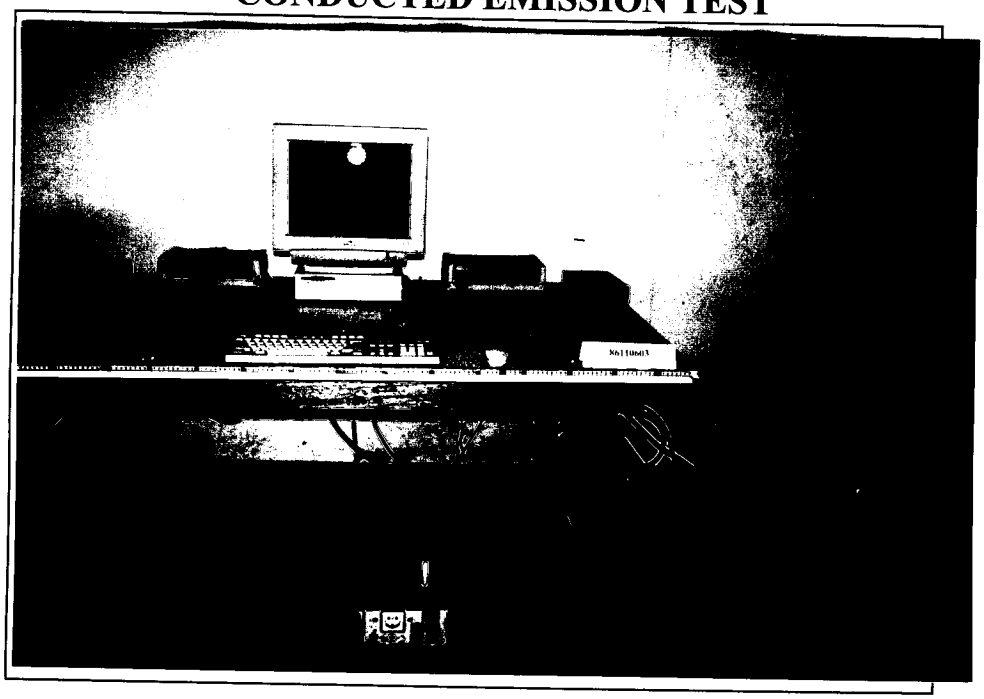
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

