

FCC TEST REPORT

Authorized under **D**eclaration of **C**onformity

According to

47 CFR, Part 2, Part 15 and CISPR PUB. 22 Class B

Equipment : **Pentium 4 based robust Panel PC with 12.1" color TFT LCD**

Model No. : APC-8122

Filing Type : Declaration of Conformity

Applicant : **AAEON Technology Inc.**
5F, No. 135, Lane 235, Pao Chiao Rd. Hsin-Tien City,
Taipei, Taiwan, R.O.C.

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SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

Table of Contents

History of this test report	ii
CERTIFICATE OF COMPLIANCE.....	1
1. General Description of Equipment under Test.....	2
1.1 Applicant.....	2
1.2 Manufacturer	2
1.3 Basic Description of Equipment under Test	2
1.4 Feature of Equipment under Test	2
2. Test Configuration of Equipment under Test.....	3
2.1 Test Manner	3
2.2 Description of Test System	3
2.3 Connection Diagram of Test System	6
3. Test Software	7
4. General Information of Test.....	8
4.1 Test Facility	8
4.2 Test Voltage	8
4.3 Standard for Methods of Measurement.....	8
4.4 Test in Compliance with	8
4.5 Frequency Range Investigated	8
4.6 Test Distance	8
5. Test of Conducted Powerline	9
5.1 Description of Major Test Instruments	9
5.2 Test Procedures.....	10
5.3 Typical Test Setup Layout of Conducted Powerline	11
5.4 Test Result of AC Powerline Conducted Emission	12
5.5 Photographs of Counducted Powerline Test Configuration	14
6. Test of Radiated Emission.....	16
6.1 Description of Major Test Instruments	16
6.2 Test Procedures.....	17
6.3 Typical Test Setup Layout of Radiated Emission.....	18
6.4 Test Result of Radiated Emission	19
6.5 Photographs of Radiated Emission Test Configuration	25
7. List of Measuring Equipment Used	26
8. Uncertainty of Test Site	27
Appendix A. Photographs of EUT	A1 ~ A36

History of this test report

Original Report Issue Date: Feb. 03, 2005

- No additional attachment.
- Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

Authorized under **D**eclaration of **C**onformity

According to

47 CFR, Part 2, Part 15 and CISPR PUB. 22 Class B

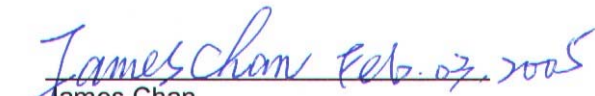
Equipment : **Pentium 4 based robust Panel PC with 12.1" color TFT LCD**

Model No. : APC-8122

Applicant : **AAEON Technology Inc.**
5F, No. 135, Lane 235, Pao Chiao Rd. Hsin-Tien City,
Taipei, Taiwan, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 2003** and the energy emitted by this equipment was **passed CISPR PUB. 22 and FCC Part 15** in both radiated and conducted emission **Class B** limits. Testing was carried out on Feb. 02, 2005 at **SPORTON International Inc. LAB.**


James Chan
Manager

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1 Applicant

AAEON Technology Inc.

5F, No. 135, Lane 235, Pao Chiao Rd. Hsin-Tien City, Taipei, Taiwan, R.O.C.

1.2 Manufacturer

Same as 1.1

1.3 Basic Description of Equipment under Test

Equipment : Pentium 4 based robust Panel PC with 12.1" color TFT LCD
Model No. : APC-8122
Trade Name : AAEON
RJ45 Cable : Non-Shielded, 5.0m
LPT Cable : AL-F-Shielded, 1.8m
Fiber Optical Cable : 1.2m
Power Supply Type : Switching
AC Power Cord : Non-Shielded, 1.8m, 3 pin

1.4 Feature of Equipment under Test

- CPU : Intel Pentrum4 3.06G FSB 400/533MHz
- Max Resolution : 800x600, 85Hz
- HDD : FUJITSU / MHT2040AT
- RAM : DSL / 513MB DDR 333MHz
- Power Adapter : FSP GROUP ING. / FSP250-50PLB
- LAN : 10/100 Mbps

2. Test Configuration of Equipment under Test

2.1 Test Manner

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
- b. The complete test system included SONY Monitor, COMPAQ PS/2 Mouse, COMPAQ PS/2 Keyboard, USB LOGITECH Mouse, KOKA MIC+SPK, Panasonic Walkman, EPSON Printer, ACEEX Modem, TeraSys USB 2.0 HDD and EUT for EMI test. The remote workstation included COMPAQ Notebook.
- c. For Conducted test, the following mode was final tested:
Mode 1. FULL SYSTEM; LCD 800X600, 85Hz / LAN: 100Mbps
- d. For Radiated test, the following modes were pre-tested:
Mode 1. FULL SYSTEM; LCD 800X600, 85Hz / LAN: 100Mbps
Mode 2. FULL SYSTEM; D-SUB 800X600, 85Hz / LAN: 100Mbps
Mode 3. FULL SYSTEM; LCD+D-SUB 800X600, 85Hz / LAN: 100Mbps
Mode 4. FULL SYSTEM; D-SUB 640X480, 60Hz / LAN: 10Mbps
Mode 5. 1-16G
cause "Mode 1 & 5" generated the worst test result, it was reported as final data.
- e. Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 16000MHz.

2.2 Description of Test System

Support Unit 1. -- Monitor (SONY)

FCC ID	: N/A
Model No.	: CPD-G420
Power Supply Type	: Switching
Power Cord	: Non-Shielded
Serial No.	: SP0010
Data Cable	: D-Shielded, 360 degree via metal backshells, 1.8m
Remark	: This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 2. -- Printer (EPSON)

FCC ID	: N/A
Model No.	: EPSON STYLUS C61
Power Supply Type	: Linear
Power Cord	: Non-Shielded
Serial No.	: SP0019
Data Cable	: Shielded, 360 degree via metal backshells, 1.8m
Remark	: This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 3. -- Modem (ACEEX)

FCC ID : IFAXDM1414
Model No. : DM1414
Power Supply Type : Linear
Power Cord : Non-Shielded, 1.8m
Serial No. : SP0020
Data Cable : Shielded, 360 degree via metal backshells, 1.8m

Support Unit 4. -- Mic+SPK (KOKA)

FCC ID : N/A
Model No. : HD-305
Serial No. : SP0021
Data Cable : Non-Shielded, 1.2m

Support Unit 5. -- Walkman (Panasonic)

FCC ID : N/A
Model No. : RQ-L8LT-S
Serial No. : SP0023
Data Cable : Non-Shielded, 1.7m
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 6. -- PS/2 Keyboard (COMPAQ)

FCC ID : N/A
Model No. : 6511-VA
Serial No. : SP0016
Data Cable : AL-F-Shielded, 1.8m
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 7. -- PS/2 Mouse (COMPAQ)

FCC ID : N/A
Model No. : M-S69
Serial No. : SP0014
Data Cable : AL-F-Shielded, 1.8m
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 8. -- USB Mouse (LOGITECH)

FCC ID : N/A
Model No. : M-BE58
Serial No. : SP0018
Data Cable : AL-F-Shielded, 1.8m
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

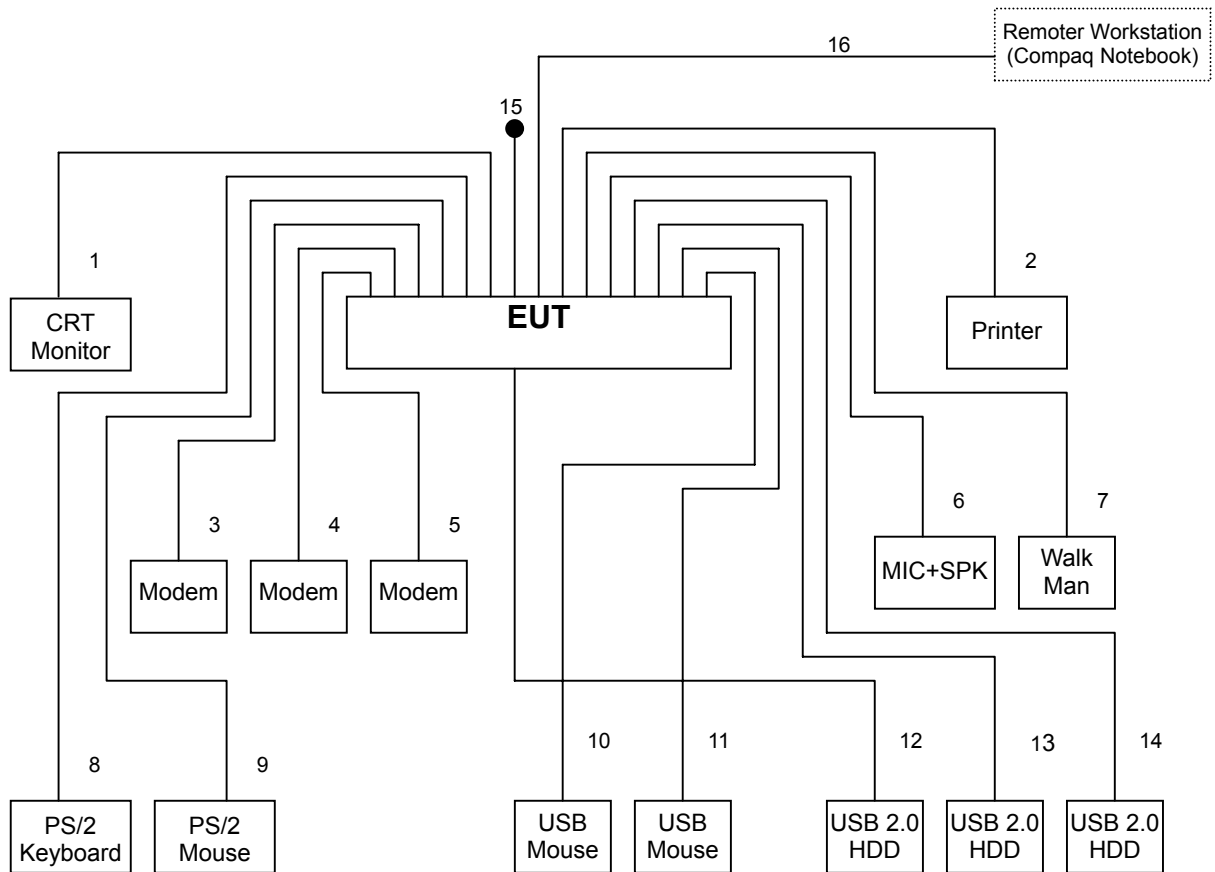
Support Unit 9. -- USB 2.0 HDD (TeraSys)

FCC ID : N/A
Model No. : F12-UF
Power Supply Type : Linear
Power Cord : Non-Shielded
Serial No. : SP0027
Data Cable : Shielded, 1.8m
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

Support Unit 10. -- Notebook (COMPAQ) for remote workstation

FCC ID : N/A
Model No. : Presario 1500
Power Supply Type : Switching
Serial No. : SP0007
Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.

2.3 Connection Diagram of Test System



1. The I/O cable is connected from EUT to the support unit 1.
2. The I/O cable is connected from EUT to the support unit 2.
3. The I/O cable is connected from EUT to the support unit 3.
4. The I/O cable is connected from EUT to the support unit 3.
5. The I/O cable is connected from EUT to the support unit 3.
6. The I/O cable is connected from EUT to the support unit 4.
7. The I/O cable is connected from EUT to the support unit 5.
8. The I/O cable is connected from EUT to the support unit 6.
9. The I/O cable is connected from EUT to the support unit 7.
10. The I/O cable is connected from EUT to the support unit 8.
11. The I/O cable is connected from EUT to the support unit 8.
12. The I/O cable is connected from EUT to the support unit 9.
13. The I/O cable is connected from EUT to the support unit 9.
14. The I/O cable is connected from EUT to the support unit 9.
15. The LTP cable is floating.
16. The RJ45 cable is connected from EUT to the remote workstation.

3. Test Software

The programs were executed as follows :

- a. Turn on the power of all equipment.
- b. The PC reads the test program from the hard disk drive and runs it.
- c. The PC sends " H " messages to the monitor, and the monitor displays " H " patterns on the screen.
- d. The PC sends " H " messages to the printer, then the printer prints them on the paper.
- e. The PC sends " H " messages to the modem.
- f. The PC sends " H " messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
- g. Repeat the steps from c to f.

At the same time, the following programs were executed:

- Executed " Media player " to play audio.
- Executed " WINTHRAX.EXE " to read and write data from USB 2.0 HDD.
- Executed " ping 192.168.1.1 " was executed to link with the remote workstation to receive and transmit data by LAN Cable.

4. General Information of Test

4.1 Test Facility

Test Site Location : No. 30-2, Lin 6, Diing-Fwu Tsuen, Lin-Kou-Hsiang,
Taipei Hsien, Taiwan, R.O.C.

TEL : 886-2-2601-1640

FAX : 886-2-2601-1695

Test Site No. : CO02-LK, OS06-LK

<1-16G>

Test Site Location : No. 52, Hwa Ya 1St Road, Hwa Ya Technology Park,
Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.

TEL : 886-3-3273456

FAX : 886-3-3180055

Test Site No. : 03CH03-HY

4.2 Test Voltage

110V/ 60Hz

4.3 Standard for Methods of Measurement

ANSI C63.4-2003

4.4 Test in Compliance with

CISPR PUB. 22 and FCC Part 15

4.5 Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation : from 30 MHz to 16000 MHz

4.6 Test Distance

- a. The test distance of radiated emission from antenna to EUT is 10 M (from 30MHz ~ 1000MHz).
- b. The test distance of radiated emission from antenna to EUT is 3 M (from 1GHz ~ 16GHz).

5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

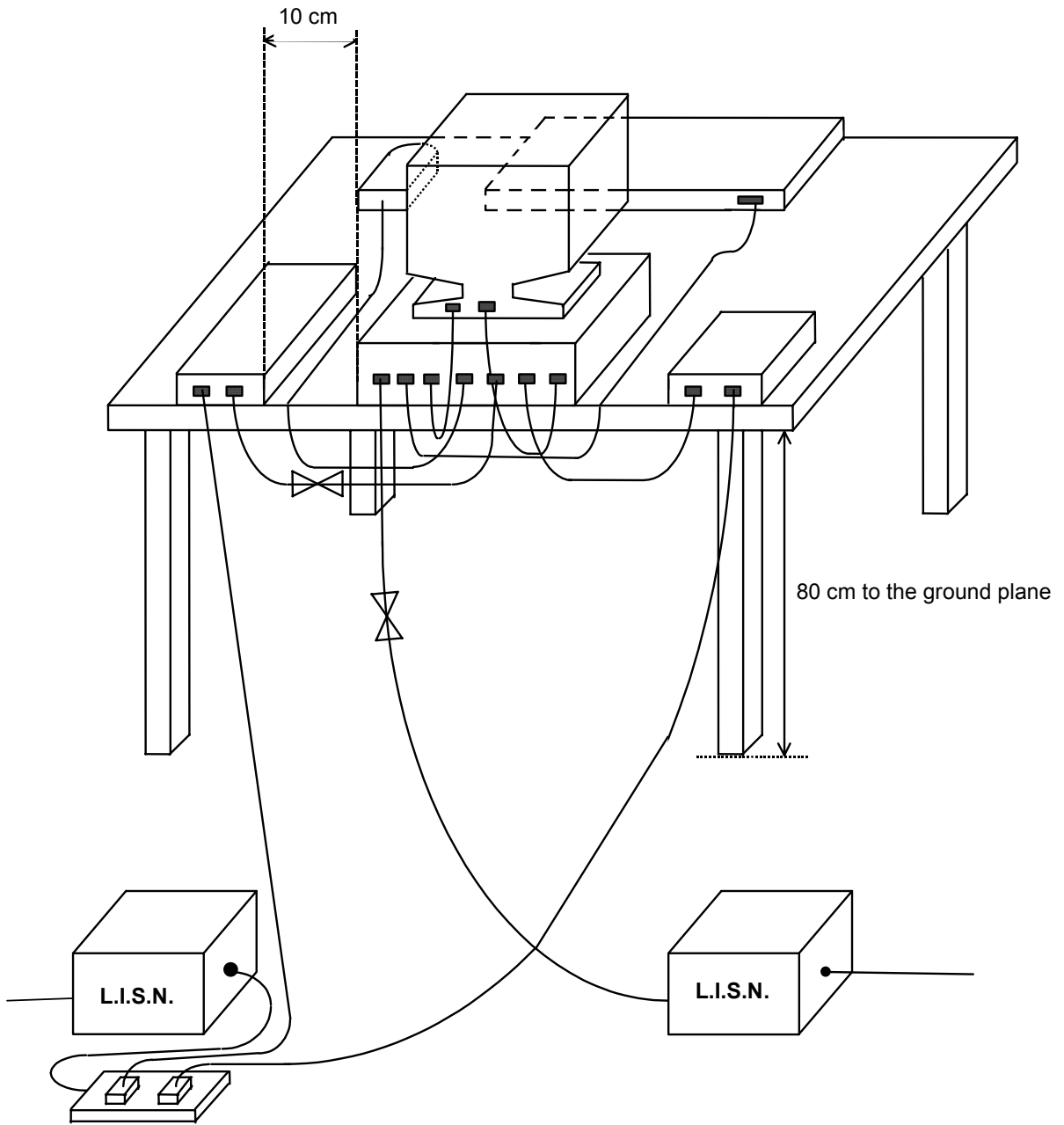
5.1 Description of Major Test Instruments

- Test Receiver (R&S ESCS 30)
 - Attenuation 10 dB
 - Start Frequency 0.15 MHz
 - Stop Frequency 30 MHz
 - IF Bandwidth 9 KHz

5.2 Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connect to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

