**DECREE OF THE DIRCTOR GENERAL OF POST AND TELECOMMUNICATION**

**NUMBER : 238/DIRJEN/2009**

**ON**

**TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT OF *HIGH SPEED DOWNLINK PACKET ACCESS* (HSDPA) MODEM**

**BY THE GRACE OF GOD THE ALMIGHTY**

**DIRECTOR GENERAL OF POST AND TELECOMMUNICATION**

Considering: a. that the Decision of the Minister of Communication Number

 KM. 3 Year 2001 on Technical Requirements of

 Telecommunication Tools and Equipment stipulates that

 every telecommunication tool and equipment shall fulfil the

 technical requirements;

b. that in line with the provision of Article 2 paragraph 1 of the Decree of the Minister of Communication and Information Technology Number 29/PER/M.KOMINFO/09/2008 on Certification of Telecommunication Tools and Equipment, any telecommunication tool and equipment manufactured, assembled, imported for trade and or use in the territory of the Republic of Indonesia shall fulfil the technical requirements;

c. that based on considerations referred to in points a and b, it

 is considered necessary to ratify a Decree of the Director

 General of Post and Telecommunication on Technical

 Requirements of Tools and Equipment of *High Speed*

 *Downlink Packet Access* (HSDPA) Modem.

Bearing in mind: 1. Law of the Republic of Indonesia Number 36 Year 1999

 on Telecommunication (State Gazette of the Republic

 of Indonesia Number 154 Year 1999, Additional State

 Gazette of the Republic of Indonesia Number 3881);

 2. Government Regulation of the Republic of Indonesia Number 52 Year 2000 on Provision of Telecommunication (State Gazette of the Republic of Indonesia Number 107 Year 2000, Additional State Gazette of the Republic of Indonesia Number 3980);

3. Government Regulation of the Republic of Indonesia Number 53 Year 2000 on Use of Radio Frequency Spectrum and Satellite Orbit (State Gazette of the Republic of Indonesia Number 108 Year 2000, Additional State Gazette of the Republic of Indonesia Number 3981);

4. Decree of the President of the Republic of Indonesia Number 9 Year 2005 on Positions, Duties, Functions, Organizational Structure and Work Method of State Ministries of the Republic of Indonesia as amended latest by the Decree of the President of the Republic of Indonesia Number 20 Year 2008;

5. Decree of the President of the Republic of Indonesia Number 10 Year 2005 on Organizational Units and Duties of Echelon I of State Ministries of the Republic of Indonesia as amended latest by the Decree of the President of the Republic of Indonesia Number 21 Year 2008;

6. Decision of the Minister of Communication Number KM.3 Year 2001 on Technical Requirements of Telecommunication Tools and Equipment;

7. Decree of the Minister of Communication and Information Technology Number 25/P/M.KOMINFO/7/2008 on Organization and Work Method of the Department of Communication and Information Technology;

8. Decree of the Minister of Communication and Information Technology Number 29/PER/M.KOMINFO/09/2008 on Certification of Telecommunication Tools and Equipment.

**DECIDES**

**To ratify : DECREE OF THE DIRECTOR GENERAL OF POST AND TELECOMMUNICATION ON TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT OF *HIGH SPEED DOWNLINK PACKET ACCESS* (HSDPA) MODEM**

Article 1

Tools and equipment of *High Speed Downlink Packet Access* (HSDPA) Modem shall fulfil the technical requirements referred to in the Attachment of this Decree.

Article 2

The implementation of certification of tools and equipment of *High Speed Downlink Packet Access* (HSDPA) shall fulfil the technical requirements referred to in Article 1.

Article 3

This Decree shall come into force on the date of its ratification.

 Done at: JAKARTA

 On : , 2009

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DIRECTOR GENERAL OF POST AND TELECOMMUNICATION**

 Signed

**BASUKI YUSUF ISKANDAR**

**Copies of this Decree are sent to:**

1. Minister of Communication and Information Technology;
2. Secretary of the Directorate General of Post and Telecommunication;
3. Directors within the Directorate General of Post and Telecommunication;
4. Head of Office of Telecommunication Equipment Testing Laboratory..

**ATTACHMENT : DECREE OF THE DIRECTOR GENERAL**

 **OF POST AND TELECOMMUNICATION**

 **NUMBER : 238/DIRJEN/2009**

 **DATE : , 2009\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT OF *HIGH SPEED DOWNLINK PACKET ACCESS* (HSDPA) MODEM**

**CHAPTER I**

**GENERAL PROVISIONS**

**1. Scope**

These technical requirements form the technical requirements for tools and equipment of HSDPA modem including *High Speed Uplink Packet Access* (HSUPA) These technical requirements comprise :

a. General Provisions (scope, definition, abbreviations);

b. Requirements (technical, environment, and service);

c. Testing Requirement;

d. Marking and Packaging

**2. Definition**

*High Speed Downlink Packet Access* (HSDPA) is a modem equipped with HSDPA facilities.

HSDPA is a WCDMA *downlink* data basedpacket service with data transmission starting from 1.8 Mbps up to 14.4 Mbps at *bandwidth* of 5 MHz in WCDMA *Downlink*.

The application of HSDPA modem covers, among other things, data application, Internet, Intranet, e-mail, SMS, and VPN.

