

TRC

Certificate of Compliance

Training Research Co., Ltd.

hereby certifies that

EMC TEST

10/100 Base-TX to 100 Base-FX Ethernet Media Converter

Model No.: DMC-300SC (See appendix D)

Made by

D-Link Corp.

**No. 8, Li-Shing Rd. VII, Science-Based Industrial Park,
His-Chu, Taiwan, R.O.C.**

is fulfilled

**EMI : EN 55022/1998, EN 61000-3-2/1995+A1/1998+A2/1998, EN 61000-3-3/1995
EMS: EN 55024/1998→ EN 61000-4-2/1995, EN 61000-4-3/1996, EN 61000-4-4/1995,
EN 61000-4-5/1995, EN 61000-4-6/1996, EN 61000-4-8/1993, EN 61000-4-11/1994**

Test Date: December 29, 2001

Certificate Registration No.: D18CE114

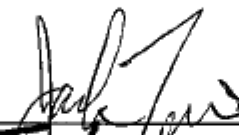
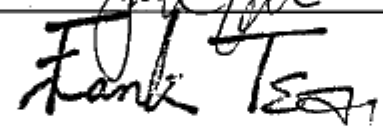
March 14, 2002

Frank Tsai

General Manager, Frank Tsai

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Training Research Co., Ltd. (NVLAP LAB CODE : 200174-0)

Report No.	D18CE114	
Specifications	EMC, Class B	
Applicant address	No. 8, Li-Shing Rd. VII, Science-Based Industrial Park, His-Chu, Taiwan, R.O.C.	
Applicant	D-Link Corp.	
Items tested	10/100 Base-TX to 100 Base-FX Ethernet Media Converter	
Model No.	DMC-300SC (See appendix D) (Sample # C51802)	
Results	Compliance (As detailed within this report)	
Date	03/13/2002 (month / day / year)	(Sample received)
	12/29/2001 (month / day / year)	(Test)
Prepared by		Project Engineer
Authorized by		General Manager (Frank Tsai)
Issue date	March 13, 2002	(month / day / year)
Modifications	None	
Tested by	Training Research Co., Ltd.	
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- (1) **This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.**
- (2) **This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.**
- (3) **This test report, measurements made by TRC are traceable to the NIST only Conducted and Radiated Method.**

★ NVLAP LAB CODE: 200174-0

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Chapter 0 Emission and Susceptibility Standards

Emission Standards

Emission Standard	European Standard	International Standard
(X)	EN 50081-1/1992	
()	EN 50081-1/8.93	
()	EN 55014/4.93	CISPR 14: 1993
()	EN 55015/12.93	CISPR 15: 1992
()	EN 55011/91	CISPR 11: 1990
(X)	EN 55022/98	CISPR 22: 1997
(X)	EN 61000-3-2/1995 +A1/1998+A2/1998	IEC 61000-3-2: 1997 A1:1997 / A2:1998
(X)	EN 61000-3-3/1995	IEC 61000-3-3: 1994

Susceptibility Standards

Susceptibility Standard	European Standard	International Standard
()	EN 50082-1/1997	
(X)	EN 55024/1998	
()	EN 50082-2/1994	
()		IEC 801-2/1984
()		IEC 801-3/1984
()		IEC 801-4/1988
()		IEC 804-5
(X)	EN 61000-4-2:1995	IEC 61000-4-2:1995
(X)	EN 61000-4-3:1996	IEC 61000-4-3:1995
(X)	EN 61000-4-4:1995	IEC 61000-4-4:1995
(X)	EN 61000-4-5:1995	IEC 61000-4-5:1995
(X)	EN 61000-4-6:1996	IEC 61000-4-6:1996
(X)	EN 61000-4-8:1993	IEC 61000-4-8:1993
(X)	EN 61000-4-11:1994	IEC 61000-4-11:1994
()	EN 55014-2:1993	CISPR/F (Sec) 159

Chapter 1 Introduction

Description of EUT

This Ethernet converter is a data transmission/receiver facility. It is designed to install in the personal computer or compatible computer and makes your data equipment available to transmit / receive data via the EUT.

Connections of EUT

- (1) The power jack of EUT is connected with the AC power source via a power adapter.
- (2) The UTP port is connected with a LAN card installed in nearby PC.
- (3) The fiber port is connected with the fiber port of converter (as same as EUT) to the other LAN card installed in far-end PC.

Test method

Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

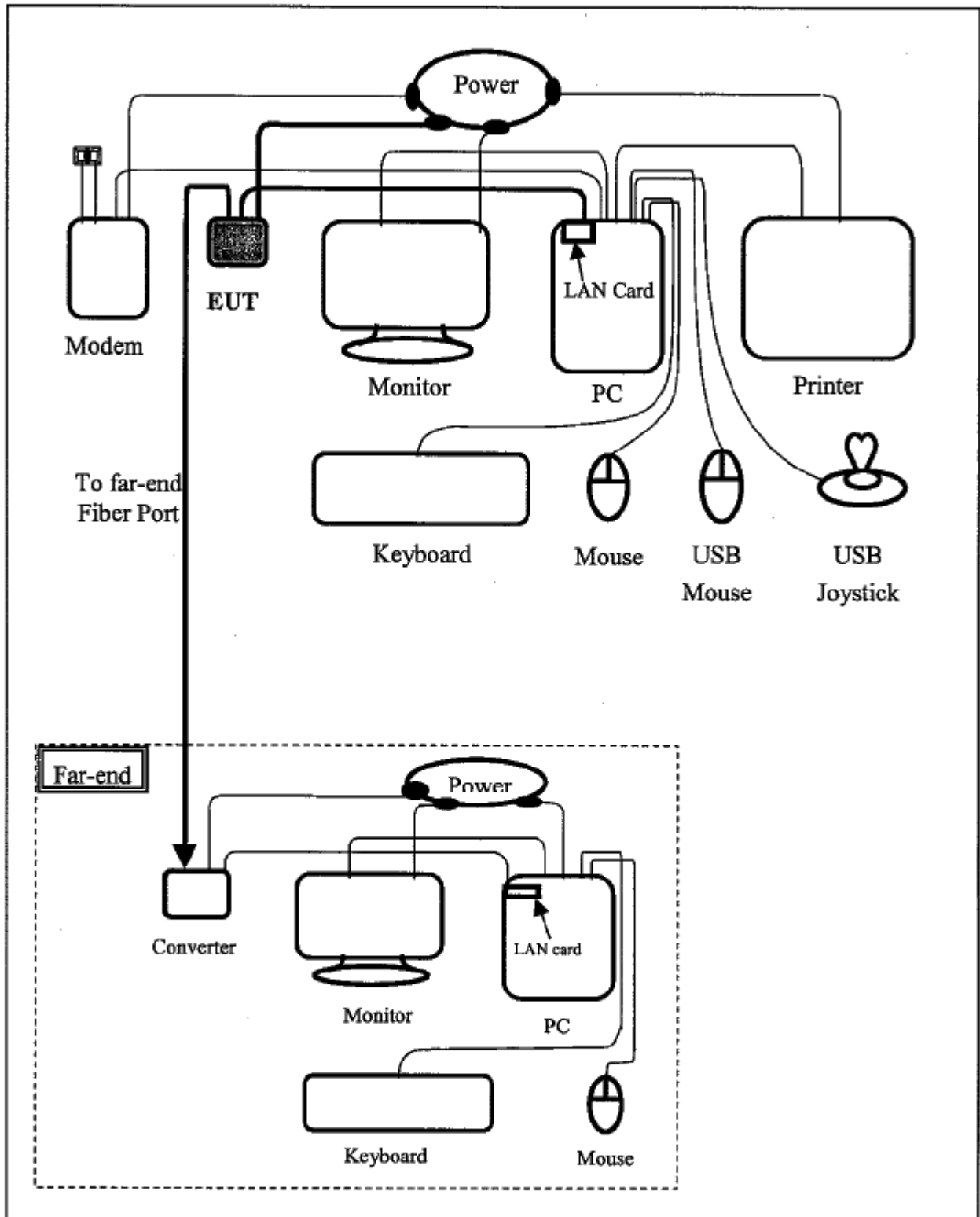
The following models were tested: MC110TMC, MC110TMT, MC110TML, MC110TMM, MC110TSC/15(L), MC110TSC/15(HP), MC110TSC/30, MC110TSC/40, MC110TSC/60. The model "MC110TSC/60" was the worst case in this test report.