RADIATED EMISSION TEST





CONDUCTED EMISSION TEST



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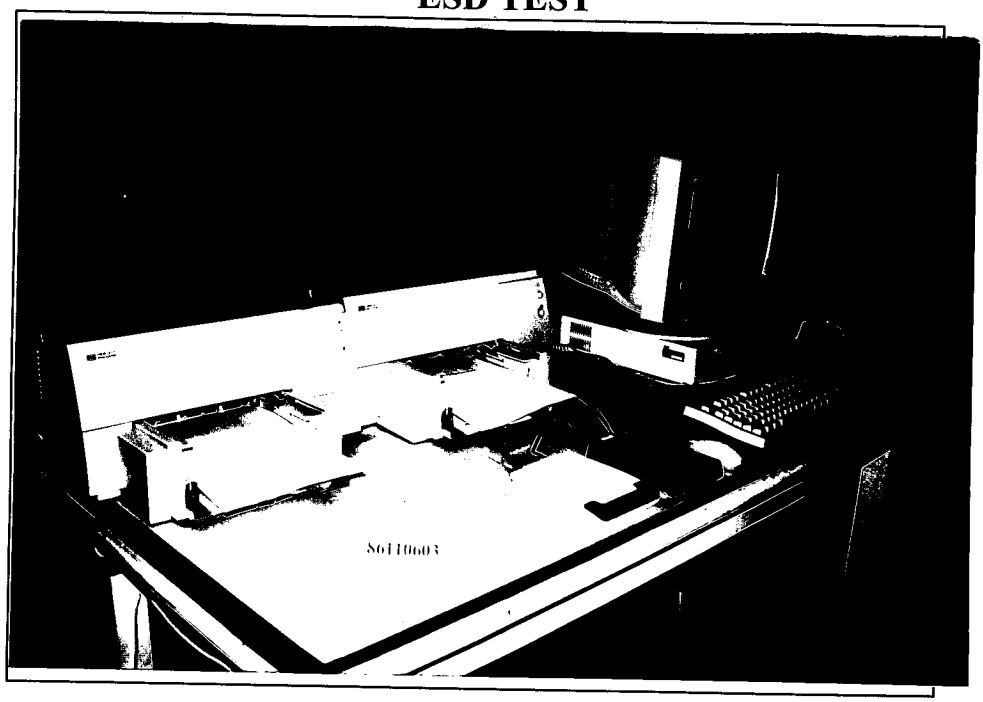
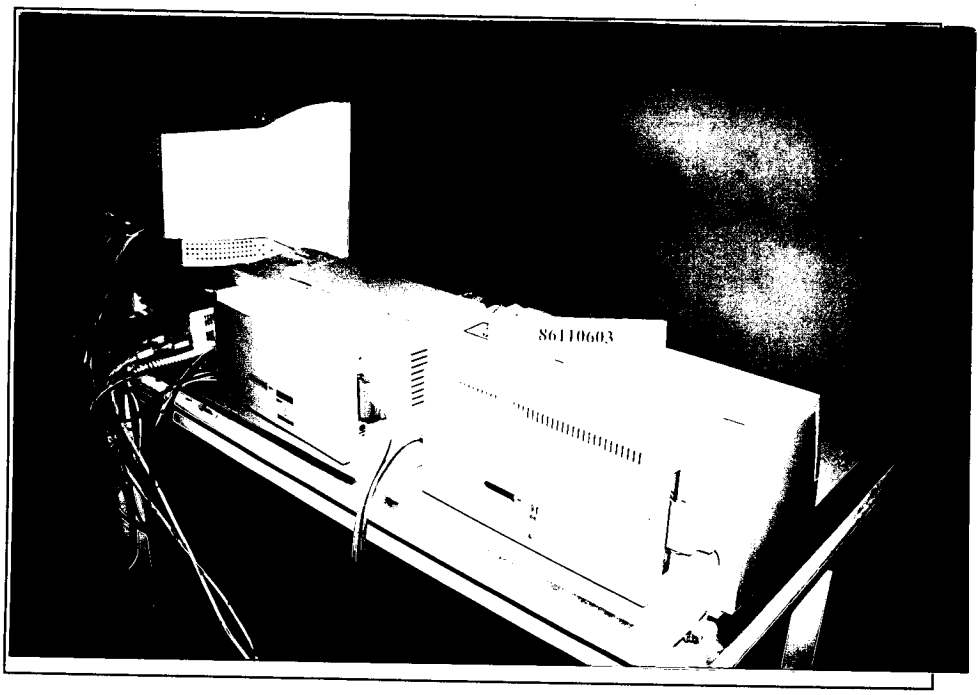
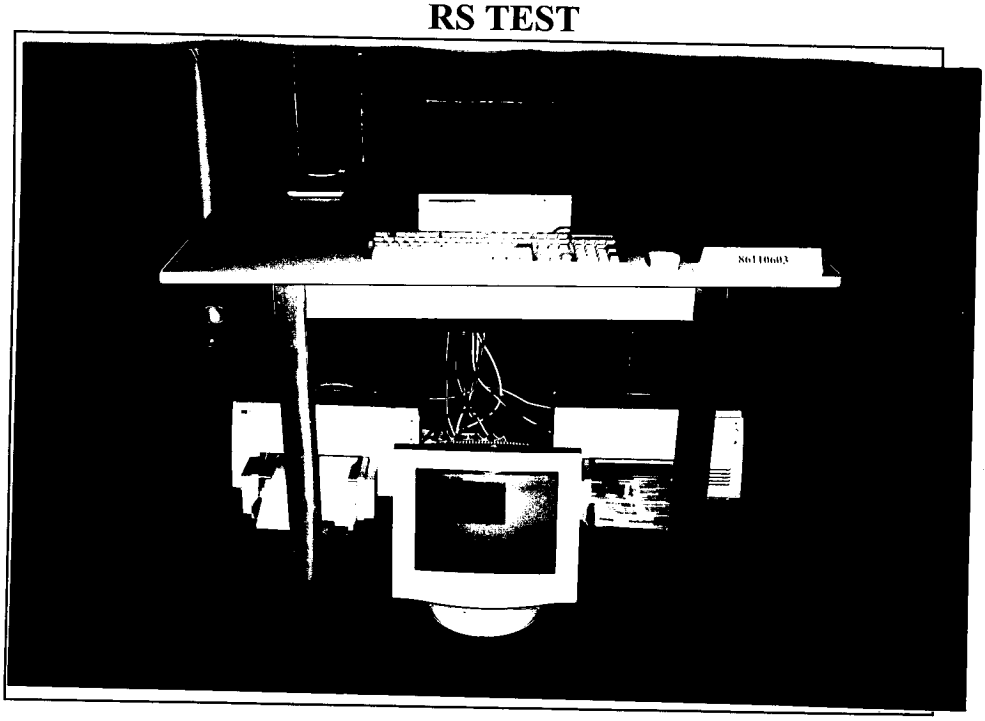
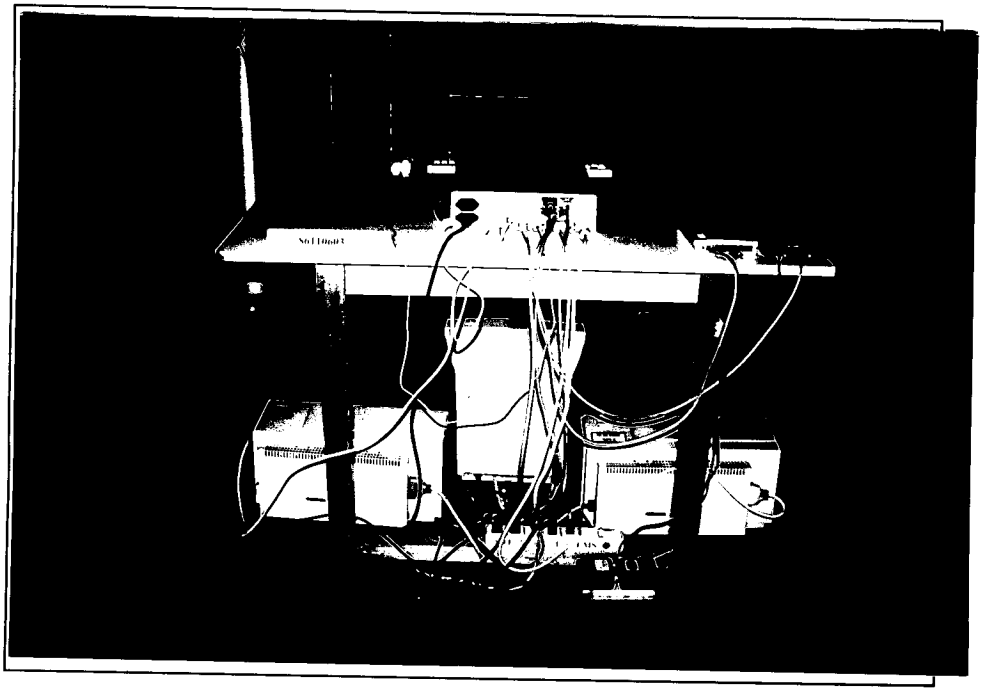