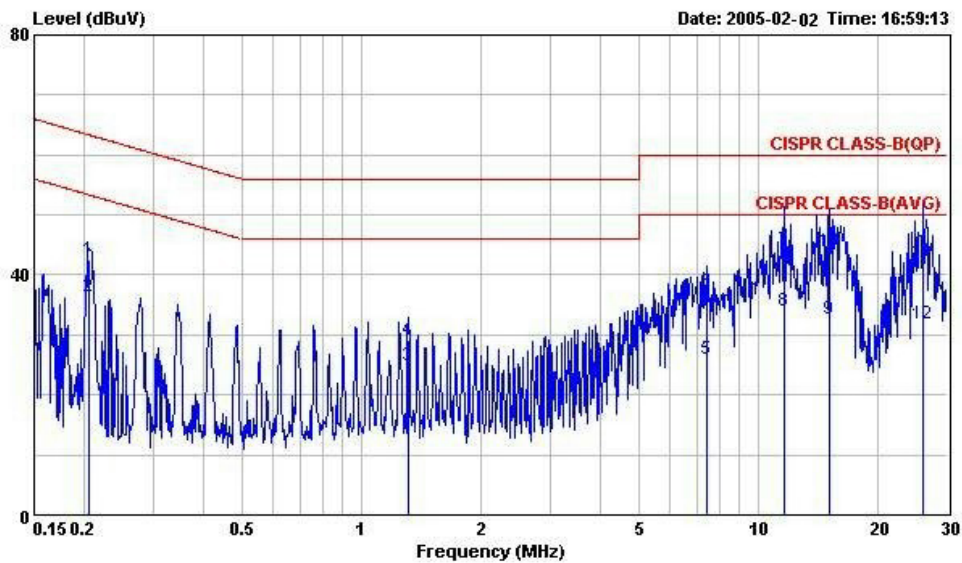
5.3 Typical Test Setup Layout of Conducted Powerline



5.4 Test Result of AC Powerline Conducted Emission

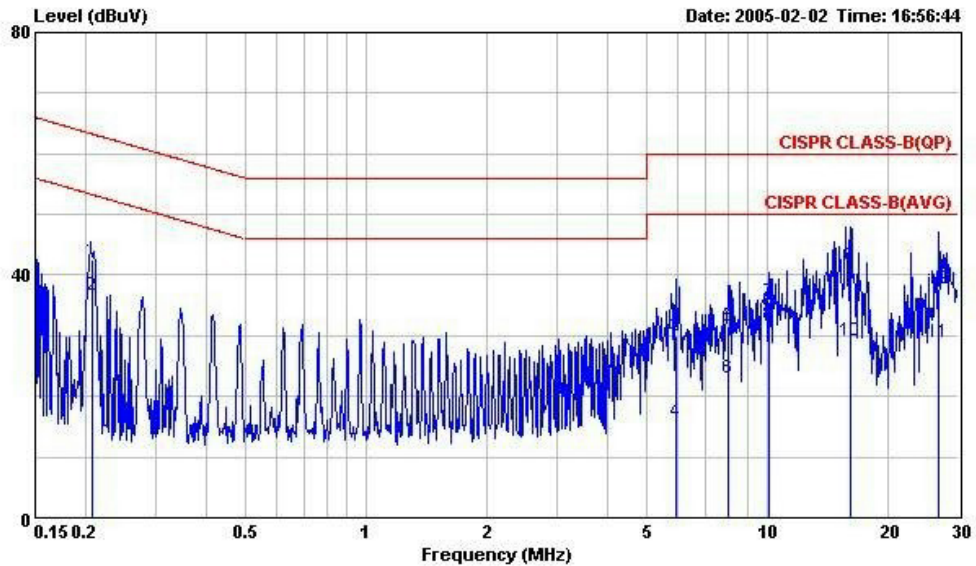
- Frequency Range of Test : from 0.15 MHz to 30 MHz
- Temperature : 16 °C
- Relative Humidity : 62 %
- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

■ The test was passed at the minimum margin that marked by a frame in the following test record.



Site : C002-LK
 Condition : CISPR CLASS-B(QP) LISN02/10070-930902 LINE
 EUT: PENTIUM 4 BASED ROBUST PANEL PC
 : WITH 12.1" COLOR TFT LCD
 MODEL: APC-8122
 POWER: 110Vac60Hz
 MEMO: FULL SYSTEM
 : LCD 800*600 85Hz
 : LAN:100Mbps

	Freq	Level	Over	Limit	Read	Cable	LISN	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.206	42.42	-20.95	63.37	42.32	0.10	0.00	0.10 QP
2	0.206	36.31	-17.06	53.37	36.21	0.10	0.00	0.10 Average
3	1.315	24.91	-21.09	46.00	24.76	0.15	0.05	0.10 Average
4	1.315	29.04	-26.96	56.00	28.89	0.15	0.05	0.10 QP
5	7.410	25.92	-24.08	50.00	25.43	0.49	0.16	0.33 Average
6	7.410	37.07	-22.93	60.00	36.58	0.49	0.16	0.33 QP
7	11.680	44.11	-15.89	60.00	43.48	0.63	0.23	0.40 QP
8	11.680	34.09	-15.91	50.00	33.46	0.63	0.23	0.40 Average
9	15.150	32.75	-17.25	50.00	32.09	0.66	0.25	0.41 Average
10	15.150	43.92	-16.08	60.00	43.26	0.66	0.25	0.41 QP
11	26.000	42.18	-17.82	60.00	40.91	1.27	0.33	0.94 QP
12	26.000	31.73	-18.27	50.00	30.46	1.27	0.33	0.94 Average



Site : CO02-LK
 Condition : CISPR CLASS-B(QP) LISN02/10070-930902 NEUTRAL
 EUT: : PENTIUM 4 BASED ROBUST PANEL PC
 : WITH 12.1" COLOR TFT LCD
 MODEL: : APC-8122
 POWER: : 110Vac60Hz
 MEMO: : FULL SYSTEM
 : LCD 800*600 85Hz
 : LAN:100Mbps

	Freq	Level	Over	Limit	Read	Cable	LISN	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	dB
1	0.209	42.56	-20.68	63.24	42.46	0.10	0.00	0.10 QP
2	0.209	36.71	-16.53	53.24	36.61	0.10	0.00	0.10 Average
3	5.930	29.99	-30.01	60.00	29.60	0.39	0.10	0.29 QP
4	5.930	15.81	-34.19	50.00	15.42	0.39	0.10	0.29 Average
5	8.020	31.54	-28.46	60.00	31.03	0.51	0.16	0.35 QP
6	8.020	23.06	-26.94	50.00	22.55	0.51	0.16	0.35 Average
7	10.121	35.52	-24.48	60.00	34.92	0.60	0.20	0.40 QP
8	10.121	31.73	-18.27	50.00	31.13	0.60	0.20	0.40 Average
9	16.140	41.54	-18.46	60.00	40.74	0.80	0.25	0.55 QP
10	16.140	29.20	-20.80	50.00	28.40	0.80	0.25	0.55 Average
11	26.700	28.98	-21.02	50.00	27.65	1.33	0.36	0.97 Average
12	26.700	37.66	-22.34	60.00	36.33	1.33	0.36	0.97 QP

Test Engineer : Jason Lin.
Jason Lin

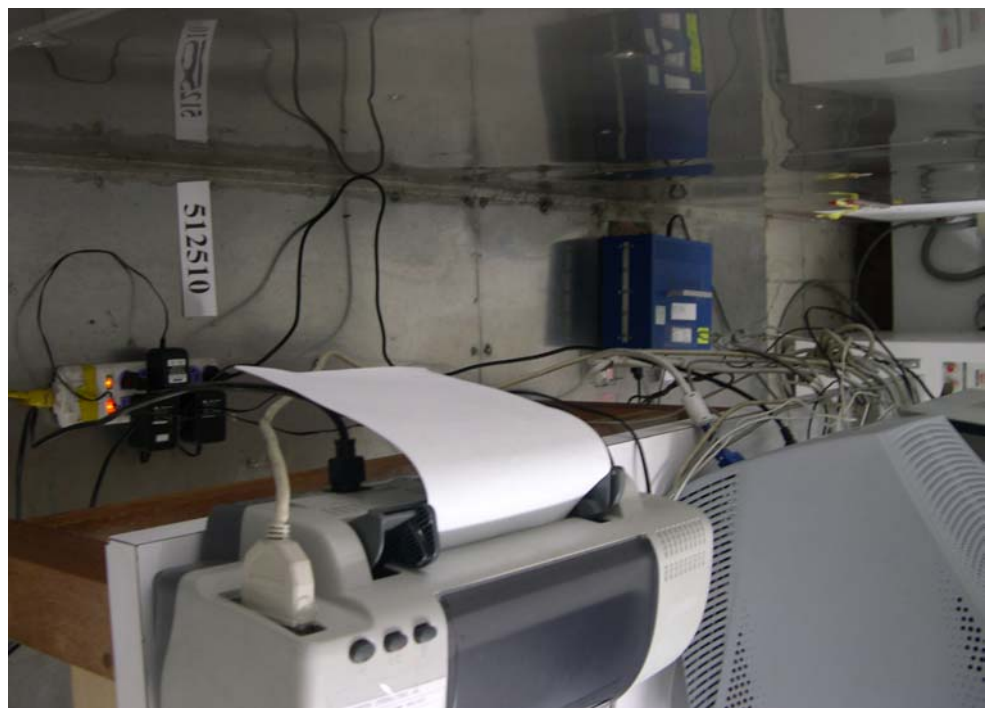
5.5 Photographs of Couducted Powerline Test Configuration

- The photographs show the configuration that generates the maximum emission.

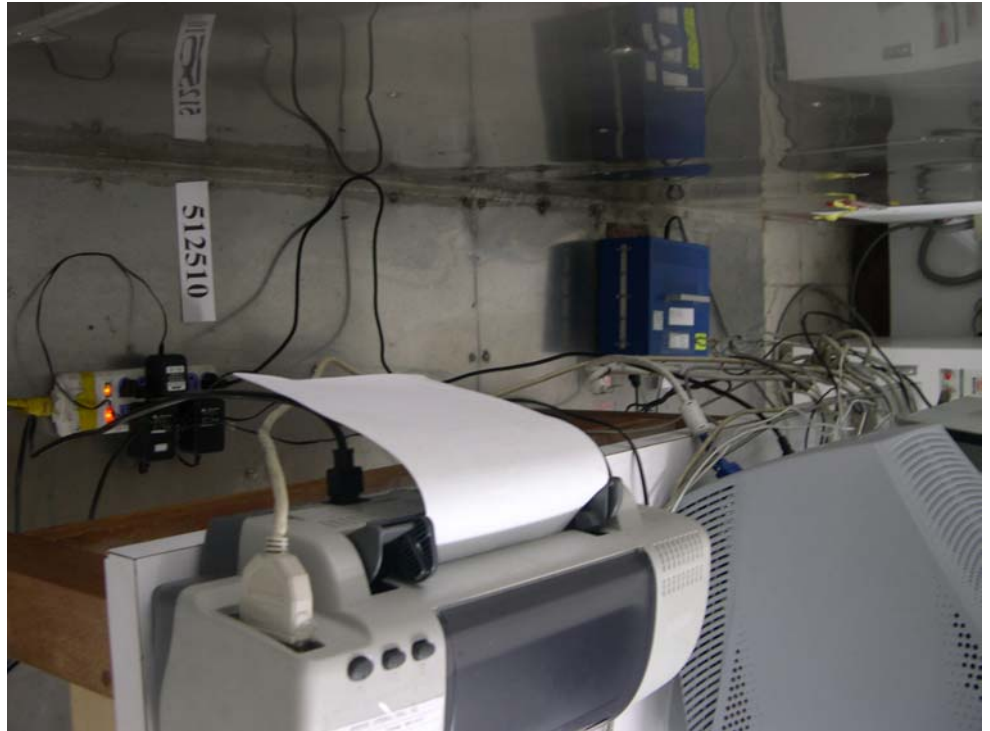
FRONT VIEW



REAR VIEW



SIDE VIEW



6. Test of Radiated Emission

Radiated emissions from 30 MHz to 16,000 MHz were measured with a bandwidth of 120 kHz for 30 MHz to 1000 MHz and 1 MHz for above 1GHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

6.1 Description of Major Test Instruments

6.1.1 from 30MHz to 1GHz

- Spectrum Analyzer (R&S FSP7)
 - Attenuation 10 dB
 - Start Frequency 30 MHz
 - Stop Frequency 1000 MHz
 - Resolution Bandwidth 120 KHz
 - Signal Input 9 KHz to 7 GHz

- Amplifier (HP 8447D)
 - RF Gain 25 dB
 - Signal Input 100KHz -1.3GHz

- Test Receiver (R&S ESCS 30)
 - Resolution Bandwidth 120 KHz
 - Frequency Band 9 K – 2.75 GHz
 - Quasi-Peak Detector ON for Quasi-Peak Mode
OFF for Peak Mode

6.1.2 from 1GHz to 16GHz

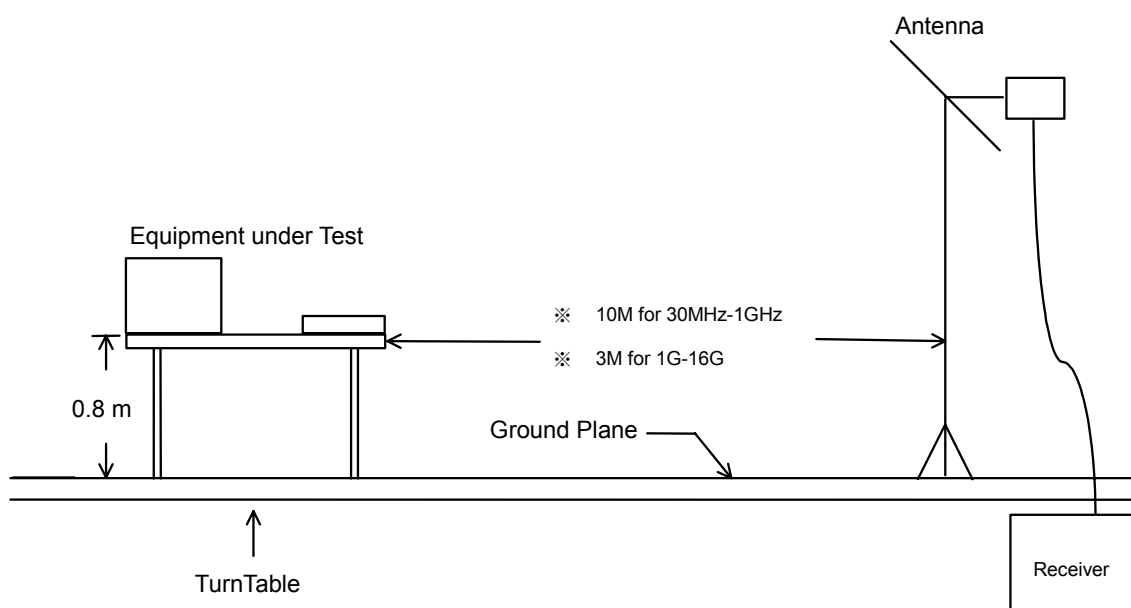
- Amplifier (MITEQ AFS44)
 - RF Gain 40 dB
 - Signal Input 100 MHz to 26.5 GHz

- Spectrum analyzer (R&S FSP40)
 - Attenuation 10 dB
 - Start Frequency 1 GHz
 - Stop Frequency 13 GHz
 - Resolution Bandwidth 1 MHz
 - Video Bandwidth 1 MHz
 - Signal Input 9 KHz to 40 GHz

6.2 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 10 meters from the interference receiving antenna which was mounted on the top of avariable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

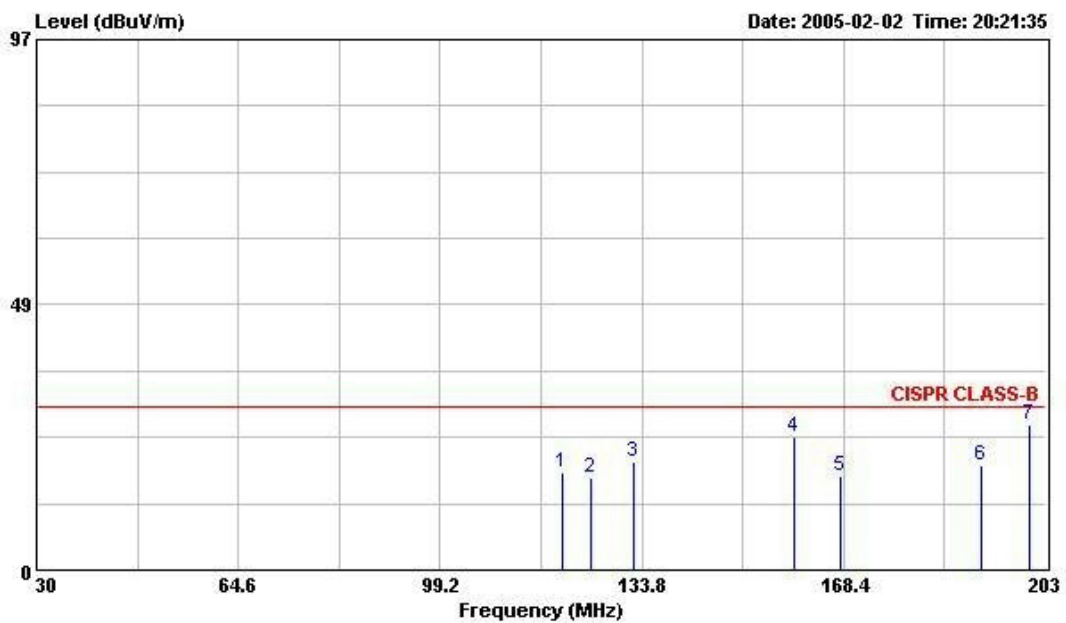
6.3 Typical Test Setup Layout of Radiated Emission



6.4 Test Result of Radiated Emission

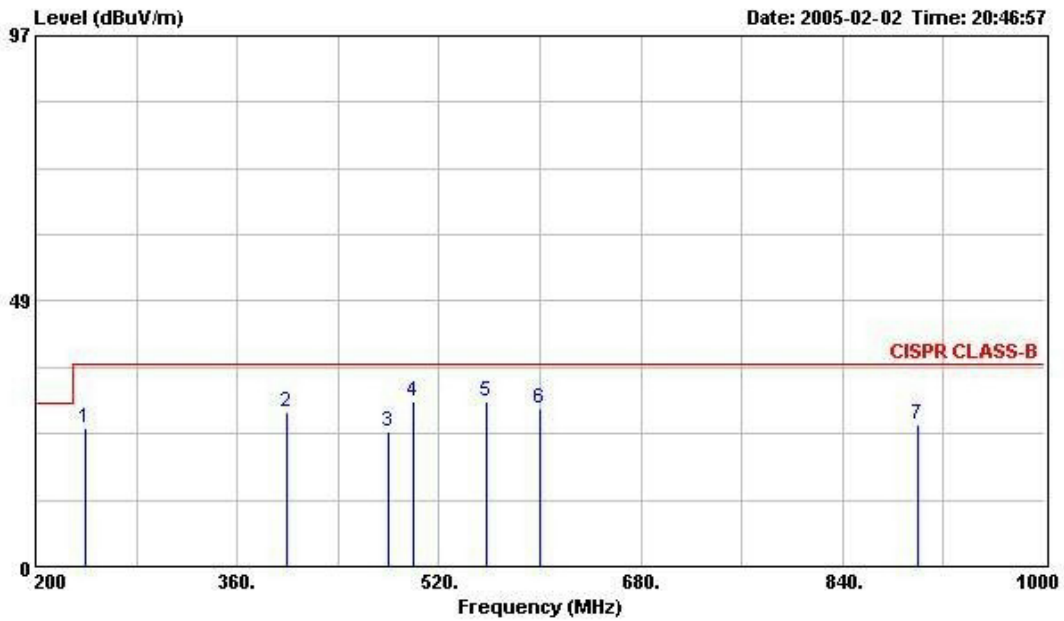
- Frequency Range of Test : from 30 MHz to 16,000 MHz
- Test Distance : 10M
- Temperature : 15 °C
- Relative Humidity : 71 %
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

