

**ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS
AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022**

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IN exercise of the power conferred on the Minister responsible for Energy by subparagraph (i) of paragraph (a) of subsection (1) of section 56 of the Energy Commission Act, 1997 (Act 541) and on the advice of the Board, these Regulations are made this 28th day of June, 2022.

*Preliminary Provisions***Purpose of Regulations**

1. The purpose of these Regulations is to promote the efficient use and conservation of energy in the country and mitigate related climate change by

- (a) providing for
 - (i) the enforcement of Standards set out in the First Schedule and the minimum energy performance standards set out in Parts One to Three of the Second Schedule;
 - (ii) the labelling of set-top boxes;
 - (iii) supplementary product information on electric mains-operated set-top boxes; and
 - (iv) the registration of models of set-top boxes in the Appliance Energy Efficiency Register; and
- (b) prohibiting the manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of a set-top box that does not meet the minimum energy performance standards set out in Parts One to Three of the Second Schedule.

Application of Regulations

2. These Regulations apply to a set-top box manufactured in the country or imported into the country for display, sale or use, with the ability to be powered directly from the mains alternating current for use as a

- (a) simple set-top box; or
- (b) complex set-top box.

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Duties and Requirements

Duty to comply with requirements

3. (1) A person who manufactures, imports, offers for sale, sells, stores, supplies, distributes, donates or otherwise disposes of a set-top box for use in the country shall ensure that each model of the set-top box

(a) is registered with the Commission; and

(b) meets the

(i) Standards set out in the First Schedule;

(ii) minimum energy performance standards for simple set-top boxes and complex set-top boxes set out in Parts Two and Three of the Second Schedule respectively;

(iii) the labelling requirements set out in the Third Schedule; and

(iv) information requirements set out in the Fourth Schedule.

(2) A person who advertises a set-top box shall comply with the provisions of Part Five of the Fourth Schedule.

Prohibition of manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of set-top box

4. (1) A person shall not manufacture, import, offer for sale, sell, store, donate, or otherwise dispose of, install or use a set-top box in the country unless the set-top box meets the

(a) minimum energy performance standards set out in Parts One to Three of the Second Schedule; and

(b) requirements of the Standards.

(2) An enforcement authority shall

(a) detain, cause to be re-exported or seize and destroy a set-top box imported for use in the country contrary to subregulation (1); or

(b) seize and destroy a set-top box manufactured for use in the country contrary to subregulation (1).

Category of set-top box

5. The category of a set-top box shall be determined in accordance with the categories set out in Part Two of the Fourth Schedule.

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Total energy consumption of set-top box

6. The total energy consumption of a set-top box and other energy related parameters shall be determined in accordance with the methods and procedures set out in Parts Two to Four of the Second Schedule.

Voltage, input power or wattage of set-top box

7. The manufacturer of a set-top box shall ensure that the rated voltage, input power or wattage of that set-top box is printed conspicuously and displayed on the back of the set-top box.

Measurement methods

8. The information to be provided pursuant to regulations 10 and 11 shall be obtained by

- (a) a reliable, accurate and reproducible measurement which takes into account recognised state-of-the-art measurements;
- and

- (b) calculation methods

in accordance with the Standards.

Use of circumvention device

9. (1) A manufacturer, an importer or an authorised representative of the manufacturer shall not use a circumvention device during the conduct of a test of a set-top box.

(2) A person shall not manufacture, import, offer for sale, sell, store, donate, or otherwise dispose of, install or use a set-top box which is designed to

- (a) detect that the set-top box is being tested by recognising the test conditions or test cycle; or
- (b) react specifically by automatically altering the performance of the set-top box during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative of the manufacturer, in the technical documentation or included in any other documentation provided.

(3) The energy consumption of a set-top box and any of the other declared parameters shall not deteriorate after a

- (a) software; or

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(b) firmware

update, when measured with the same test standard originally used for the declaration of conformity, except with the consent of the Commission and the Standards Authority, before the update.

(4) A manufacturer, an importer or an authorised representative of the manufacturer shall inform the Commission and the Standards Authority in writing, with reasons, prior to an update of the software or firmware.

Technical documentation

10. (1) A person shall not manufacture, import, offer for sale, sell, store, distribute, donate or otherwise dispose of a set-top box for use in the country, unless that person has provided the Commission with sufficient technical documentation to enable the Commission

(a) ascertain the accuracy of the information contained

(i) in the Product Information Sheet; or

(ii) on the label; and

(b) register each model of the set-top box in the Appliance Energy Efficiency Register.

(2) The technical documentation referred to in subregulation (1) shall

(a) be in the English language;

(b) include the Product Information Sheet set out in Part One of the Fourth Schedule; and

(c) contain the information set out in Part Three of the Fourth Schedule marked "Technical Documentation".

(3) The technical documentation shall

(a) be prepared for each model of a set-top box placed on the market; and

(b) include

(i) the name and address of the supplier;

(ii) the description of the set-top box, for purposes of identification;

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- (iii) the model identifier of the manufacturer;
- (iv) the relevant drawings on the main design features of the model and parameters of the set-top box that affect the energy consumption of the set-top box;
- (v) reports of relevant measurement tests carried out in compliance with the Standards;
- (vi) details of calculations, extrapolations and tests carried out to verify the accuracy of calculations;
- (vii) the installation and operating instructions; and
- (viii) the period within which the model of the set-top box was manufactured.

Labelling and information requirements

11. (1) A person shall not manufacture, import, offer for sale, sell, store, supply, distribute, donate or otherwise dispose of a set-top box for use in the country unless the set-top box and the packaging of the set-top box meet the following requirements:

- (a) the set-top box shall bear a label
 - (i) in the form set out in the Third Schedule; and
 - (ii) placed on the set-top box;
- (b) the information in respect of the set-top box indicated on the packaging of the set-top box shall be in the English language;
- (c) the Product Information Sheet in respect of the set-top box shall be as set out in Part One of the Fourth Schedule;
- (d) the label on the packaging containing the set-top box shall
 - (i) contain the information set out in the Third Schedule; and
 - (ii) be printed in colour;
- (e) the labels on the set-top box and the packaging of the set-top box shall include the following information:
 - (i) the Quick Response Code;
 - (ii) the name or trademark of the manufacturer;
 - (iii) the model identifier of the manufacturer;
 - (iv) the year of manufacture;

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- (v) the type of set-top box;
 - (vi) the input power or wattage of the set-top box, measured in accordance with test procedures specified in the Standards;
 - (vii) the power consumption in standby mode;
 - (viii) the power consumption in automatic power down mode;
 - (ix) the length of time to automatic power down mode; and
 - (x) the country of origin or manufacture;
- (f) for a simple set-top box, the labels on the set-top box and the packaging of the set-top box shall include information on
- (i) the maximum total power consumption in active mode; and
 - (ii) the power consumption in active mode, with or without additional functionality allowances, if applicable;
- (g) for a complex set-top box, the labels on the set-top box and the packaging of the set-top box shall include information on
- (i) power consumption in television watching mode or on-mode;
 - (ii) power consumption in playback mode;
 - (iii) power consumption in recording mode;
 - (iv) maximum total energy consumption value (kWh/year) including functionality adjustments applied;
 - (v) base total energy consumption value applied (kWh/year); and
 - (vi) measured total energy consumption value (kWh/year) inclusive of functionality adjustments applied determined in accordance with the test procedures of the Standards and the calculations provided in Part Four of the Second Schedule;
- (h) the label shall be printed in colour on a waterproof material and pasted conspicuously on the outside of the front or top of the set-top box;

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- (i) the background of a label printed or pasted on each packaging containing the set-top box shall be gold in colour;
 - (j) all the stars on the label of the set-top box shall be shaded in black; and
 - (k) the text on the label of the set-top box shall be black in colour.
- (2) Despite regulation 21, an update to the Standards shall take precedence over the requirements specified in paragraphs (e), (f) and (g) of subregulation (1) and the Second Schedule.

(3) Where

- (a) a side of the packaging is not large enough to contain a label and the blank border; or
 - (b) a label would cover more than fifty per cent of the surface area of the largest side of a packaging,
- the label and the blank border shall be reduced to not less than forty per cent of the largest side of the packaging and pasted on the largest side of the packaging.

(4) A person shall not remove the label on a set-top box or the packaging containing a set-top box before the first retail purchase of the set-top box.

(5) For the purposes of this regulation, “first retail purchase” means the purchase of a set-top box by an end user.

Registration of Set-Top Boxes

Appliance Energy Efficiency Register

12. (1) The Commission shall establish, keep and maintain an Appliance Energy Efficiency Register.

(2) The Appliance Energy Efficiency Register shall contain the information specified in subregulation (5) of regulation 13.

Application for registration

13. (1) A person who

- (a) manufactures a set-top box in the country; or
- (b) imports a set-top box into the country

for use in the country shall, prior to the manufacture or importation, ensure that each model of the set-top box is registered with the Commission.

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- (2) A person who
- (a) manufactures a set-top box in the country; or
 - (b) imports a set-top box into the country

for use in the country shall apply to the Commission for registration of the set-top box.

(3) An application for registration under subregulation (2) shall be made in writing or electronically on the website of the Commission and accompanied with the prescribed fee.

(4) An application for registration shall be accompanied with a test report from an accredited test laboratory that demonstrates that

- (a) the set-top box meets the minimum energy performance standards set out in the Second Schedule; and
- (b) the test report corresponds to the energy consumption that is provided on the energy efficiency label of the set-top box.