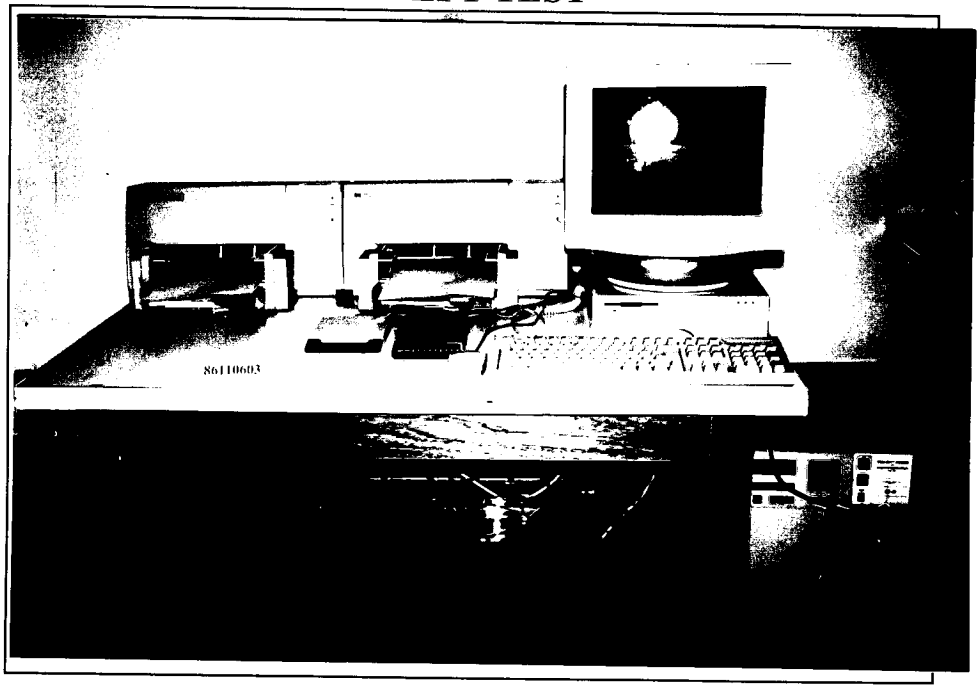


RS TEST

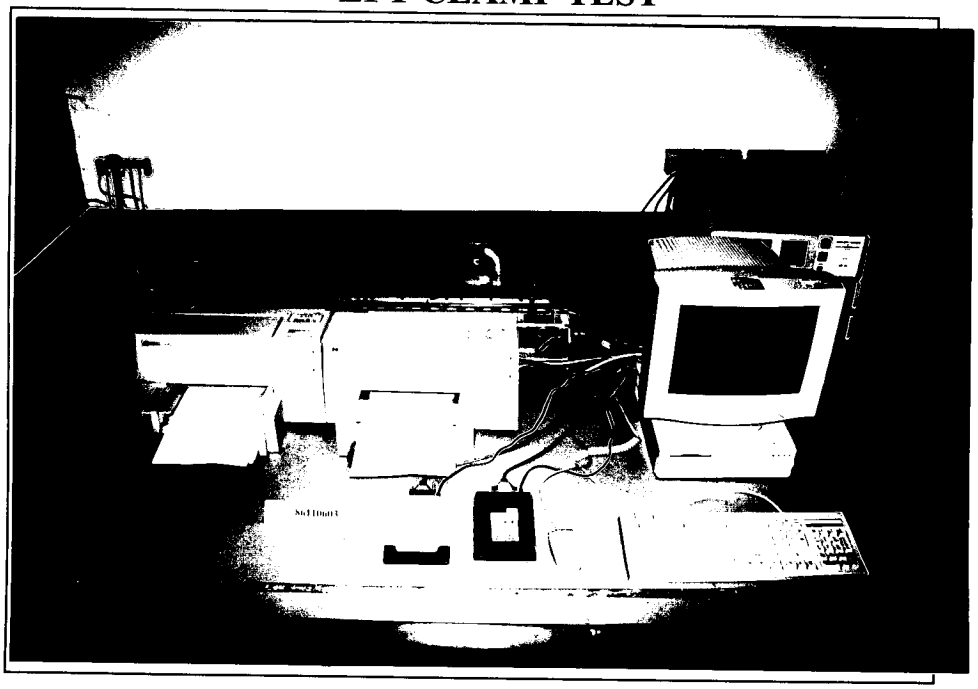




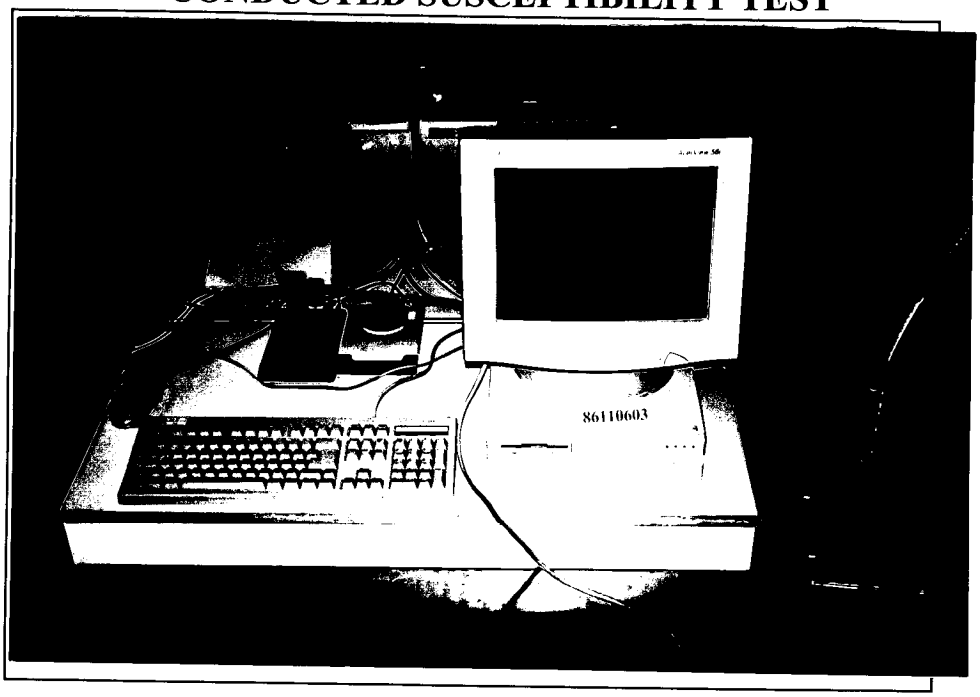
EFT TEST



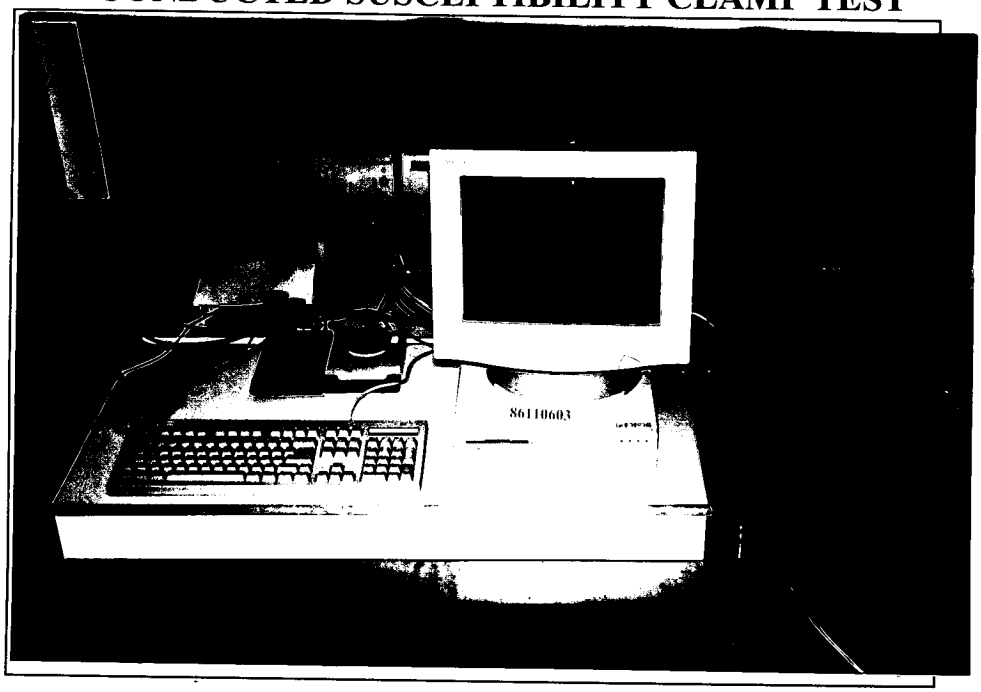
