# CE R&TTE TEST REPORT

according to

**EN 300 328-1 V1.3.1 (2001-12)**
**EN 300 328-2 V1.2.1 (2001-12)**

| | |
|---|---|
| Applicant | TRENDware International, Inc. |
| Address | 3135 Kashiwa Street, Torrance, CA90505 U.S.A. |
| Equipment | 802.11g 54Mbps ADSL Modem Router |
| Model No. | TEW-435BRM |
| Trade Name | TRENDware |
| Power Supply Type | Adapter I/P: 230Vac/50Hz ; O/P: 15Vdc, 1A |

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of Exclusive Certification Corp, the test report shall not be reproduced except in full.
- This test report is only applicable to European Community.

Contents

# CERTIFICATE OF COMPLIANCE

according to

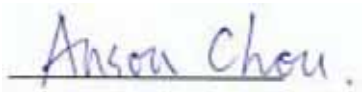
## EN 300 328-1 V1.3.1 (2001-12)
## EN 300 328-2 V1.2.1 (2001-12)

| | |
|---|---|
| Applicant | TRENDware International, Inc. |
| Address | 3135 Kashiwa Street, Torrance, CA90505 U.S.A. |
| Equipment | 802.11g 54Mbps ADSL Modem Router |
| Model No. | TEW-435BRM |

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **EUROPEAN COUNCIL DIRECTIVE 1999/5/EC.** The equipment was ***passed*** the test performed according to **EN 300 328-2 V1.2.1 (2001-12).** Testing was carried out on Oct. 24, 2003 at Electronics Testing Center, Taiwan.

Signature



Anson Chou / Manager

# 1. List of Measurements

| Clause | Test Parameter | Remark |
|---|---|---|
| | **Transmitter parameters** | |
| 5.2.1/7.2.1 | Effective Radiated Power | Passed |
| 5.2.2/7.2.2 | Peak Power Density – for FHSS equipment | Not Applicable |
| 5.2.2/7.2.2 | Peak Power Density – for DSSS equipment | Passed |
| 5.2.3/7.2.3 | Frequency Range – for FHSS equipment | Not Applicable |
| 5.2.3/7.2.4 | Frequency Range – for using other forms of modulation | Passed |
| 5.2.4/7.2.5 | Transmitter spurious emissions | Passed |
| | **Receiver parameters** | |
| 5.3.2/7.3.2 | Receiver spurious emissions | Passed |

# 2. Feature of Equipment under Test

1. A powerful, true firewall.
2. Content filtering.
3. Auto Sensing and Auto Uplink™ LAN Ethernet connections.
4. Extensive Internet protocol support.
5. Easy, Web-based setup for installation and management.

## 2.1 History of this test report

The Model No. TEW-435BRM (Report No:CR04020701-A) is the same and it only differs from the outside cosmetic. The functions and specifications are the same.

## 3. General Information of Test

| | |
|---|---|
| Test Site : | ELECTRONICS TESTING CENTER, Taiwan<br>No. 34, Lin 5, Ding Fu Tdun, Linkou Hsiang, Taipei, Taiwan, R.O.C. |
| Test Voltage : | AC 230V/ 50Hz |
| Test Condition : | Normal Voltage : 230V<br>Extreme Voltage : 253V and 207V subclause 6.4.2.3<br>Normal Temperature : 25<br>Extreme Temperature : -20 and 70 subclause 6.4.1 |
| Test in Compliance with : | ETSI EN 300 328-1 V1.3.1 (2001-12)<br>ETSI EN 300 328-2 V1.2.1 (2001-12) |

# 4. Transmitter Parameters

## 4.1 Effective Radiated Power (Conducted)

Ambient temperature: 28°C (SUBCLAUSE 7.2.1)

Relative humidity: 65%

Rated output power (maximum)....15dBm

Antenna: Dipole Antenna

Bandwidth of measurement receiver. .RBW 1 MHz

Bit-Rate: 1Mbps

Gain: 1.8dBi Duty at cycle :x=1.0(see clause 7.2.1step 2)10 log(1/x)=0

| Test conditions | | Transmitter power (dBm) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2412MHz | | 2441MHz | | 2472MHz | |
| | | Pear | Ave. | Pear | Ave. | Pear | Ave. |
| Tnom (25)°C | Vnom (230 Vac) | 13.8 | 11.6 | 12.5 | 10.5 | 12.5 | 10.4 |
| Tmin (-20)°C | Vnom (207 Vac) | 13.4 | 11.2 | 12.2 | 10.2 | 12.4 | 10.3 |
| | Vnom (253 Vac) | 13.7 | 11.5 | 12.1 | 10.1 | 12.5 | 10.4 |
| Tmax (+70)°C | Vnom (207 Vac) | 13.4 | 11.2 | 12.0 | 10.0 | 12.4 | 10.3 |
| | Vnom (253 Vac) | 13.3 | 11.1 | 12.0 | 10.0 | 12.3 | 10.2 |
| Maximum deviation from rated output under normal test conditions (dB) | | -1.2 | | -2.5 | | -2.5 | |
| Measurement uncertainty (dB) | | ±1.5 | | | | | |