During testing, the EUT was operated at transmitting and receiving data mode simultaneously, the transmitting rate was set to "10 × 10Mbps" and "100 × 100Mbps" for each emission measured. This was done in order to insure that maximum emission levels were attained.

The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is showing in the next page.

Configuration of Test Setup



Connections

PC:

- *Serial Port --- an external modem
 - *Printer Port --- a printer
 - *Monitor Port --- a monitor
 - *Keyboard Port --- a keyboard
 - *Mouse Port --- a mouse
 - *USB A Port --- a USB mouse
 - *USB B Port --- a USB joystick
- (Each port on PC is connected with suitable device)

EUT:

- *Power adaptor
 - Model: DV-751A5UK,
 - I/P: 240V~50Hz, 0.12A
 - O/P: 7.5V, 1.5A
- *Power cable of adaptor
 - 189cm long, non-shielded, no ferrite core
- *RJ45 cable x 1
 - 30m long, non-shielded, no ferrite core
- *Fiber cable x 2 (Multi-mode, Single-mode)
 - 100m long, non-shielded, no ferrite core

List of Support Equipment**Conducted (Radiated) test:**

PC : **HP Brio 8410 6/350**
Model No. : D6928A
Serial No. : TW90400174
FCC ID : N/A (Doc Approved)
檢磁 : 3872H013
Power type : 100 ~ 240VAC / 50 ~ 60Hz, 5A, Switching
Power cord : Non-shielded, 2.30m long, Plastic, No ferrite core

Monitor : **HP 15" Color Monitor**
Model No. : D2832A
Serial No. : MY90615892
FCC ID : N/A (Doc Approved)
檢磁 : 4872A167
Power type : 110 ~ 240 VAC / 50 ~ 60 Hz, Switching
Power cord : Shielded, 1.80m long, No ferrite core
Data cable : Shielded, 1.50m long, with two ferrite cores

Keyboard : **HP**
Model No. : SK-2501K
Serial No. : M981216213
FCC ID : GYUR38SK
檢磁 : 3862A621
Power type : By PC
Data cable : Shielded, 1.70m long, with ferrite core

Mouse : **HP**
Model No. : M-S34
Serial No. : LZC84446151
FCC ID : DZL211029
檢磁 : 4862A011
Power type : By PC
Power cord : Non-shielded, 1.80m long, no ferrite core

Printer : **EPSON**
Model No. : P78PA
Serial No. : 0EE0014030
FCC ID : BKM9A8P70RA
Power type : Linear
Power cord : Non-shielded, 2m long, No ferrite core
Data cable : Shielded, 1.8m long, No ferrite core

Modem : **ACEEX**
Model No. : XDM-56V14
FCC ID : IFAXDM-56V14
Power type : Linear
Power cord : Non-shielded, 1.9m long, No ferrite cord
Data cable : RS232, Shielded, 1.2m long, No ferrite core
RJ11C x 2, 7' long non-shielded, No ferrite core

USB Mouse : **Logitech**
Model No. : M-BA47
Serial No. : LZE92250027
FCC ID : N/A, Doc Approved
檢磁 : 4872A220
Power type : Powered by PC
Power Cable : Shielded, 1.5m long, Plastic hoods, No ferrite bead

USB Joystick : **Padix**
Model No. : QF-305U
Serial No. : 8100848
FCC ID : N/A, Doc Approval
Power type : Powered by PC
Power Cable : Shielded, 1.5m long, No ferrite bead data cable

LAN Card : **D-Link**
Model No. : DFE-530TX
Serial No. : 0050BAE32FF3, 0050BAE3158B
FCC ID : N/A, DoC Approved
Power type : Powered by PC

Converter : **Cameo Communications, Inc.**
Model No. : N/A
FCC ID : N/A, DoC Approval
Power type : Linear
Power cord : Non-shielded, 1.89m long, no ferrite core

Chapter 2 Conducted Emission Test

Test condition and setup

All the equipment is placed and setup according to the EN 55022.

Power Line: The EUT is assembled on a wooden table, which is 80 cm high, is placed 40 cm from the back-wall, which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and spectrum.

Signal Line: The EUT is assembled on a wooden table, which is 80 cm high, is placed 40 cm from the back-wall, which is a vertical conducting plane. One T-LISN connect is for EUT, the other T-LISN connect is for support equipment. They are all placed on the conductive ground. The EUT's T-LISN connected a line switch box for selecting phone line or LAN Port, then connect to a preamplifier and spectrum.

The spectrum scans from 150KHz to 30MHz. Conducted emission levels are detected at max. peak mode . But if the max. peak mode failed or over average limit, it will be measured by average detection mode.

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

List of test Instrument

Instrument Name	Model No.	Brand	Serial No.	Calibration Date	
				Last time	Next time
Spectrum analyzer	8591EM	H P	3710A01203	02/22/01	02/22/02
Pre-selector (<30MHz)	AMP-01	TRC	REP-001	08/09/01	08/09/02
LISN (EUT)	TRC LISN01	TRC	LISN-01	08/21/01	08/21/02
LISN (Support E.)	LISN-01	TRC	9912-01, 02	12/13/01	12/13/02
EMI Receiver	8546A	H P	3520A00242	06/29/01	06/29/02
T-LISN 1	EZ-10	ROHD&SCHWARE			
			839561\007	03/05/01	03/05/02
T-LISN 1	ESH3-Z4	ROHD&SCHWARE			
			833866\002	03/05/01	03/05/02

The level of confidence of 95%, the uncertainty of measurement of conducted emission is ± 2.4 dB.

Test Result: Pass (Appendix A)

Conducted Test Placement: (Photographs)



Chapter 3 Radiated Emission Test

Test condition and setup

Pretest: Prior to the final test (OATS test), the EUT is placed in a shielded enclosure, and scan from 30MHz to 1GHz. This is done to ensure the radiation is exactly emitted from the EUT.

Final test: Final radiation measurements are made on a **10 – meter**, open-field test site. The EUT is placed on a nonconductive table, which is 0.8m height, the top surface is 1.0 x 1.5 meter. The entire placement is according to EN 55022.

The spectrum is examined from 30 MHz to 1000MHz measured by HP spectrum.

The range antenna is used to measure frequency from 30MHz to 1GHz. The final test is used the spectrum analyzer.

Measure more than six top marked frequencies generated from pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading. The spectrum analyzer's 6dB bandwidth is set to 120 kHz, and the EUT is measured at quasi-peak (below 1GHz) mode.

If the emission is close to the frequency band of ambient, the tester will recheck the data and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from shielded room will be taken as the final data.