EFT CLAMP TEST



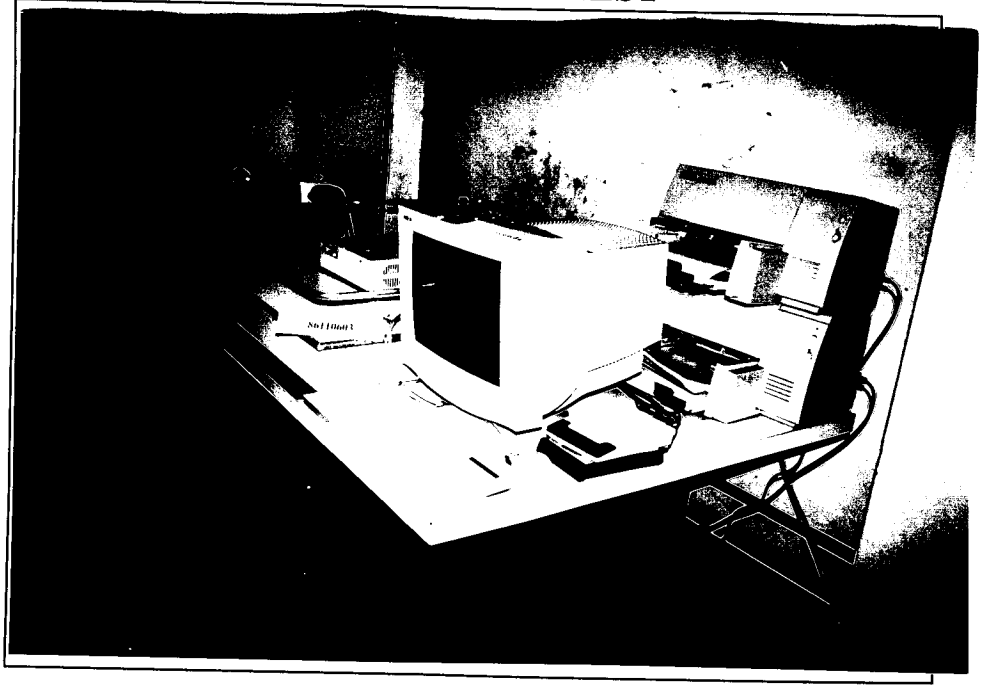
CONDUCTED SUSCEPTIBILITY TEST



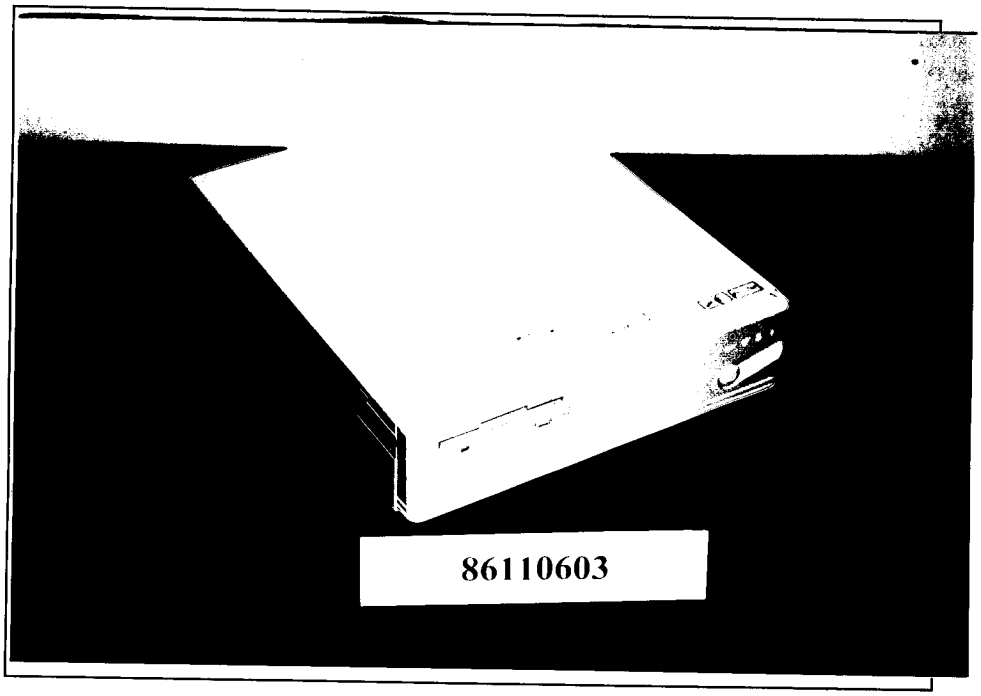