LIMIT SUBCLAUSE 5.2.1

| | |
|---|---|
| Under all test conditions | 20 dBm / -10dBW |

A separate page shall be filled in for each antenna assembly submitted for type testing.

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

7, 14, 15, 16, 17

……

## 4.2 Effective Radiated Power (Radiated)

Ambient temperature: 28°C (SUBCLAUSE 7.2.1)

Relative humidity: 65%

Rated output power (maximum)....15dBm

Antenna: Dipole Antenna

Bandwidth of measurement receiver. .RBW 1 MHz

Bit-Rate: 1Mbps

| Test conditions | | Transmitter power (dBm) | | |
|---|---|---|---|---|
| | | 2412MHz | 242MHz | 2472MHz |
| Tnom (25)°C | Vnom (230 Vac) | 8.0 | 7.2 | 6.8 |
| | Vnom (207 Vac) | 7.4 | 6.4 | 5.8 |
| | Vnom (253 Vac) | 7.3 | 6.5 | 5.7 |
| Maximum deviation from rated output under normal test conditions (dB) | | -7.7 | -8.6 | -9.3 |
| Measurement uncertainty (dB) | | ±2.0 | | |

LIMIT SUBCLAUSE 5.2.1

| | |
|---|---|
| Under all test conditions | 20 dBm / -10dBW |

A separate page shall be filled in for each antenna assembly submitted for type testing.

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

4, 9, 12, 16, 17

……

## 4.3 Peak Power Density – for DSSS modulation

Ambient temperature: 28°C CLAUSE 7.2.2

Relative humidity: 65%

Rated radiated power ..... dBm/MHz.

Bit-Rate: 1Mbps

| Tests | Measured Power Density | | |
|---|---|---|---|
| | Lowest frequency 2412MHz | Middle frequency 2442MHz | Highest frequency 2472MHz |
| Measured power density | -8.83dBm/MHz | -9.50dBm/MHz | -11.67dBm/MHz |
| Measurement uncertainty | ±3.0 | | |

LIMITS: Clause 5.2.2

| | |
|---|---|
| Under normal test conditions only | -20dBW/MHz 10dBm/1MHz |

Is Tx on Time < 10 microseconds ? .....

If yes, then the test method used is that agreed between the National Regulatory Authority, the appointed test house, the accreditation authority and the applicant;

the test method reference is as follows:

……

and the basic description of the method of measurement is as follows:

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

7, 14, 15, 16, 17

……

## 4.4 Frequency range – for DSSS equipment

Ambient temperature: 28°C clause 7.2.3

Relative humidity: 65%

Applicants declared operating frequency band

Lowest frequency: 2.400 GHz Highest frequency: 2.4835 GHz Modulated

| Tests conditions | | Frequency MHz | |
|---|---|---|---|
| | | FL | FH |
| Tnom(25) °C | Vnom(230 Vac) | 2402.330 | 2482.170 |
| Tnom(-15) °C | Vnom(207Vac) | 2402.335 | 2482.183 |
| | Vnom(253 Vac) | 2402.340 | 2482.192 |
| Tnom(+60) °C | Vnom(207 Vac) | 2402.344 | 2482.205 |
| | Vnom(253 Vac) | 2402.351 | 2482.215 |
| Measurement uncertainty Hz | | ±1500 | |

Where FL Lowest frequency at the appropriate spurious emission level

FH Highest frequency at the appropriate spurious emission level

Band edge limits FL = 2402.330MHz (measured) and FH = 2482.215MHz (measured)

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

7, 14, 15, 16, 17

…….

