**DECREE OF THE DIRECTOR GENERAL OF RESOURCES AND EQUIPMENT OF POST AND INFORMATION TECHNOLOGY**

**NUMBER : 129/DIRJEN/2011**

**ON**

**TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT RECEIVER (SET TOP BOX) OF TERRESTRIAL PAID TELEVISION SERVICE AT FREQUENCY BAND OF 300 MHz**

**BY THE GRACE OF GOD THE ALMIGHTY**

**DIRECTOR GENERAL OF RESOURCES AND EQUIPMENT OF POST AND INFORMATION TECHNOLOGY,**

Considering: a. that in accordance 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 used in the

 territory of the Republic of Indonesia shall comply with

 the technical requirements;

 b. that based on consideration referred to in point a above,

 it is considered necessary to ratify a Decree of the

 Director General of Resources and Equipment of Post

 and Information Technology on Technical Requirements

 of Tools and Equipment Receiver (*Set Top Box*) of

 Terrestrial Paid Television Service At Frequency Band

 of 300 MHz.

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);

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1. 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);
2. Decree of the President of the Republic of Indonesia Number 47 Year 2009 on Formation of the Organization of State Ministries of the Republic of Indonesia;
3. Decree of the President of the Republic of Indonesia Number 24 Year 2010 on Positions, Duties, and Functions of State Ministries and Organizational Structure, Duties, and Functions of Echelon I of State Ministries of the Republic of Indonesia;
4. Decision of the Minister of Communication Number : KM. 3 Year 2001 on Technical Requirements of Telecommunication Tools and Equipment;
5. Decree of the Minister of Communication and Information Technology Number 03/PM.Kominfo/5/2005 on Adjustment of Nomenclatures of a number of Decisions/Decrees of the Minister of Communication which regulate Special Material Contents in the Field of Post and Telecommunication;
6. Decree of the Minister of Communication and Information Technology Number 17/PER/M.KOMINFO/10/2010 on Organization and Work Method of the Ministry of Communication and Information Technology;
7. Decree of the Minister of Communication and Information Technology Number 29/PER/M.KOMINFO/09/2008 on Certification of Telecommunication Tools and Equipment;
8. Circular Letter of the Minister of Communication and Information Technology Number 50/M.KOMINFO/1/2011 on Acting Director General of Resources and Equipment of Post and Information Technology of the Department (**Ministry?**) of Communication and Information Technology.

**DECIDES**

**To ratify** : **DECREE OF THE DIRECTOR GENERAL OF RESOURCES AND**

**EQUIPMENT OF POST AND INFORMATION TECHNOLOGY ON**

 **TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT**

 **RECEIVER (SET TOP BOX) OF TERRESTRIAL PAID**

 **TELEVISION SERVICE AT FREQUENCY BAND OF 300 MHz**

Article 1

Tools and Equipment Receiver (*Set Top* Box) of Terrestrial Paid Television at Frequency Band of 300 MHz shall comply with technical requirements referred to in the Attachment which is inseparable from this Decree.

Article 2

The testing implementation of tools and equipment receiver (*Set Top* Box) of Terrestrial Paid Television Service at frequency band of 300 MHz shall comply with technical requirements referred to in the Attachment which is inseparable from this Decree.

Article 3

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

 Done at: AKARTA

 On : May 6, 2011

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**Acting DIRECTOR GENERAL OF RESOURCES AND EQUIPMENT OF POST AND INFORMATION TECHNOLOGY,**

Signed

**MUHAMMAD BUDI SETIAWAN**

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

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

**Attachment : Decree of the Director General of Resources and**

 **Equipment of Post and Information Technology**

 **Number : 129 / DIRJEN / 2011**

 **Date : May 6, 2011**

**TECHNICAL REQUIREMENTS OF TOOLS AND EQUIPMENT RECEIVER (*SET TOP BOX*) OF TERRESTRIAL PAID TELEVISION SERVICE AT FREQUENCY BAND OF 300 MHz**

The scope of technical requirements of tools and equipment receiver (*set top box*) of terrestrial paid television service at frequency band of 300 MHz comprises :

CHAPTER I : General Provisions (definition and abbreviations);

CHAPTER II : Technical Requirements (general and special requirements for

 paid television service);

CHAPTER III : Testing (method of sampling, test method, conditions for passing

 the test, and conditions for safety and health);

CHAPTER IV : Marking and Packaging (conditions for marking and method of

 packaging).