CONDUCTED SUSCEPTIBILITY CLAMP TEST

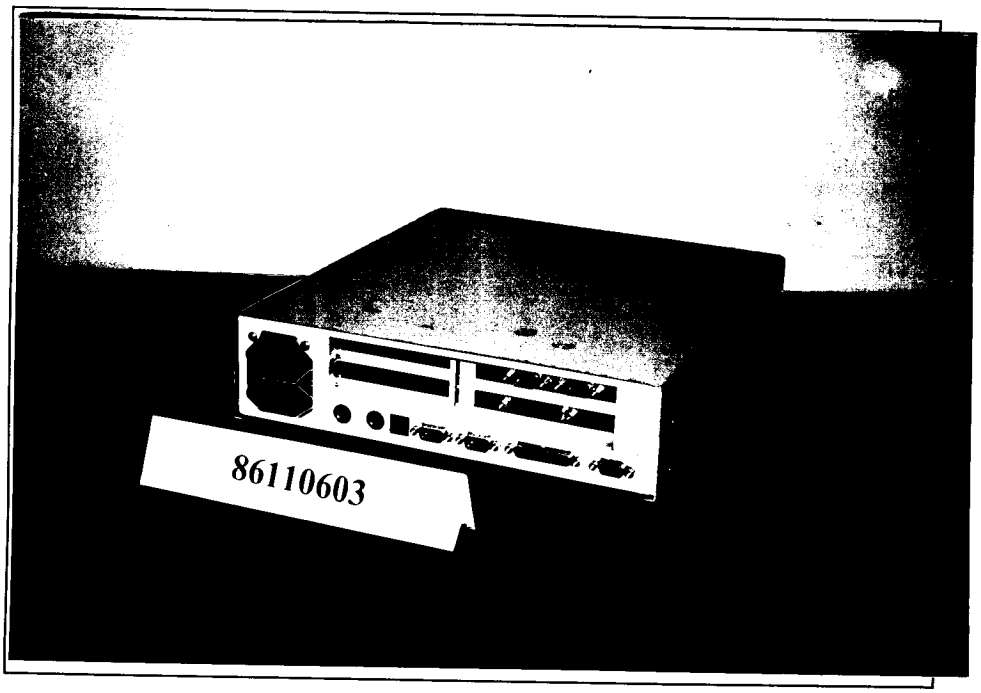


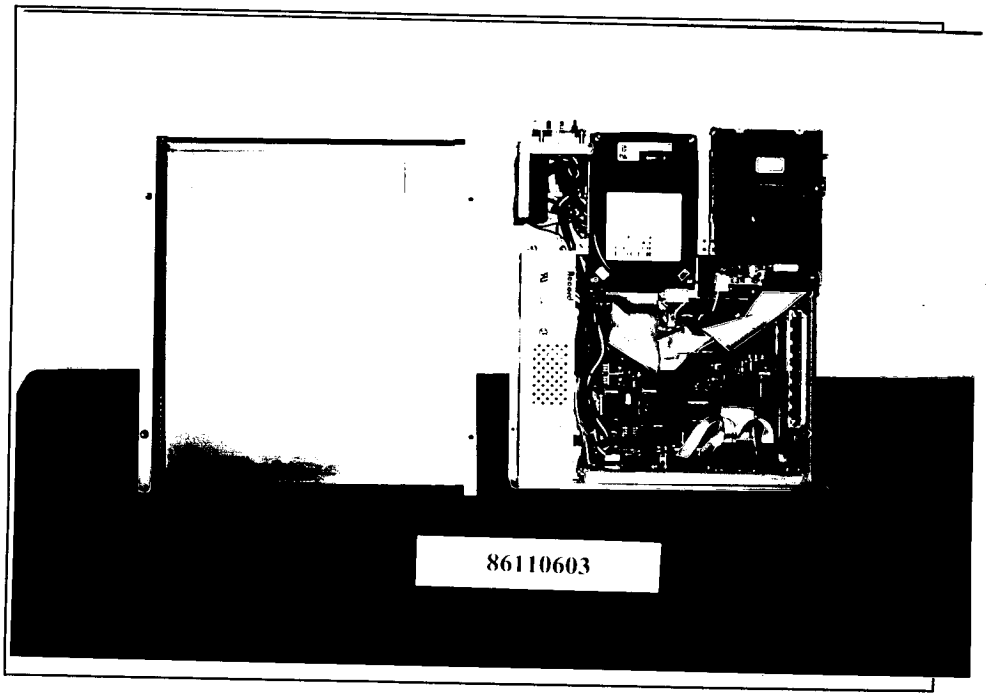
MAGNETIC TEST



7. CONSTRUCTION PHOTOS OF EUT