(5) The following information shall be provided for each registration of a model of a set-top box:

- (a) the brand or trademark, if any, used in connection with a supply of the model;
- (b) the model identifier issued by the manufacturer for each model covered by the registration;
- (c) the Product Information Sheet of the model;
- (d) the date the registration takes effect;
- (e) a unique identifier for the registration issued by the Commission;
- (f) the names and contact details of the applicant and contact person in relation to the registration;
- (g) if the model is to be registered as a replacement model of an earlier registered model, that fact and details to identify the replaced model, including the date the replacement was made;
- (h) if a model to be registered is affected by a replacement, that fact and details to identify the replaced model and replacement model, including the date the replacement was made;

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- (i) any information specified in these Regulations in relation to that model of set-top box; and
- (j) any other information the Commission may consider appropriate.

Consideration of application

14. (1) The Commission shall, on receipt of an application for registration of a set-top box, consider the application.

(2) The Commission shall, in considering the application, have regard to the requirements specified in subregulation (5) of regulation 13.

Grant of application

15. (1) The Commission may, within fourteen days after receipt of an application, grant or refuse an application.

(2) Where the Commission decides to grant an application, the Commission shall

- (a) within three days after the date of the decision, inform the applicant, in writing or electronically as the case may be, of the decision; and
- (b) enter the information specified in subregulation (5) of regulation 13 in the Appliance Energy Efficiency Register.

(3) Where the Commission refuses to grant an application, the Commission shall within three days after the date of the decision communicate to the applicant, in writing or electronically as the case may be,

- (a) the reason for the refusal; and
- (b) the applicable Standards the model of the set-top box is required to meet.

Duties of Dealers and Suppliers of Set-Top Boxes

Duty of dealer to keep, maintain and provide technical documentation

16. (1) A dealer shall keep and maintain technical documentation in respect of a set-top box for a period of not less than two years after the date of manufacture or importation.

(2) A dealer shall, within two days after a request by an enforcement authority, provide the enforcement authority with technical documentation in respect of a set-top box for inspection.

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(3) Where a dealer fails to provide technical documentation in respect of a set-top box within two days after the request, the enforcement authority shall detain the set-top box.

(4) A dealer shall ensure that

- (a) each set-top box, at the point of sale, including at trade fairs, bears the label provided by a supplier in accordance with regulation 3, with the label being displayed conspicuously;
- (b) in the event of distance selling, the label and Product Information Sheet are provided in accordance with the Third and Fourth Schedules;
- (c) an audio advertisement, including radio and local information broadcast network, on a specific model of a set-top box where the brand, size, category or price is mentioned, contains information on the energy efficiency class and the range of efficiency classes available in accordance with Part Five of the Fourth Schedule;
- (d) a visual advertisement for a specific model of set-top box, including an advertisement on the internet contains information on the energy efficiency class and the range of energy efficiency classes available on the label, in accordance with Part Five of the Fourth Schedule; and
- (e) a technical promotional material concerning a specific model of set-top box, including technical promotional material on the internet, which describes the specific technical parameters of the set-top box includes
 - (i) the energy efficiency class of that model; and
 - (ii) the range of energy efficiency classes available on the label

in accordance with Part Five of the Fourth Schedule.

Duty of supplier to keep, maintain and provide technical documentation

17. (1) A supplier shall keep and maintain technical documentation in respect of each model of set-top box for a period of not less than two years after the date of manufacture or importation.

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(2) A supplier shall, on request by an enforcement authority, provide the enforcement authority with the technical documentation of the set-top box for inspection.

(3) Where a supplier fails to provide technical documentation in respect of a set-top box within two days after the request, the enforcement authority shall detain the set-top box.

Duty of supplier to keep, maintain and provide Product Information Sheet

18. (1) A supplier shall keep and maintain in the possession of the supplier a Product Information Sheet in respect of each set-top box in the form set out in Part One of the Fourth Schedule.

(2) A supplier shall, on request by an enforcement authority, provide the enforcement authority with a Product Information Sheet which shall be in the

(a) English language; and

(b) form set out in Part One of the Fourth Schedule.

Duty of supplier to provide information for statistical purposes

19. (1) A person who manufactures in the country, imports into the country or exports out of the country a set-top box or an assembly of components that incorporates a set-top box, shall provide the Commission with the following information not later than four months after the end of each year:

(a) the number of set-top boxes of each model that the person manufactured, exported or imported into the country in the relevant year;

(b) the number of set-top boxes of each model that the person sold in the country in the relevant year;

(c) the number of set-top boxes of each model that the person exported from the country in the relevant year;

(d) the name of each model that the person discontinued

(i) manufacturing in the relevant year;

(ii) exporting in the relevant year; or

(iii) importing in the relevant year; and

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(e) a copy of any existing test report, or other energy performance data specified by the Commission, for each model specified under paragraph (d).

(2) Upon a written request by the Commission, a person who manufactures a set-top box for use in the country or imports a set-top box into the country shall provide the following information to the Commission not later than forty days after receiving the request:

- (a) the number of set-top boxes in each product class specified by the Commission that the person sold to a purchaser in the country in each of the preceding three years; and
- (b) the energy performance characteristics of the set-top box as specified in the request.

Duty of supplier to ensure accuracy of information

20. (1) A supplier shall ensure that the information indicated on a
- (a) Product Information Sheet; or
 - (b) label

in respect of a set-top box is accurate.

(2) The duty imposed on a supplier under subregulation (1) does not affect any other right of action which a person may have by law against a person with respect to the inaccuracy of information on a Product Information Sheet or on a label.

Access to information on technical documentation and Product Information Sheet

21. (1) The information required under regulations 10, 11, 16, 17 and 18 shall be obtained in accordance with the test procedures required by the Standards.

(2) Information obtained in a manner other than in accordance with subregulation (1) shall, for the purposes of these Regulations, be invalid.

Product brochure in respect of set-top box

22. Where a supplier provides a product brochure in respect of a set-top box, the brochure shall contain a Product Information Sheet which shall be in the

- (a) English language; and
- (b) form set out in Part One of the Fourth Schedule.

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Information

Public information

23. (1) The information provided by a supplier on the Product Information Sheet or on a label of a set-top box is deemed public information.

(2) A supplier is deemed to have consented to the publication of the information indicated on a Product Information Sheet or on a label in respect of a set-top box.

Information in respect of mail order and other distance selling

24. (1) Where a person offers a set-top box for sale to another person in the country through a medium of communication including a mail order or any other distance selling medium, that person shall provide information in respect of the set-top box.

(2) The information referred to in subsection (1) shall

- (a) be in the English language;
- (b) include the product registration number assigned by the Commission upon registration in the Appliance Energy Efficiency Register;
- (c) include the information set out in Part Four of the Fourth Schedule; and
- (d) be written in a manner that is legible.

Obligations of audio or audio-visual broadcasting service provider

25. Where an audio or audio-visual broadcasting service provider advertises a set-top box, and the information in the advertisement includes the brand, model, size, price and any other information that is specific to a particular model, that service provider shall ensure that

- (a) the advertisement has been vetted and approved by the Commission; and
- (b) the advertisement includes
 - (i) information on the minimum energy performance standard of the set-top box;
 - (ii) a statement that the advertisement has been vetted and approved by the Commission; and
 - (iii) any other information required under Part Five of the Fourth Schedule.

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Obligations of e-commerce platform

26. (1) A person shall not offer for sale, sell, supply, distribute or otherwise dispose of a set-top box through a promotion on the internet unless

- (a) the minimum energy performance of the set-top box is posted next to the price of the set-top box; and
- (b) the label of the set-top box is made available to consumers in the same medium of communication.

(2) Where an e-commerce service provider allows the direct sale of a set-top box through the website of the service provider, the service provider shall

- (a) enable the display of the
 - (i) electronic label; and
 - (ii) electronic Product Information Sheet provided by the dealer on the display mechanism in accordance with Part Six of the Fourth Schedule; and
- (b) inform the dealer of the obligation to display the electronic label and electronic Product Information Sheet.

Misleading information

27. (1) A person shall not display a label, mark, symbol or inscription which relates to the energy consumption of a set-top box, if the display is likely to be

- (a) deceptive;
- (b) misleading; or
- (c) false.

(2) A person shall not broadcast an advertisement relating to the energy performance of a set-top box if the information in the advertisement is likely to be

- (a) deceptive;
- (b) misleading; or
- (c) false.

(3) Subregulations (1) and (2) do not apply to

- (a) a label;
- (b) a mark;
- (c) a symbol; or

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(d) an inscription displayed under an environmental labelling scheme or endorsement labelling scheme.

Restriction on disclosure of information

28. (1) An enforcement authority shall not disclose information which consists of a

- (a) secret manufacturing process; or
- (b) trade secret

that was obtained by that enforcement authority in the course of the exercise of a power or duty conferred on the enforcement authority by these Regulations.

(2) Despite subregulation (1), an enforcement authority may disclose information if

- (a) the information is public information; or
- (b) the disclosure is made
 - (i) for the purpose of facilitating the exercise of power by an enforcement authority under these Regulations or any other enactment;
 - (ii) in connection with the investigation of an offence; or
 - (iii) for the purpose of a civil or criminal proceeding.