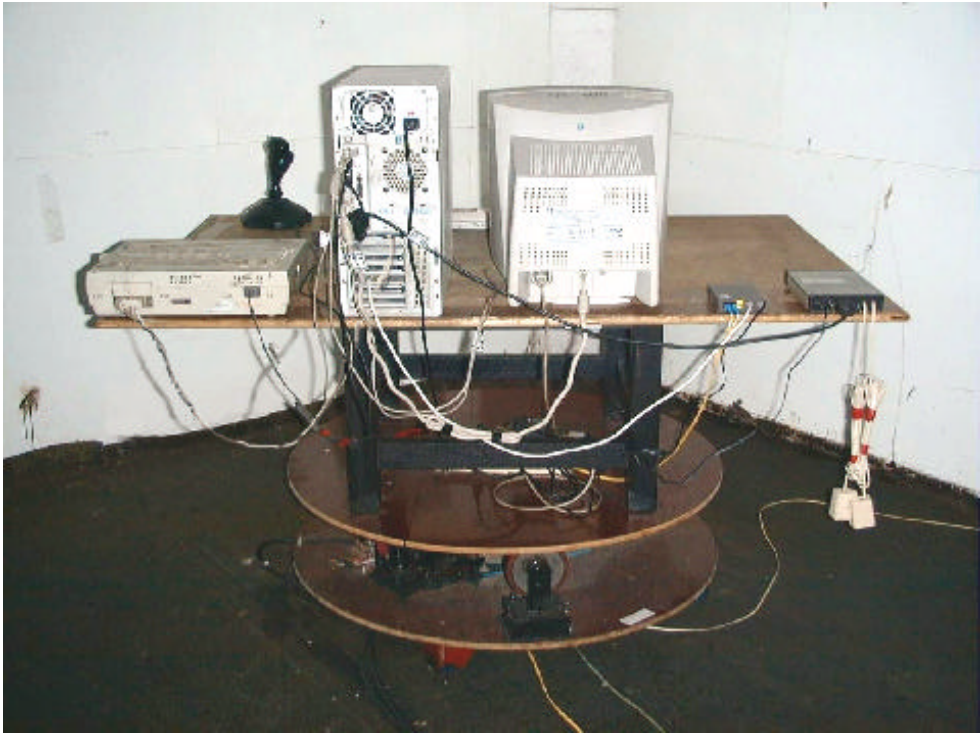
List of test Instrument

Instrument Name	Model No.	Brand	Serial No.	Calibration Date	
				Last time	Next time
Spectrum analyzer	8591EM	H P	3619A01203	02/22/01	02/22/02
Pre-selector (>30MHz)	AMP-01	TRC	REP-001	10/02/01	10/02/02
Spectrum analyzer	8568B	H P	3004A18617	06/04/01	06/04/02
Quasi-peak Adapter	85650A	H P	2521A00984	06/04/01	06/04/02
RF Pre-selector	85685A	H P	2947A01011	06/05/01	06/05/02
RF Pre-selector	AMP-01	TRC	REP-002	10/02/01	10/02/02
Bi-log Antenna	VULB9160	M. E.	3064	07/12/01	07/12/02
Antenna (30M-2GHz)	3142	EMCO	9610-1094	10/02/01	10/02/02
Open test side (Antenna, Amplify, cable calibrated together)				05/20/01	05/20/02

The level of confidence of 95% , the uncertainty of measurement of radiated emission is ± 4.96 dB .

Test Result: Pass (Appendix B)

Radiated Test Placement: (Photographs)



Chapter 4 Radio Frequency Immunity Test (RS)

Test information:

Test setup: GTEM cell

Test Frequency: 80 ~ 1000 MHz

27 ~ 500 MHz Without Modulation

Modulation: FM %

80% AM Modulation with 1KHz

900 KHz \pm 5 KHz with PM 200 Hz and 100% depth

Step size: \leq 1% step size

Sweep time: 2.5 Second

Field strength: 1V/m 3V/m 10V/m

Test mode: Ref. Test method of Chapter 1

Test instruments:

Name	Model Number	Serial Number	Selected
EMCO GTEM	5317	9411-1123	X
EMCO Probe	7122	9406-1194	X
EMCO METERING UNIT	7122	9406-1194	X
EMCO data interface	7110	9410-1273	X
HP Personal Computer	D3178A	3438S00486	X
HP Signal Generator	8657B	2928U00286	X
IFI Wideband Amplifier	SMX50	467-0795	X

Comment:

Performance Criteria A B C

EN 61000-4-3 PHOTO OF TEST SET-UP



Chapter 5 Electric Fast Transient/Burst Requirements Test

Test information:

Test setup: According to EN 61000-4-4

Test Voltage: DC Power line () 0.5 KV, 5 KH
 AC Power line (X) 1 KV, 5 KHz
 Signal & Control line (X) 0.5 KV, 5 KHz
 () 1 KV, 5 KHz

Polarity: (X) Positive (X) Negative

Test Duration: (X) 1 minute () 3 minutes

Connected lines: () Power line shielded
 (X) Power line non-shielded
 (X) Signal & Control line non-shielded
 () Signal & Control line shielded

Test mode: Ref. Test method of Chapter 1.

Test instrument:

Name	Model Number	Serial Number	Selected
Best Plus BURST ESD SURGE TRANSIENTS	Best Plus V6.2	199749-019SC	X
KeyTek Instrument EFT Test system	E412	9505206/505207	
BEST EMC Test Instrument	BEST EMC V2.3 (-8, -9)	199918-006SC	

Comment:

Performance Criteria () A (X) B () C

EN 61000-4-4 PHOTO OF TEST SET-UP



Chapter 6 Electrostatic Discharges Immunity Test

Test information:

Test setup: Shielded room

Test Voltage: 4KV contact discharge

8KV air discharge

Indirect Discharges: HCP

VCP

Polarity: positive negative

Test points: Connectors and case of EUT.

Test mode: Ref. Test method of Chapter 1

Test instruments:

Name	Model Number	Serial Number	Selected
Best Plus BURST ESD SURGE TRANSIENTS	Best Plus V6.2	199749-019SC	X
KeyTek Instrument ESD Test system	Series 2000	9204303/9204310 9209226/9301395	
BEST EMC Test Instrument	BEST EMC V2.3 (-8, -9)	199918-006SC	
NoiseKen Electrostatic Discharge Simulator	ESS-100L(A)	2100C03605	
NoiseKen Electrostatic Discharge Gun	TC-815P	2100C03566	

Comment:

Performance Criteria A B C

EN 61000-4-2 PHOTO OF TEST SET-UP



Chapter 7 Surge Immunity Test

Test information:

Test setup: According to EN 61000-4-5

Test Voltage: DC Power line () 0.5 KV
 AC Power line (X) Line – Line: 1KV
 (X) Line – Ground: 2KV
 Control line () 0.5 KV
 Signal () 2 KV

Time : (X) 1.2/50µs (8/20µs)
 Polarity: (X) Positive (X) Negative

Connected lines: () Power line shielded
 (X) Power line non-shielded
 () Signal & Control line non-shielded
 () Signal & Control line shielded

Test mode: Ref. Test method of Chapter 1.

Test instrument:

Name	Model Number	Serial Number	Selected
Best Plus BURST ESD SURGE TRANSIENTS	Best Plus V6.2	199749-019SC	X
BEST EMC Test Instrument	BEST EMC V2.3 (-8, -9)	199918-006SC	
KeyTek Pulsed-EMI Test System	E103, 501B, E502B, E503, E505A, E4552A	0008260 ~0008264, 0008254	

Comment:

Performance Criteria: () A (X) B () C

EN 61000-4-5 PHOTO OF TEST SET-UP



Chapter 8 Continuous Wave Voltage Immunity Test

Test information:

Test setup: According to EN 61000-4-6

Test Frequency: 0.15 ~ 80MHz

Modulation: FM %

80% AM Modulation with 1KHz

Step size: $\leq 1\%$ step size

Signal Strength: 1Vrms 3Vrms 10Vrms

Test mode: Ref. Test method of Chapter 1

Test instruments:

Name	Model Number	Serial Number	Selected
FRANKONIA EMV-Mess-System	CIT-10	103A3113	X
FRANKONIA CDN	M2+M3	A3011015	X
FRANKONIA CDN	T2-801	A3010002	
FRANKONIA CDN	T4-801	A3015004	X
FRANKONIA CDN	S1-801	A3005002	
SCHAFFNER FM-Koppelzange	KEMZ 801	17045	X
SCHAFFNER RF-SYNTHE SIZERIAMP21FIER	NSG 2070-1	1020	
SCHAFFNER CDN	M325	13773	
SCHAFFNER CDN	M216	15604	
SCHAFFNER CDN	T004	15230	
SCHAFFNER CDN	S501	15167	
SCHAFFNER FM-Koppelzange	KEMZ 801	14301	

Comment:

Performance Criteria: A B C

EN 61000-4-6 PHOTO OF TEST SET-UP



Chapter 9 Power Frequency Magnetic Field Immunity Test**Test information:**

Test setup: According to EN 61000-4-8

Test method: Continuous Short durationMagnetic Field Strength: 1A/m

Frequency: 50Hz

Polarization: X polarization Y polarization Z polarization

Test mode: Ref. Test method of Chapter 1

Test Duration: 30 seconds 1~3 secondsConnected lines: Power line shielded Power line non-shielded Signal & Control line non-shielded Signal & Control line shielded**** Power Frequency Magnetic Field in the horizontal and vertical polarity.****

Test instruments:

Name	Model Number	Serial Number	Selected
BEST EMC Test Instrument	BEST EMC V2.3 (-8, -9)	199918-006SC	X
Induction Coil	INA 701 BEST	199922-001SC	X

Comment:

Performance Criteria: A B C

EN 61000-4-8 PHOTO OF TEST SET-UP



Chapter10 Voltage DIP / Interruption Test

Test information:

Test setup: According to EN 61000-4-11

Voltage dips: (X) > 95% , 0.5 Period

(X) 30%, 25 Period

Voltage interruptions: (X) > 95%, 250 Periods

Test mode: Ref. Test method of Chapter 1

Test instruments:

Name	Model Number	Serial Number	Selected
Best Plus BURST ESD SURGE TRANSIENTS	Best Plus V6.2	199749-019SC	X
BEST EMC Test Instrument	BEST EMC V2.3 (-8, -9)	199918-006SC	

Comment:

Performance Criteria:	Dips (1) >95%	() A	(X) B	() C
	Dips (2) 30%	() A	() B	(X) C
	Interruptions (1) >95%	() A	() B	(X) C

EN 61000-4-11 PHOTO OF TEST SET-UP



Chapter 11 Harmonics Test

Test information:

Test setup: According to EN 61000-3-2

Test Item: Quasi – stationary & Fluctuating Current Harmonics Test.

Test mode: Ref. Test method of Chapter 1

Test instrument:

Name	Model Number	Serial Number	Selected
Harmonic/Flicker Test System	HP 6842A	3531A-00102	x

Test Equipment Settings:	Quasi-stationary Current Harmonics Test	Fluctuating Current Harmonics Test
Line Voltage	230VAC	230VAC
Line Frequency	50Hz	50Hz
Device Class	D	D
Test Limit Overrides	None	None
Total Number of Failures:	None	None
Total Number of Errors:	None	None

Test Result: PASS

Chapter 12 Voltage Fluctuation and Flicker Test

Test information:

Test setup: According to EN 61000-3-3

Test mode: Ref. Test method of Chapter 1

Test instrument:

Name	Model Number	Serial Number	Selected
Harmonic/Flicker Test System	HP 6842A	3531A-00102	x

Test Equipment Settings:	
Line Voltage	230VAC
Line Frequency	50Hz
Test Limit Overrides	None
Total Number of Failures:	Pst: (0), Plt: (0)
	Dc: (0), Dmax (0), Dt (0)
Total Number of Errors:	None

Test Result: PASS

Appendix A

Conducted Emission Test Result (DMC-300SC, 10 x 10Mbps, Power line)

Testing room : Temperature : 23 ° C Humidity : 65 % RH

Line 1

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBµV)	Quasi-Peak (dBµV)	Average (dBµV)	Quasi-Peak (dBµV)	Average (dBµV)	
150.00	38.03	---	---	66.00	56.00	-17.97
157.00	36.82	---	---	65.80	55.80	-18.98
593.00	27.46	---	---	56.00	46.00	-18.54
654.00	31.70	---	---	56.00	46.00	-14.30
729.00	40.99	---	---	56.00	46.00	-5.01
10150.00	29.67	---	---	60.00	50.00	-20.33
10590.00	31.30	---	---	60.00	50.00	-18.70
10890.00	60.63	---	---	60.00	50.00	10.63
11630.00	30.41	---	---	60.00	50.00	-19.59
22760.00	31.45	---	---	60.00	50.00	-18.55

Line 2

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBµV)	Quasi-Peak (dBµV)	Average (dBµV)	Quasi-Peak (dBµV)	Average (dBµV)	
593.00	31.72	---	---	56.00	46.00	-14.28
729.00	32.58	---	---	56.00	46.00	-13.42
818.00	26.51	---	---	56.00	46.00	-19.49
9260.00	30.43	---	---	60.00	50.00	-19.57
10660.00	35.85	---	---	60.00	50.00	-14.15
10960.00	37.33	---	---	60.00	50.00	-12.67
11700.00	35.78	---	---	60.00	50.00	-14.22
12010.00	35.83	---	---	60.00	50.00	-14.17
12360.00	34.54	---	---	60.00	50.00	-15.46
22760.00	37.19	---	---	60.00	50.00	-12.81

**The reading amplitudes are all under limit.*

Conducted Emission Test Result (DMC-300SC, 100 x 100Mbps, Power line)

Testing room : Temperature : 23 ° C Humidity : 65 % RH

Line 1

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	
729.00	40.67	---	---	56.00	46.00	-5.33
9960.00	33.48	---	---	60.00	50.00	-16.52
10660.00	34.57	---	---	60.00	50.00	-15.43
16150.00	33.83	---	---	60.00	50.00	-16.17
18210.00	34.04	---	---	60.00	50.00	-15.96
23050.00	34.75	---	---	60.00	50.00	-15.25
24300.00	33.87	---	---	60.00	50.00	-16.13
25700.00	33.67	---	---	60.00	50.00	-16.33
26570.00	35.55	---	---	60.00	50.00	-14.45
27090.00	33.87	---	---	60.00	50.00	-16.13

Line 2

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	
10290.00	38.68	---	---	60.00	50.00	-11.32
10590.00	38.28	---	---	60.00	50.00	-11.72
11260.00	38.03	---	---	60.00	50.00	-11.97
11850.00	38.36	---	---	60.00	50.00	-11.64
16150.00	39.24	---	---	60.00	50.00	-10.76
23050.00	42.08	---	---	60.00	50.00	-7.92
24300.00	38.79	---	---	60.00	50.00	-11.21
25870.00	37.92	---	---	60.00	50.00	-12.08
26570.00	40.11	---	---	60.00	50.00	-9.89
27090.00	38.38	---	---	60.00	50.00	-11.62

***The reading amplitudes are all under limit.**

Conducted Emission Test Result (DMC-300SC, 10 x 10Mbps, Signal line)

Testing room : Temperature : 20 ° C Humidity : 55 % RH

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	
560.00	40.72	---	---	74.00	64.00	-23.28
593.00	42.08	---	---	74.00	64.00	-21.92
3730.00	47.18	---	---	74.00	64.00	-16.82
4580.00	39.71	---	---	74.00	64.00	-24.29
5010.00	44.45	---	---	74.00	64.00	-19.55
6220.00	52.08	---	---	74.00	64.00	-11.92
8750.00	52.87	---	---	74.00	64.00	-11.13
9960.00	56.39	---	---	74.00	64.00	-7.61
11260.00	45.22	---	---	74.00	64.00	-18.78
13740.00	46.20	---	---	74.00	64.00	-17.80

**The reading amplitudes are all under limit.*

Conducted Emission Test Result (DMC-300SC, 100 x 100Mbps, Signal line)

Testing room : Temperature : 20 ° C Humidity : 55 % RH

Frequency (kHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	Quasi-Peak (dB μ V)	Average (dB μ V)	
11850.00	52.04	---	---	74.00	64.00	-11.96
16150.00	56.93	---	---	74.00	64.00	-7.07
17020.00	52.26	---	---	74.00	64.00	-11.74
17700.00	52.93	---	---	74.00	64.00	-11.07
18210.00	55.75	---	---	74.00	64.00	-8.25
18850.00	53.65	---	---	74.00	64.00	-10.35
19750.00	52.61	---	---	74.00	64.00	-11.39
20260.00	52.68	---	---	74.00	64.00	-11.32
26570.00	53.79	---	---	74.00	64.00	-10.21
29390.00	53.55	---	---	74.00	64.00	-10.45