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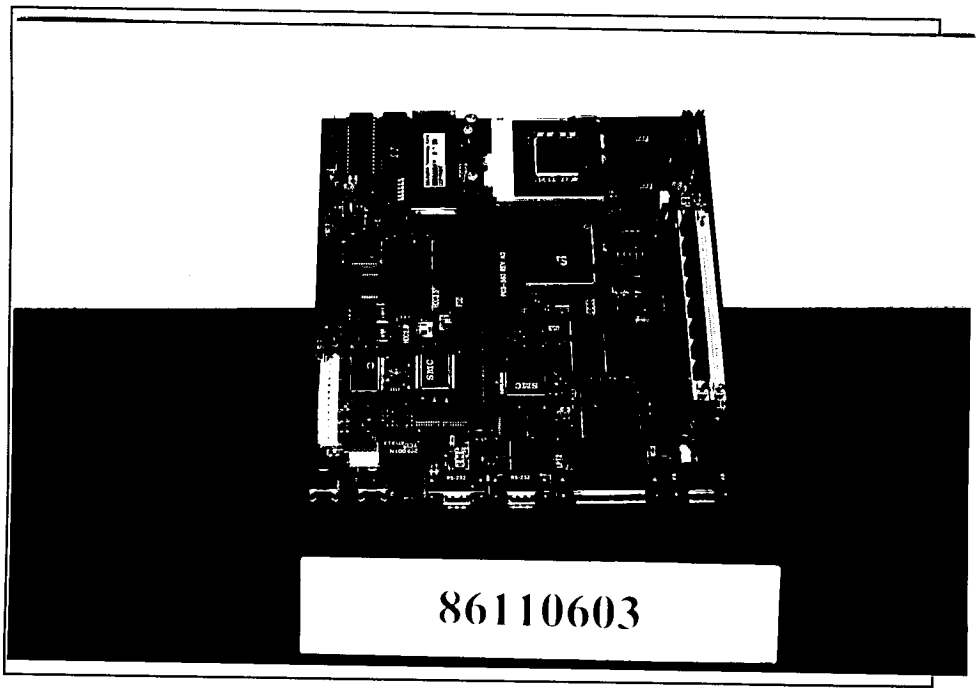

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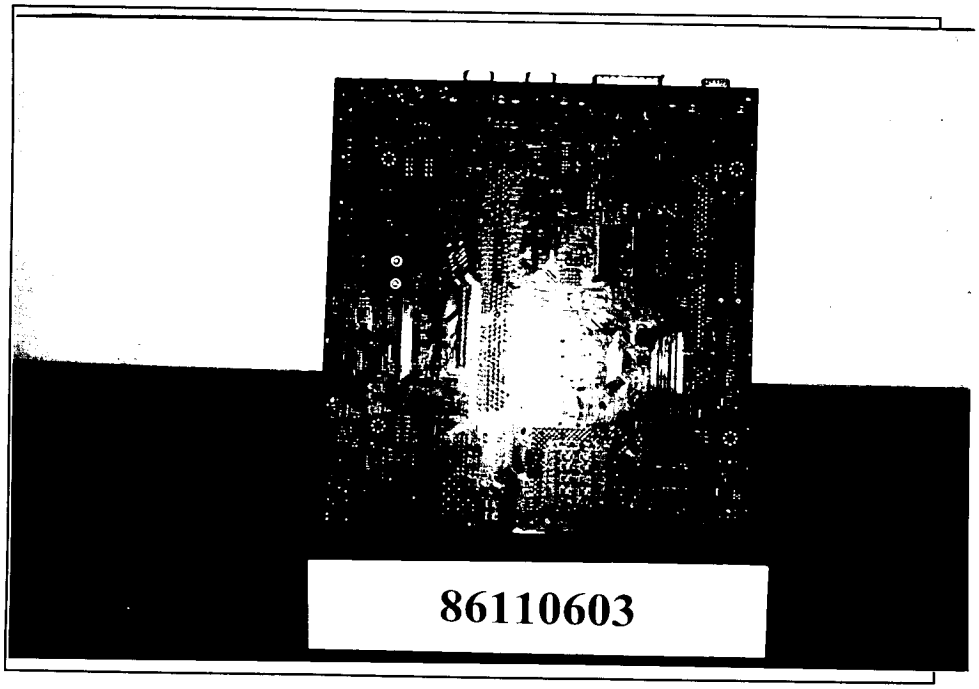

