EXHIBIT B

Test Report

Report No.

T0615337

Specifications
Test Method

FCC Part 15 Class B ANSI C63.4 1992

Applicant address

P.O.BOX. 10-08 NEIHU TAIPEI, TAIWAN, R.O.C.

Applicant
Items tested
Model No.

TAINET COMMUNICATION SYSTEM CORP. 128K U-Interface Network Termination Unit DT128 SERIES (Sample # T06337)

Results
Sample received

Sample received date

As detailed within this report 06/09/1998 (month / day / year)

Prepared by

project engineer

Authorized by

Issue date June 16, 1998

Vice General Manager (Jacob Lin)

(month / day / year)

Modifications

Tested by Office and

Open site at

Training Research Co., Ltd.

No. 15, Lane 530, Pa-Lian RD., Sec. 1, Hsi-Chih Town,

Taipei Hsien, Taiwan, R.O.C.

### Conditions of issue:

(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.

FCC ID: KJKDT128

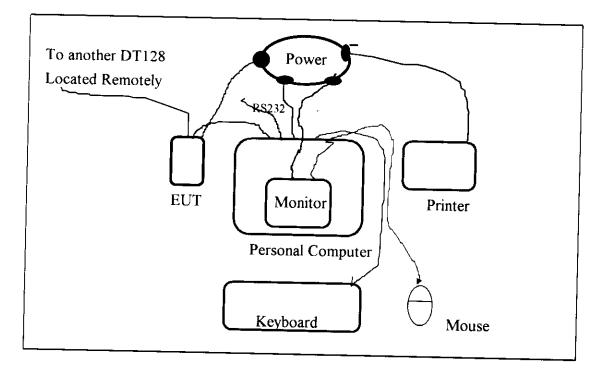
Test date: 06/15/98 Training Research C. L. L. TEL . . . .

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## Configuration of test setup



### Connections:

#### PC:

- \*Serial A port --- EUT
- \*Serial B port --- a 76 cm shielded RS232 cable
- \*Printer port --- a Printer
- \*Keyboard port --- a Keyboard
- \*Mouse port --- a Mouse
- \*Monitor port --- a monitor

(Each port on PC is connected with suitable device)

#### EUT:

- \*Line jack --- via 15 m RJ11C cable to PABX located remotely
- \*Power cord --- non-shielded, 1.5 m
- \*RS232 port --- 76 cm shielded cable connected to PC

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#### List of support equipment

### Conducted (Radiated) test:

PC

HP

Model

Vectra VE2 ( VECTRA VE4/66 )

Serial No.

SG61803151 (SG53000675)

FCC ID

HCJVECTRAVL5 (HCJVECTRAVE4)

Power type

AC 117 VAC, switching

Power cord

non-Shielded, 1.7m long, Plastic, no ferrite core

Monitor

HP

Model No.

D2084 (D2821)

Serial No.

KR4397004 (TW73107071)

FCC ID

CSYSC-428VSP (A3KM064)

Power type

117VAC, Switching

Power cord

Non-Shielded, 3m long, no ferrite core

Data cable

Shielded, 1.8m long, with ferrite core

Keyboard

HP ( Digital )

Model No.

C3757 #ABO (KB-5923)

Serial No.

C3757-60423 (9S74904741)

FCC ID

CIGE03614 (E8HKB-5923)

Power type

By PC

Data cable

Shielded, 1.8m long, with ferrite core

**Printer** 

HP

Model No.

C2642A

Serial No.

SG69A196GV

FCC ID

B94C2642X

Power type

Linear

Power cord

Non-shielded, 2m long, no ferrite core

Data cable

Shielded, 1.84m long, no ferrite core (1.7m)

PABX : King Design
Model No. : KD8705-A

Serial No. : GV101101186

Power type : 110 VAC 50/60Hz

Power cord : Non - Shielded

Mouse : Hewlett Packard mouse

Model No. : C3751B

Serial No. : LZA2216003
FCC ID : DZL211029
Power type : Powered by PC

Power Cable : Non - Shielded. 5.5' long, Plastic hoods, No ferrite bead

## Chapter 2 Conducted emission test

### Test condition and setup:

All the equipment is placed and setup according to the ANSI C63.4 - 1992. 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.

The spectrum scans from 450KHz to 30MHz. Conducted emission levels are detected at max. peak mode. But if the max. peak mode failed, it will be measured by CISPR's quasipeak detection mode.

