# EMC - Test Report

## Model : KDC-100

| | | | |
|---|---|---|---|
| FCC ID | NIZKDC-100 | | |
| Product type | Digital Still Camera + USB PC Camera | Serial No. | - |
| Applicant | Korea Communications Co., Ltd. | | |
| Address | 53B/4LT, Namdong-Industrial Zone, Namdong-Gu, Incheon, Korea 405-300 | | |
| Manufacturer | Korea Communications Co., Ltd. | | |
| Address | 53B/4LT, Namdong-Industrial Zone, Namdong-Gu, Incheon, Korea 405-300 | | |

**Test specification (Standard)** : **FCC Part15 Subpart B Class B**

**Test Result** : **In compliance**

| *Tested by (Test engineer)* | | | *Reviewed by (EMC Manager)* | | |
|---|---|---|---|---|---|
| 2000-11-29 | Young Joon, Park | | 2000-11-29 | James, Hong | |
| Date | Name | Signature | Date | Name | Signature |

**Definition** ☒ : Applicable, ☐ : Not Applicable, **N/A** : Not Applicable, **-** : Not Applicable

The test result only responds to the tested sample.

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Tel: +82-31-339-9970, Fax: +82-31-339-9972

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# 1. EUT description

## Introduction

**KDC-100** is a Digital Still Camera + USB PC Camera.

## Identification

Receipt date : 2000-11-13

Model : KDC-100

Manufacturer : Korea Communications Co., Ltd.

Address : 53B/4LT, Namdong-Industrial Zone, Namdong-Gu, Incheon, Korea 405-300

Contact person : In-Ho, Kim

Telephone : +82 - 32 - 815 - 0511

Serial No : -

EUT size : 88mm(W) x 54mm(H) x 36mm(D)

Peripheral Device Ports

| Port name | Description |
|---|---|
| **USB** | Connect to PC' s USB Port |

## Electrical rating

Input : Digital Still Camera - DC 4.5V(AAA 1.5V x 3) / USB PC Camera - Power By PC USB Port (5V)