■ The test was passed at the minimum margin that marked by the frame in the following test record



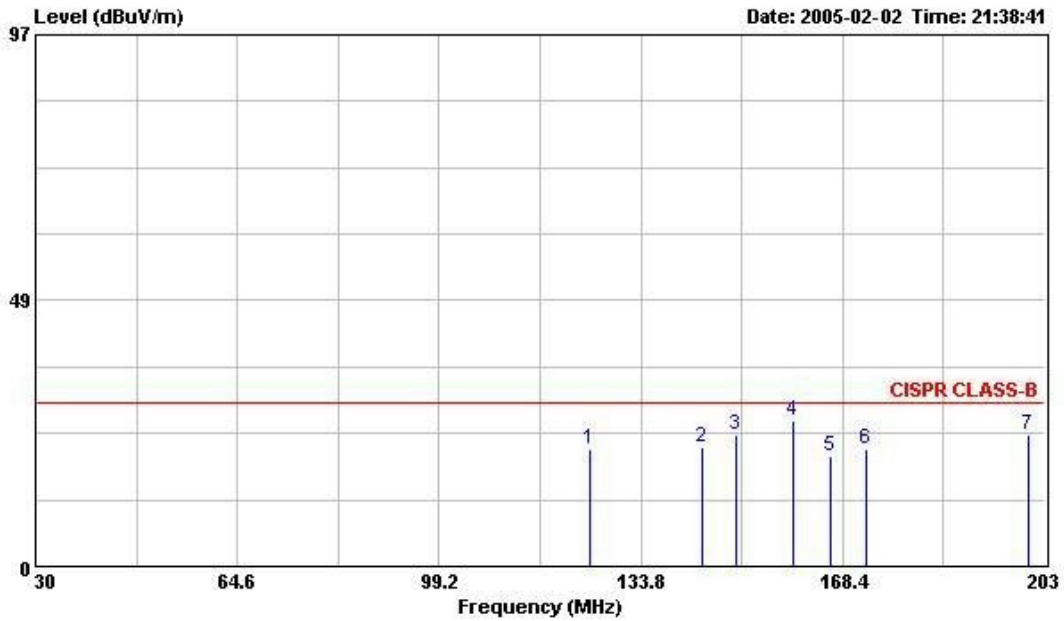
Site : OS06-LK
 Condition : CISPR CLASS-B 10m OS6CBL6111 C2722-9306 VERTICAL
 EUT : PENTIUM 4 BASED ROBUST PANEL PC WITH 12.1" COLOR TFT LCD
 POWER : 110Vac60Hz
 MODEL : APC-8122
 MEMO : FULL SYSTEM
 : LCD 800*600 85 Hz
 : LAN:100Mbps

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	120.320	17.83	-12.17	30.00	32.24	11.58	1.33	27.32	---	---	Peak
2	125.000	16.76	-13.24	30.00	31.20	11.52	1.34	27.30	---	---	Peak
3	132.470	19.92	-10.08	30.00	34.42	11.34	1.43	27.27	---	---	Peak
4	159.770	24.40	-5.60	30.00	39.51	10.43	1.62	27.16	400	235	QP
5	167.860	17.27	-12.73	30.00	32.56	10.21	1.63	27.13	---	---	Peak
6	192.060	18.99	-11.01	30.00	33.57	10.65	1.80	27.03	---	---	Peak
7 @	200.300	26.52	-3.48	30.00	41.01	10.66	1.85	27.00	100	168	QP



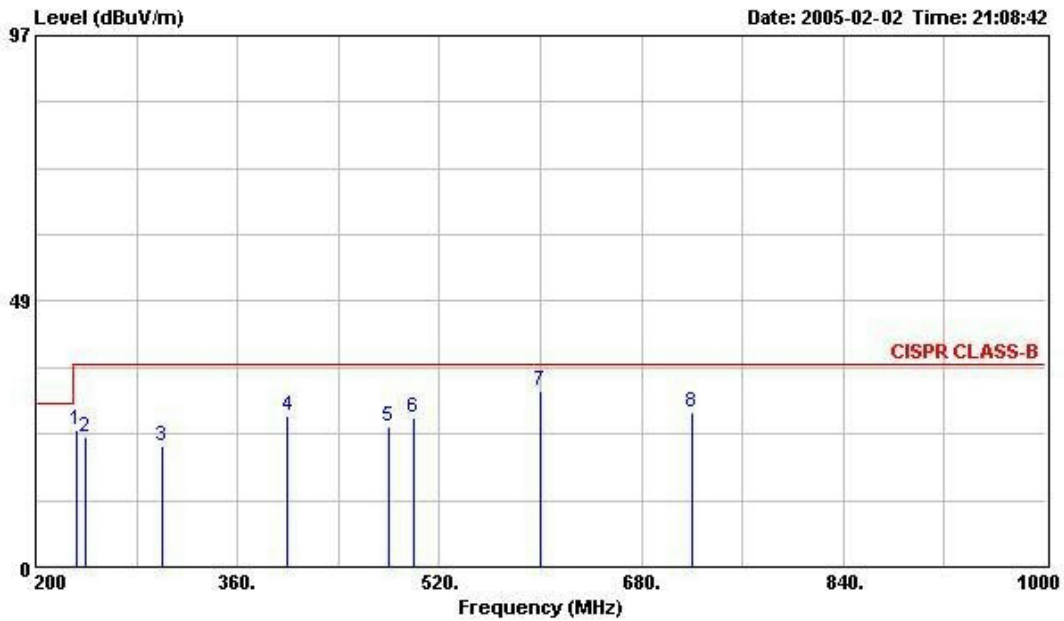
Site : OS06-LK
 Condition : CISPR CLASS-B 10m OS6CBL6111C2722-9306 VERTICAL
 EUT : PENTIUM 4 BASED ROBUST PANEL PC WITH 12.1" COLOR TFT LCD
 POWER : 110Vac60Hz
 MODEL : APC-8122
 MEMO : FULL SYSTEM
 : LCD 800*600 85 Hz
 : LAN:100Mbps

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	240.250	25.27	-11.73	37.00	36.39	13.62	2.06	26.80	---	--- Peak
2	399.450	28.17	-8.83	37.00	36.12	16.50	2.95	27.40	---	--- Peak
3	480.000	24.65	-12.35	37.00	31.73	17.62	3.18	27.88	---	--- Peak
4	499.780	30.15	-6.85	37.00	36.97	17.89	3.28	27.99	---	--- Peak
5	557.080	30.24	-6.76	37.00	35.53	19.29	3.59	28.17	---	--- Peak
6	599.730	28.90	-8.10	37.00	33.10	20.34	3.76	28.30	---	--- Peak
7	900.000	26.06	-10.94	37.00	25.67	23.49	4.70	27.80	---	--- Peak



Site : OS06-LK
 Condition : CISPR CLASS-B 10m OS6CBL6111 C2722-9306 HORIZONTAL
 EUT : PENTIUM 4 BASED ROBUST PANEL PC WITH 12.1" COLOR TFT LCD
 POWER : 110Vac60Hz
 MODEL : APC-8122
 MEMO : FULL SYSTEM
 : LCD 800*600 85 Hz
 : LAN:100Mbps

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	125.150	21.39	-8.61	30.00	35.83	11.52	1.34	27.30	--- Peak
2	144.210	21.78	-8.22	30.00	36.36	11.03	1.61	27.22	--- Peak
3	150.000	24.04	-5.96	30.00	38.85	10.84	1.55	27.20	--- Peak
4	159.760	26.69	-3.31	30.00	41.80	10.43	1.62	27.16	400 70 QP
5	166.250	20.03	-9.97	30.00	35.28	10.26	1.63	27.14	--- Peak
6	172.340	21.48	-8.52	30.00	36.84	10.07	1.68	27.11	--- Peak
7	200.350	24.03	-5.97	30.00	38.52	10.66	1.85	27.00	400 235 QP



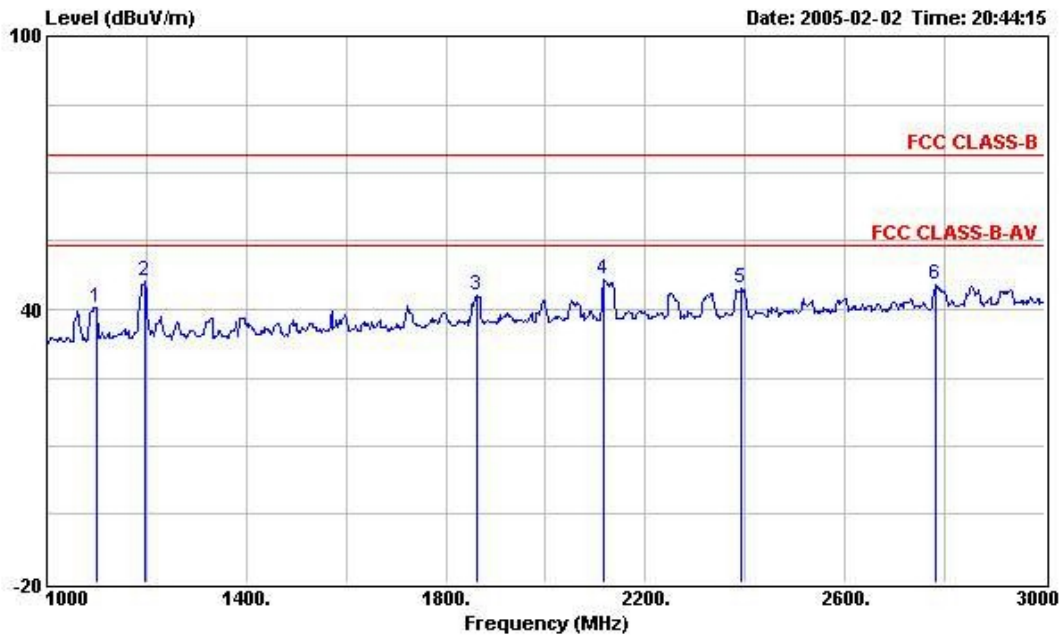
Site : OS06-LK
 Condition : CISPR CLASS-B 10m OS6CBL6111C2722-9306 HORIZONTAL
 EUT : PENTIUM 4 BASED ROBUST PANEL PC WITH 12.1" COLOR TFT LCD
 POWER : 110Vac60Hz
 MODEL : APC-8122
 MEMO : FULL SYSTEM
 : LCD 800*600 85 Hz
 : LAN:100Mbps

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	233.050	25.02	-11.98	37.00	36.81	13.04	2.00	26.83	---	---	Peak
2	240.000	23.75	-13.25	37.00	34.94	13.55	2.06	26.80	---	---	Peak
3	299.800	22.02	-14.98	37.00	32.62	13.57	2.33	26.50	---	---	Peak
4	400.000	27.43	-9.57	37.00	35.38	16.50	2.95	27.40	---	---	Peak
5	480.000	25.55	-11.45	37.00	32.63	17.62	3.18	27.88	---	---	Peak
6	500.000	27.41	-9.59	37.00	34.22	17.90	3.29	28.00	---	---	Peak
7	599.700	32.00	-5.00	37.00	36.20	20.34	3.76	28.30	---	---	Peak
8	720.000	28.27	-8.73	37.00	32.49	19.64	4.24	28.10	---	---	Peak

Test Engineer : Jason Lin.
 Jason Lin

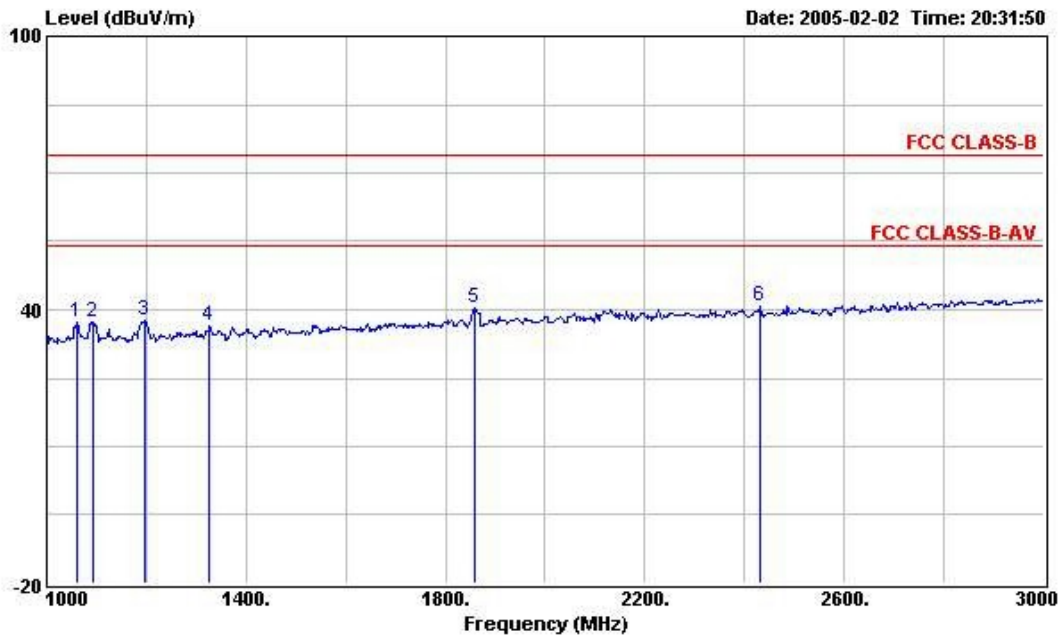
- Test Distance : 3M for 1GHz ~ 16GHz
- Temperature : 15 °C
- Relative Humidity : 71 %

- **The test was passed at the minimum margin that marked by the frame in the following record**
- **For frequency is 3000 ~ 16000MHz, the emission is too low to be measured.**



Site : 03CH03-HY
 Condition : FCC CLASS-B 3m HORN-ANT-6821 VERTICAL
 EUT : Pentium4 Based Robust Panel PC With 12.1" Color TFT
 Power : AC110V60Hz
 Model : APC-8122
 Memo : FULLSYSTEM

	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp	Remark	Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor		Pos	Pos
			dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1100.000	40.56	-33.44	74.00	58.12	24.11	0.00	41.67	Peak	---	---
2	1198.000	46.32	-27.68	74.00	63.67	24.38	0.00	41.73	Peak	---	---
3	1862.000	43.06	-30.94	74.00	58.59	26.60	0.00	42.13	Peak	---	---
4	2118.000	46.71	-27.29	74.00	61.52	27.42	0.00	42.23	Peak	---	---
5	2390.000	44.67	-29.33	74.00	58.81	28.14	0.00	42.28	Peak	---	---
6	2780.000	45.41	-28.59	74.00	58.34	29.43	0.00	42.36	Peak	---	---



Site : 03CH03-HY
 Condition : FCC CLASS-B 3m HORN-ANT-6821 HORIZONTAL
 EUT : Pentium4 Based Robust Panel PC With 12.1" Color TFT
 Power : AC110V60Hz
 Model : APC-8122
 Memo : FULLSYSTEM

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1062.000	37.34	-36.66	74.00	54.98	24.00	0.00	41.64	Peak	---	---
2	1092.000	37.13	-36.87	74.00	54.71	24.08	0.00	41.66	Peak	---	---
3	1198.000	37.70	-36.30	74.00	55.05	24.38	0.00	41.73	Peak	---	---
4	1326.000	36.31	-37.69	74.00	53.36	24.75	0.00	41.80	Peak	---	---
5	1860.000	40.36	-33.64	74.00	55.90	26.59	0.00	42.13	Peak	---	---
6	2430.000	40.69	-33.31	74.00	54.73	28.25	0.00	42.29	Peak	---	---

Test Engineer : Jason Lin.
 Jason Lin

6.5 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW



7. List of Measuring Equipment Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	100168	9 KHz - 2.75 GHz	Dec. 09, 2004	Conduction (CO02-LK)
LISN	Rolf Heine	NNB-2/16Z	02/10070	9KHz ~ 30MHz	Sep. 02, 2004	Conduction (CO02-LK)
LISN	Rolf Heine	NNB-2/16Z	02/10084	9KHz ~ 30MHz	Sep. 02, 2004	Conduction (CO02-LK)
RF Cable-CON	Suhner Switzerland	RG223/U	CB018	9KHz~30MHz	Feb. 09, 2004	Conduction (CO02-LK)
Open Area Test Site	SPORTON	OATS-10	OS06-LK	30MHz~1GHz 10m,3m	Oct. 22, 2004	Radiation (OS06-LK)
Spectrum Analyzer	R&S	FSP7	838858/007	9KHz - 7GHz	Jul. 03, 2004	Radiation (OS06-LK)
Receiver	R&S	ESCS 30	100167	9KHz~2.75GHz	Dec. 15, 2004	Radiation (OS06-LK)
Amplifier	Com-Power	PA-103	161075	1MHz -1GHz	Apr. 26, 2004	Radiation (OS06-LK)
Bilog Antenna	SCHAFFNER	CBL6111C	2722	30MHz -1GHz	Jun. 10, 2004	Radiation (OS06-LK)
Turn Table	EMCO	1670	N/A	0 ~ 360 degree	N/A	Radiation (OS06-LK)
Antenna Mast	EMCO	2070-2	2263	1 m- 4 m	N/A	Radiation (OS06-LK)
RF Cable-R10m	MIYAZAKI	5DFB	CB015	30MHz~1GHz	Aug. 16, 2004	Radiation (OS06-LK)
RF Cable-R03m	MIYAZAKI	5DFB	CB016	30MHz~1GHz	Aug. 16, 2004	Radiation (OS06-LK)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	Jun. 21, 2004	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023/030	9KHZ~30GHz	Aug. 02, 2004	Radiation (03CH03-HY)
Amplifier	MITEQ	AFS44	879982	100MHz~26.5GHz	Mar. 26, 2004	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6903	1GHz - 18GHz	Mar. 26, 2004	Radiation (03CH03-HY)
RF Cable-HIGH	Jye Bao	RG142	CB030-HIGH	1GHz~29.5GHz	Dec. 01, 2004	Radiation (03CH03-HY)

※ Calibration Interval of instruments listed above is one year.