**3. Abbreviations**

ACLR : *Adjacent Channel Leaked Power Ratio*

ACS : *Adjacent Channel Selectivity*

BER : *Bit Error Rate*

BLER : *Block Error Rate*

BS : *Base Station*

CW : *Continuous Wave (unmodulated signal)*

DL : *Down Link (Forward Link)*

EVM : *Error Vector Magnitude*

FDD : *Frequency Division Duplexing*

Fuw : *Frequency of unwanted signal*

MS : *Mobile Station*

PCDE : *Peak Code Domain Error*

PPM : *Part Per Million*

RBS : *Radio Base Station*

TDD : *Time Division Duplexing*

TPC : *Transmit Power Control*

UE : *User Equipment*

UL : *Up Link*

UMTS : *Universal Mobile Telecommunication System*

UTRA : *UMTS Terrestrial Radio Access*

UTRAN : *UMTS Terrestrial Radio Access Network*

W-CDMA *: Wideband Code Division Multiple Access*

**CHAPTER II**

**REQUIREMENTS**

**1. TECHNICAL REQUIREMENT**

**1.1.Technological Specification / Band :**

HSDPA/HSUPA : Uplink frequency 1920 – 1980 MHz

 Downlink frequency 2110 – 2170 MHz

It is possible for multiband and provide service to GPRS / EDGE / UMTS

**1.2.Data Speed :**

1. a. HSDPA Uplink Speeds maximum : 384 Kbps

 b. HSUPA Uplink Speeds maximum : 2.1 Mbps

2. HSDPA/HSUPA Downlink Speeds maximum :

 14.4 Mbps / 7.2 Mbps / 3.6 Mbps / 1.8 Mbps / 1.2 Mbps

**1.3.Power Class**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Operating****Band**  | **Power Class****1** | **Power Class****2** | **Power Class****3** | **Power Class****4** | **Power Class****5** |
| **Power****(dBm)** | **Tol****(dB)** | **Power****(dBm)** | **Tol****(dB** | **Power****(dBm)** | **Tol****(dB)** | **Power****(dBm)** | **Tol****(dB)** | **Power****(dBm)** | **Tol****(dB)** |
| **Band l** | +33 | +1/-3 | +27 | +1/-3 | +24 | +1/-3 | 23 | +2/-2 | +21 | +2/-2 |

**1.4.Adaptive Modulation and Codification**

QPSK and 16-QAM *Mandatory*

**1.5.Data user multiplexing**

TDM/CDM

**1.6.*Channel feedback***

*Channel quality reported at 2 ms rate* or 500 Hz

**1.7.External Interface**

At least own one of the following external interfaces:

- USB2.0 *interface*

*-* PCMCIA

*-* *ExpressCard*

- RJ-45 *interface*

**1.8.*Power Consumption***

- *Voltage* 5V DC

**2. ENVIRONMENTAL REQUIREMENT**

**2.1.*Operating Temperature***

-20o up to +50o

**2.2.*Storage Temperature***

 -40o up to +80o

**2.3.Humidity**

95% *Humidity, non condensing*

**3. SERVICE REQUIREMENT**

**3.1.*Visual indicator***

 Required to have *Visual indicator* for network status

**3.2.Minimum System Rqquirements**

* OS (*Operating System*) Windows® 2000/XP/Vista 32 bits & 64 bits
* *Connection port* USB
* Processor (CPU) minimum 667 MHz or speedier
* *Auto installation*
* Memory 128 MB
* *Disk space* 100 MB
* *Disk Drive* CD-ROM (*Optional*)

**3.3.Standards/Approvals/Certifications**

 HSDPA modem must have one of international certificates/approvals such as:

* 3GPP Release 99 for GSM/GPRS
* 3GPP Release 5 for HSDPA
* GCF
* GSM Phase 2+
* Microsoft WHQL
* IOT Compliance
* R&TTE Directive 1999/5/EC (health, safety, EMC, spectrum) Compliant
* RoHS Directive 2002/95/EC Compliant
* WEEE Directive 2002/96/EC Compliant

**CHAPTER III**

**TESTING REQUIREMENT**

**1. Method of Sampling**

Sampling of test materials is done at random according to prevailing testing procedure.

**2. Test Method**

Testing method is determined by testing institution that must be able to show in a qualitative and quantitative manner that on the tested materials measurement is done in accordance with testing procedure and requirement in this standard.

**3. Condition for Passing the Test**

The testing result is declared PASS THE TEST, if all the tested materials comply with the provisions indicated in these technical requirements.

If the tested materials are declared NOT PASS THE TEST, all the groups included in the tested materials are also declared not pass the test.

**4. Condition for Safety and Health**

The prescribed Tools and Equipment must be reengineered in such a way that users are protected from electrical and electromagnetic disturbances.

**5. Condition for Electromagnetic Compatibility**

Refer to CISPR-22 and CISPR-24 Standards or the equivalents.

**CHAPTER IV**

**MARKING AND PACKAGING**

1. Any telecommunication tool and equipment of *High Speed Downlink Packet Access* (HSDPA) that has passed the test shall be marked with the name of manufacturer, manufacturing country, brand, type, and serial number and complies with certification provision.

2. Packaging must take into account elements of safety, endurance against weather, aesthetics, and space efficiency.

**Acting DIRECTOR GENERAL OF POST AND TELECOMMUNICATION**

Signed

**BASUKI YUSUF ISKANDAR**