**The reading amplitudes are all under limit.*

Appendix B

Radiated Emission Test Result (Horizontal, DMC-560SC, 100 x 100Mbps)

Test Conditions:

Testing room : Temperature : 24 ° C Humidity : 69 % RH
 Testing site : Temperature : 22 ° C Humidity : 80 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	dB μ V/m	m	degree	dB/m	dB μ V/m	dB μ V/m	dB
250.000	42.80	4.00	226	-11.80	31.00	37.00	-6.00
350.000	38.40	2.56	242	-7.80	30.60	37.00	-6.40
375.000	36.50	2.56	109	-6.39	30.11	37.00	-6.89
400.000	37.90	4.00	285	-5.80	32.10	37.00	-4.90
415.700	38.10	2.56	289	-5.35	32.75	37.00	-4.25
500.000	35.90	1.00	296	-3.30	32.60	37.00	-4.40
687.800	28.80	1.00	151	1.60	30.40	37.00	-6.60
875.000	23.50	4.00	264	6.13	29.63	37.00	-7.37

Note:

1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss – Amplitude gain)

Radiated Emission Test Result (Vertical, DMC-560SC, 100 x 100Mbps)

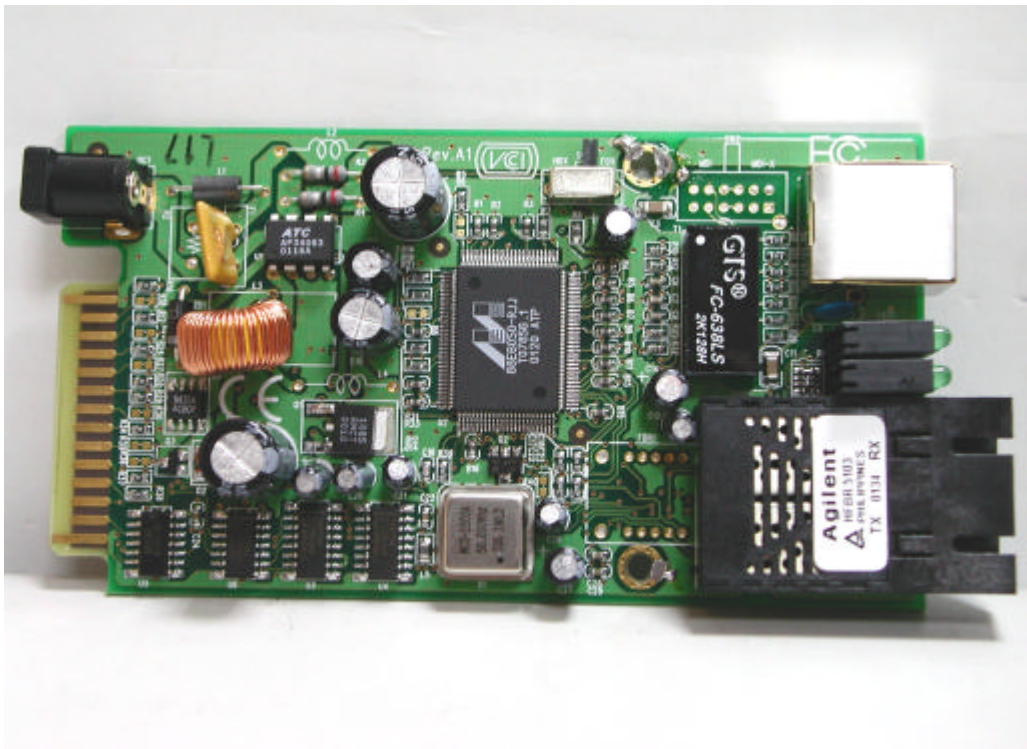
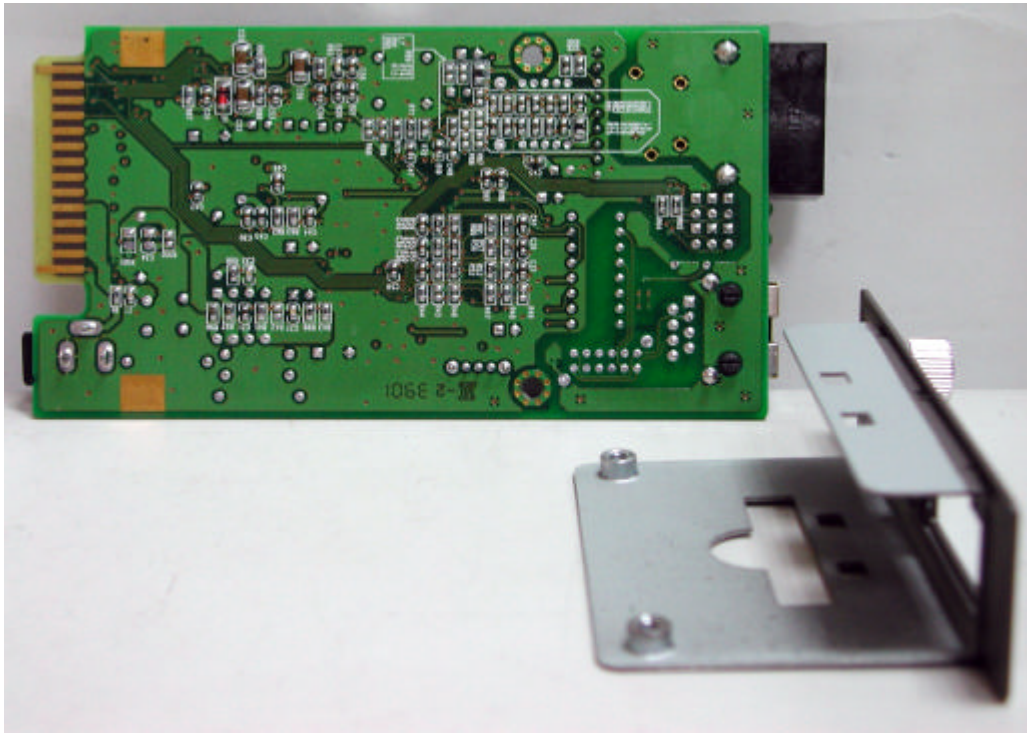
Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	dB μ V/m	m	degree	dB/m	dB μ V/m	dB μ V/m	dB
36.130	40.90	1.00	4	-15.46	25.44	30.00	-4.56
39.670	39.50	2.56	205	-15.04	24.46	30.00	-5.54
55.300	37.30	1.00	121	-13.68	23.62	30.00	-6.38
64.770	38.70	1.00	49	-14.72	23.98	30.00	-6.02
78.020	42.80	4.00	2	-16.28	26.52	30.00	-3.48
82.250	40.20	1.00	70	-16.47	23.73	30.00	-6.27
125.000	37.60	1.00	40	-12.10	25.50	30.00	-4.50
149.370	38.00	2.56	203	-10.76	27.24	30.00	-2.76
375.000	41.00	1.00	4	-6.39	34.61	37.00	-2.39