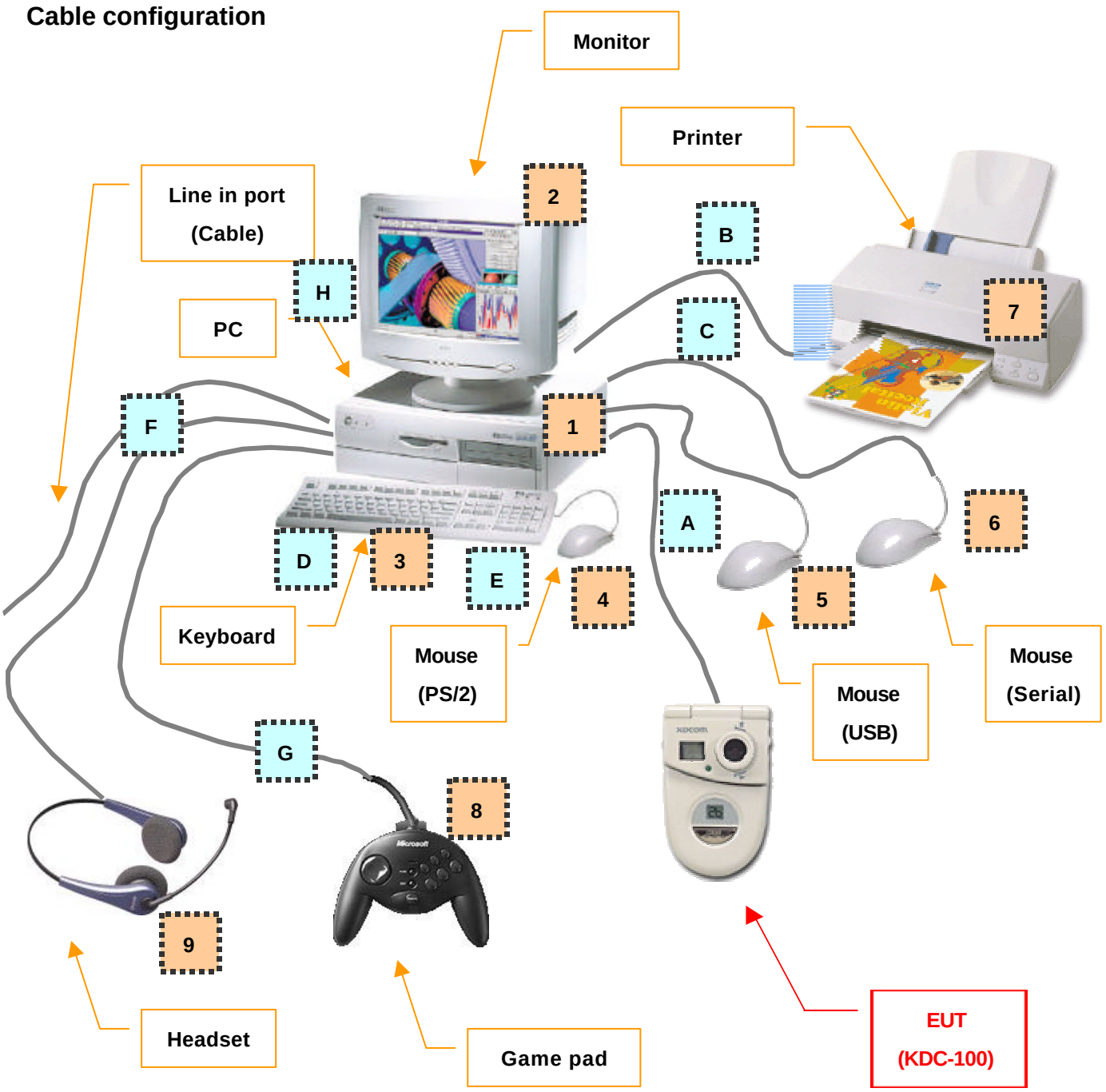
Output : -

# 2. Test Set-up

## Test Mode

Normal operation mode. - Data Transfer mode (EUT <-> PC) & Display image to monitor screen.

## Cable configuration



## Cable description

| | Port name (start / end) | Type | Length (m) | Remark |
|---|---|---|---|---|
| A | EUT' s USB / PC' s USB | Shielded | 1.5 | Connected to PC' s USB Port |
| B | Printer' s Parallel / PC' s Parallel | Shielded (With Ferrite Core) | 1.8 | Connected to PC' s Parallel port |
| C | PC' s Serial / Mouse | Shielded | 1.6 | Connected Serial Mouse |
| D | PC' s Keyboard / Keyboard | Shielded | 1.5 | Connected PS/2 Keyboard |
| E | PC' s Mouse / Mouse | Shielded | 1.6 | Connected PS/2 Mouse |
| F | PC' s Sound (Speaker / Mic / Line in) / Headset & Cable | Unshielded | 2.0 | Connected Headset & Cable |
| G | PC' s Game Port / Game pad | Unshielded | 2.0 | Connected Game pad |
| H | PC' s Video / Monitor | Shielded (With Ferrite Core) | 1.8 | Connected Monitor |

## Auxiliary equipment

| | Description | Model name | Serial No. | Manufacturer | FCC ID or DoC Info |
|---|---|---|---|---|---|
| 1 | PC | DTPC-17 | G1703009 | HEWLETT PACKARD | DoC |
| 2 | Monitor | PG17HS | 301661 | SAMSUNG | DoC |
| 3 | Keyboard | SK-2502C | M000351491 | HEWLETT PACKARD | DoC |
| 4 | Mouse (PS/2) | M-S48 | LZA84601000 | LOGITECH | JNZ201213 |
| 5 | Mouse (USB) | M-BB48 | LZE93853176 | LOGITECH | DoC |
| 6 | Mouse (Serial) | M-S48 | LZA91153127 | SOTEC | DZL211153 |
| 7 | Printer | Stylus COLOR 460 | BWCE143331 | EPSON | DoC |
| 8 | Game pad | Side Winder | 03421317 | MICROSOFT | C3KMGP1 |
| 9 | Headset | Hi-sonic | - | - | N/A |