**CHAPTER I**

**GENERAL PROVISIONS**

**1. Definition**

Tools and Equipment Receiver (*Set Top Box*) of Terrestrial Paid Television Service at Frequency Band of 300 MHz are tools and equipment receiver (*set top box*) for the use of paid television service that makes use of terrestrial wave propagation at frequency band of 300 MHz with a digital modulation and compression system that can receive video, audio, and data signals.

**2. Abbreviations**

AM : *Amplitude Modulation*

AVC : *Advance Video Coding*

CAS : *Conditional Access System*

DVB : *Digital Video Broadcasting*

FFT : *Fast Fourier Transform*

IEC : *International Electrotechnical Commission*

LNB : *Low Noise Block*

MPEG : *Moving Picture Experts Group*

NTSC : *National Television System Committee*

OFDM : *Orthogonal Frequency Division Multiplexing*

PAL : *Phase Alternation Line*

QAM : *Quadrature Amplitude Modulation*

RF : *Radio Frequency*

STB : *Set Top Box*

QPSK : *Quadrature Phase Shift Keying*

**CHAPTER II**

**TECHNICAL REQUIREMENTS**

**1. General**

Input voltage : 100 – 240 Volt AC

Input frequency : 50 Hz

Protection : *fuse*

*Temperature range* : 0oC – 50oC

*Humidity range*: 5% - 95%

***a. Receiver***

* *Input Frequency range* : 287 – 324 MHz
* *IF Connector Input* : IEC 169-2 *Female*
* *Input Impedance* : 75 Ώ
* *Input Level Signal* : -20 ~ -90 dBm
* *Spurious response* : -50 dBc
* RF *Sensitivity* : ≤ -60 dBm
* *Input Rate Minimal* : 15 Mbit/s
* IF *Bandwidth* : 7 MHz
* *Mode of operation* : 2K, 4K, 8K, 16K, 32K
* *Forward Error Correction* : 1/2, 2/3, 3/4, 3/5, 4/5, 5/6, 7/8
* *Guard Interval* : 1/4, 1/8, 1/16, 1/32, 19/256, 1/128
* *Modulation* : OFDM, QPSK, 16-QAM, 64-QAM, 256-QAM

***b. Video Decoder Minimal***

* *Transport Stream* : MPEG-2ISO/IEC 13818-1
* *Profile Level* : H.264 (MPEG-4 AVC MP@L3) MPEG-2 *Main*

 *Profile@Main Level*

* *Video Format* : 4:3, 16:9
* *Terminal Output Minimal* : 1 x RCA

***c. Video Output Minimal***

* *Video Format* : PAL *and* NTSC
* *Output Level* : 1000 mV
* *Sync Level* : 300 mV
* *Burst Level* : 300 mV
* *Luma non*-linearity **:** 5 %
* *Chrominance gain* : 5 %
* C/L *Delay* : -30 nsec
* *Signal to noise rate* : 56 dBmin

***d. Audio Output Minimal***

* *Audio Decoding* : MPEG 1 *Layer* I & II
* *Sample Rate* : 32/ 44.1 / 48 KHz
* *Frequency Response* : 20Hz – 20KHz
* *Output Level* : 1Vp-p

**2. Special Requirements for Paid Television service**

Support *Conditional Access System* for receiving Paid Television service

**CHAPTER III**

**TESTING**

**1. Method of Sampling**

Sampling of test material is done at random according to test procedure based on prevailing regulation.

**2. Test Method**

Test method used is in accordance with *Standard Operating Procedure* of the respective Test Offices.

**3. Conditions for Passing the Test**

Testing result is declared PASS THE TEST , if each of the tested materials complies with all the provisions referred to in these technical requirements.

**4. Conditions for Safety and Health**

The testing result must prove that the concerned tools and equipment are capable of protecting users from electrical disturbances (*electrical safety*) and from *electromagnetic compatibility* (EMC).

**CHAPTER IV**

**MARKING AND PACKAGING**

**1. Conditions for Marking**

Any tool and equipment that have passed the test shall be given mark containing name of the manufacturer and manufacturing country, brand, type and serial number complying with the provision of certification.

**2. Method of Packaging**

Size of packaging depends on the manufacturer by taking into account safety elements, aesthetics, and space efficiency,.

**Acting DIRECTOR GENERAL OF RESOURCES AND EQUIPMENT OF POST AND INFORMATION TECHNOLOGY ,**

Signed

**MUHAMMAD BUDI SETIAWAN**.