Appendix C

Photographs of EUT

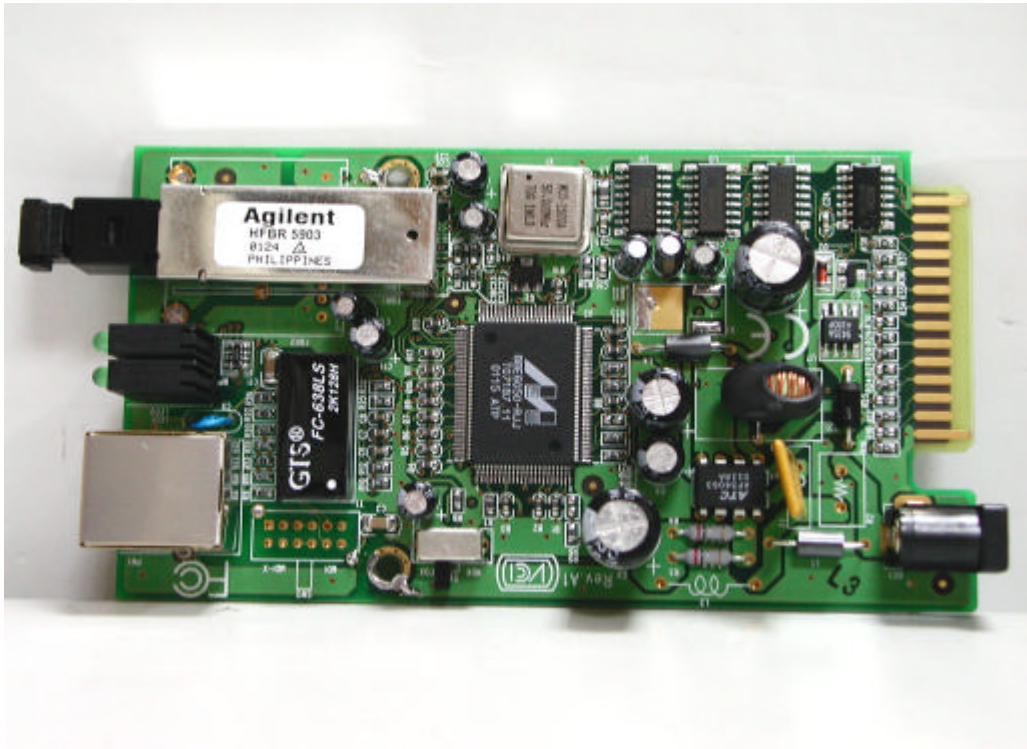
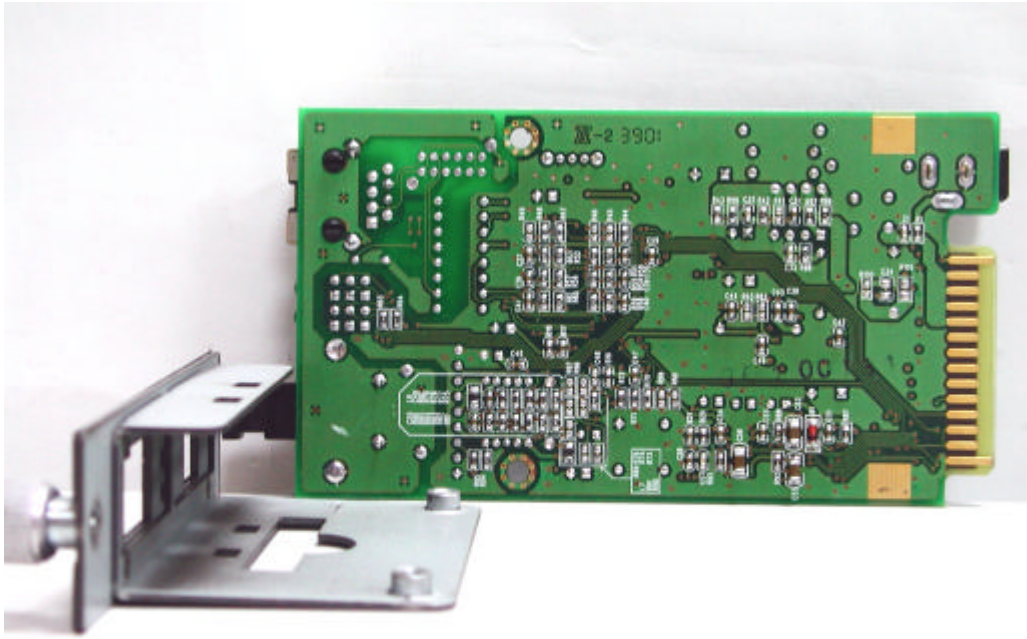
DMC-300SC