## Test software

| Software name | Manufacturer | Version | Description |
|---|---|---|---|
| KOCOM Viewer | KOCOM | 1.0 | Photo Editing |
| NetMeeting | Microsoft | 3.0 | Video Chat |

## Measurement Procedures

Preliminary AC power line conducted emissions tests were performed shielded room. To find worst mode, several typical mode and typical cable position were tested.
Final AC power line conducted emissions test was performed shielded room.(location is same as Preliminary test) Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

Preliminary radiated emissions test were performed anechoic chamber (Distance of antenna and EUT was 3m). To find worst mode, several typical mode and typical cable position were tested and peak level and frequency were recorded.
Final radiated emissions test was performed Open Area Test Site. Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

∗ Measurement procedures was In accordance with ANSI C63.4-1992 7.2.3, 7.2.4 and 8.3.1.1, 8.3.1.2

# 3. Test Result

## Test summary

| Test | Result | Remark |
|---|---|---|
| **Emission test (EMI)** | | |
| **Radiated emission** | **Met** | |
| **Conducted emission** | **Met** | |

**Measurement uncertainty (k=2)**

150kHz~30MHz: ±2.68, 30MHz~300MHz: +4.58, -4.66, 300MHz ~ 1GHz: +3.78, -3.74

Uncertainty parameter was calculated according to ‘ NAMAS Publication NIS 80’

**The tested KDC-100 fully meets the Requirements of ANSI C63.4-1992, when operated as described in this report.**

## Radiated emission

Test result: **Met**

Date of testing : 2000-11-20

Ambient temperature: 15°C, Relative humidity: 40%, Atmospheric pressure: 1003hPa(mbar)

Test site type: Open area test site

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

| Model name | Manufacturer | Description | Serial No. |
|---|---|---|---|
| 3146 | EMCO | Biconical antenna | 9607-4567 |
| 3110B | EMCO | Log-periodic antenna | 9607-2564 |
| ESVS30 | Rohde Schwarz | Field strength meter | 826638/008 |

Frequency Band 30MHz - 1000MHz

Instrument settings IF Band Width : 120KHz

Antenna distance 3m (From the EUT)

**Test data sheet (Quasi-Peak reading)**

| Frequency | Reading | Pol. | Height | Correction Factor | | Limits | Result | Margin |
|---|---|---|---|---|---|---|---|---|
| [MHz] | [dBuV/m] | | [m] | Antenna | Cable | [dBuV/m] | [dBuV/m] | [dB] |
| 48.01 | 22.8 | V | 1.0 | 10.28 | 0.60 | 40.0 | 33.68 | 6.32 |
| 108.00 | 13.0 | V | 3.0 | 10.65 | 1.10 | 43.5 | 24.75 | 18.75 |
| 157.60 | 14.5 | V | 1.0 | 12.63 | 1.50 | 43.5 | 28.63 | 14.87 |
| 171.18 | 10.0 | V | 1.0 | 12.90 | 1.60 | 43.5 | 24.50 | 19.00 |
| 228.00 | 12.0 | V | 1.0 | 17.30 | 1.90 | 46.0 | 31.20 | 14.80 |
| 744.00 | 12.8 | H | 1.8 | 21.28 | 4.50 | 46.0 | 38.58 | 7.42 |
| 744.00 | 15.0 | V | 1.0 | 21.28 | 4.50 | 46.0 | 40.78 | 5.22 |
| 792.00 | 18.8 | H | 1.0 | 21.20 | 4.70 | 46.0 | 44.70 | 1.30 |
| 792.00 | 15.4 | V | 1.0 | 21.20 | 4.70 | 46.0 | 41.30 | 4.70 |