## 4.5 Spurious emissions Transmitter operating – Conducted

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power …..15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2412 MHz with maximum output power

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4824.000 | 1 | -44.1 |
| 7236.000 | 1 | --- |
| 9648.000 | 1 | --- |
| 12060.000 | 1 | --- |
| 14472.000 | 1 | --- |
| 16884.000 | 1 | --- |
| 19296.000 | 1 | --- |
| 21708.000 | 1 | --- |
| 24120.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark” ---“ means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

9, 13, 15, 16, 17

……

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power …..15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2472 MHz with maximum output power

Frequency static

Bit-Rate: 1Mbps

802.11b

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4944.000 | 1 | -44.6 |
| 7416.000 | 1 | --- |
| 9888.000 | 1 | --- |
| 12360.000 | 1 | --- |
| 14832.000 | 1 | --- |
| 17304.000 | 1 | --- |
| 19776.000 | 1 | --- |
| 22248.000 | 1 | --- |
| 24720.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

9, 13, 15, 16, 17

……

## 4.6 Spurious emissions Transmitter standby – Conducted

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power …..15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2412 MHz

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4824.000 | 1 | --- |
| 7236.000 | 1 | --- |
| 9648.000 | 1 | --- |
| 14472.000 | 1 | --- |
| 16884.000 | 1 | --- |
| 19296.000 | 1 | --- |
| 21708.000 | 1 | --- |
| 24120.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

9, 13, 15, 16, 17

……

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power …..15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2472 MHz

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4944.000 | 1 | --- |
| 7416.000 | 1 | --- |
| 9888.000 | 1 | --- |
| 12360.000 | 1 | --- |
| 14832.000 | 1 | --- |
| 17304.000 | 1 | --- |
| 19776.000 | 1 | --- |
| 22248.000 | 1 | --- |
| 24720.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark” ---“ means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

9, 13, 15, 16, 17

.....

## 4.7 Spurious emissions Transmitter operating -- Radiated

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power .....15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2412 MHz Unmodulated with maximum output power

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4824.000 | 1 | --- |
| 7236.000 | 1 | --- |
| 9648.000 | 1 | --- |
| 12060.000 | 1 | --- |
| 14472.000 | 1 | --- |
| 16884.000 | 1 | --- |
| 19296.000 | 1 | --- |
| 21708.000 | 1 | --- |
| 24120.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 16, 17

.....

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power .....15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2472 MHz Unmodulated with maximum output power

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4944.000 | 1 | --- |
| 7416.000 | 1 | --- |
| 9888.000 | 1 | --- |
| 12360.000 | 1 | --- |
| 14832.000 | 1 | --- |
| 17304.000 | 1 | --- |
| 19776.000 | 1 | --- |
| 22248.000 | 1 | --- |
| 24720.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 16, 17

.....

## 4.8 Spurious emissions Transmitter standby -- Radiated

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power .....15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2412 MHz

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4824.000 | 1 | --- |
| 7236.000 | 1 | --- |
| 9648.000 | 1 | --- |
| 12060.000 | 1 | --- |
| 14472.000 | 1 | --- |
| 16884.000 | 1 | --- |
| 19296.000 | 1 | --- |
| 21708.000 | 1 | --- |
| 24120.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 16, 17

.....

Ambient temperature: 28°C

Relative humidity: 65%

Rated output power .....15dBm

Power supplied: 230Vac/50Hz

Transmitter Operating @2472 MHz

Frequency static

Bit-Rate: 1Mbps

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 4944.000 | 1 | --- |
| 7416.000 | 1 | --- |
| 9888.000 | 1 | --- |
| 12360.000 | 1 | --- |
| 14832.000 | 1 | --- |
| 17304.000 | 1 | --- |
| 19776.000 | 1 | --- |
| 22248.000 | 1 | --- |
| 24720.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.2.4

| State | 30MHz to 1GHz | Above 1GHz to 12.75GHz | 1.8GHz to 1.9GHz 5.15GHz 5.3GHz |
|---|---|---|---|
| Operating | -36dBm | -30dBm | -47dBm |
| Standby | -57dBm | -47dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 16, 17

.....

# 5. Receiver Parameters

## 5.1 Spurious radiations - Conducted

Ambient temperature: 28°C

Relative humidity: 65%

Power supplied: 230Vac/50Hz

Frequency static @2038 MHz

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 2038.000 | 1 | -53.2 |
| 4076.000 | 1 | --- |
| 6114.000 | 1 | --- |
| 8152.000 | 1 | --- |
| 10190.000 | 1 | --- |
| 12228.000 | 1 | --- |
| 14266.000 | 1 | --- |
| 16304.000 | 1 | --- |
| 18342.000 | 1 | --- |
| 20380.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.3.2

| Frequency | 30MH to 1GHz | Above 1GHz to 12.75GHz |
|---|---|---|
| Limits | -57dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

7,9,10,11,16,17

.....