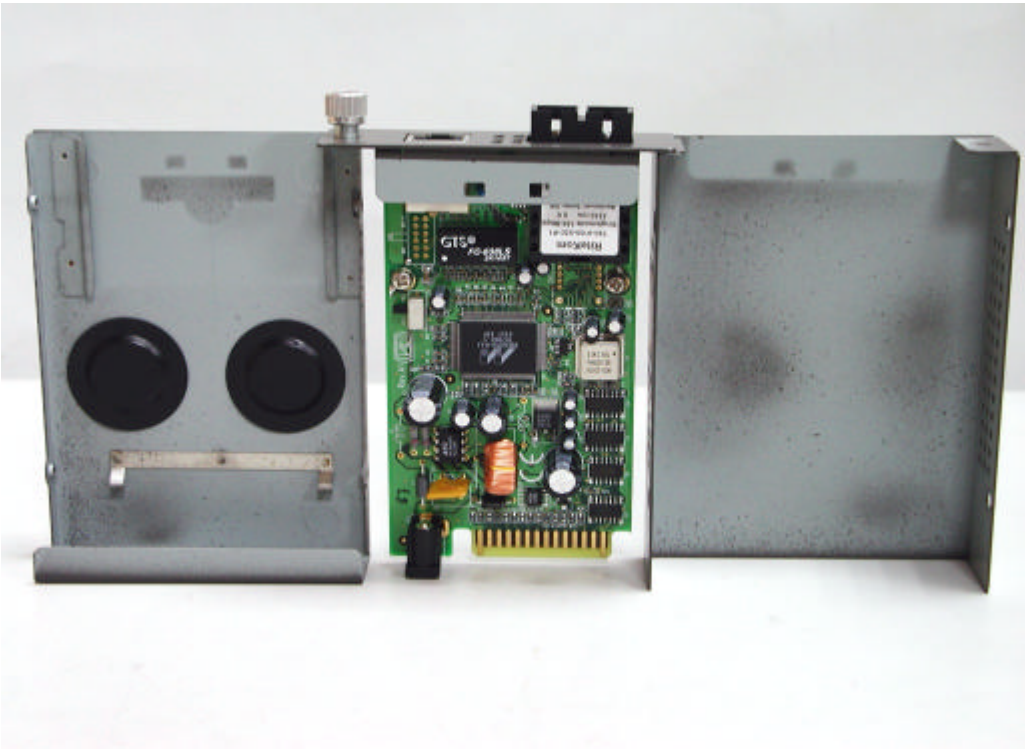


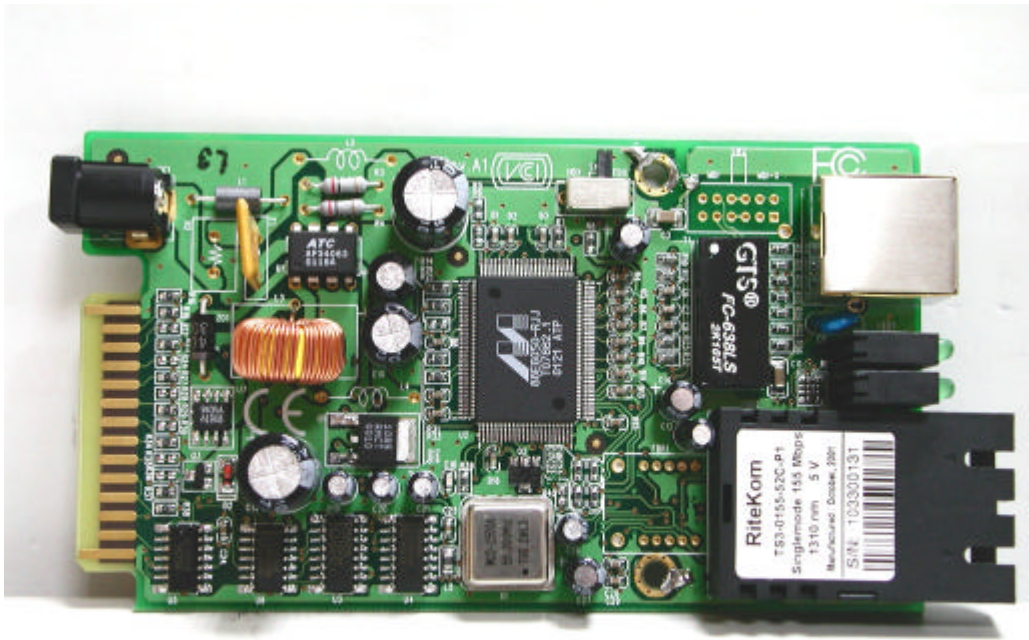
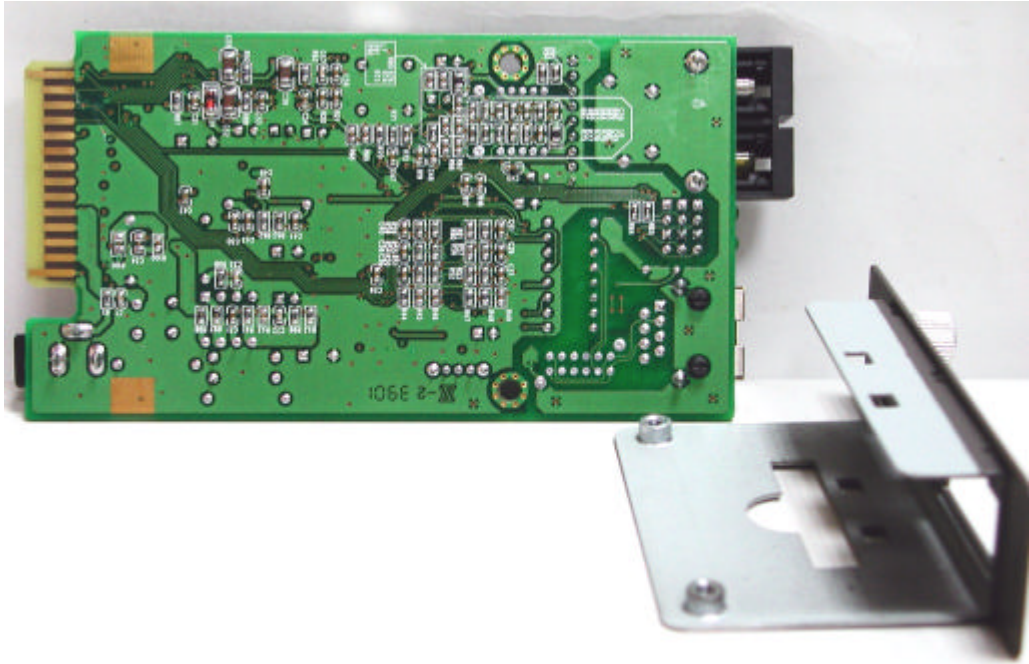
DMC-300M



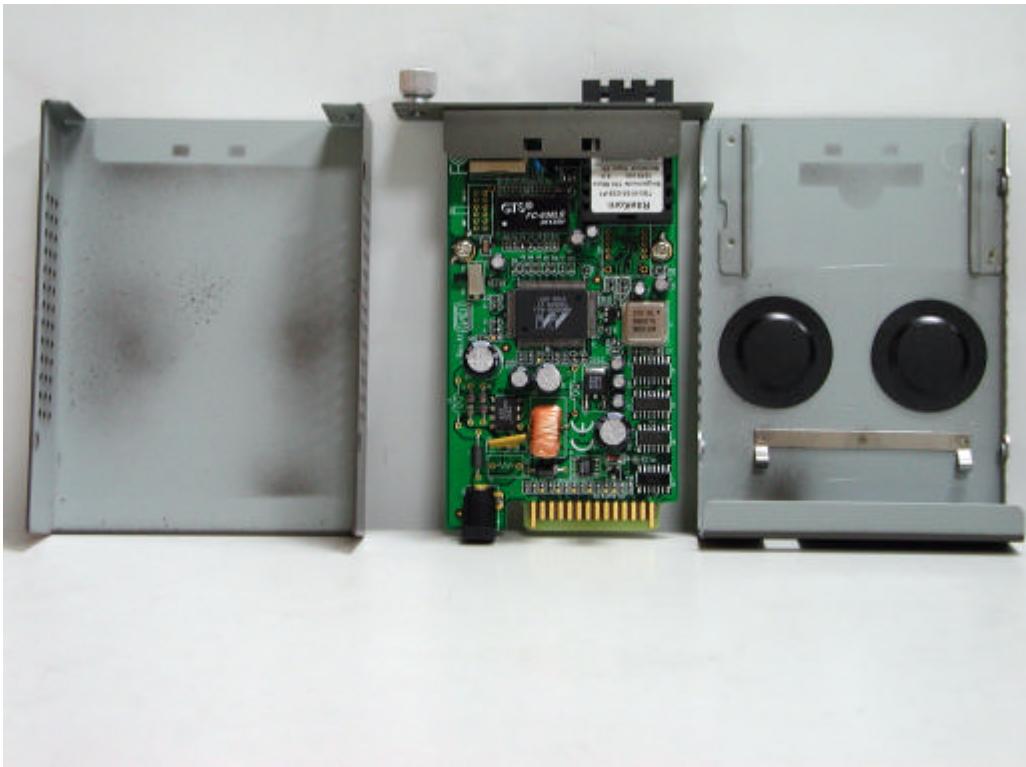


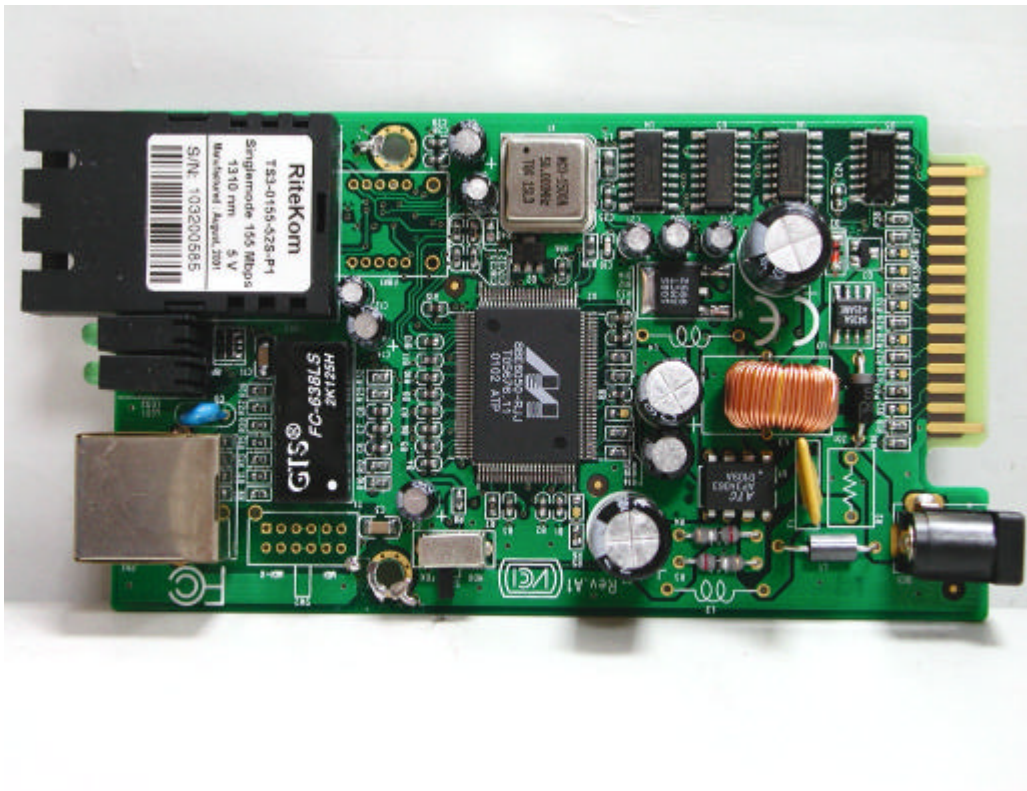
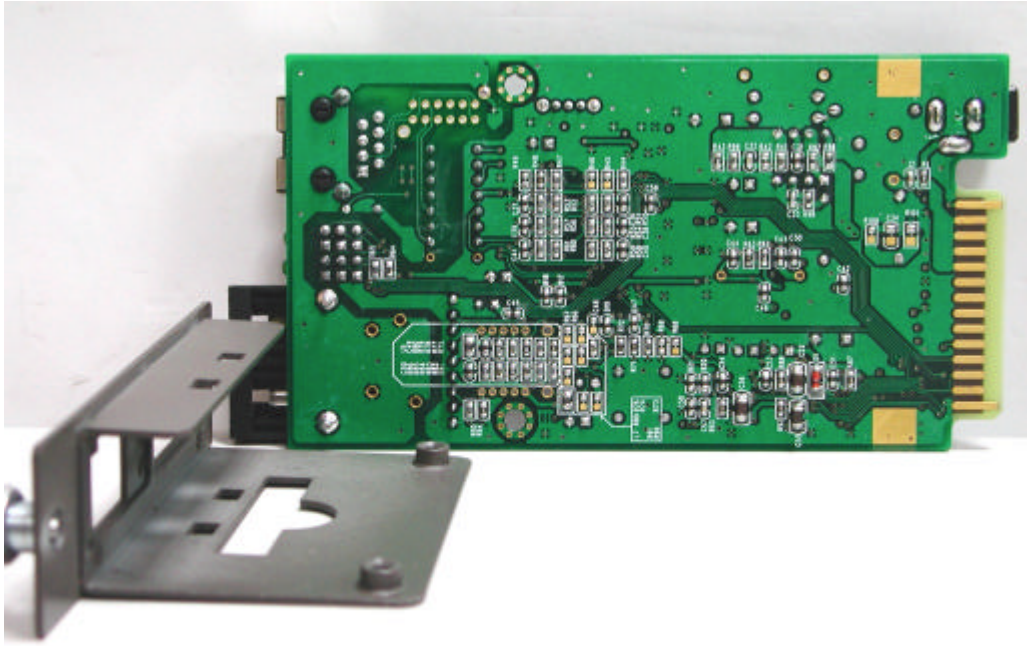
DMC-515SC