Comment : -

## Conducted emission

Test result: **Met**

Date of testing : 2000-11-21

Ambient temperature: 20°C, Relative humidity: 43%, Atmospheric pressure: 1000hPa(mbar)

Test site type: Shielded room

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

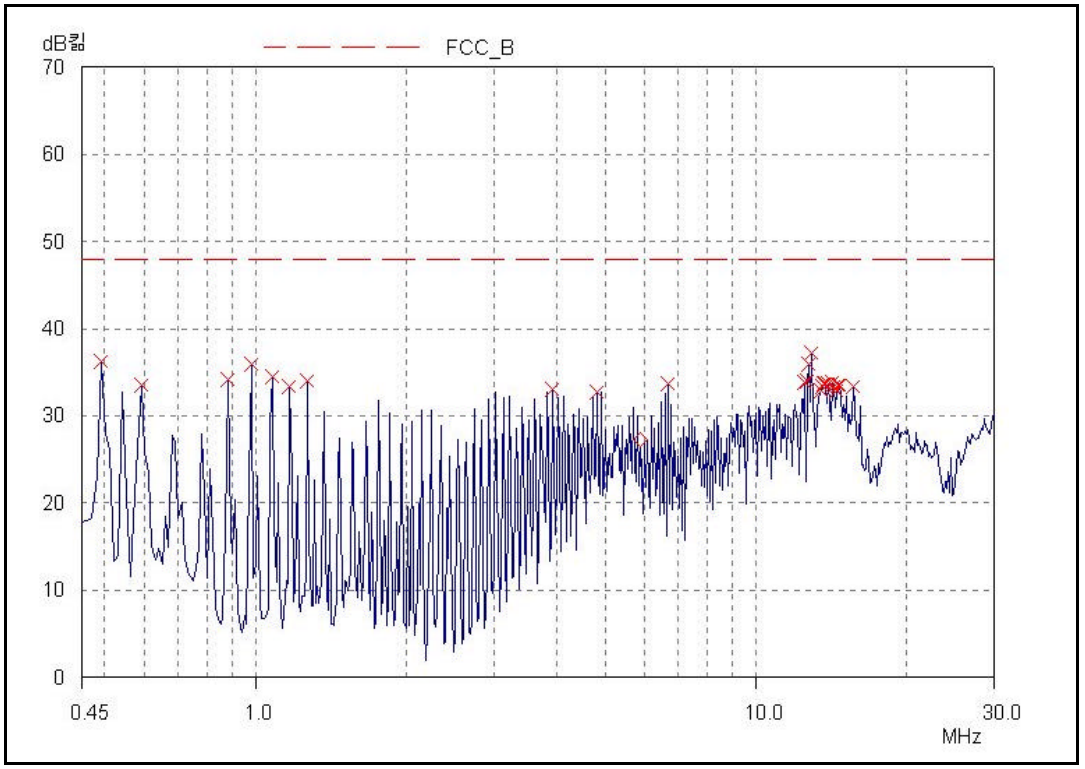
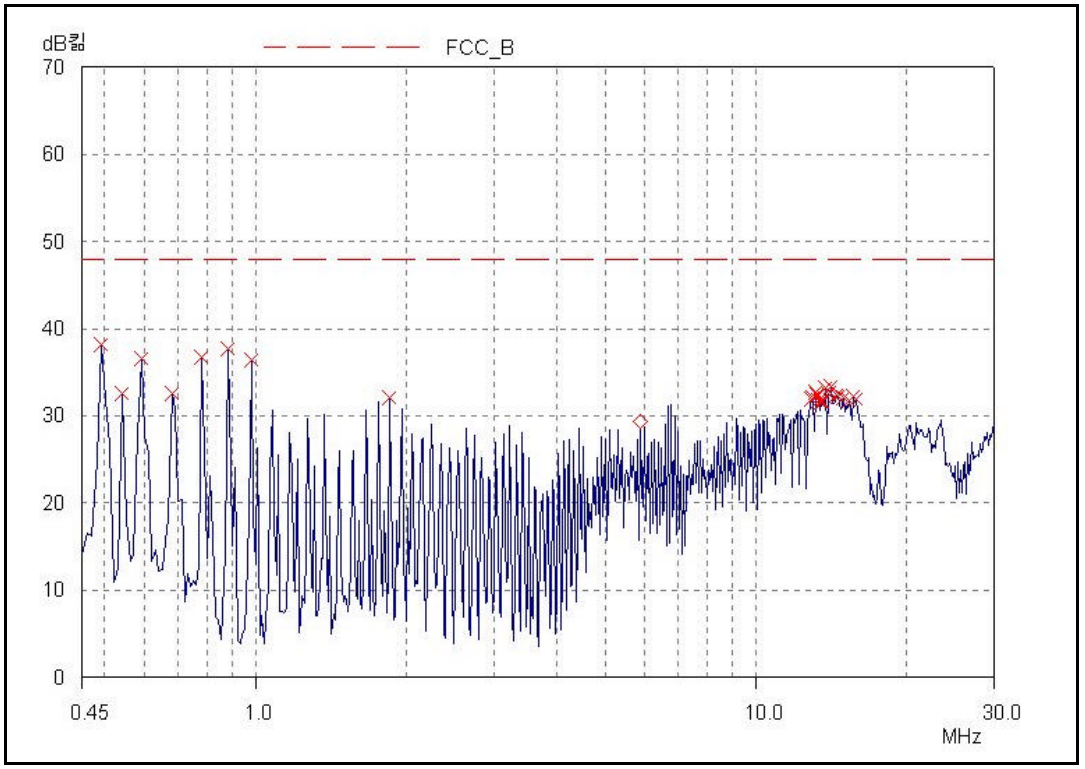
| Model name | Manufacturer | Description | Serial No. |
|---|---|---|---|
| 3825/2 | EMCO | LISN | 9206-1971 |
| ESHS30 | Rohde Schwarz | Field strength meter | 828144/002 |
| - | - | - | - |