Powers of Enforcement

Power of enforcement authority to require technical documentation

29. Where an enforcement authority suspects that the information given

- (a) in a Product Information Sheet; or
- (b) on a label

in respect of a set-top box is incorrect, that enforcement authority may, by notice served on the supplier or importer of the set-top box, require the supplier or importer to furnish the enforcement authority with the technical documentation referred to in regulation 10 within the period stipulated in the notice.

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Power of enforcement authority to inspect set-top box

30. An enforcement authority may, at any reasonable time, enter any premises to inspect a set-top box if the enforcement authority has reason to believe that the premises are being used for a purpose in contravention of these Regulations.

Power of enforcement authority to detain or seize record or set-top box

31. (1) Subject to these Regulations, where an enforcement authority has reasonable cause to suspect that an offence has been committed or is being committed, that enforcement authority may

- (a) at any reasonable time enter premises other than a dwelling place, and conduct an inspection in accordance with subsection (3) of section 52 of the Act;
- (b) require a person engaged in a business or employed in connection with a business to produce a record in respect of a set-top box;
- (c) detain or seize a set-top box that is
 - (i) not labelled;
 - (ii) not properly labelled; or
 - (iii) labelled in a deceptive or misleading manner;
- (d) detain or seize a set-top box that is imported without technical documentation which justifies the label affixed on the set-top box;
- (e) detain or seize a set-top box to enable tests to be carried out;
- (f) detain or seize a record to be used as evidence in proceedings in respect of an offence under these Regulations;
- (g) cause a container to be opened for the purpose of inspection;
- (h) break open a container, where implementation of paragraph (g) is not practicable; or
- (i) detain or seize a set-top box if the model is not registered in the Appliance Energy Efficiency Register.

(2) For the purposes of paragraphs (b) and (f) of subregulation (1), the enforcement authority may request for information stored electronically to be made available to the enforcement authority in printed form.

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Power of enforcement authority to test set-top box

32. (1) An enforcement authority may

- (a) obtain, remove and test a set-top box; or
- (b) order the testing of a set-top box

to ascertain whether a provision of these Regulations has been contravened.

(2) A person who suspects that a set-top box offered for sale does not comply with the provisions of these Regulations may lodge a complaint with an enforcement authority.

(3) The enforcement authority may, upon receipt of a complaint under subregulation (2), detain and test the set-top box.

(4) The test to be conducted in respect of a set-top box purchased, obtained or detained under regulation 31 shall be carried out in accordance with the test procedures required by the Standards.

Detention, Re-Exportation and Seizure

Procedure for market surveillance and verification

33. (1) Despite regulation 32, the Commission and the Standards Authority shall conduct market surveillance to ascertain whether a set-top box on the market conforms to these Regulations.

(2) The Commission and the Standards Authority shall apply the verification procedure specified in the Fifth Schedule to conduct the market surveillance.

Order to access premises to inspect, detain or seize set-top box or record

34. Where

- (a) an enforcement authority is refused entry to premises;
- (b) a notification to enter premises would defeat the purpose of the entry;
- (c) the premises to be entered are unoccupied; or
- (d) the occupier of premises to be entered is temporarily absent

the enforcement authority may apply to a court for an order to enter the premises to inspect, detain or seize a set-top box or record, if the enforcement authority has reasonable grounds to believe that a set-top

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box or record on the premises may assist in the disclosure of evidence of the commission of an offence under these Regulations.

Procedure for detention of set-top box

35. (1) An enforcement authority that exercises a power of detention under these Regulations shall, immediately give a written notice to the person against whom the power has been exercised.

- (2) The written notice shall state
- (a) the set-top box that has been detained; and
 - (b) the reason for the detention.

(3) Where an enforcement authority detains a set-top box, that set-top box may be kept in a warehouse or other secure location reserved for the purpose.

Procedure for re-labelling of detained set-top box

36. (1) Subject to these Regulations, where an enforcement authority detains a set-top box under paragraph (e) of subregulation (1) of regulation 31, the enforcement authority shall

- (a) within two days after the detention, submit a sample of the set-top box for testing; and
- (b) within two days after receipt of the test results, give a notice in writing to the supplier of the set-top box to properly label the set-top box if the minimum energy performance standards have been complied with.

(2) The notice under paragraph (b) of subregulation (1) shall require a set-top box to be re-labelled in the required manner or exported out of the country within twenty-eight days.

(3) Where a supplier is required under subregulation (2), to re-label a set-top box, the supplier shall re-label the set-top box under the supervision of an officer authorised for the purpose by the Commission or the Standards Authority.

- (4) Where a supplier fails to
- (a) re-label the set-top box; or
 - (b) export the set-top box

within twenty-eight days after the notice given under paragraph (b) of subregulation (1), the Commission shall, in consultation with the

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Standards Authority, destroy the set-top box in a manner that the Commission may determine.

Procedure for re-exportation of imported set-top box

37. (1) An enforcement authority that exercises a power of detention or seizure under these Regulations shall, within seven days after the detention or seizure, give an order in writing to the person against whom the power has been exercised to re-export the set-top box.

(2) The order referred to in subregulation (1) shall state

(a) the set-top box to be re-exported;

(b) the reason for the order;

(c) the period within which the set-top box is to be re-exported; and

(d) the fact that the supplier shall be responsible for the cost associated with the re-export.

(3) Where a set-top box is kept within premises that are under the control of the owner of the set-top box, the owner shall pay a security deposit against any breach of the re-exportation order.

(4) A security deposit under subregulation (3) shall be forfeited in the event of a breach of the re-exportation order, including the sale or destruction of a set-top box which has been ordered to be re-exported.

(5) Where a person fails to pay a security deposit imposed under subregulation (3), the Commission may recover the amount imposed as a civil debt.

Procedure for seizure of set-top box

38. (1) An enforcement authority that exercises a power of seizure under these Regulations shall, within seven days after the seizure, give a written notice to the person against whom the power has been exercised.

(2) The written notice under subregulation (1) shall state

(a) the set-top box that has been seized;

(b) the reason for the seizure; and

(c) the venue and the period within which a petition against the seizure may be brought under regulation 39.

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(3) Where an enforcement authority seizes a set-top box, that set-top box may be kept in a warehouse or other secure location reserved for the purpose.

(4) The owner of the set-top box may be required to pay a deposit to cover the cost of destruction, if the set-top box does not meet the minimum energy performance standards.

(5) Where a set-top box is kept within premises that are under the control of the owner of the set-top box, the owner shall pay a security deposit against any breach of the seizure order.

(6) A security deposit under subregulation (5) shall be forfeited in the event of a breach of the seizure order, including the sale or destruction of a set-top box which has been seized.

(7) Where a person fails to pay a security deposit imposed under subregulation (5), the Commission may recover the amount imposed as a civil debt.

Petition and Compensation

Petition against seizure

39. (1) Subject to these Regulations, a person whose set-top box is seized may, within seven days after receipt of the written notice specified in subregulation (1) of regulation 38, petition the Executive Secretary for the release of the seized set-top box.

(2) The Executive Secretary shall, within seven days after the receipt of a petition under subregulation (1),

(a) confirm the seizure; or

(b) order the release of the seized set-top box to the petitioner on a specific day.

(3) A person who is dissatisfied with a decision of the Executive Secretary under subregulation (2) may appeal to the Board within seven days after the receipt of the decision.

(4) The Board shall within thirty days after the receipt of an appeal under subregulation (3),

(a) consult the Standards Authority; and

(b) take a decision on the appeal.

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(5) The Board may release the seized set-top box to the petitioner only if the Commission and the Standards Authority fail to prove that an offence under these Regulations has been committed.

(6) A person who is dissatisfied with

(a) a decision of the Board under subregulation (4) may, within fourteen days after the decision; or

(b) the failure of the Board to make a decision within thirty days after receipt of the appeal may, within fourteen days after the failure

apply to the court.

Forfeiture and destruction of seized set-top box

40. (1) Where an appeal to the Board under subregulation (3) of regulation 39 is not successful, the enforcement authority shall, within twenty-eight days after the decision of the Board, notify the owner of the set-top box of the forfeiture and date of destruction of the seized set-top box.

(2) The Commission may, in consultation with the Standards Authority, destroy a forfeited set-top box in a manner that the Commission may determine.

(3) Where under subregulation (6) of regulation 39, the court upholds or affirms the decision of the Board to forfeit and destroy the set-top box, the Commission shall destroy the set-top box within the period given by the court.

Compensation for loss of set-top box or record seized

41. (1) Where an enforcement authority exercises power under these Regulations to seize a set-top box or record, that enforcement authority is liable to pay compensation to the owner of the set-top box or record for any loss or damage caused by the exercise of the power, if

(a) these Regulations have not been contravened in relation to the set-top box or record; and

(b) the loss or damage is not attributable to the neglect or the fault of the owner but an official of the Commission.

(2) Paragraph (b) of subregulation (1) does not apply in a case of *force majeure*.

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(3) The compensation payable under subregulation (1) for a loss or damage shall not exceed the value of the set-top box or record.

(4) A dispute as to the

(a) right to compensation; or

(b) amount of compensation payable to a person under subregulation (1),

shall be determined in the first instance by arbitration in accordance with the Alternative Dispute Resolution Act, 2010 (Act 798).

Recovery of expenses by enforcement authority

42. (1) Where an enforcement authority

(a) seizes;

(b) tests; or

(c) supervises the re-labelling or destruction of

a set-top box, that enforcement authority may surcharge the dealer or supplier of the set-top box for the expenses incurred for the seizure, testing or supervision.