8. Uncertainty of Test Site

Uncertainty of Conducted Emission Measurement

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.15	Normal(k=2)	0.08
Cable loss	0.19	Normal(k=2)	0.10
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.67	Rectangular	0.96
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty $Uc(y)$	1.26		
Measuring uncertainty for a level of confidence of 95% $U=2Uc(y)$	2.52		

Uncertainty of Radiated Emission Measurement

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.17	Normal(k=2)	0.09
Antenna factor calibration	1.03	Normal(k=2)	0.52
Cable loss calibration	0.13	Normal(k=2)	0.07
Pre Amplifier Gain calibration	0.13	Normal(k=2)	0.07
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	2.01	Rectangular	1.11
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty $Uc(y)$	1.49		
Measuring uncertainty for a level of confidence of 95% $U=2Uc(y)$	2.98		

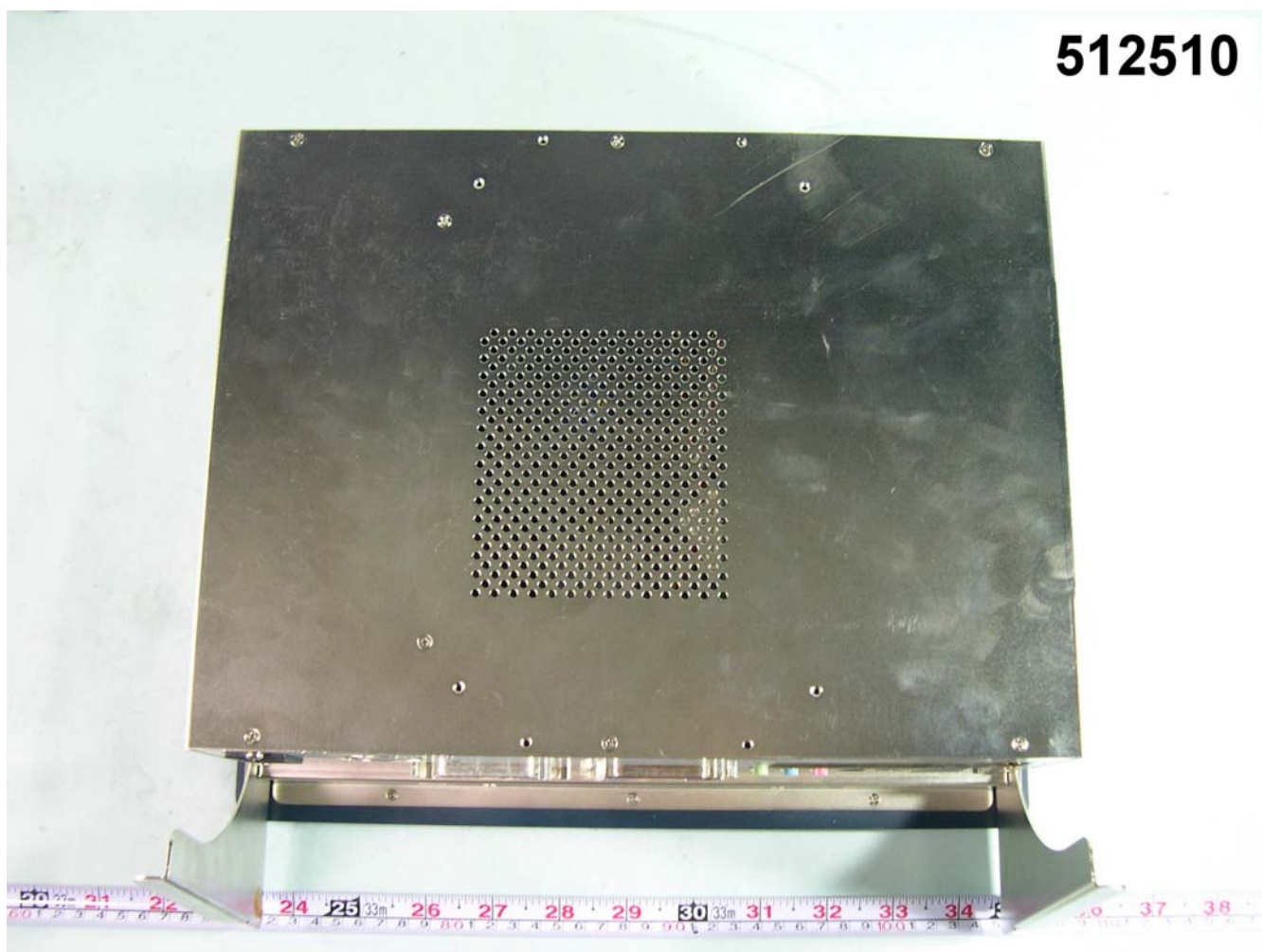


APPENDIX A. Photographs of EUT

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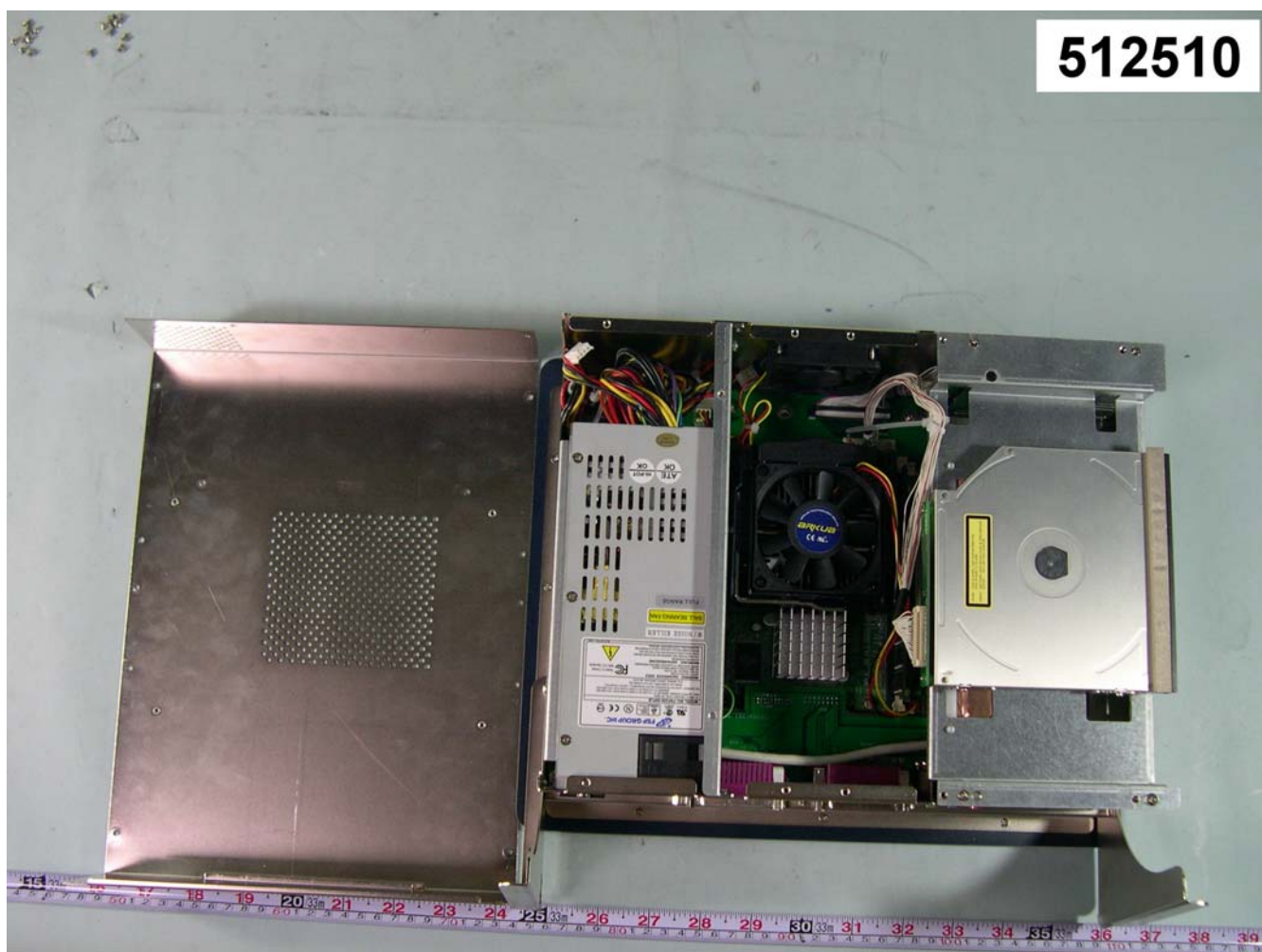
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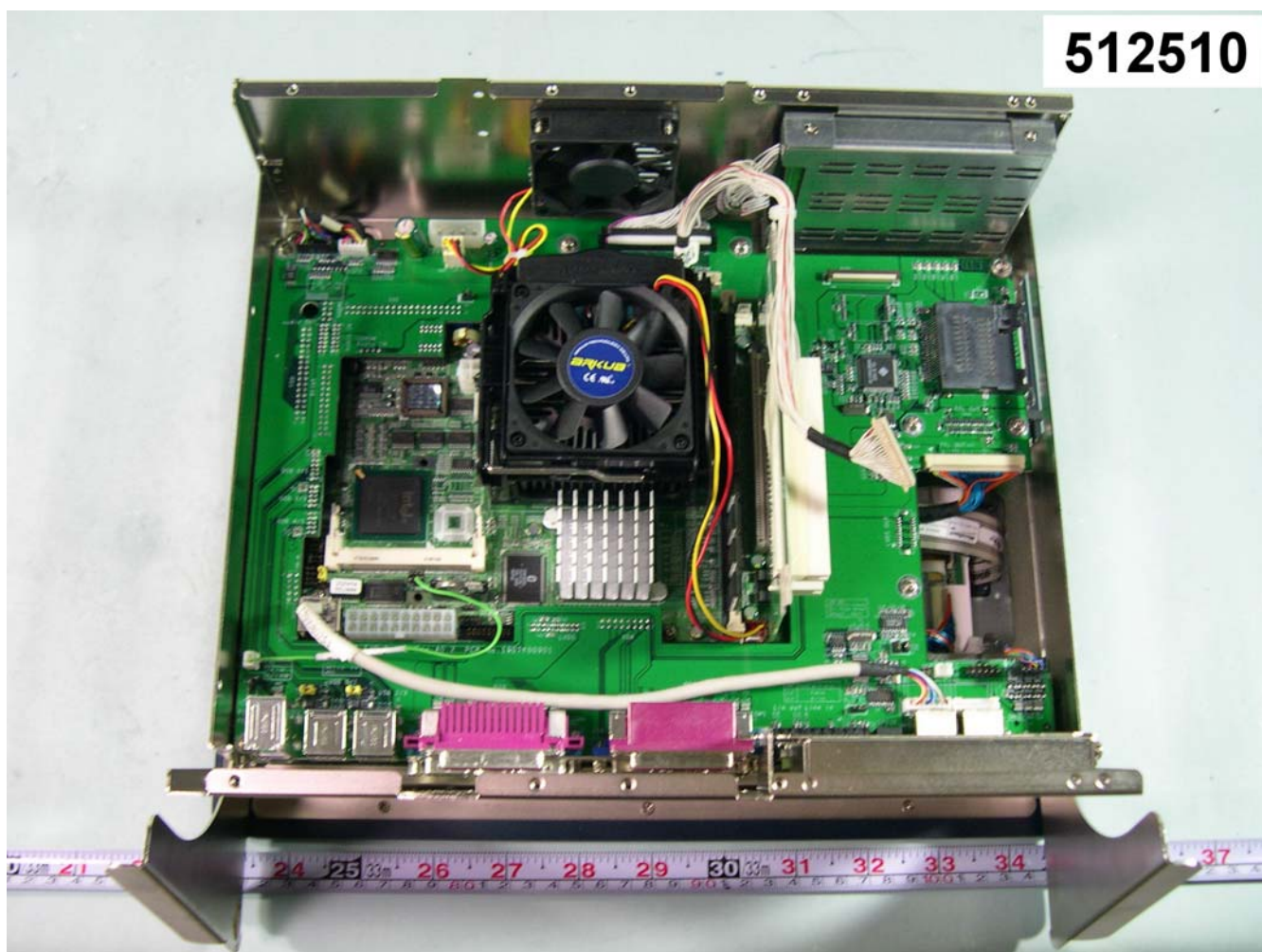
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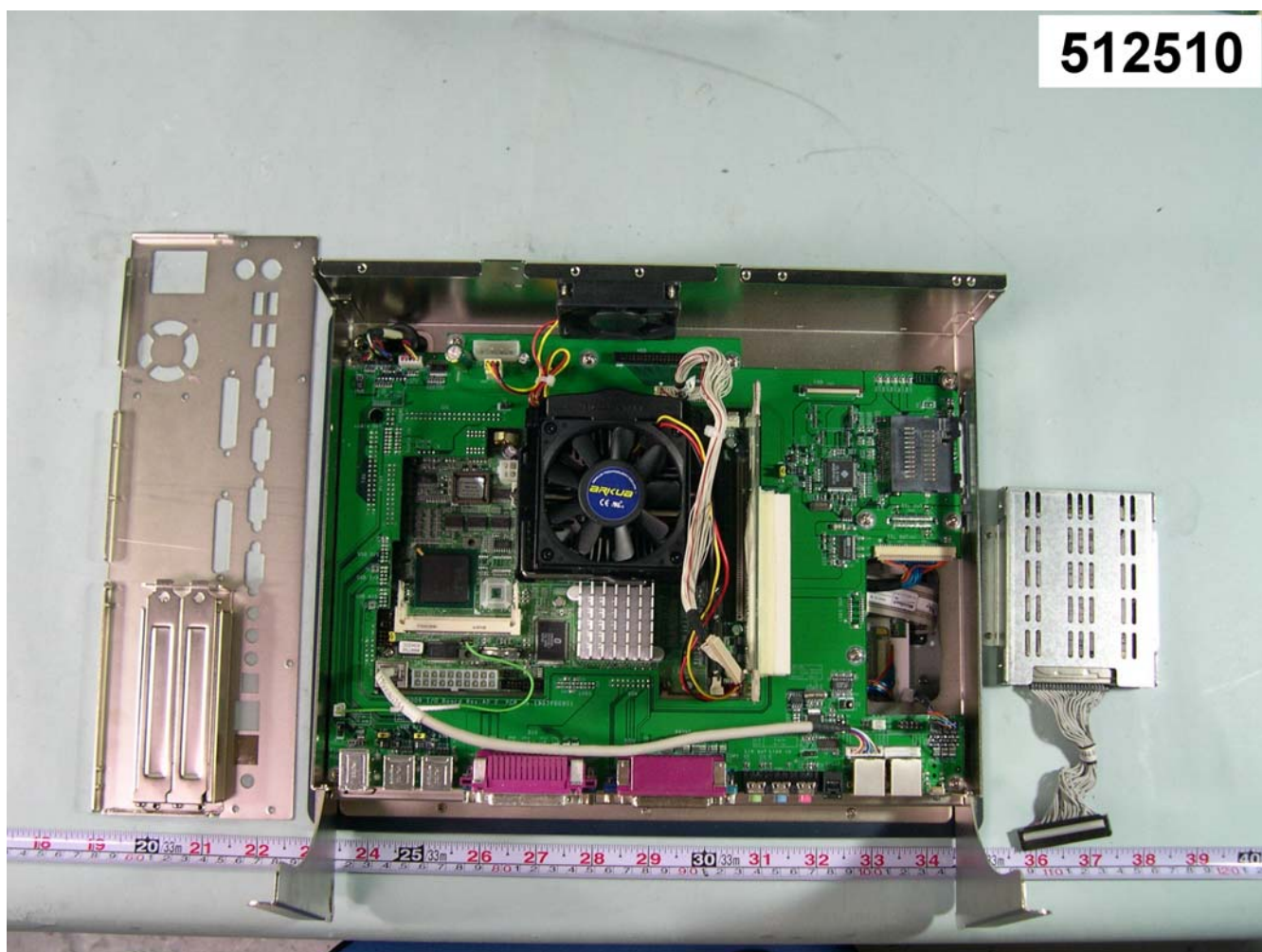