Frequency Band 450KHz - 30MHz

Instrument settings IF Band Width : 9KHz

**Test data sheet (Quasi-Peak reading)**

| Frequency | Correction Factor | | Line | Quasi-peak | | | | Average | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Limit | Reading | Result | Margin | Limit | Reading | Result | Margin |
| [MHz] | LISN | Cable | | [dBuV] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dB] |
| 0.49 | 0.2 | 0.1 | N | 48.0 | 38.2 | 38.5 | 9.5 | | | | |
| 0.54 | 0.2 | 0.1 | N | 48.0 | 32.5 | 32.8 | 15.2 | | | | |
| 0.59 | 0.2 | 0.1 | N | 48.0 | 36.5 | 36.8 | 11.2 | | | | |
| 0.68 | 0.2 | 0.1 | N | 48.0 | 32.5 | 32.8 | 15.2 | | | | |
| 0.78 | 0.2 | 0.1 | N | 48.0 | 36.6 | 36.9 | 11.1 | | | | |
| 0.88 | 0.3 | 0.1 | N | 48.0 | 37.7 | 38.1 | 9.9 | | | | |
| 0.98 | 0.3 | 0.1 | N | 48.0 | 36.4 | 36.8 | 11.2 | | | | |
| 12.61 | 0.3 | 0.1 | H | 48.0 | 34.0 | 34.4 | 13.6 | | | | |
| 12.71 | 0.3 | 0.1 | H | 48.0 | 35.9 | 36.3 | 11.7 | | | | |
| 12.91 | 0.3 | 0.1 | H | 48.0 | 37.1 | 37.5 | 10.5 | | | | |
| 13.89 | 0.2 | 0.1 | H | 48.0 | 33.7 | 34.0 | 14.0 | | | | |
| 14.18 | 0.2 | 0.1 | H | 48.0 | 33.7 | 34.0 | 14.0 | | | | |

Comment : -

## Test data graphic