(2) Despite subregulation (1), where a court convicts a person of an offence in respect of the contravention of a provision of these Regulations, the court may, in addition to any order that the court may make as to costs and expenses, order the person convicted to reimburse the enforcement authority for the expenditure incurred by the enforcement authority in connection with the seizure.

Miscellaneous Provisions

Offences and penalties

43. (1) A person who

(a) manufactures, imports, offers for sale, sells, stores, advertises, distributes or otherwise disposes of a set-top box that

(i) does not meet a requirement in respect of the minimum energy performance standards contrary to regulation 3;

(ii) is not accompanied by the required technical documentation contrary to regulation 10;

(iii) is not labelled or properly labelled contrary to regulation 11;

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- (iv) is labelled in a deceptive or misleading manner contrary to regulation 27;
 - (b) uses a circumvention device contrary to regulation 9;
 - (c) fails to comply with a labelling requirement contrary to regulation 11;
 - (d) fails to provide technical documentation contrary to regulation 10, 16 or 17;
 - (e) fails to register a model of a set-top box contrary to regulation 13;
 - (f) fails to provide a Product Information Sheet contrary to regulation 18;
 - (g) fails to provide information on a set-top box contrary to regulation 19;
 - (h) provides inaccurate information contrary to regulation 20;
 - (i) advertises a set-top box without providing accurate information on the minimum energy performance of the set-top box and the range of energy efficiency of the set-top box available contrary to regulation 25;
 - (j) offers for sale or sells a set-top box over the internet or other distance selling medium without providing the information required contrary to regulation 24 or 26;
 - (k) provides misleading information contrary to regulation 27;
 - (l) obstructs or interferes with an enforcement authority in the exercise of the powers of that enforcement authority contrary to regulation 31;
 - (m) fails to comply with the requirements for re-labelling contrary to regulation 36; or
 - (n) violates a seizure order or notice contrary to regulation 38
- commits an offence and is liable on summary conviction to a fine of not less than one hundred and twenty-five penalty units and not more than two hundred and fifty penalty units or to a term of imprisonment of not less than six months and not more than twelve months or to both.

(2) A person who commits a second or subsequent offence under subregulation (1) after an earlier conviction under subregulation (1) is liable on summary conviction to a fine of not less than two hundred and

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fifty penalty units and not more than five hundred penalty units or to a term of imprisonment of not less than twelve months and not more than twenty-four months or to both.

(3) Where an offence is committed under these Regulations by a body corporate or by a member of a partnership or other firm, every director or officer of that body corporate or any member of the partnership or any other person concerned with the management of the firm shall be deemed to have committed that offence and is liable, on summary conviction, to a fine of not less than five hundred penalty units and not more than one thousand penalty units, and is in addition liable to the payment of compensation for the damage resulting from the breach.

(4) A person shall not be convicted of an offence under subregulation (3), if it is proved that

- (a) the person exercised due diligence to secure compliance with the provisions of these Regulations; and
- (b) the offence was committed without the knowledge, consent or connivance of that person.

Interpretation

44. In these Regulations, unless the context otherwise requires,

“accredited test laboratory” means a test laboratory that is recognised by the Standards Authority for laboratory testing and product certification;

“appliance” means a device or machine for performing specific task;

“Appliance Energy Efficiency Register” means an official record kept and maintained by the Commission on energy efficiency information in respect of models of electrical appliances that have been certified by the Commission and Standards Authority for use in Ghana;

“audio or audiovisual broadcasting service provider” means a person who provides a service which delivers radio programmes or programmes with hearing and sight components to persons with equipment appropriate for receiving that service, whether the delivery is effected by means of or uses the radio frequency spectrum, cable,

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- optical fibre, satellite, internet radio via streaming media on the internet, or any other means or a combination of those means intended to reach a wide audience;
- “auto power down” means a function which switches the active mode of a set-top box into standby mode after a period in the active or on-mode following the last user interaction or channel change;
- “cable” means a service of broadcasting reception in which signals from distant stations are picked up by a master antenna and sent by cable or wire to the individual receivers of paying subscribers;
- “circumvention device” means any control, control device, software, component or part that alters the operating characteristics of a set-top box during any test procedure, resulting in measurements that are unrepresentative of the true characteristics of the set-top box that may occur during normal use under comparable conditions;
- “complex set-top box” means a set-top box that performs the same basic function as a simple set top box but includes conditional access, capability or functionality that allows for control in accordance with a subscription package or Pay-Tv the customer subscribes to;
- “conditional access” means a provider-controlled broadcasting service which requires a market subscription television service;
- “container” means a receptacle or enclosure for holding a product for storage, packaging and shipping;
- “court” means a court of competent jurisdiction;
- “dealer” means a retailer or other person who displays, offers for sale, or sells a set-top box to an end user;
- “default” referring to a specific feature or setting, means the value of a specific feature as set at the factory and available when the customer uses the product for the first time and after performing a “reset to factory settings” action, if allowed by the product;

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- “distance selling” means the sale of goods or services without the buyer and seller being physically present simultaneously;
- “DVR” means a digital video recorder that takes input from cable or satellite converter and records video in digital format in any hard-drive, flash-drive or secure digital card attached with device;
- “dwelling place” means place of residence;
- “electric mains-operated set-top box” means a set-top box that operates on electricity supply from the grid of 230 (\pm 10%) volts of alternating current at 50Hz;
- “electronic Product Information Sheet” means a document containing the following information in electronic format:
- (a) basic product information;
 - (b) energy label information; and
 - (c) special features and characteristics;
- “end user” means the first user of a set-top box;
- “endorsement labelling scheme” includes a voluntary labelling scheme that guarantees the performance standards of the set-top box, that are equal to or exceed the minimum threshold established by a recognised advisory body;
- “enforcement authority” means
- (a) an authorised officer of the Commission;
 - (b) an authorised officer of the Standards Authority;
 - (c) an authorised officer of the Customs Division of the Ghana Revenue Authority;
 - (d) an authorised officer of the Police Service; or
 - (e) an authorised person designated by the Customs Division of the Ghana Revenue Authority, the Commission or the Standards Authority to carry out inspections for the purposes of these Regulations;
- “environmental labelling scheme” means a voluntary labelling scheme that provides detailed information on the environment in respect of the performance characteristics of a set-top box;

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“equivalent model” means a model which has the same technical characteristics relevant for the technical information to be provided, but which is placed on the market or put into service by the same manufacturer, importer or authorised representative as another model with a different model identifier;

“gesture detection sensor” means a sensor monitoring and reacting to movement in the space around a set-top box where

- (a) the signal of the gesture detecting sensor can trigger the switching of the set-top box to on-mode; and
- (b) lack of movement detection by the gesture detecting sensor for a predetermined time can switch the set-top box into standby mode or networked standby mode;

“GS” means Ghana Standards;

“home-mode” means the set-top box setting which is recommended by the manufacturer for normal home use;

“importer” means a person who places a set-top box from a foreign country on the Ghanaian market and supplies that set-top box for use;

“information or status display” means a continuous function providing information or indicating the status of the equipment on a display, including clocks;

“Internet Protocol Television” means a service that uses a packet switched network like LAN and Internet over Internet protocol suite for delivering services that are mainly classified in Video on Demand, live television and time-shifted television;

“label” means a material attached to a set-top box the inscription of which contains information on the energy consumption of the set-top box;

“minimum energy performance standards” mean a set of procedures and regulations that prescribe the minimum allowable values of energy efficiency or energy performance of manufactured products;

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“model identifier” means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trademark or the same name of the manufacturer, importer or authorised representative of the manufacturer;

“occupancy sensor” means a gesture detecting sensor;

“off-mode” means a condition in which the equipment is connected to the mains power source and is not providing any function including

(a) a condition providing only an indication of off-mode condition; and

(b) a condition providing only functionalities intended to ensure electromagnetic compatibility with controls and signals applicable to the set-top box;

“on-mode” means the condition where the set-top box is connected to the mains power source and produces sound or picture;

“point of sale” means the place at which a retail transaction is carried out;

“premises” means land and any building, store, shop, apartment, or other structure on the land used for the storage of a set-top box;

“product brochure” includes a pamphlet or booklet that contains introductory information about a product;

“Product Information Sheet” means a standard table of information related to a set-top box;

“Quick Response Code” means a matrix barcode included on the energy label of a product model that links to the information of the model in the public part of the product database;

“rated voltage” means the voltage marked on the set-top box in volts;

“reactivation function” means a function facilitating the activation of other modes, including on-mode, by remote switch including remote control, internal sensor or timer to a condition providing additional functions, including on-mode;

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- “record” includes a book, document, label, mark, symbol, inscription or information in electronic form;
- “room presence sensor” means a gesture detection sensor;
- “sale” means the exchange of a product for consideration including hire purchase, credit sale and purchase by instalment;
- “satellite” means a service that receives signals from satellite network and forwards the signals into Quadratic Phase Shift Keying for Modulation and Demodulation;
- “set-top box” means an equipment for the reception of television and related services including radio from terrestrial, cable, satellite or broadcast networks which are decoded and delivered to a display or recording device;
- “simple set-top box” means a stand-alone device which, irrespective of the interfaces used
- (a) has the primary function of converting standard-definition or high-definition, free-to-air digital broadcast signals to analogue broadcast signals suitable for analogue television or radio;
 - (b) may include internal hard drive or solid-state memory for recording and other functionalities;
 - (c) offers no recording function based on removable media in a standard library format; and
 - (d) has no conditional access function;
- “Standards” means quality specifications for set-top boxes as stipulated in the First Schedule;
- “Standards Authority” means the Standards Authority established under the Standards Authority Act, 1973 (NRCD 173);
- “stand by-mode” means a condition where
- (a) the set-top box is connected to the mains power source;
 - (b) depends on energy input from the mains power source to function properly; and
 - (c) offers the following functions only, which may persist for an indefinite time:

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- (i) reactivation function and only an indication of enabled reactivation function;
- (ii) information or status display; or
- (iii) both functions referred to subparagraphs (i) and (ii);

“supplier” means a person or organisation that provides a product, including

- (a) a manufacturer or the authorised representative of a manufacturer resident in the country; and
- (b) an importer or the person who introduces a set-top box on the Ghanaian market;

“supply” includes an offer to supply, contract to supply and an advertisement for supply of a set-top box but excludes the exhibition at a trade fair of a set-top box that is prohibited by these Regulations;

“terrestrial” means a type of broadcasting in which the broadcast signal is transmitted by radio waves from the earth-based transmitter of a broadcasting station to a receiver having an antenna;

“wattage” means the power marked on the set-top box, in watts (W); and

“year” means the period from 1st January to 31st December.