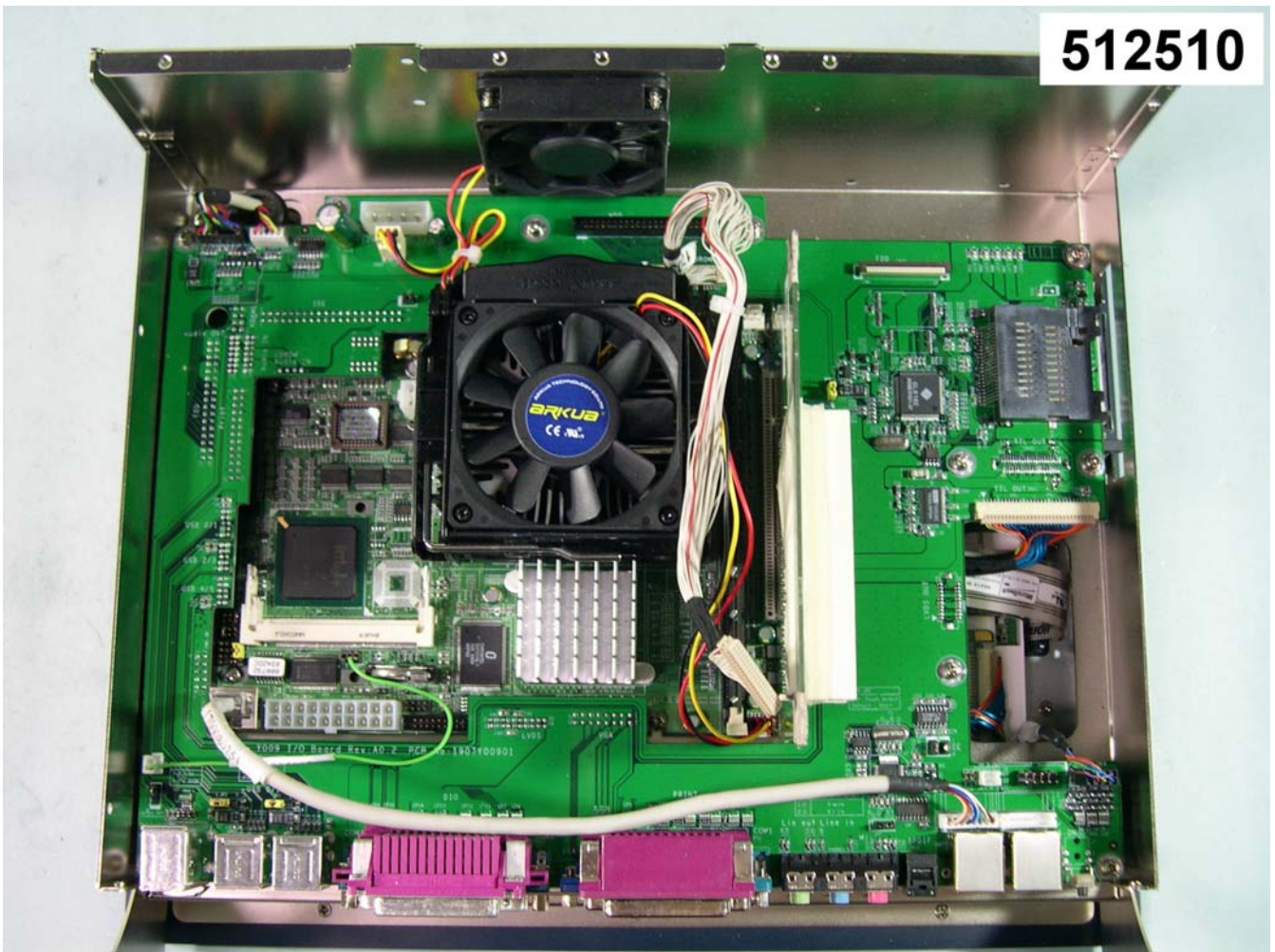


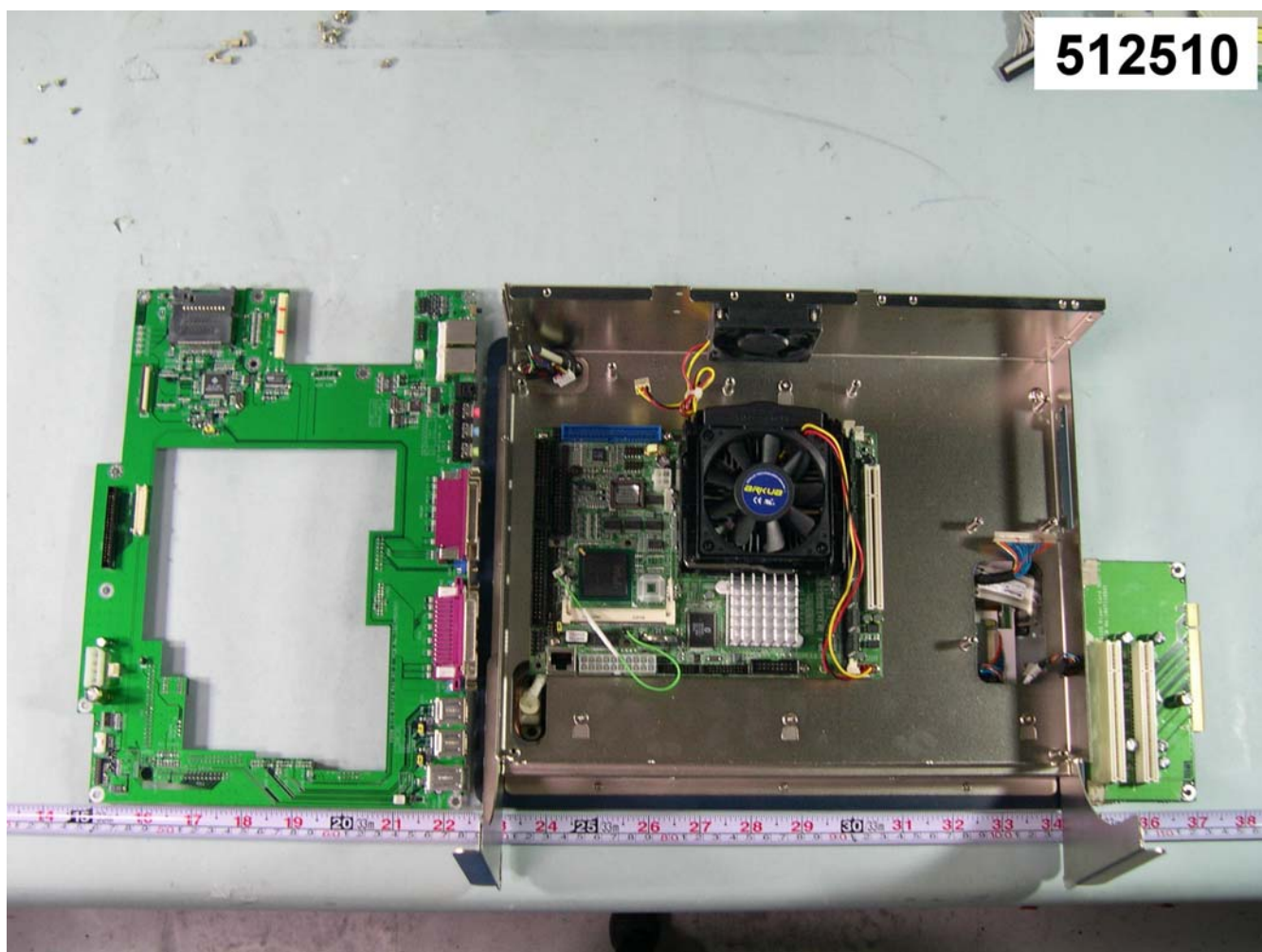


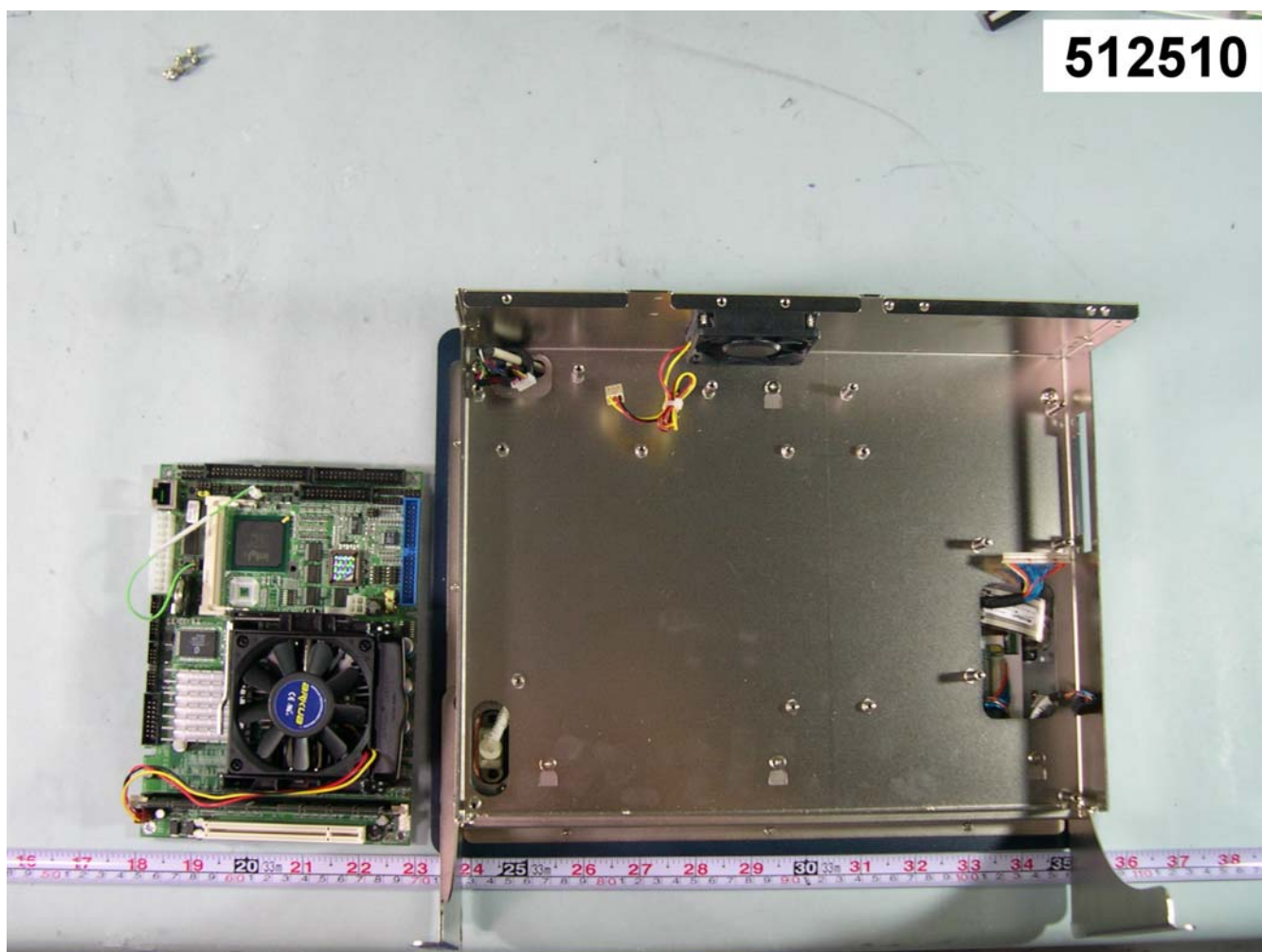
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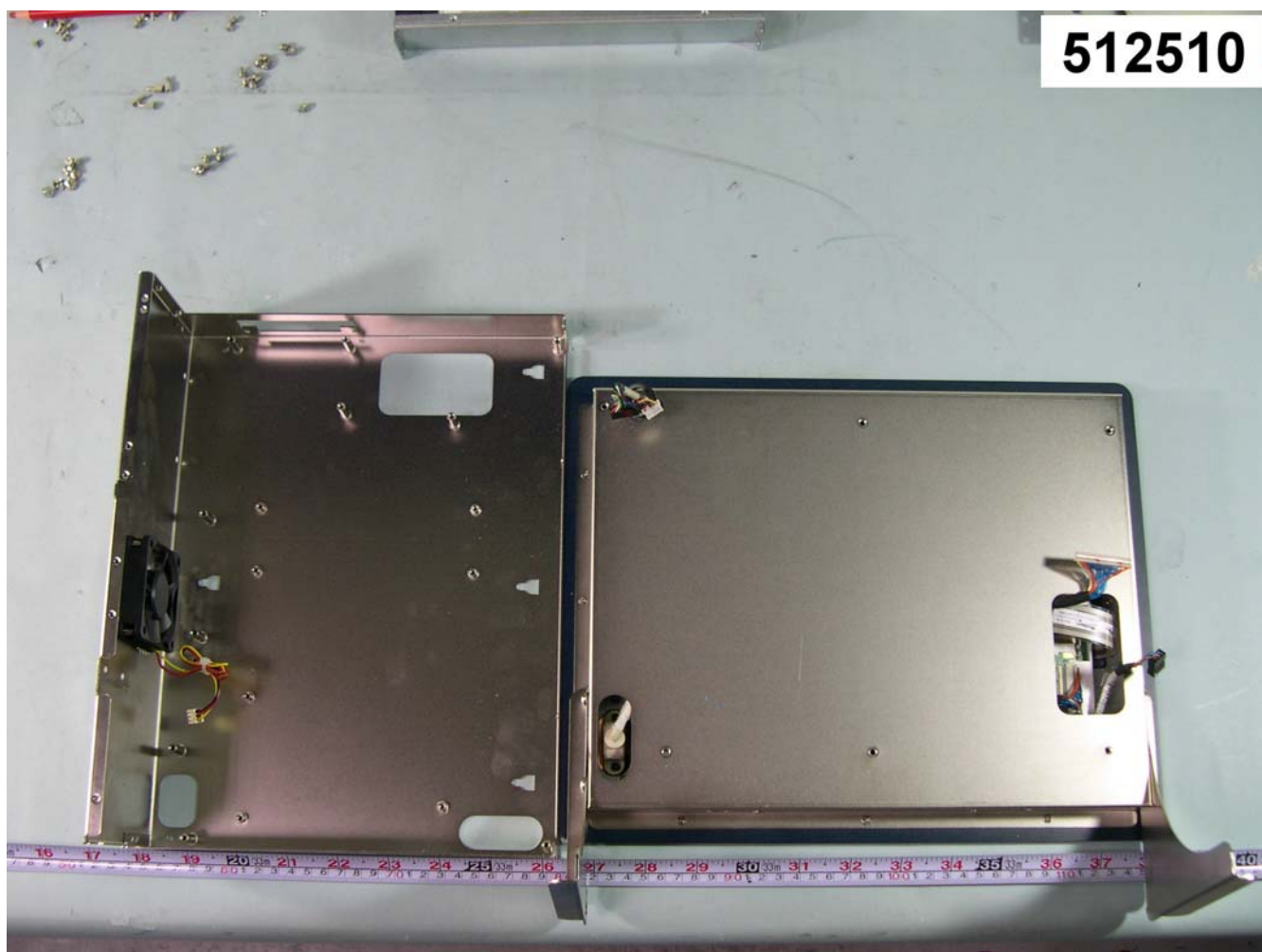