Ambient temperature: 28°C

Relative humidity: 65%

Power supplied: 230Vac/50Hz

Frequency static @2098 MHz

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 2098.000 | 1 | -55 |
| 4196.000 | 1 | --- |
| 6294.000 | 1 | --- |
| 8392.000 | 1 | --- |
| 10490.000 | 1 | --- |
| 12588.000 | 1 | --- |
| 14686.000 | 1 | --- |
| 16784.000 | 1 | --- |
| 18882.000 | 1 | --- |
| 20980.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.3.2

| Frequency | 30MH to 1GHz | Above 1GHz to 12.75GHz |
|---|---|---|
| Limits | -57dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

7,9,10,11,16,17

.....

## 5.2 Spurious radiations - Radiated

Ambient temperature: 28°C

Relative humidity: 65%

Power supplied: 230Vac/50Hz

Frequency static @2038 MHz

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 2038.000 | 1 | --- |
| 4076.000 | 1 | --- |
| 6114.000 | 1 | --- |
| 8152.000 | 1 | --- |
| 10190.000 | 1 | --- |
| 12228.000 | 1 | --- |
| 14266.000 | 1 | --- |
| 16304.000 | 1 | --- |
| 18342.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.3.2

| Frequency | 30MH to 1GHz | Above 1GHz to 12.75GHz |
|---|---|---|
| Limits | -57dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1,2,3,4,5,8,9,10,11,16,17

.....

Ambient temperature: 28°C

Relative humidity: 65%

Power supplied: 230Vac/50Hz

Frequency static @2098 MHz

| Frequency (MHz) | Measuring receiver bandwidth (MHz) | Spurious emissions level (dBm) |
|---|---|---|
| 2098.000 | 1 | -55 |
| 4196.000 | 1 | --- |
| 6294.000 | 1 | --- |
| 8392.000 | 1 | --- |
| 10490.000 | 1 | --- |
| 12588.000 | 1 | --- |
| 14686.000 | 1 | --- |
| 16784.000 | 1 | --- |
| 18882.000 | 1 | --- |
| Measurement uncertainty ±2(dB) | | |

Remark" ---" means the emission level is greater than 20 dB below the limit or can not be detected.

LIMIT SUBCLAUSE 5.3.2

| Frequency | 30MH to 1GHz | Above 1GHz to 12.75GHz |
|---|---|---|
| Limits | -57dBm | -47dBm |

REFERENCE NUMBER(S) OF TEST EQUIPMENT USED (for reference see test equipment listing)

1,2,3,4,5,8,9,10,11,16,17

.....

## 6. Test Equipment and Ancillaries Used for Tests

| Ref. No. | Instrument/Ancillary | Type | Manufacturer | Serial No. |
|---|---|---|---|---|
| 01 | Bi-conical Antenna | 3110B | EMCO | 2486 |
| 02 | Log-periodic Antenna | 3146 | EMCO | 4942 |
| 03 | DipoleAntenna | 3121 | EMCO | 1315 |
| 04 | Hom Antenna | 3115 | EMCO | 9804-5454 |
| 05 | Hom Antenna | 3116 | EMCO | 9611-2328 |
| 06 | Test Receiver | ESVS 30 | R&S | 8473710/008 |
| 07 | Test Receiver | ESBI | R&S | 848224/003 |
| 08 | Spectrum Analyzer | 8568B | HP | 2732A03842 |
| 09 | Spectrum Analyzer | 8564E | HP | 3821A01267 |
| 10 | Pre-amplifier | 8447D | HP | 2648A0494 |
| 11 | Pre-amplifier | 8449B | HP | 3008A00936 |
| 12 | Spectrum Analyzer | 83732B | HP | US37100841 |
| 13 | Hi-pass Filter | 84300-80038 | HP | 005 |
| 14 | Attenuator | 1 | Weinschel | AS8828 |
| 15 | Temperature Chamber | EOS200T | ACS | 5460 |
| 16 | Frequency Converter | BFA-200-70D | Board-Tech | 200005 |
| 17 | Voltage Meter | YF-3180 | YFE | 931218 |
| 18 | DC Power Supply | GPQ-3030 | Good Will | 9070171 |
| 19 | Radio Communications Test Set | 2955B | Marconi | 295501/037 |
| 20 | Multifunction Synthesizer | 8904A | HP | 2917A02406 |
| 21 | Signal Generator | 8656B | HP | 2926U07030 |
| 22 | Preamplifier | 83051A | HP | 3332A00627 |

Calibration Interval of instruments listed above is one year.