Transitional provision

45. A person who, before the coming into force of these Regulations, has

- (a) manufactured in the country; or
- (b) imported into the country

a set-top box that does not comply with these Regulations, shall, within one year after the coming into force of these Regulations, sell, distribute, donate or otherwise dispose of that set-top box.

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SCHEDULES
FIRST SCHEDULE

STANDARDS

(regulations (1)(a)(i), 3(1)(b)(i) and 44)

1. GS 1099:2019 Telecommunication – Ghana minimum technical specifications of DTT and DTH receivers for free-to-air (FTA) television reception.
2. GS IEC 62087-1: 2015 Audio, video, and related equipment – Determination of power consumption – Part 1: General.
3. GS IEC 62087-2: 2015 Audio, video, and related equipment – Determination of power consumption – Part 2: signals and media.
4. GS IEC 62087-5: 2015 Audio, video, and related equipment – Determination of power consumption – Part 5: Set top boxes.
5. GS IEC 62301: 2011 Household electrical appliances - Measurement of standby power.
6. GS IEC 62216: 2009 Digital Terrestrial TV Receiver for the DVB-T System.

Notes:

1. The Standards are applicable to a set-top box (STB) used to convert digital television signals to a signal compatible with the existing television receiver and television monitor technology, including analogue signal, composite video, s-vhs, IP, component video and HDMI.
2. Both a simple set-top box and a complex set-top box are included under the scope of the Standards in this Schedule. Signals based on Free-to-Air services and Conditional access for receiving subscription services through built-in access control or the use of an access card-key or similar, including Cable Card type services, are covered under the Standards for these Regulations.

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3. The scope of these Regulations cover the minimum technical requirements for a standard and high definition receiver for free-to-air Digital Terrestrial Television (DTT), Digital Satellite Direct-to-Home (DTH) Television or both, in the country as well as other additional functionalities of the set-top box which may be mandatory or optional together with the corresponding power or energy consumption allowance limits and requirements.
4. Measurements and calculations shall meet the technical definitions, conditions, equations and parameters set out in the Second Schedule.

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SECOND SCHEDULE

MINIMUM ENERGY PERFORMANCE STANDARDS

(regulations 1(a)(i), 1(b), 3(1)(b)(ii), 4(1)(a), 6 and 11(1)(g)(vi), 11(2) and 13(4)(i))

PART ONE

(regulations 1(a)(i), 1(b) and 4(1)(a))

1. The energy efficiency level of the types and categories of set-top boxes covered in these Regulations is defined in terms of specified minimum energy performance standards (MEPS) requirements based on measurements of the following power and energy consumption parameters determined in accordance with standard test conditions and procedures as set out in the Standards provided in the First Schedule and determined in accordance with calculations provided in this Schedule:
 - (a) Power for 'on' or 'active' mode, also called TV mode (W), which may have variants depending upon the additional functionalities available as set out in Table 1.1;
 - (b) Power for various types of 'standby' mode as set out in Table 1.2; and
 - (c) Total Energy Consumption (TEC) per year (kWh/year) based on consistent assumptions of hours per year in each mode multiplied by the relevant power levels.

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2. Table 1.1: Type of On-modes for Set-top box (STB)

On-mode types	Definition
On mode (on/active mode)	STB is connected to a power supply and fulfils its main function
On (Average) mode	STB is performing the function of providing a viewer with video and audio from a broadcast
On (Play) mode	STB is playing back a prerecorded programme
On (Record)	STB is connected to a power source and records a signal from an external or internal source
On (multifunction)	STB is performing multiple functions simultaneously
Auto Power Down (APD)	STB to power down into Partial on (Standby) mode after a predetermined time

3. Table 1.2: Type of Standby modes for Set-top box

Standby-mode types	Definition
Passive standby	Text A: STB is connected to a power source, does not fulfil the main function but can be switched into another mode with the remote control unit or an internal signal
Standby active, low	Same as Text A PLUS and can additionally be switched into another mode by an external signal
Standby active, high	Same as Text A PLUS and is exchanging/receiving data with/from an external source
Sleep (from auto-sleep or user initiated or other)	STB has less power consumption, capability, and responsiveness than in the On/Active state

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PART TWO

(regulations 1(a)(i), 1(b), 3(1)(b)(ii) and 6)

Energy Efficiency Requirements for Simple Set-Top Boxes (SSTBs)

1. Power consumption limits

A simple set-top box manufactured locally or imported for use in the country shall not exceed the power consumption limits specified in Table 2.1:

Table 2.1: Power consumption limit of simple set-top box

Base Limit / Type of Allowance	Standby mode	Active mode
Simple STB	0.50 W	5.00 W
Allowance for display function in standby	0.50 W	-
Allowance for Hard Disk	-	6.00 W
Allowance for second tuner	-	1.00 W
Allowance for decoding HD signals	-	1.00 W

2. Standby Feature

A simple set-top box manufactured locally or imported for use in the country shall be equipped with the 'Standby mode' feature.

3. Automatic Power down Feature

A simple set-top box manufactured locally or imported for use in the country shall be equipped with an 'Automatic Power-Down' or similar function with the following characteristics:

- (a) the simple set-top box shall be automatically switched from active mode into standby mode after less than three hours in active mode following the last user interaction or a channel change with an alert message two minutes before going into standby mode; and
- (b) the 'automatic power-down' function shall be set as default.

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4. Tests and Measurements

Tests and measurements of the specified parameters shall be taken in accordance with the provisions under Part Four of this Schedule.

PART THREE

(regulations 1(a)(i), 1(b), 3(1)(b)(ii), 4(1)(a) and 6)

Energy Efficiency Requirements for Complex Set-Top Boxes (CSTBs)

1. Total Energy Consumption (TEC)

The energy efficiency level of a complex set-top box is determined by the result of a single energy value (in kWh/year) representing the energy usage of the device over the course of an entire year, its Total Energy Consumption (TEC).

2. Maximum TEC

Energy consumption limits are established for the base functionality of a complex set-top box (TEC_{BASE}) and added to energy consumption allowances established for specific additional functionalities present (TEC_{ADD_i}) for the complex set-top box to determine the Maximum Total Energy Consumption (TEC_{MAX}) for the device in accordance with calculations provided under Part Four of this Schedule. The criterion is a limit for base functionality, plus limits for specific, additional functionalities present across a duty cycle.

3. Base Functionality TEC Limit (TEC_{BASE}) for type or category of complex set-top box

(a) TEC_{BASE} limits for a complex set-top box signal categories as defined in Part Two of the Fourth Schedule are provided in Table 3.1.

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- (b) The TEC base functionality limits of complex set-top boxes includes conditional access to allow for the descrambling of standard definition digital video and audio signals.
- (c) The base functionality of complex set-top boxes includes the reception of digital TV signals from Cable, Satellite, IP or Terrestrial distribution systems, or else Thin Client functionality, as further specified below.
- (d) The classification of each complex set-top box as set out Table 3.1 is distinct and each classification is mutually exclusive. If a particular complex set-top box might fall into more than one of the categories then it shall be treated as falling solely into the first such category.