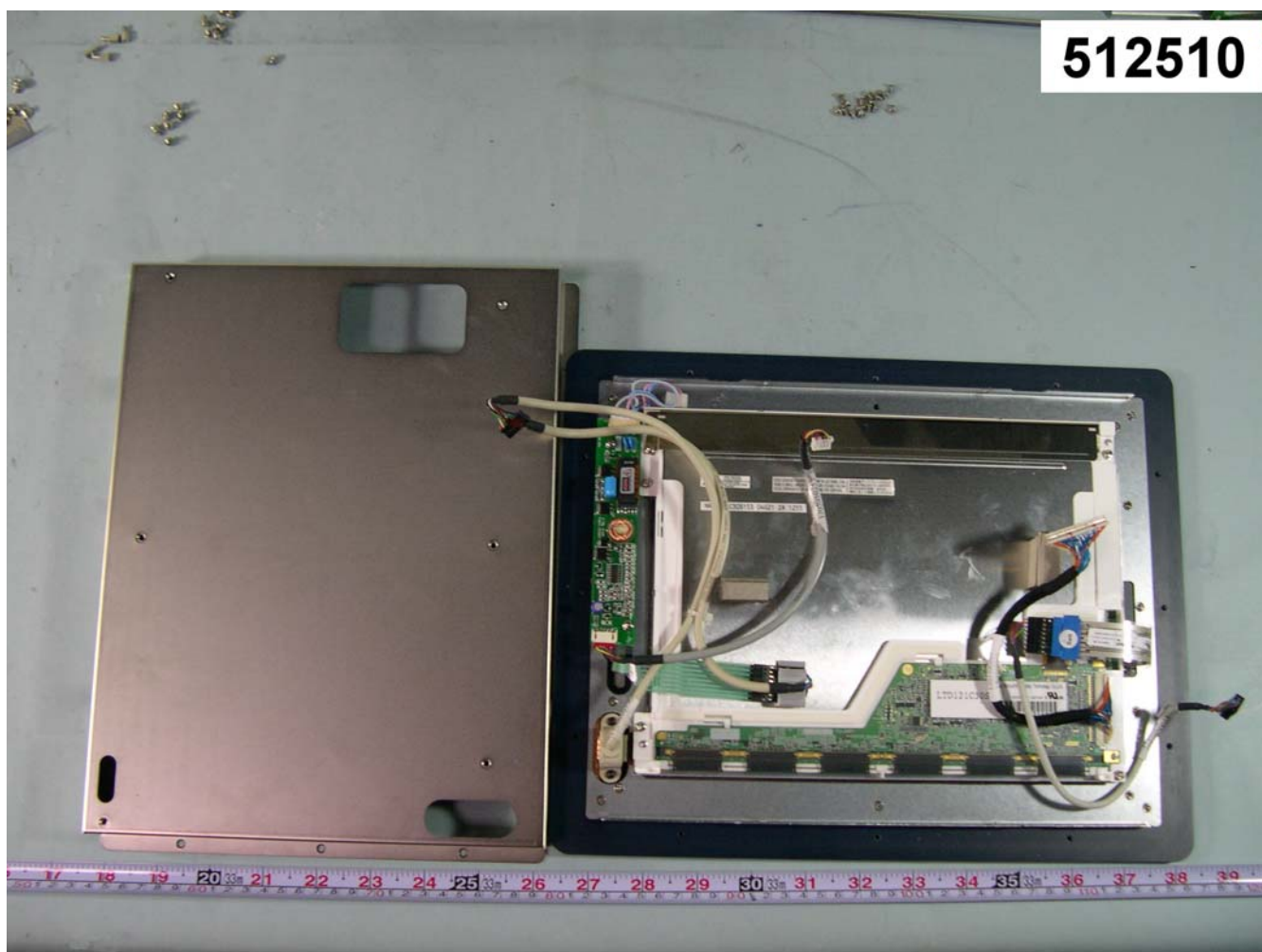






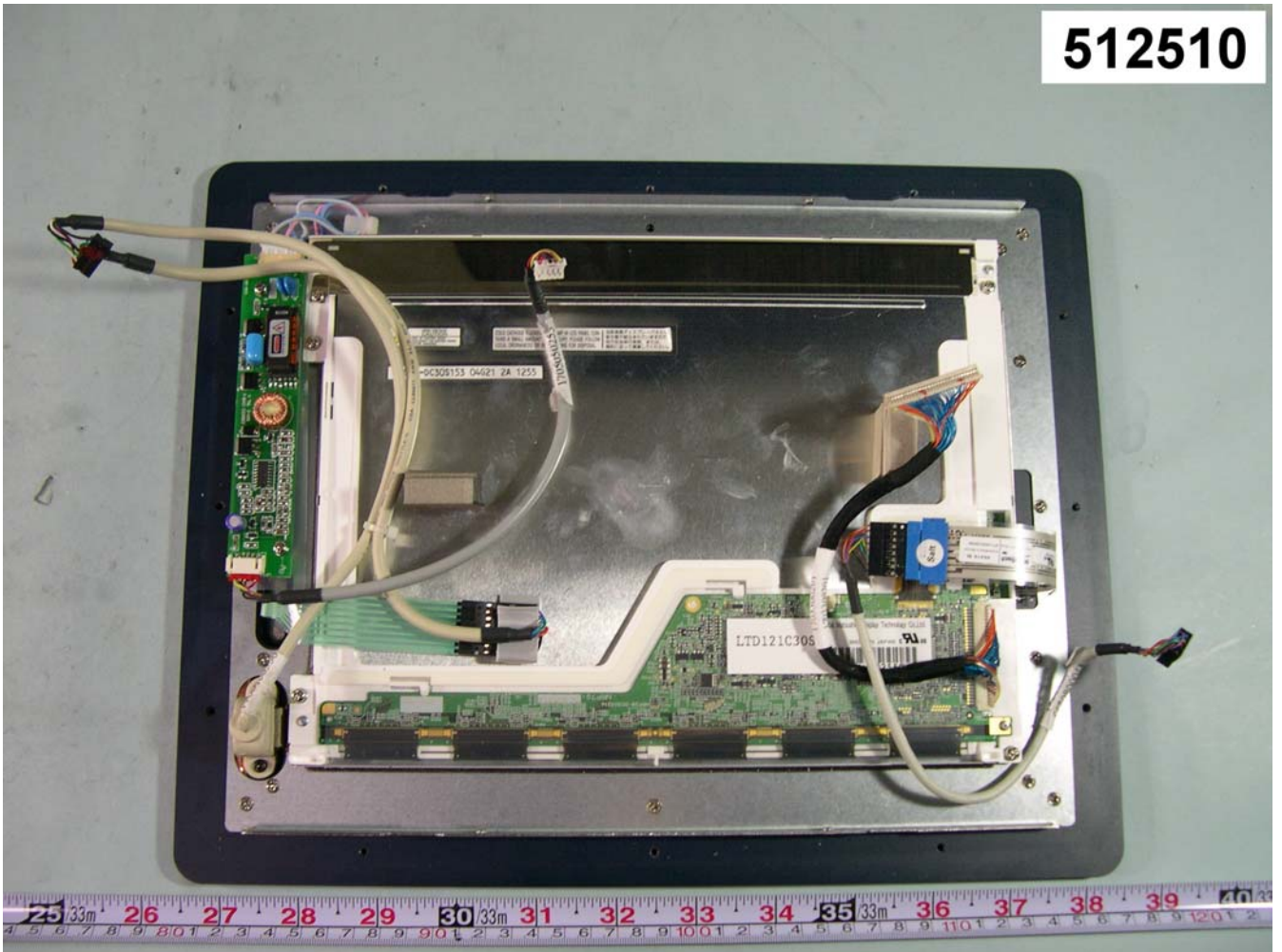


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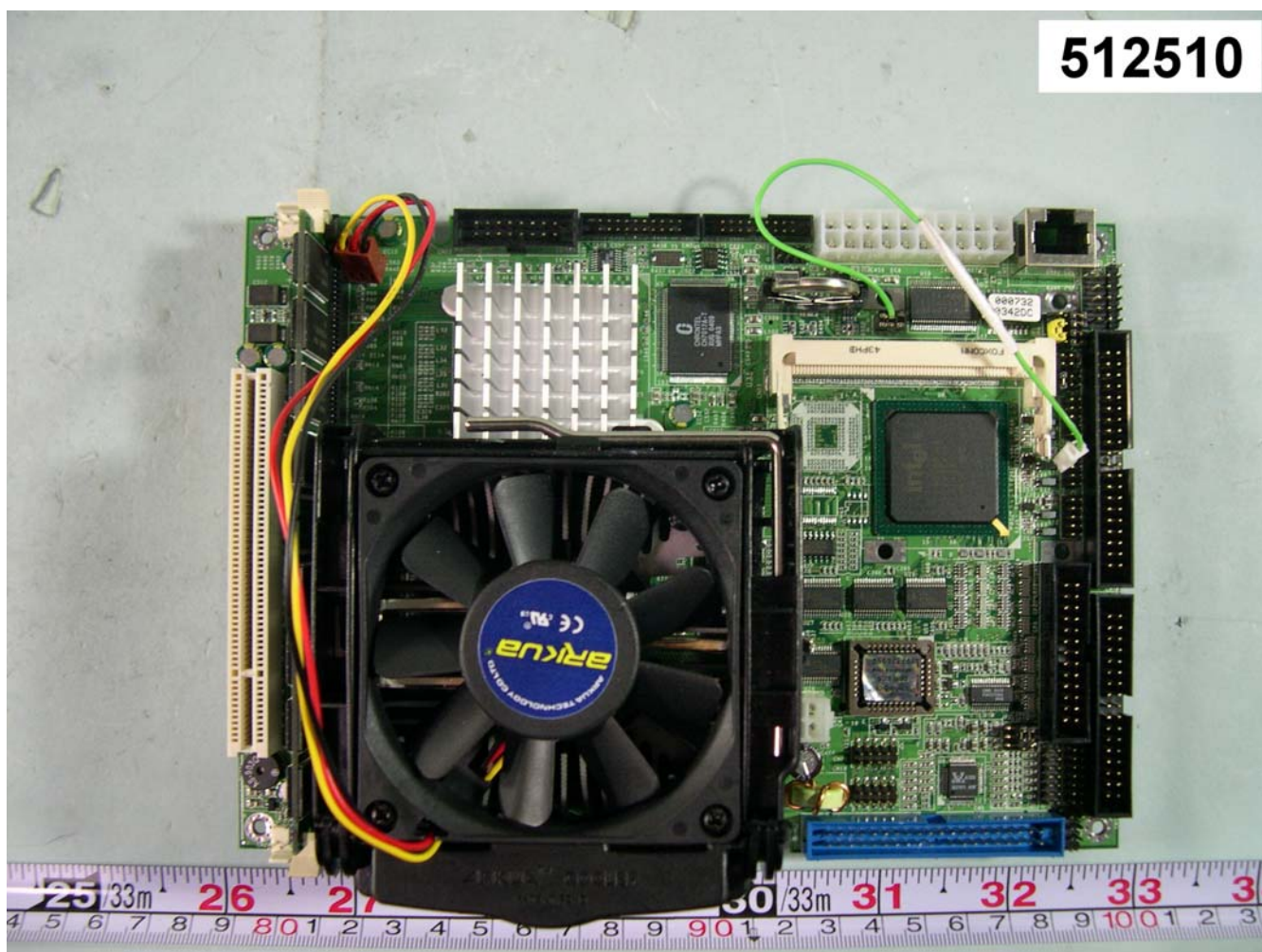


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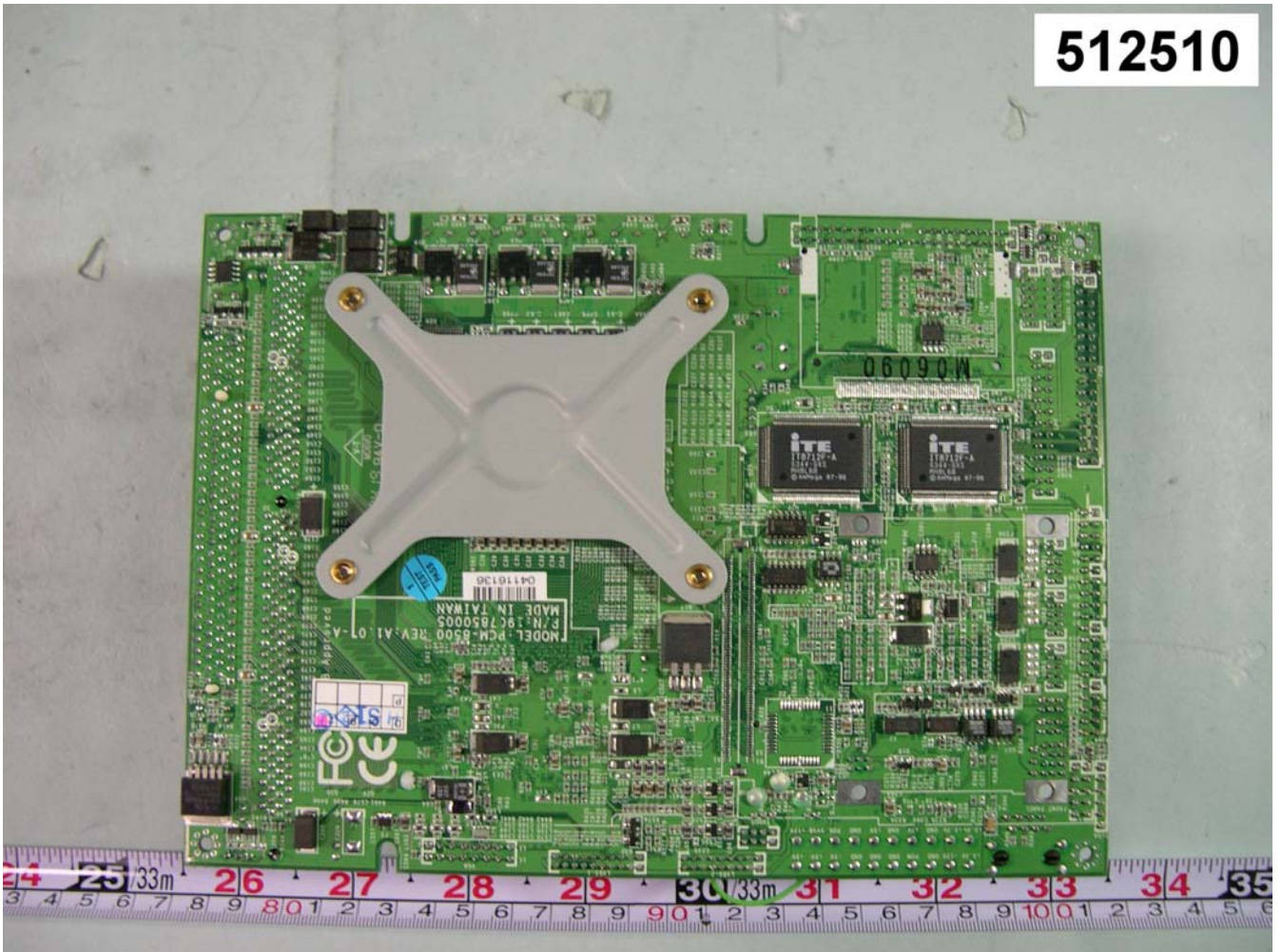


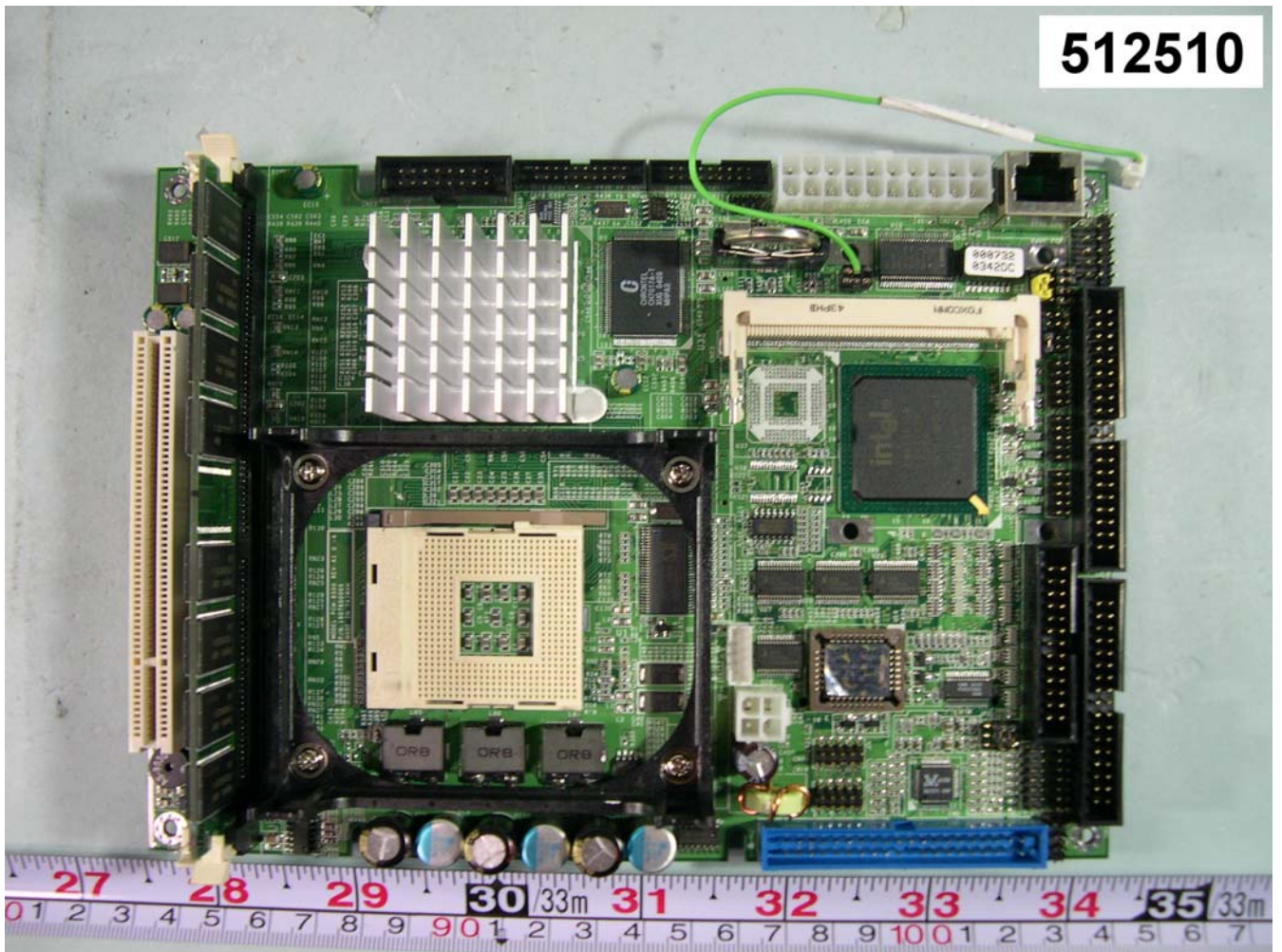
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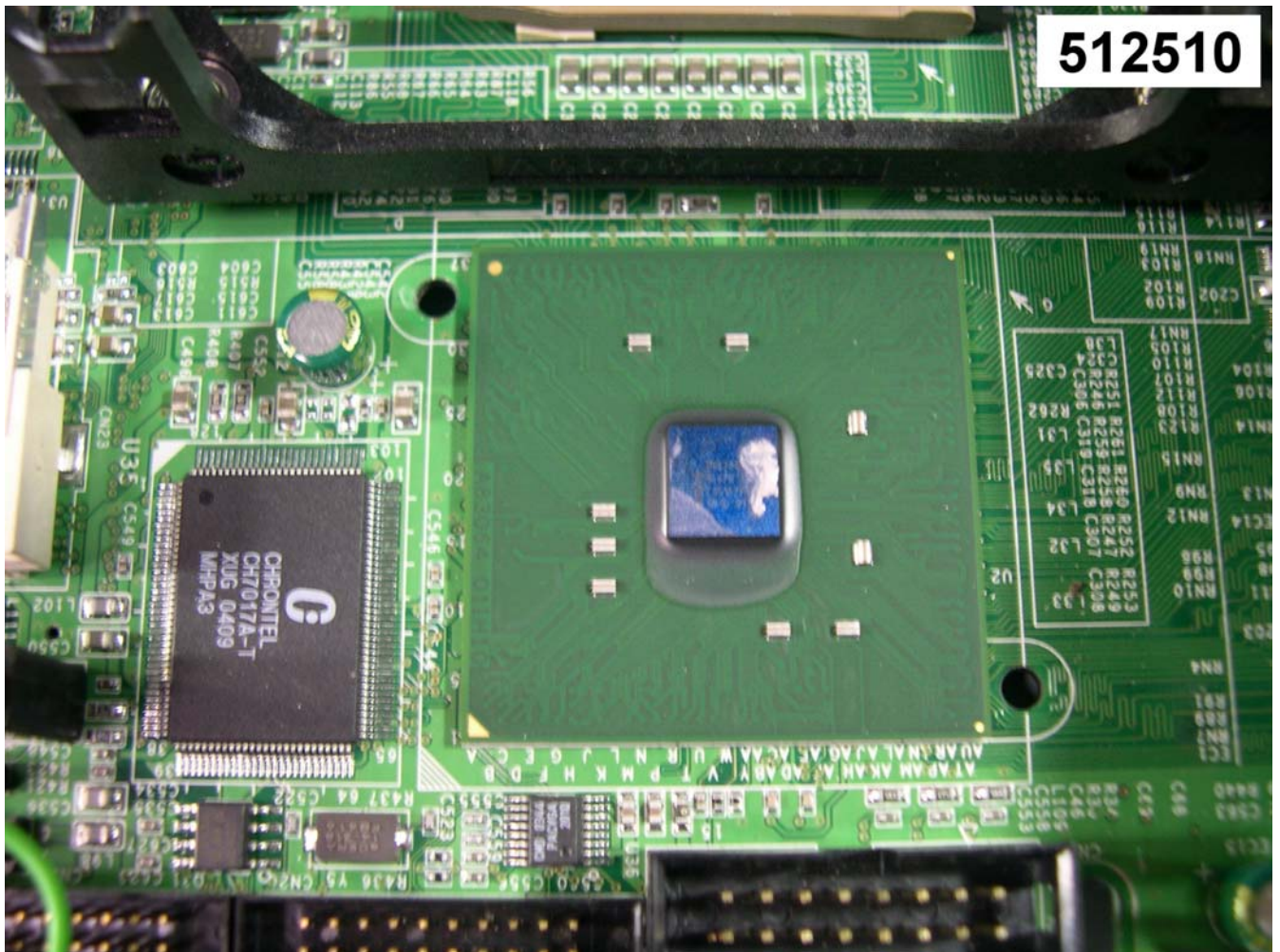