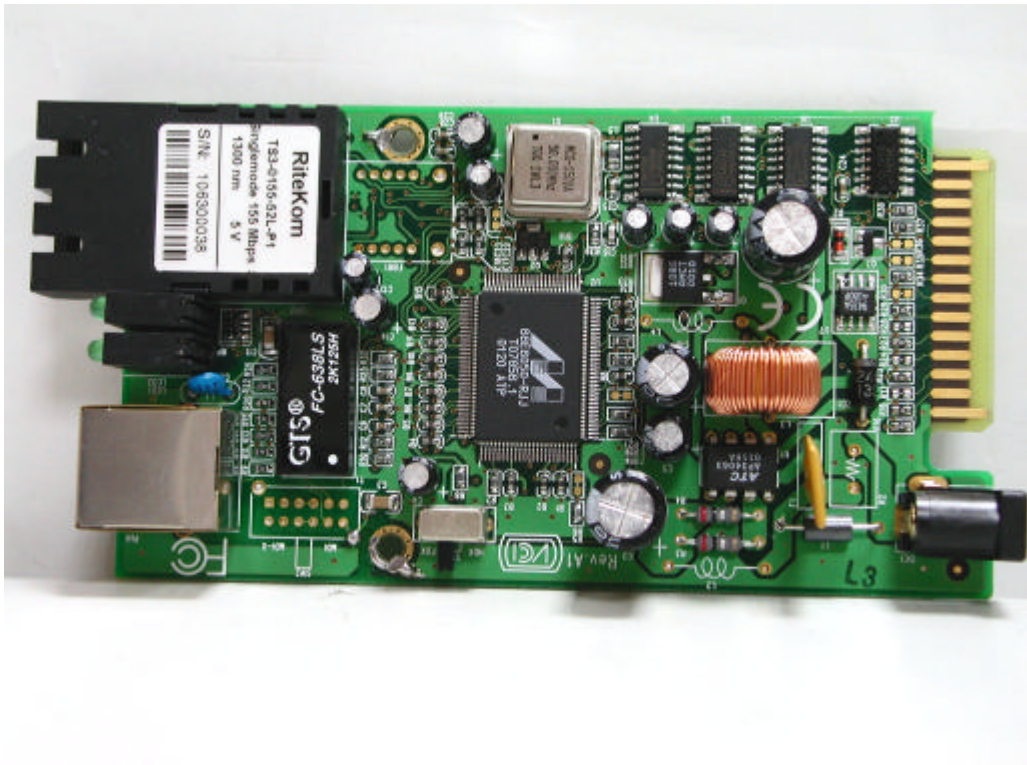
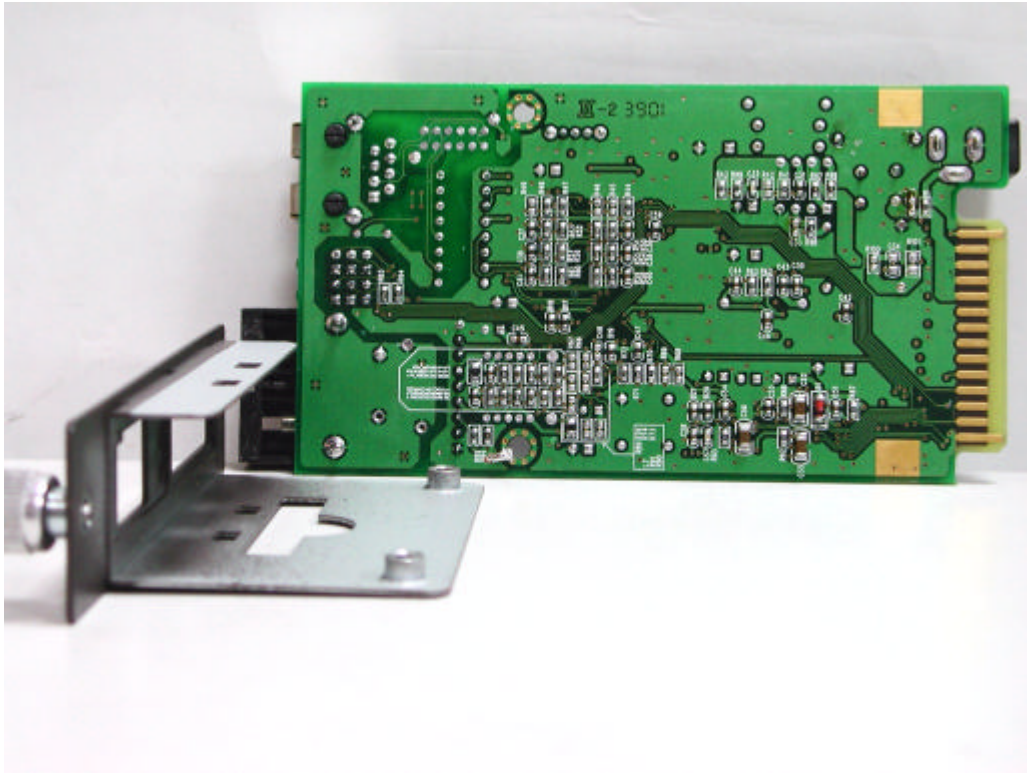
DMC-530SC





DMC-560SC





Appendix D

Model Number List

Product name:10/100 Base-T to 100 Base-FX Multi-Mode Fiber with SC Connector

Model Number List:

(1) DMC-300SC

Product name:10/100 Base-T to 100 Base-FX Multi-Mode Fiber with MT-RJ Connector

Model Number List:

(1) DMC-300M

Product name:10/100 Base-T to 100 Base-FX Single-Mode 15 km Fiber with SC Connector

Model Number List:

(1) DMC-515SC

Product name: 10/100 Base-T to 100 Base-FX Single-Mode 30 km Fiber with SC Connector

Model Number List:

(1) DMC-530SC

Product name:10/100 Base-T to 100 Base-FX Single-Mode 60 km Fiber with SC Connector

Model Number List:

(1) DMC-560SC