Table 3.1: TEC_{BASE} Limits

CSTB base-type definition (Type of signal)	Base annual energy Limit (kWh/yr)	Notes
Cable CSTB	50	Return Path allowance is inclusive of established limits
Satellite CSTB	45	
Internet Protocol (IP) CSTB	30	
Terrestrial CSTB	25	
Thin Client/Remote CSTB	7	

4. Additional Functionality TEC Limit (TEC_{ADD_i}) for complex set-top box

Additional Functionality limits or allowances shall be as specified in Table 3.2, subject to the following usage rules:

- (a) Each Additional Functionality Allowance shall be used at most once per complex set-top box unless otherwise specified;

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- (b) **Additional RF Channels Cable or Satellite:** Access to additional RF channels may be achieved either by adding additional RF narrowband tuners (each with its corresponding demod) or else by providing a wideband (or full band capture) tuner capable of accessing multiple channels simultaneously (via multiple demods) either from the primary network or else from a physically separate network. This limit does not apply to additional network-based IP inputs such as an additional Ethernet interface. The limit given is per additional RF channel and can be claimed for each additional channel that can be displayed or recorded simultaneously;
- (c) **Additional RF Channels IP or Terrestrial:** Access to additional video channels. The limit given is per additional channel capable of being decoded and the allowance is restricted to a maximum of 11 additional channels (12 including initial base). The allowance can be claimed for each additional channel that can be displayed or recorded simultaneously;
- (d) **High Efficiency Video Processing:** High Efficiency methods for video decoding, giving compression efficiency significantly beyond H.264/AVC. This includes, but is not limited to HEVC H.265;
- (e) **Full High Definition Resolution:** Video output with resolutions greater or equal to 1080p (1920 pixels x 1080 lines at 50 frames/s progressive);
- (f) **Ultra-High Definition Resolution:** Video output with resolutions greater or equal to 4Kx2K (3840 pixels x 2160 lines at 50 frames/s progressive);
- (g) **3DTV Processing:** Producing a 3D output by using a method that requires the processing of some form of difference signal;

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- (h) **Advanced Graphics Processing:** Advanced graphics capabilities for providing 3D graphics acceleration giving support for OpenGL ES 2.0 or higher;
- (i) **Digital Video Recorder (DVR):** A device that stores video in a digital format to a rewritable disk drive or other non-volatile storage media local to the unit. It does not include server based DVR capabilities. For the DVR energy limit to be claimed the recording capability shall be greater than 30 minutes;
- (j) **Multi-decode:** A complex set-top box with a functionality limit that meets the definition for Cable, Satellite, IP or Terrestrial complex set-top box and is capable of decoding more than one content stream such as in PiP;
- (k) **Multi-display:** A complex set-top box with a functionality limit that meets the definition for Cable, Satellite, IP or Terrestrial complex set-top box and is capable of providing independent content streams to at least 3 display devices external to the complex set-top box;
- (l) **Multi-encoding:** A Cable, Satellite, IP or Terrestrial complex set-top box that is also capable of audio-video encoding from the highest claimed decoding resolution of the device to a different encoding format in the nature of HEVC to MPEG4 to output content to a different device;
- (m) **In-Home Networking:** The capability to interface with external devices over a high bandwidth network in the nature of IEEE 802.11 (Wi-Fi), MoCA, HPNA, Home Plug). The limit is once per equipment and excludes wired Ethernet;
- (n) **In-Home Networking Access Point-Router:** The capability to determine the optimal path along which IP traffic should be routed IP between different home networks based on layer information;

ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022

- (o) **Return Path Functionality:** This is an indicator of an enhanced functionality complex set-top box. Return Path functionality may be provided by any common means of connecting to a telecommunications network and used for the purpose of two-way data communications between the complex set-top box and the service provider in the nature of Ethernet, Wi-Fi, cable modem or telecommunications modem);
- (p) **Return Path Technical Interface:** In addition to the Return Path Functionality limit, a further limit applies for complex set-top boxes which include a broadband cable modem or broadband telecommunications modem. The value of this limit is dependent on the broadband technology used;
- (q) **Speculative Recording:** Automated recording based on customer profiling;
- (r) **Telephony:** The ability to connect to analog home telephone systems including but not limited to VOIP (Voice Over IP) and POTS (plain old telephone system);
- (s) **Smart Home services / Ultra high processing capability:** High-end services requiring ultra-high-end CPU and memory concept providing high (DMIPS) processing capability to run securely and independently concurrent applications;
- (t) **MIMO Wi-Fi 2.4GHZ:** In addition to the In-Home Networking or In-Home Networking Access Point–Router a limit may be claimed for each spatial stream in the 2.4GHZ band that the device supports. If a device supports both 2.4 and 5GHZ bands the limit may be claimed for both bands if both bands can be used concurrently. If the bands are switchable then the limit can only be claimed for one band;
- (u) **MIMO Wi-Fi 5GHZ:** In addition to the In Home Networking or In Home Networking Access Point– Router a limit may be claimed for each spatial stream in the 5GHZ band that the device supports;

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- (v) **Powerline:** The ability to network between clients and servers using signaling via the mains domestic wiring examples of include power line, G.hn; and
- (w) **Community Wi-Fi:** allows service providers to leverage unused capacity on existing Wi-Fi infrastructure to offer Wi-Fi network access to visitors and passers on an ad-hoc basis.

Table 3.2: Additional Functionality limits or allowances

Additional Functionality description	Functional TEC_{ADD_i} allowance (kWh/yr)	Notes
Access to additional RF channels Cable or Satellite	7	Per channel
Multi-Stream - Terrestrial/IP [Access to Additional channels IP or terrestrial]	4	Per channel
High Efficiency Video Processing (HEVP)	12	Once per Set-top box
Full High Definition (HD) resolution -1080p60, (2kx1k) 60hz	12	Once per equipment
Ultra High Definition (8kx4k_16x full hd) - Mutually exclusive with Full High Definition	20	Once per equipment
3D TV processing	8	Once per equipment
Digital Video Recorder (DVR)	15	Recording capability > 30 minutes to claim
In-Home Network (IHN)	12	Once per equipment
In-Home Networking Access Point – Router	15	Once per equipment

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Return path technology interfaces Docsis 2.0 or ADSL	18	Once per equipment
Return path technology interfaces Docsis VDSL	18	Once per equipment
Return path technology interfaces_Docsis 3,0 (1st 4 channels)	25	Once per equipment
Return path technology DOCSIS 3.0 additional 4 channels (per 4)	5	Once per equipment
Telephony /VOIP	4	Once per equipment
MIMO WiFi IHN - 2.4GHz	3	Per spatial stream
MIMO Wi-Fi 5.0GHz	8	Per spatial stream
Powerline	10	Once per equipment
Community WiFi *	3	Per spatial stream

5. Measured Total Energy Consumption ($TEC_{measured}$)

- (a) The measured TEC ($TEC_{measured}$) values are derived from tests, measurements and calculations provided in Part Four of this Schedule and compared with the calculated or declared Maximum TEC (TEC_{MAX}) to determine compliance of the complex set-top box.
- (b) Measured TEC ($TEC_{measured}$) as calculated in Equation (2) under Part Four of this Schedule shall be less than or equal to the Maximum TEC (TEC_{MAX}) requirement as calculated in Equation (1) under Part Four of this Schedule.

ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022

PART FOUR

(regulations 6 and 11(1)(g)(vi))

Measurements and Calculations

1. Basic Test Requirements

The basic test conditions and requirements for the measurements under these Regulations are summarised in Table 4.1 with details provided in the various standards in the First Schedule.

Table 4.1: Summary of basic test conditions

Test Conditions	Value	
Ambient temperature	23 ± 5 °C	
Air speed close to the unit	≤ 0.5 m/s	
Supply voltage	230V ± 1% 50 Hz ± 1%	
Supply voltage waveform	Total harmonic content ≤ 2% Crest factor between 1.34 and 1.49	
<u>Power measurement accuracy:</u> Power level ≥ 0.5W Power level ≤ 0.5W	<u>Uncertainty</u> ≤ 2% level ≤ 0.01 W	<u>Confidence Level</u> at the 95% confidence at the 95% confidence
<u>Instrument resolution:</u> Power ≤ 10 W 10W < Power ≤ 100W Power > 100W	<u>Resolution</u> ≥ 0.01 W ≥ 0.1 W ≥ 1 W	
<u>Total Energy Consumption (TEC) Calculations:</u> TEC ≤ 10 kWh 10kWh < TEC ≤ 100kWh TEC > 100kWh	<u>Resolution</u> ≥ 0.01 W ≥ 0.1 W ≥ 1 W	

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2. Test measurements and methods

Measurement of the following principal parameters shall be undertaken in accordance with the test conditions and methods specified in GS 1099:2015 and GS IEC 62087-5 and other Standards provided in the First Schedule:

- (a) Standby Power (P_{Standby} , user initiated) including passive and active Standby modes to obtain an average power for standby mode;
- (b) Auto Power Down (P_{APD} , EUT initiated);
- (c) Power for 'on' or 'active' mode, also called TV mode (W), including the following:
 - (i) "On" mode Power for non-DVR;
 - (ii) "On" mode Power for complex set-top box with DVR; and
 - (iii) "On" mode Power for In Home Networking Access Points – Router.

3. Calculations

Total energy consumption (TEC) per year (kWh/year) based on consistent assumptions of hours per year (duty cycle) in each mode multiplied by the relevant power levels are then calculated using test measurement results obtained as follows:

(a) Maximum Total Energy Consumption (TEC_{MAX})

The maximum allowed TEC (TEC_{MAX}) in kWh/year is the sum of the specified complex set-top box base type limit and the sum of all applicable Additional Functionality Allowances as calculated using the formula

$$TEC_{\text{MAX}} = TEC_{\text{BASE}} + \sum_{i=1}^n TEC_{\text{ADD } i} \quad \dots \text{Eq(1)}$$

Where

TEC_{BASE} = the Base Functionality Limit (kWh/year) as provided in Table 3.1 under Part 3 of this Schedule

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TEC_{ADD_i} = each applicable Additional Functionality Allowance (kWh/year) as provided in Table 3.2 under Part 3 of this Schedule.