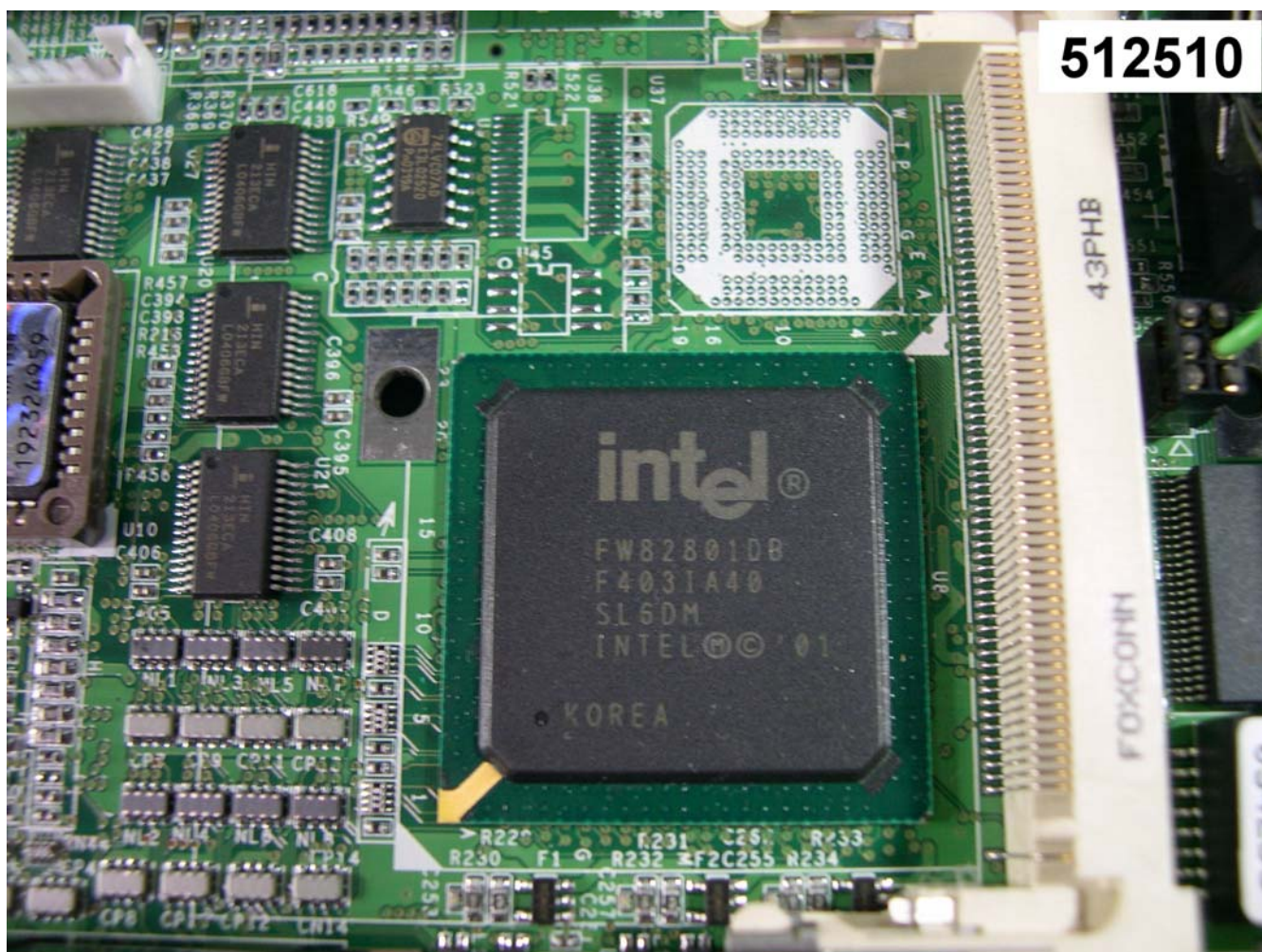




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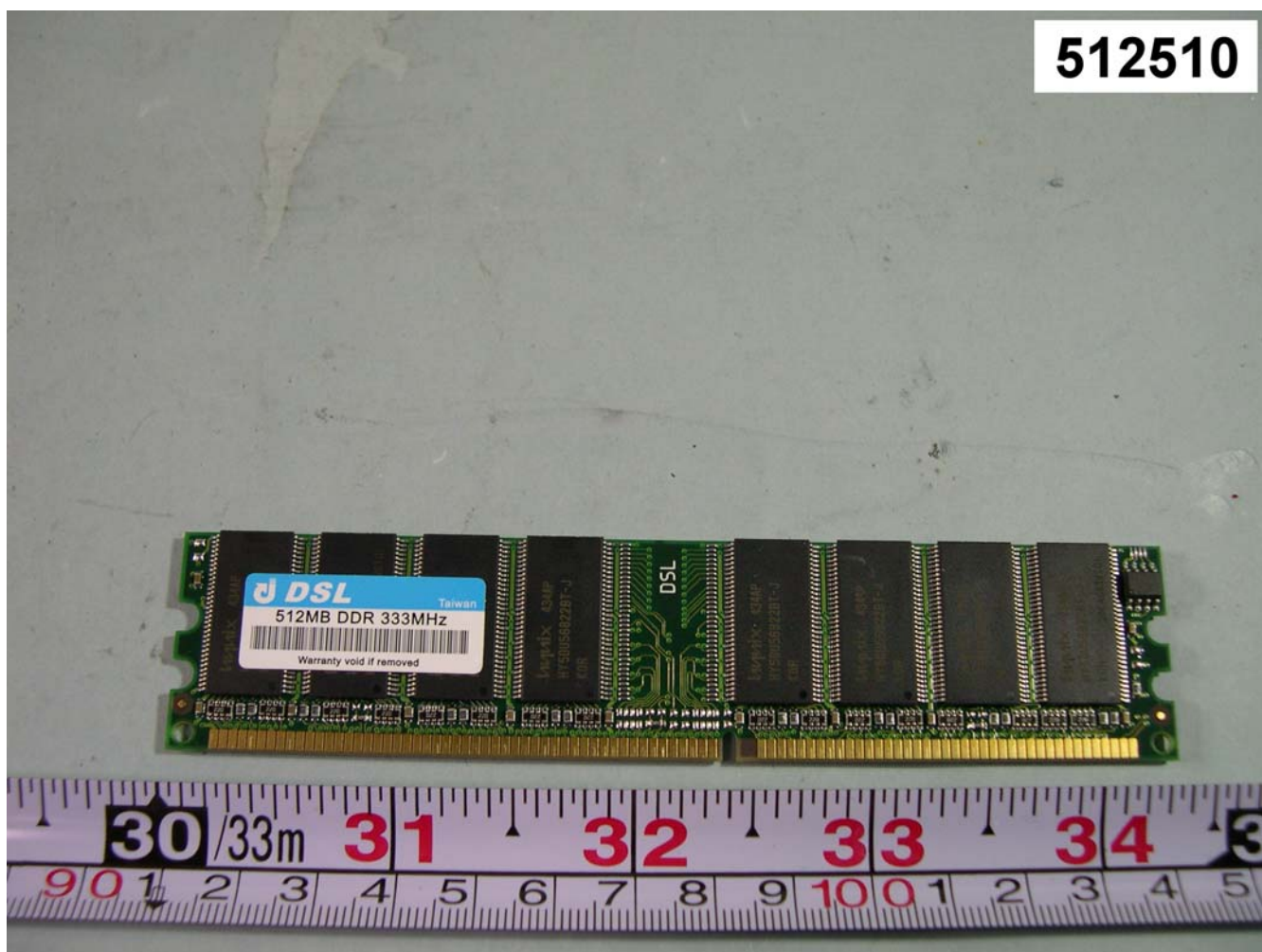




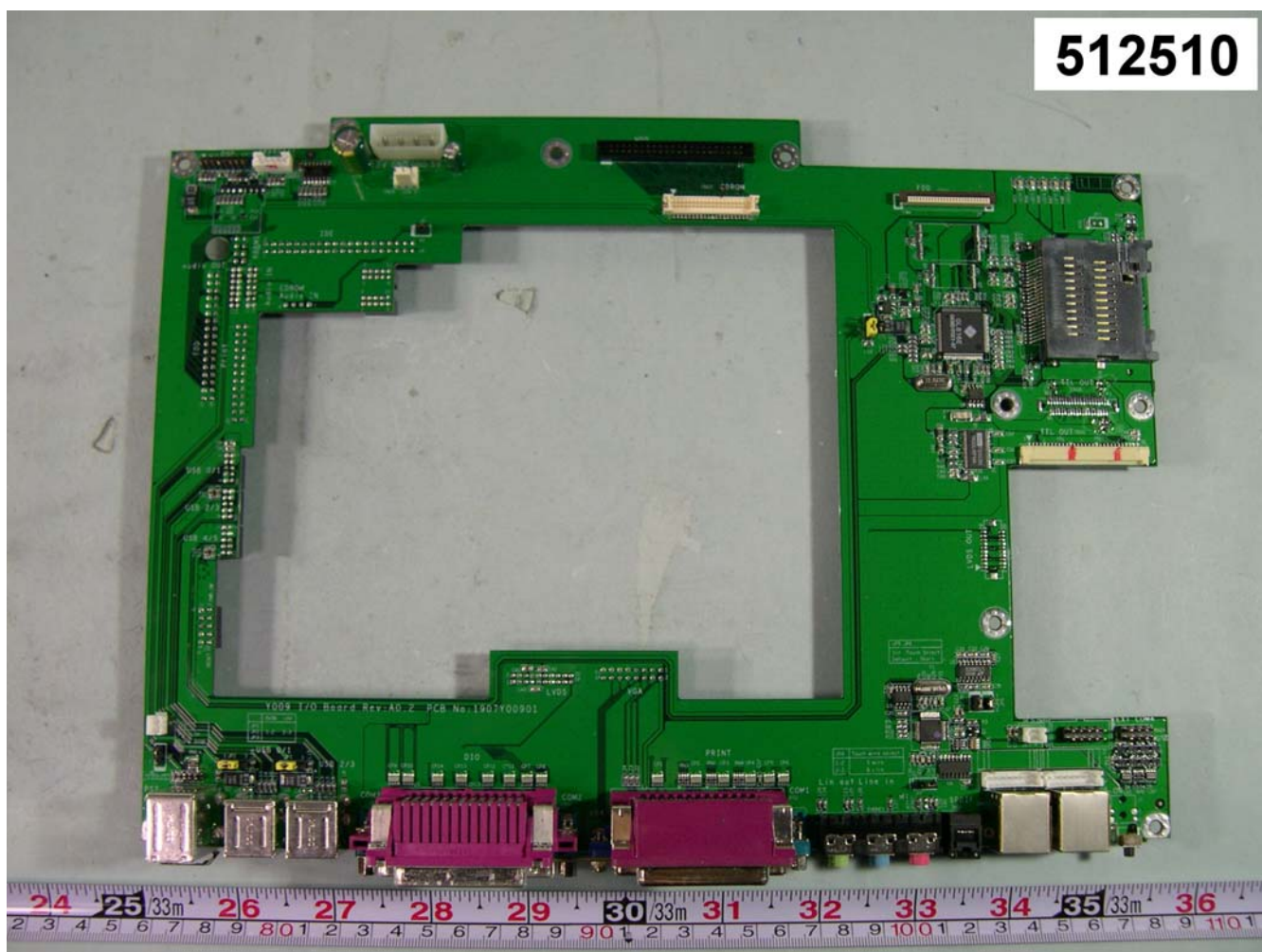




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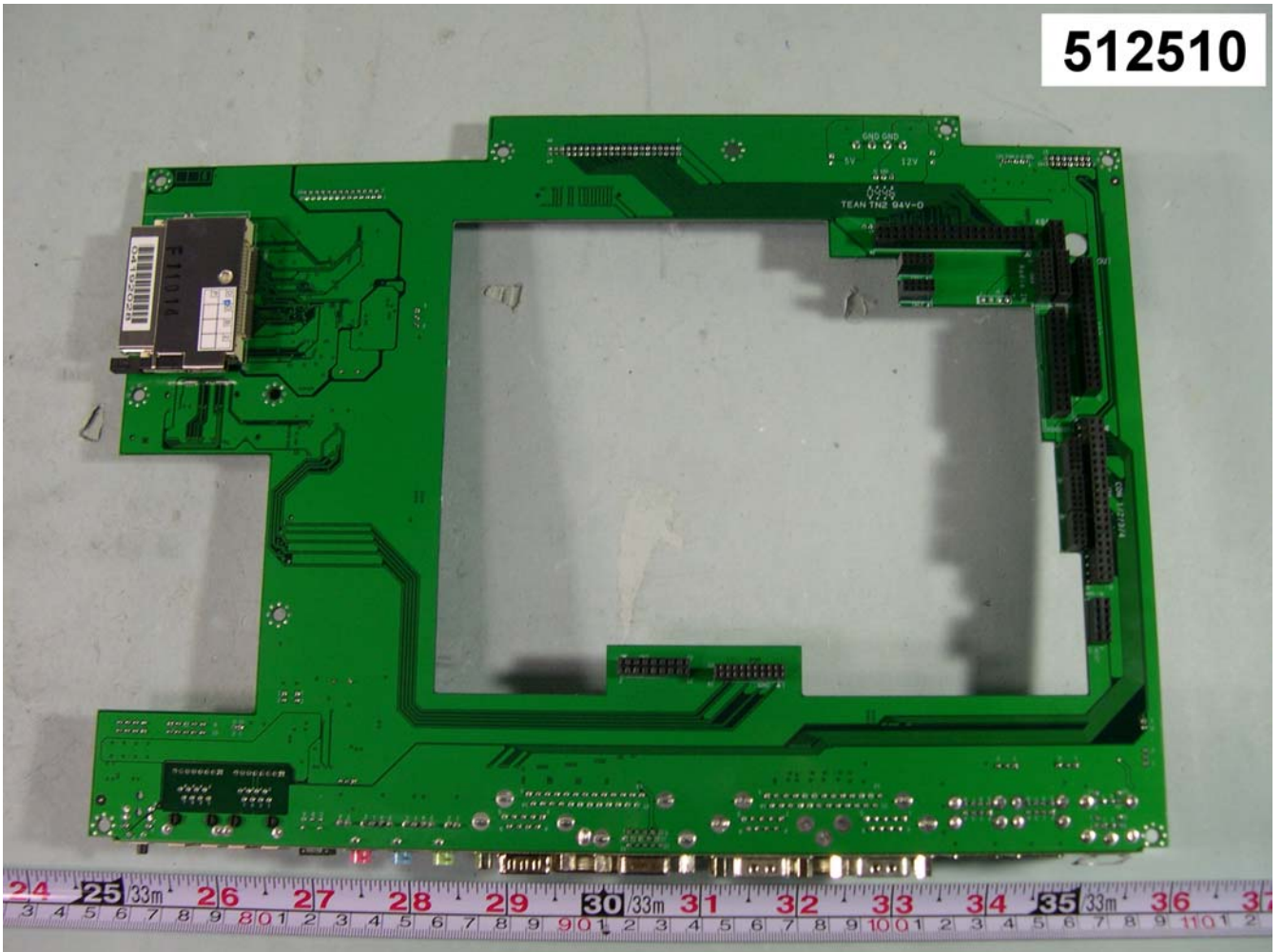


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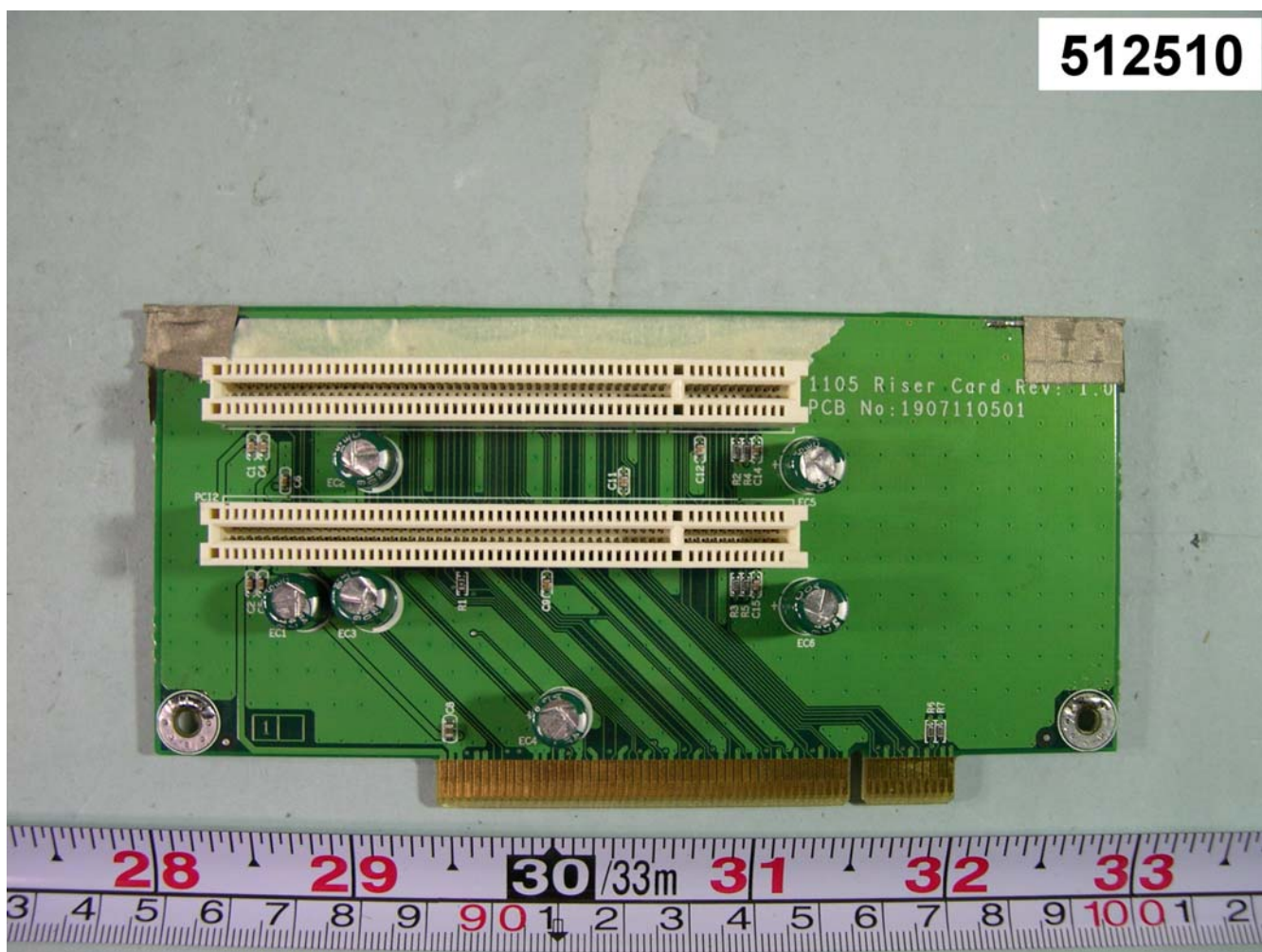


