

Annex 3

Working document on possible ecodesign requirements for simple set top boxes

Subject matter

This implementing measure pursuant to Directive 2005/32/EC establishes eco-design requirements related to simple set top boxes.

Definitions

For the purposes of this implementing measure the following definitions shall apply:

1. Simple Set Top Box (simple STB) means a device which
 - has the primary function of converting Standard Definition (SD) or High Definition (HD), Free-to-Air digital broadcast signals to analogue broadcast signals suitable for analogue TVs
 - has no Conditional Access (CA) function
 - offers no recording function based on removable media in a standard library format

The following additional functions/components are included in the power consumption limits set under this implementing measure, but do not constitute a minimum specification of a simple STB:

- time shift and recording functions based on integrated hard disc
- HD broadcast signal reception converted to HD or SD video output
- second tuner

2. "Automatic power down" means a function which switches the on mode as defined below of a simple STB into standby after a period in the on mode following the last user interaction and/or a programme change.

3. "Second tuner" means a part of the simple STB needed for independent recording while watching a different programme.

4. "Conditional Access" (CA) means a provider-controlled broadcasting service requiring a market subscription television service.

5. "On mode" means a condition in which a simple STB performs its primary function.

6. "Standby" and "off mode" shall have the same meaning as in the implementing measure for standby and off-mode electric power consumption of electrical and electronic household and office equipment under directive 2005/32/EC.

Other expressions used in this implementing measure shall have the same meaning as in Directive 2005/32/EC.

Eco-design requirements

Equipment falling under the definitions of paragraph "Definitions", first subparagraph, shall meet the ecodesign requirements set out in Annex I.

Conformity Assessment

A conformity assessment shall be carried out according to Article 8(2), and Annex IV (Internal design control) or Annex V (Management system for assessing conformity) of Directive 2005/32/EC.

Market surveillance

When performing the market surveillance checks referred to in Directive 2005/32/EC, Article 3 (2), Member State authorities shall apply the verification procedure set out in Annex II of this implementing measure.

Annex I: Ecodesign requirements

1. Simple STB with SD; requirements for "on mode" and "standby/off mode"

a) One year after this implementing measure has come into force:

On mode:

Power consumption of simple STB in on mode shall not exceed 5.0 Watt.

Standby and off mode:

Power consumption of simple STB in off mode or any condition providing only a reactivation function, or a reactivation function and a mere indication of enabled reactivation function shall not exceed 1.0 Watt.

b) Three years after this implementing measure has come into force:

On mode:

Power consumption of simple STB in on mode shall not exceed 5.0 Watt.

Standby and off mode:

Power consumption of simple STB in off mode or any condition providing only a reactivation function, or a reactivation function and a mere indication of enabled reactivation function shall not exceed 0.5 Watt.

2. Simple STB with HD; requirements for "on mode" and "standby/off mode"

a) Three years after this implementing measure has come into force:

On mode:

Power consumption of simple STB in on mode shall not exceed 7.0 Watt.

Standby and off mode:

Power consumption of simple STB in off mode or any condition providing only a reactivation function, or a reactivation function and a mere indication of enabled reactivation function shall not exceed 0.5 Watt.

3. Simple STB (SD and HD) with additional functions; allowances in "on mode"

a) Three years after this implementing measure has come into force the power consumption of a simple STB with integrated hard disc providing time shift and recording functions shall not exceed 14 Watt.

b) Three years after this implementing measure has come into force the power consumption of a simple STB with a second tuner shall not exceed 8 Watt.

c) Three years after this implementing measure has come into force the power consumption of a simple STB with a second tuner as well as integrated hard disc providing time shift and recording functions shall not exceed 15 Watt.

For all power consumption limits set in Annex I, point 1, 2, and 3, of this implementing measure the measurement procedure laid down in Annex II of this implementing measure should apply.

4. Automatic power down

One year after this implementing measure has come into force all simple STB shall be equipped with an "Automatic power down" or similar function having the following characteristics: the simple STB should be automatically switched from on mode into standby after less than 4 hours in the on mode following the last user interaction and/or a programme change.

6. Review

A review of this IM shall be presented to the Consultation Forum depending on technological progress and market trends, and not later than 5 years after its entry into force

Annex II: Verification procedure for market surveillance purposes

When proceeding to a verification of conformity for market surveillance purposes, Member State authorities shall test one single unit.

For all products falling within the definition set out in this implementing measure the following test methodology shall be applied.

The methodology for metering should follow guidance given by IEC 62301.

The simple STB should be set up according to the indications of IEC 62087.

The model shall be considered to comply with the provisions set out in Annex I of this implementing measure if neither of the results for the standby/off mode and on mode is exceeding the limit values set out in Annex I by more than 10 %.

Otherwise, three more units shall be tested. The model shall be considered to comply with this implementing measure if neither of the average of the results of the latter three tests for standby/off mode and on mode, is exceeding the limit values set out in Annex I by more than 10 %.

Otherwise, the model shall be considered not to comply.

Explanatory Notes

Scope

The purpose of the implementing measure ("IM") is to set ecodesign requirements for simple set top boxes (Simple STB). The simple STB targeted by this IM is an intermediate technology with the primary function of converting Standard Definition (SD) or High Definition (HD), Free-to-Air digital broadcast signals to analogue broadcast signals suitable for analogue TVs.

The time shift and recording functions (also called Personal Video Recording) based on integrated hard disc; HD broadcast signal reception converted to HD or SD video output, and second tuner are all considered as additional functions/components of simple STB, and therefore additional power consumption allowances are established in what regards these functions/components. They do not constitute a minimum specification of a simple STB, i.e. they may not be present in the device. The decision to include them is based on the results of the preparatory study, which have indicated that as of 2012 such functions will be massively integrated into simple STB due to falling prices of hard disks suitable for consumer electronic products.

Beyond the analogue switch-off the set top box will still exist as a product genre to provide high functionality to basic television equipment as new broadcasting and home networking technologies emerge. These set top boxes, qualified as Complex STB and differentiated from simple STB by the conditional access (CA) function, will be tackled under a separate IM under Directive 2005/32/EC.

Energy efficiency levels and their timing

The power consumption limits are differentiated on the basis of service type, i.e. the energy needed to decode HD and SD signals.

The timing of ecodesign requirement set under this IM are adapted to the market forecast for simple STB, according to which sales and stock will peak around 2015.

The first deadline for an on-mode and standby power limit is in line with the next step of expected higher integration of the STB electronics, which will allow lower power consumption.

The timing for power consumption limits for integrated hard disk has been based on Least Life Cycle Cost considerations.

The limits for standby and their timing is in line with the horizontal measure for standby and off-mode electric power consumption of electrical and electronic household and office equipment under directive 2005/32/EC

Automatic power down

Taking into consideration studies which have shown that consumers have the tendency to leave simple STB permanently in the on-mode, the automatic power down function is an essential element of this IM.

Measurement methods

Both standards, IEC 62087 and IEC 62301 are under review. The latter will be formally published as an updated standard in 2008. IEC 62087 will be reviewed for simple STB testing from 2008. The existing standard should be used in the meantime.