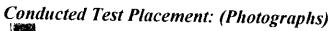
While testing, there is a the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

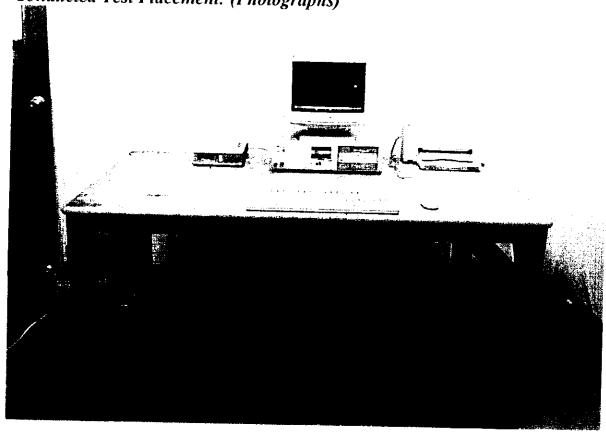
#### List of test Instrument:

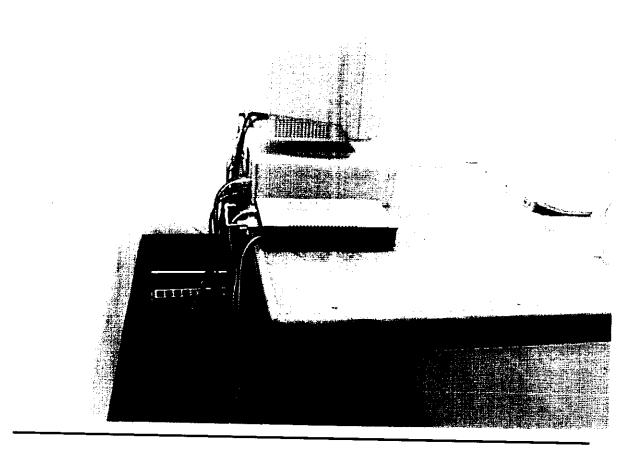
				Calibration Date		
Instrument Name	Model No.	Brand	Serial No.	Last time	Next time	
Spectrum analyzer	8591EM	H P	3619A00821	10/06/97	10/06/98	
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99	
LISN (Support E.)	3825/2	<b>EMCO</b>	9210-2007	05/15/98	05/15/99	
Preamplifier	8447F	ΗP	2944A03706	05/13/98	05/15/99	
Line switch box	AC1-003	TRC		05/15/98	05/15/99	
Line selector	AC1-002	TRC		05/15/98	05/15/99	

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

### Test Result: Pass (Appendix A)







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### 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, GTEM, and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits form the EUT.

Final test: Final radiation measurement is made on a 3 – meter, open-field test site. The EUT is placed on a nonconductive table which is 0.8 m height, the top surface is 1.0 x 1.5 meter. All the placement is according to ANSI C63.4 - 1992.

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

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM.

Measure more than six top marked frequencies generated form 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 meter 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 mode.

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

### List of test Instrument:

				<b>Calibration Date</b>		
Instrument name	Model No_	Brand	Serial No.	Last	Next	
Spectrum analyzer	8568B	H P	3004A18617	05/15/98	05/15/99	
Quasi-peak Adapter	85650A	ΗP	2521A00984	05/15/98	05/15/99	
RF Pre-selector	85685A	H P	2947A01011	05/15/98	05/15/99	
Spectrum analyzer	8594EM	H P	3619A00198	08/13/97	08/13/98	
Antenna (30M-2G Hz)	3141	<b>EMCO</b>	9706-1049	01/30/97	12/30/98	
Open test side (Antenna	, Amplify, cable	e calibrate	d together)	05/15/98	05/15/99	

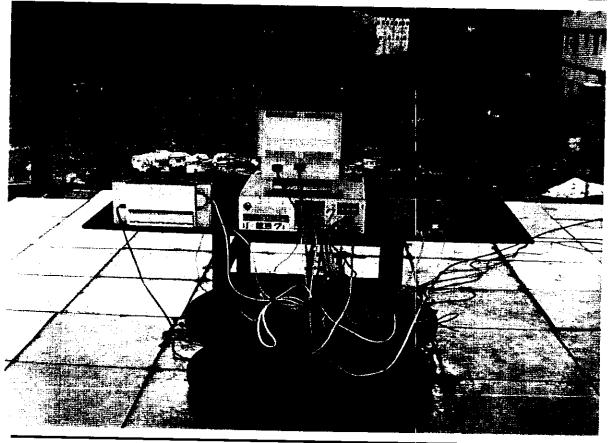
The level of confidence of 95%, the uncertainty of measurement of radiated emission is  $\pm$  4.96 dB.