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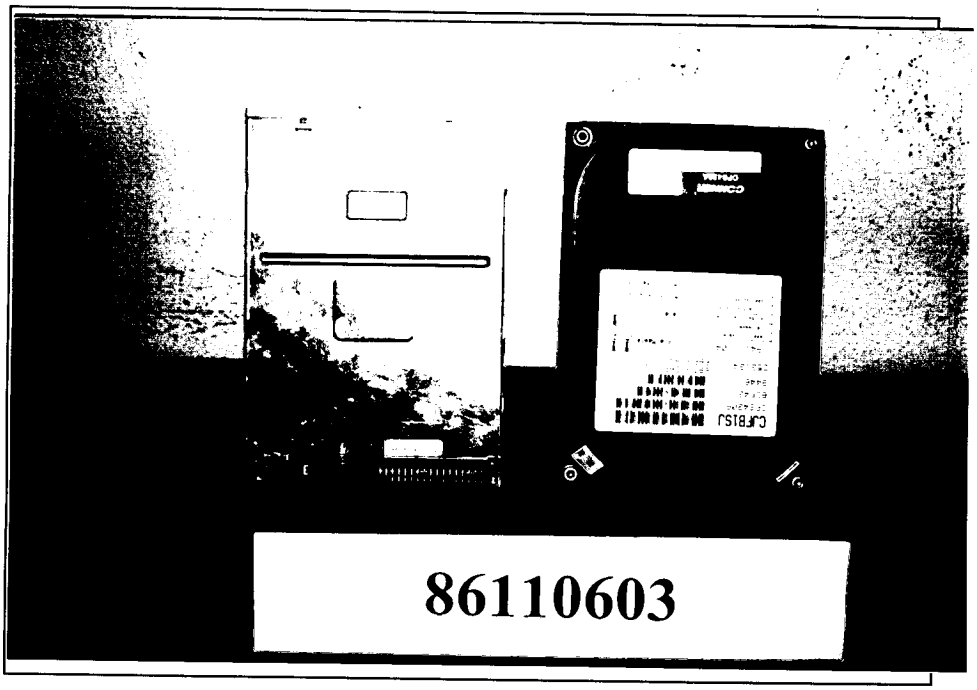

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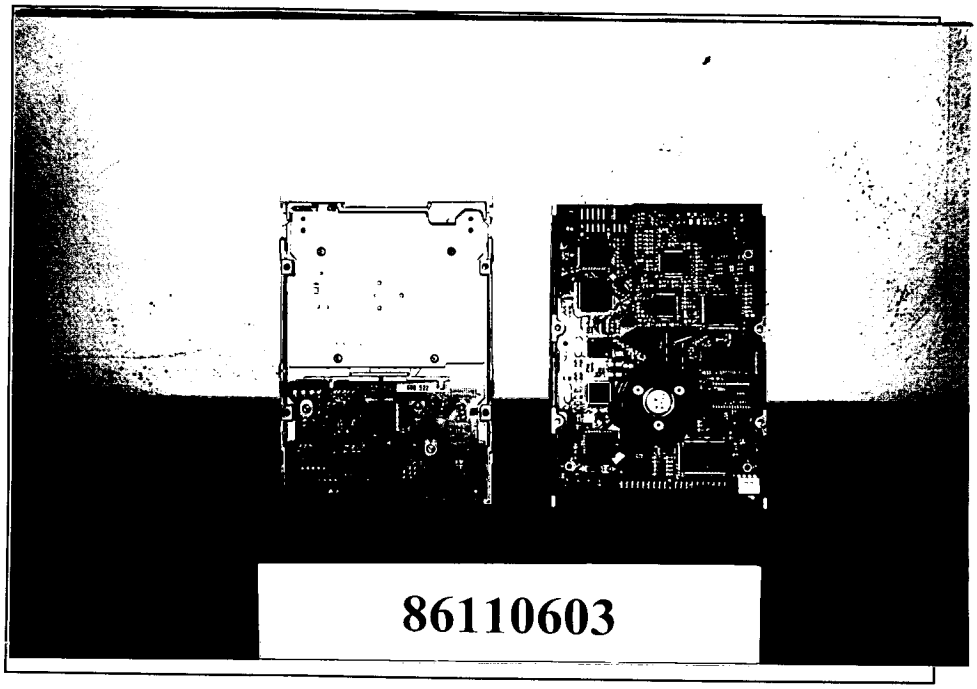