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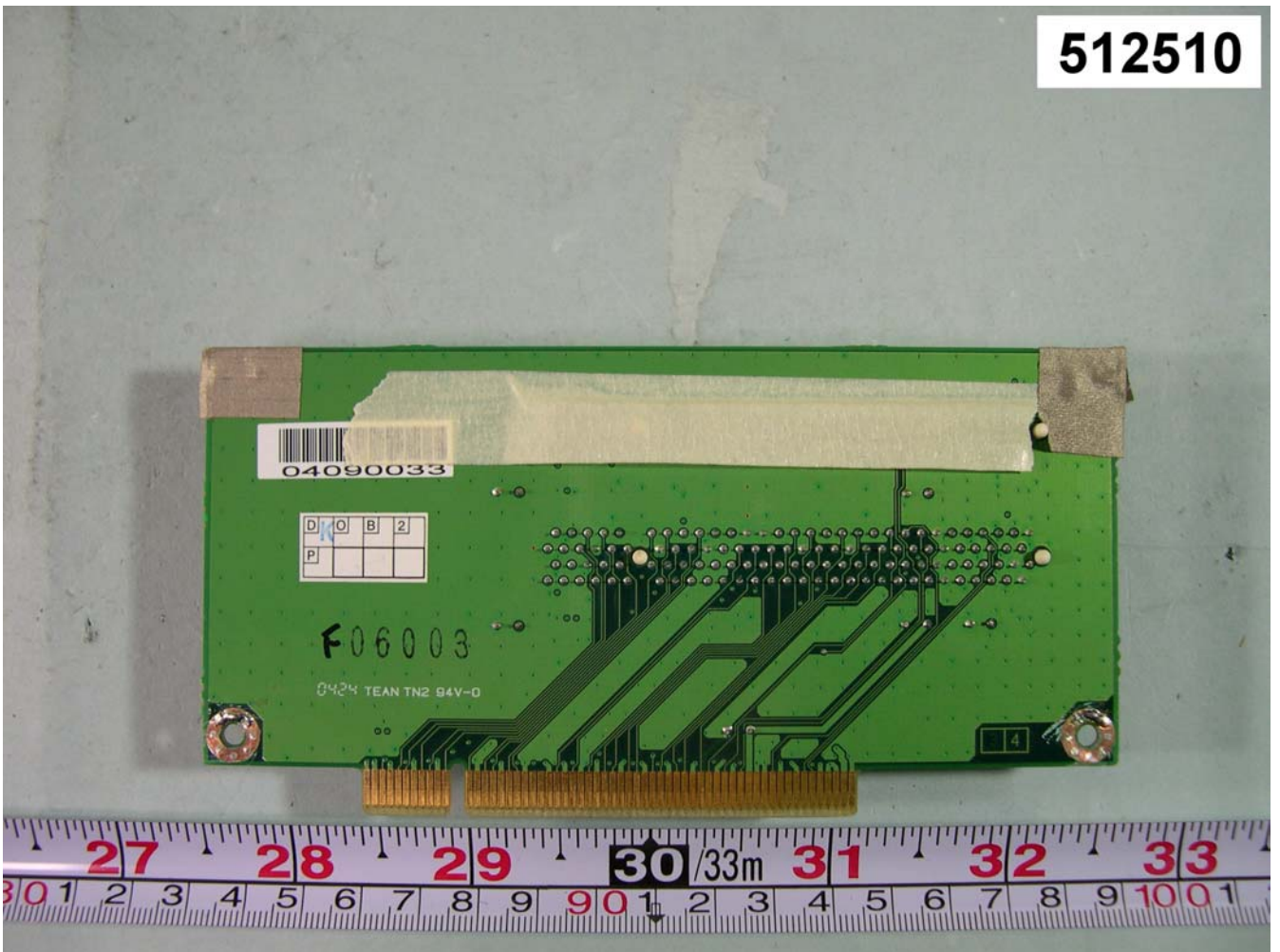


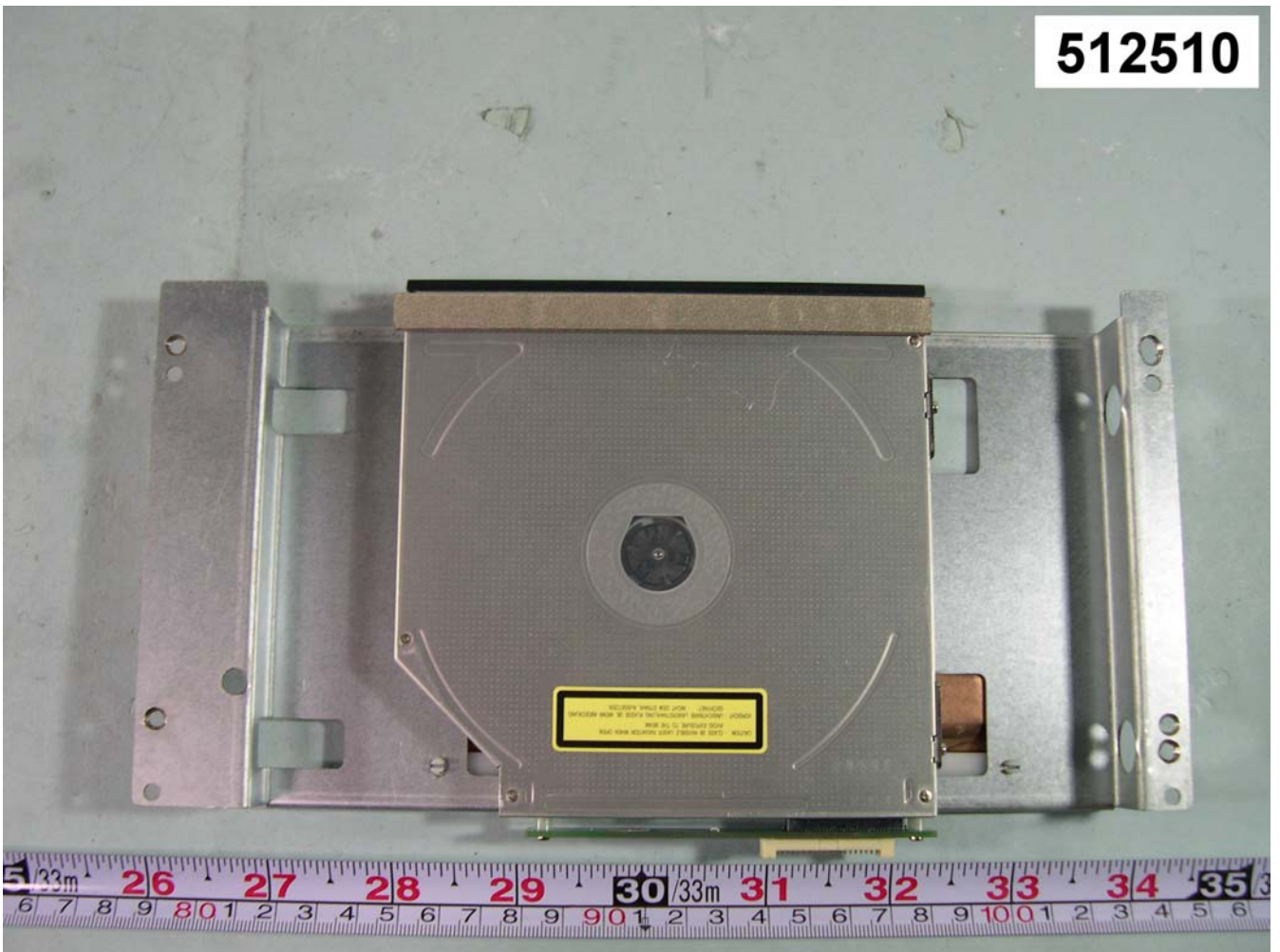
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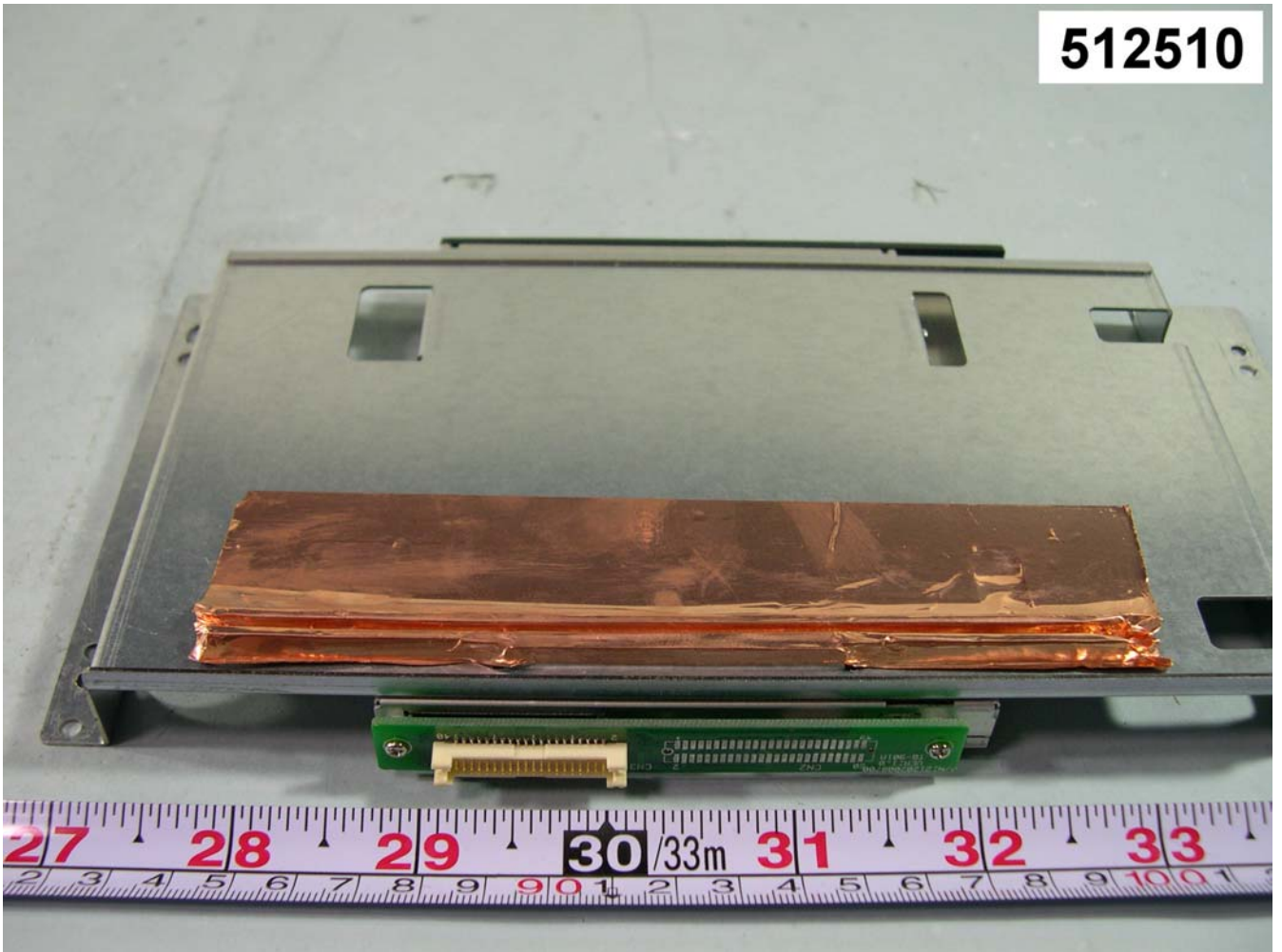
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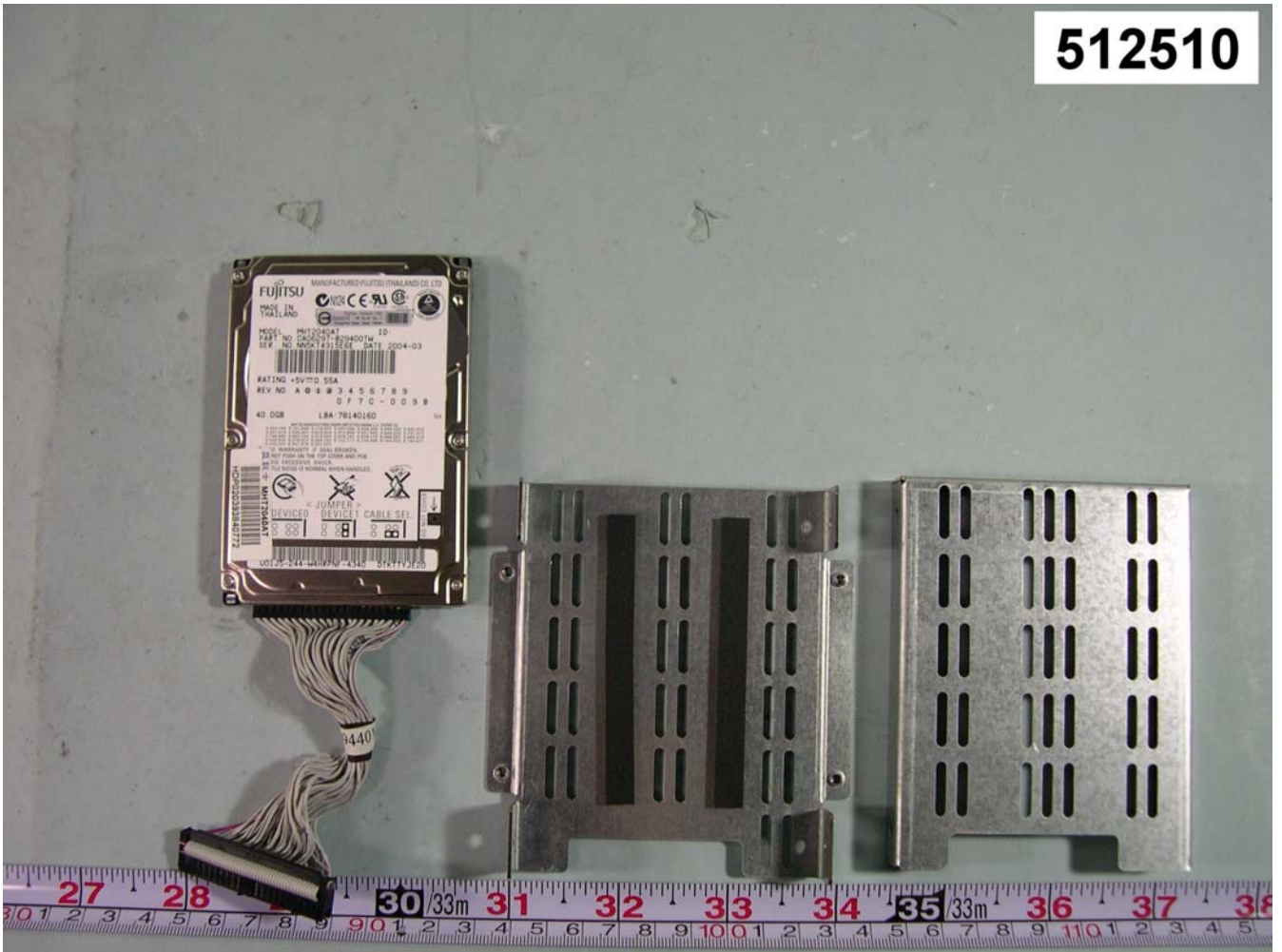


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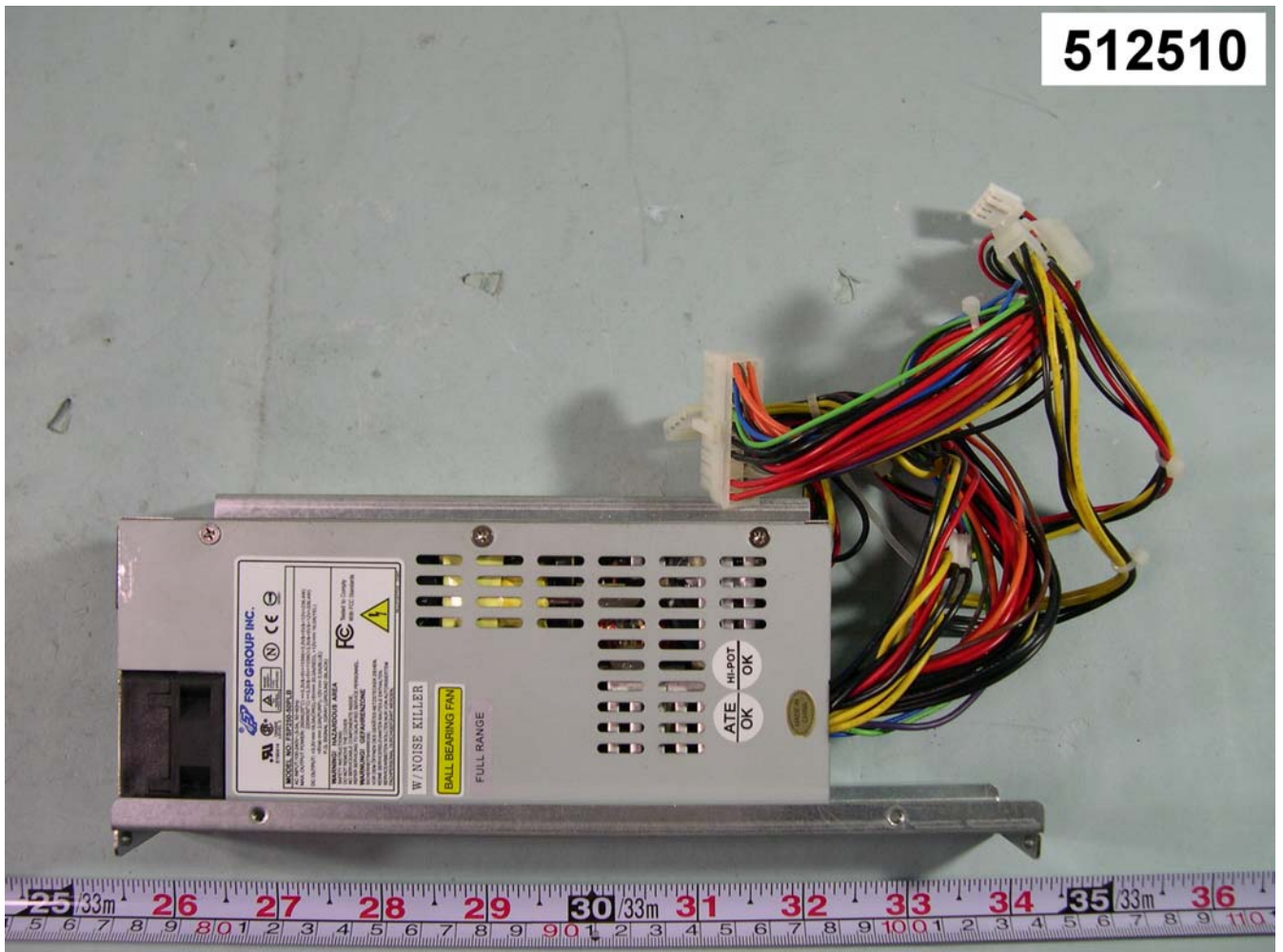


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