### Test Result: Pass (Appendix B)

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Radiated Test Placement: (Photographs)





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## Appendix A

## Conducted Emission Test Result:

Testing room: Temperature : 28 ° C Humidity: 59 % RH

Line 1

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	26.96	48.00	-21.04
3.339	30.67	48.00	-17.33
3.486	31.84	48.00	-16.16
4.152	26.65	48.00	-21.35
10.279	26.48	48.00	-21.52
15.356	26.84	48.00	-21.16
19.979	27.34	48.00	-20.66
20.492	25.83	48.00	-22.17
26.710	26.37	48.00	-21.63
26.929	26.23	48.00	-21.77

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.451	29.08	48.00	-18.92
2.303	26.55	48.00	-21.45
3.339	32.46	48.00	-15.54
3.486	32.61	48.00	-15.39
4.226	28.18	48.00	-19.82
10.279	26.88	48.00	-21.12
15.356	27.00	48.00	-21.00
19.979	27.73	48.00	-20.27
26.710	25.79	48.00	-22.21
26.929	26.69	48.00	-21.31

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### Appendix B

## Radiated Emission Test Result: (Horizontal)

Test Conditions:

Testing room: Temperature : 29 ° C Humidity: 27 % RH
Testing site : Temperature : 28 ° C Humidity: 48 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B	Margin
MHz	dBuV	m	degree	dB/m	DBuV/m	dBuV/m	dB

798.721	56.61	0.99	16	-17.96 -19.23	35.92 37.38	46.00 46.00	-10.08 -8.62
906.241	54.87	0.98	262	-19.47	35.40	46.00	-10.60
952.321	49.14	0.98	98	-17.09	32.05	46.00	-13.95
*** <u></u>							

#### 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)

(For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

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## Radiated Emission Test Result: (Vertical)

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B	Margin
MHz	dBuV	m	degree	dB/m	dBuV/m	dBuV/m	dB
				·		·L	
153.600	51.52	0.98	31	-23.63	27.89	43.50	-15.61
163.841	60.74	0.99	235	-23.41	37.33	43.50	-6.17
165.606	51.10	3.01	16	-23.40	27.7	43.50	-15.80
245.762	53.45	0.98	334	-20.70	32.75	46.00	-13.25
583.681	55.83	0.98	19	-15.17	40.66	46.00	-5.34
875.522	59.71	0.98	317	-19.74	39.97	46.00	-6.03
906.242	60.38	0.98	53	-19.47	40.91	<del></del>	-5.09
952.321	54.82	0.98	318	-17.09	37.73		-8.27
***							

### Final statement:

This test report, measurements made by TRC are traceable to the NIST.

### Chapter 1 Introduction

#### Description of EUT:

The up and button covers of DT128 series are coated. The TAINET DT-128 series is U-Interface Network termination Unit. It fully comply with ANSI T1.601. It has following features:

- 1. DTE Speed: (1) Synchronous: 128K/64K/38.4k/19.2K/9600/4800/2400bps.
  - (2) Asynchronous: 38.4K/19.2K/9600/4800/2400/1200/600/300bps.
- 2. Operating Range: (1) 2-Wire Mode: ① Up to 6.0 Km over 26 gauge wire
  - ② Up to 9.0 Km over 24 gauge wire
  - (2) 4-Wire Mode: ① Up to 6.15 Km over 26 gauge wire
    - 2 Up to 9.0 Km over 24 gauge wire
- 3. Diagnostic Capability: (1) Analog Lookback (2) Digital Lookback
  - (3) Remote Configuration (4) Bit Error Rate Test with test Pattern and error Count

#### Connections of EUT:

- (1) Connect the EUT to Serial Port A of PC via a RS232 cable.
- (2) line jack of EUT connects with another DT128 SERIES located remotely.
- (3) Power jack of EUT connects with AC power supply.

#### 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.

During testing, the EUT was operated at "transmitting" and "receiving" mode simultaneously.

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.