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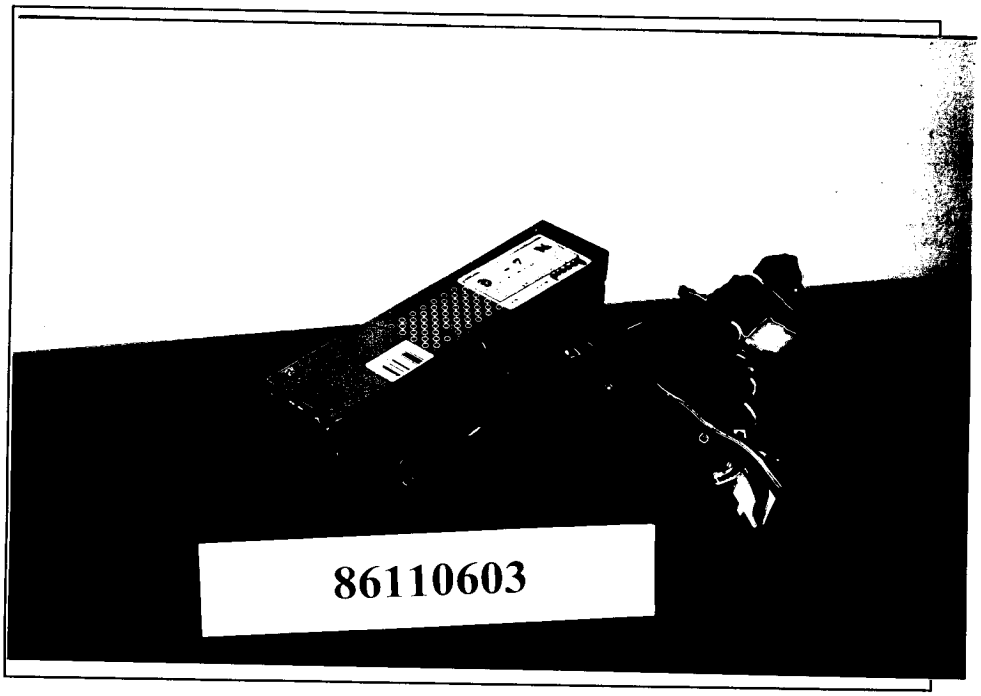
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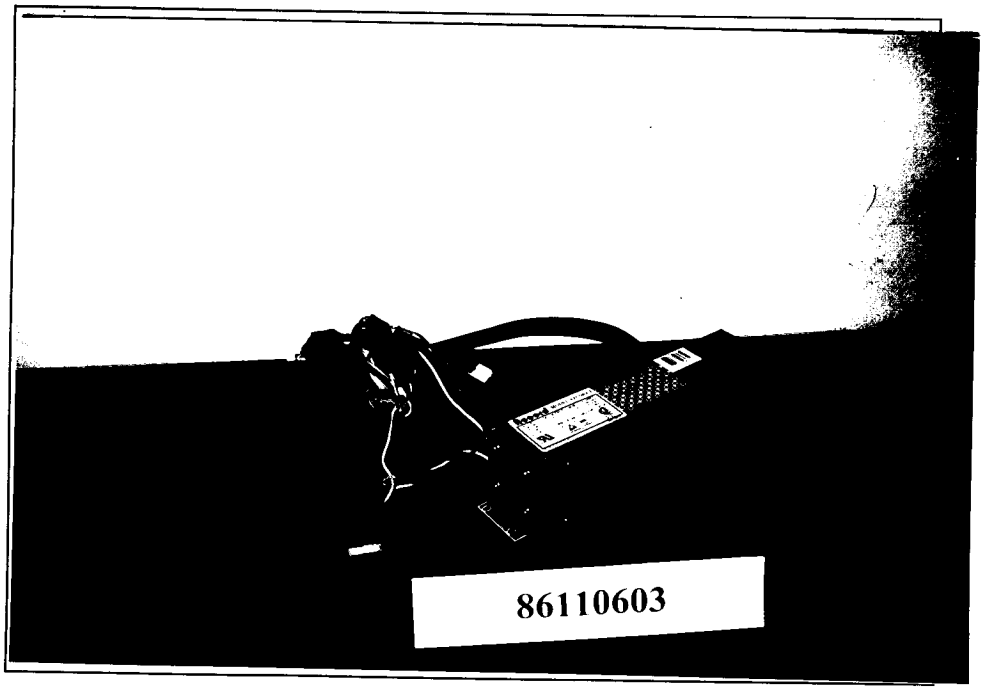
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8. ATTACHMENT I - TECHNICAL DESCRIPTION OF EUT

Specifications:

Standard SBC functions

* Processor	Intel Pentium® 75-166MHz, P55C (MMX) AMD K5, K6 Cyrix 6x86
* BIOS	Award 128 KB Flash BIOS includes Ethernet boot ROM, SSD driver and VGA BIOS. Supports Plug and Play, APM
* System chipset	SiS 5571
* Green function	APM 1.1 compliant
* Second level cache	On-board 512 KB pipelined burst SRAM
* RAM	Two 72-pin SIMM sockets and one 168-pin DIMM socket for 256 MB total on-board memory. Supports 3.3V or 5V SIMM/DIMM by setting jumpers
* Enhanced IDE interface	Two Enhanced IDE interfaces, one 44-pin header for IDE SSD and one 40-pin header supports IDE devices
* FDD interface	Supports up to two FDDs (360 KB/1.2 MB/720 KB/1.44 MB/2.88 MB)
* Parallel port	Two parallel ports, supporting SPP/EPP/ECP parallel mode
* Serial port	Serial ports with +5V/+12V power capability COM 1, 2, 4: RS-232 COM 3: RS-232/422/485
* Watchdog timer	Software enabled/disabled. Timer interval of 1.5 seconds generates system reset in the event of program failure
* Keyboard connector	Mini-DIN keyboard connector and 5-pin header connector
* Mouse connector	PS/2 mouse connector
* I/O bus expansion	EISA bus connector provides ISA/PCI signals

PCI SVGA/Flat Panel Interface

* Chipset	C&T 65550
* Display memory	1MB on-board memory, supports up to 2 MB
* Display type	simultaneously supports CRT and flat panel (EL, LCD and gas plasma) displays. Supports 3.3V LCD
* Digital resolution	Supports non-interfaced CRT and LCD displays up to 1024x768 @ 256 colors with 1 MB on-board memory

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Ethernet interface

* Chipset	UM9008 Ethernet controller
* Ethernet interface	ISA 10 Mbps Ethernet controller. Novell NE2000 compatible. Includes software drivers and boot ROM

Solid State Disk

* Supports DiskOnChip® (DOC) 2000
* One 32-pin socket supports 512 KB SRAM/Flash/ROM device
* DOS and Windows 3.1 command compatible

Digital I/O

* Two digital output, MOS FET output to direct drive relay or solenoid
* Four digital input; TTL compatible

Mechanical and Environmental

* Max. power requirements: 7A @ 5V (4.75 to 5.25)
* Operating temperature: 0° to 60°C (32° to 140°F)
* Size 220 mm(L) x 235 mm (W) (8"x5.75")
* Weight:0.5 kg (1.1 lbs.)

Ordering Information

POS-560-0000

All-in-One control board for POS applications, with 1 MB display memory. Includes 512 KB cache memory (processor not included)