(b) Measured TEC ($TEC_{measured}$):

The measured TEC ($TEC_{measured}$) shall be calculated using the following formulae:

$$TEC_{measured} = TEC_{primary} + TEC_{play/record} \dots\dots Eq (2);$$

$$TEC_{primary} = 0.365 [(P_{tv} \times T_{tv}) + (P_{APD} \times T_{APD}) + (P_{Standby} \times T_{Standby})] \dots\dots Eq (3); \text{ and}$$

$$TEC_{play/record} = 0.365 [(P_{play} - P_{tv}) \times T_{play}] + [(P_{record} - P_{tv}) \times T_{record}] \dots Eq (4).$$

Where:

P_{tv} = measured On mode power (in W)

P_{APD} = measured Auto Power-Down mode power (in W)

$P_{Standby}$ = measured Standby mode power (in W)

T_{tv} = assumed proportion of time (per day) spent in On mode as provided in Table 4.2;

T_{APD} = assumed proportion of time (per day) spent in Auto Power-down mode as in Table 4.2;

$T_{Standby}$ = assumed proportion of time (per day) spent in Standby mode as provided in Table 4.2

P_{play} = measured power in Playback mode (in W)

P_{record} = measured power in Recording mode (in W)

T_{play} = assumed proportion of time (per day) spent in Playback mode as provided in Table 4.3;

T_{record} = assumed proportion of time (per day) spent in Recording mode as provided in Table 4.3.

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Table 4.2: Assumed Base Duty Cycle of CSTB (in hours/day)

STB with or without Auto power down (APD) functionality	Hours in On mode (T_{tv})	Hours in Standby mode ($T_{standby}$)	Hours in Auto power down mode (T_{apd})
Without APD	9	15	-
With APD	4.5	15	4.5

Table 4.3: Assumed Playback/Recording functionality durations (in hours) for CSTB

STB functional	PVR/DVR (hours/day)	Removable media playback	Removable media playback with record
Hours on-playback (T_{play}) =>	2	2	2
Hours on-record (T_{record}) =>	3	0	1

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THIRD SCHEDULE

THE LABEL

(regulations 3(1)(b)(iii), 11(1)(a)(i), 11(1)(d)(i) and 16(4)(b))

1. Label design for Simple Set-Top Box

The design of the label for a Simple set-top box shall be in accordance with Figure 1 and shall include the information required by the notes.

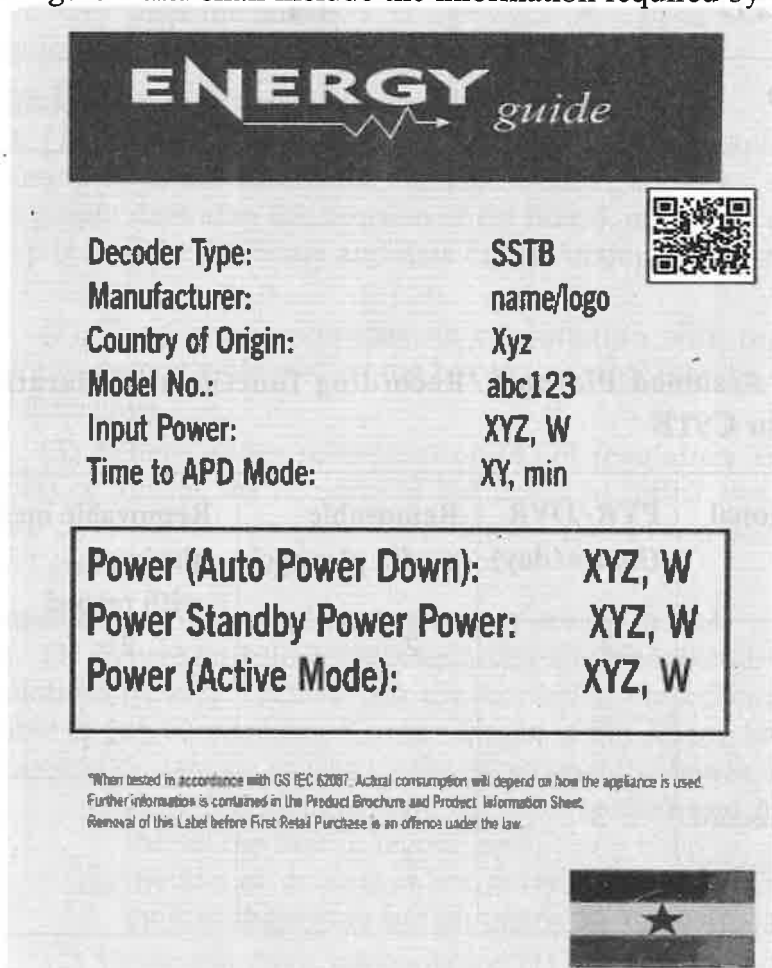


Figure 1: Simple set-top box Label

ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022

2. Notes to Figure 1

- (i) the Quick Response Code;
- (ii) type of set-top box;
- (iii) the name or trade mark of the manufacturer;
- (iv) the model identifier of the manufacturer;
- (v) the input power or wattage of the set-top box;
- (vi) the power consumption (P_{Standby}) in Standby mode (W);
- (vii) the power consumption (P_{APD}) in Automatic Power Down mode (W);
- (viii) the length of time to Automatic Power down (T_{APD}) mode (hours); and
- (ix) the power consumption (P_{Active}) in Active mode (W) (with or without additional functionality allowances, if applicable); and
- (x) the country of origin.


3. Label design for Complex Set-Top Box

The design of the label for a complex set-top box shall be in accordance with Figure 2 and shall include the information required by the notes.

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ENERGY *guide*

Decoder Type:	CSTB
Manufacturer:	name/logo
Model No.:	abc123
Input Power:	XYZ, W
Standby Power:	XYZ, W
Power (TV On Mode):	XYZ, W
Power (Playback Mode):	XYZ, W
Power (Record Mode):	XY, min
Total Energy Consumption (TEC_{MAX})	xyz, kWh/yr
Total Energy Consumption (TEC_{BASE})	xyz, kWh/yr
Country of Origin:	XYZ



Measured TEC of Decoders, TEC_{MAX} kWh/yr on the Market

Minimum XYZ, kWh	Total Energy Consumption of this Model	Maximum XYZ, kWh
<h2 style="margin: 0;">XYZ, kWh/yr*</h2>		

*When tested in accordance with CS-EC-COR-1. Actual consumption will depend on how the appliance is used. Further information is contained in the Product Reference and Handbook. Information Panel, Reference Label and Reference Panel are provided for reference under the law.




Figure 2: Complex Set-Top Box Label

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4. Notes to Figure 2

- (i) the type of set-top box;
- (ii) the Quick Response Code;
- (iii) the name or trade mark of the manufacturer;
- (iv) the model identifier of the manufacturer;
- (v) the input power or wattage of the set-top box;
- (vi) the power consumption (P_{Standby}) in Standby mode (W);
- (vii) the power consumption (P_{APD}) in Automatic Power Down mode (W);
- (viii) the length of time to automatic power down (T_{APD}) mode (hours);
- (ix) the power consumption (P_{TV}) in TV watching mode or 'On' mode (W);
- (x) the power consumption (P_{play}) in Playback mode (W);
- (xi) the power consumption (P_{record}) in recording mode (W);
- (xii) the maximum total energy consumption (TEC_{MAX}) value (kWh/year) including functionality adjustments applied;
- (xiii) the base total energy consumption TEC_{BASE} value applied (kWh/year);
- (xiv) the measured total energy consumption ($\text{TEC}_{\text{measured}}$) value (kWh/year) inclusive of functionality adjustments applied and determined in accordance with the test procedures of the Standards and calculations provided in Part 4 of the Second Schedule; and
- (xv) the country of origin.

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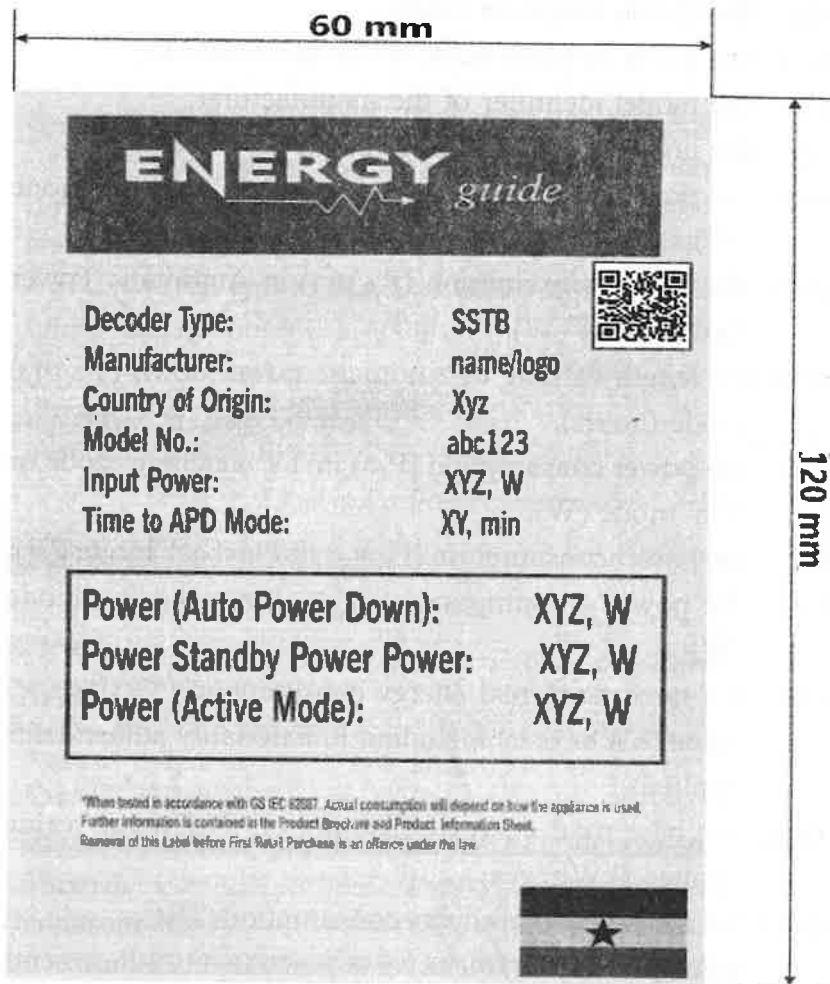


Figure 3: Dimensions of Labels

ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022

5. Printing

- (1) Figure 1 and Figure 2 define aspects of the labels for a simple set-top box and a complex set-top box respectively.
- (2) The dimensions of the labels shall be in accordance with the illustration in Figure 3 and shall be placed on the front or side of the regulated appliance.
- (3) Colours are to be used on the label in accordance with the following:
 - (a) all text shall be in black or gold as illustrated;
 - (b) the background shall be gold; and
 - (c) the border line shall be in black.

ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (SET-TOP BOXES) REGULATIONS, 2022

FOURTH SCHEDULE

PRODUCT INFORMATION SHEET

(regulations 3(2), 5, 10(2)(b), 10(2)(c), 11(1)(c), 16(4)(b),(c),(d) and (e), 18(1), 18(2)(b), 22(b), 24(2)(c), 25(b)(iii) and 26(2)(a))

PART ONE

(regulations 10(2)(b), 11(1)(c), 18(1), 18(2)(b) and 22(b))

A supplier shall provide in the Product Information Sheet and make publicly available on free-access websites the following information:

1. For Both Simple Set-Top Box and Complex Set-Top Box

- (a) product type and one category as defined in Part Two of this Schedule;
- (b) name, registered trade name or registered trade mark and address of manufacturer;
- (c) product model number;
- (d) year of manufacture; and
- (e) additional functionality features.

2. For Simple Set-Top Box

- (a) Power consumption (P_{Standby}) in Standby mode (W);
- (b) Power consumption (P_{Standby}) in Display Standby mode (W);
- (c) Power consumption (P_{Active}) in Active mode (W) with additional functionality allowances (W);
- (d) Power consumption (P_{Active}) in Active mode (W) without additional functionality allowances (W);
- (e) Power consumption (P_{APD}) in Automatic Power Down mode (W); and
- (f) Length of time to Automatic Power Down (T_{APD}) mode (hours).

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3. For Complex Set-Top Box

- (a) Power consumption (P_{TV}) in TV watching or mode 'On' mode (W);
- (b) Power consumption ($P_{Standby}$) in Standby mode (W);
- (c) consumption (P_{Play}) in Playback mode (W);
- (d) Power consumption (P_{record}) in recording mode (W);
- (e) Power consumption (P_{APD}) in Automatic Power Down mode (W);
- (f) Length of time to Automatic Power Down (T_{APD}) mode (hours);
- (g) TEC_{MAX} value (kWh/year) and functionality adjustments applied;
- (h) TEC_{BASE} value (kWh/year);
- (i) $TEC_{measured}$ value (kWh/year) and functionality adjustments applied;
- (j) User information on the energy-saving potential of power management functionality; and
- (k) User information on how to enable the power management functionality (where applicable).

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PART TWO

(regulation 5)

Type and Categories of Set-top boxes

<i>Category</i>	<i>Description of characteristics/functions and features</i>	<i>Description of characteristics/functions and features</i>	
		<i>Base Functionality</i>	<i>Additional Functionality</i>
Simple Set-Top Box (SSTP)	Standard Definition (SD) FTA	<ul style="list-style-type: none"> - Display function in standby - Automatic Power Down (APD) - No conditional access (CA) function - No recording function based on removable media 	<ul style="list-style-type: none"> - Integrated hard disk for Time-Shift and Recording - Conversion of HD broadcast signal reception to HD or SD video output - Second tuner
	High Definition (HD) FTA		
Complex Set-Top Box (CSTB)	Cable	<ul style="list-style-type: none"> - Conditional access (CA) function - Reception, descrambling and processing of data from digital broadcasting streams and related services - Protection of content in transport and on the platform - Audio and video decoding and output capability - Ability to provide content to one or more dedicated 	<ul style="list-style-type: none"> - Additional RF Channels Cable or Satellite - Additional RF Channels IP or Terrestrial - High Efficiency Video Processing - Full High Definition Resolution - Ultra-High Definition Resolution - 3DTV Processing - Advanced Graphics Processing - Digital Video Recorder (DVR)- Multi-decode - Multi-display - Multi-encoding
	Satellite		
	Internet Protocol (IP)		
	Terrestrial		
	Thin-Client /Remote		

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	<p>Thin-Client/Remote CSTBs via a home network</p> <ul style="list-style-type: none"> - Gateway and routing functions - Return Path Functionality 	<ul style="list-style-type: none"> - In Home Networking (IHN) - IHN Access Point - Router - Speculative Recording - Telephony including VOIP - Smart Home services / Ultra high processing capability - MIMO Wi-Fi 2.4GHZ - MIMO Wi-Fi 5GHZ - Powerline - Community Wi-Fi
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PART THREE
(regulation 10(2)(c))

Technical documentation

1. The technical documentation referred to in regulation 10 shall include
 - (a) all the Product Information Sheet requirements listed under Part One of this Schedule;
 - (b) the test and measurement methodology used to determine information mentioned in paragraphs (f) to (p), if applicable;
 - (c) sequence of steps for achieving a stable condition with respect to power demand;
 - (d) description of applicable standby modes and how they have been programmed;

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- (e) the length of time after a period of user inactivity in which the device slides into Automatic Power Down; and
 - (f) test parameters for measurements as follows:
 - (i) test voltage in V and frequency in Hz;
 - (ii) total harmonic distortion of the electricity supply system;
 - (iii) information and documentation on the instrumentation; and
 - (iv) set-up and circuits used for electrical testing.
2. If a product model is placed on the market in multiple configurations, the product information required in paragraph 1 of this Part may be reported once per product category as defined in Part Two of this Schedule, for the highest power-demanding configuration available within that product category. A list of all model configurations that are represented by the model for which the information is reported shall be included in the information provided.

PART FOUR

(regulation 24(2)(c))

Mail Order and other Distance Selling

Information to be provided in cases where an end-user cannot be expected to see the product displayed

1. A supplier shall ensure that
 - (a) a set-top box offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the appliance displayed, is marketed with the Product Information Sheet;

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- (b) a mail order catalogue and other communication shall contain at least, the following information, given in the order specified below:
- (i) product model number;
 - (ii) year of manufacture;
 - (iii) TEC_{max} value (kWh) and capability adjustments applied when all available functionalities associated with the device are enabled;
 - (iv) Power consumption (P_{Standby}) in Standby mode (W);
 - (v) Power consumption (P_{APD}) in Automatic Power Down mode (W);
 - (vi) Length of time to Automatic Power Down (T_{APD}) mode (hours);
 - (vii) Power consumption (P_{Active}) in Active mode (W) (with and without additional functionality allowances, if applicable); and
 - (viii) noise levels (the declared A-weighted sound power level) of the set-top box;
- (c) an advertisement for a specific set-top box model contains the energy performance specifications, if the advertisement discloses energy-related or price information and shall appear in the order described in paragraph (b); and
- (d) a technical promotional material concerning a specific set-top box model, which describes the specific technical parameters of the set-top box, includes the energy performance characteristics of that model.
2. The size and font in which all the information referred in this Part is printed or shown shall be legible.

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PART FIVE

(regulations 3(2), 16(4)(c), 16(4)(d), 16(4)(e) and 25(b)(iii))

Information to be provided in audio advertisements, visual advertisements, in technical promotional material, in distance selling, except distance selling on the internet

1. In an audio advertisement, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3, the total energy consumption of the model of set-top box being advertised and the specified minimum energy performance standards of the models available on the market shall be stated in the advertisement.
2. In a visual advertisement, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3, the annual total energy consumption of the model of set-top box and the minimum energy performance standards of the set-top box shall be made available on the label and be shown as set out in paragraph 5 of this Part.
3. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3 the annual total energy consumption of the model of set-top box and the minimum energy performance standards of the set-top box made available on the label and be shown as set out in paragraph 5 of this Part.
4. A paper-based distance selling shall show the energy performance characteristics of the model of set-top box and the ranges of energy performance characteristics available on the label as set out in paragraph 5 of this Part.
5. The total energy consumption of the model of set-top box and the minimum energy performance standards of the set-top box shall be shown, as indicated in Figure 1, with
 - (a) an arrow, containing the total energy consumption in hundred per cent white, Calibri Bold and in a font size equivalent to that of the price, when the price is shown;

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- (b) the colour of the box in gold;
- (c) the minimum energy performance standards in hundred per cent black; and
- (d) the size such that the box is clearly visible and legible.
6. By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the box can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.
7. Telemarketing-based distance selling shall specifically inform the customer of the total energy consumption of the model and minimum energy performance standards available on the label, and that the customer can access the full label and the Product Information Sheet through a free access website, public part of the Appliance Energy Efficiency Register of the Commission or by requesting a printed copy.

POWER (SSTB)	
MAX POWER (ACTIVE MODE)	XX, W
ACTIVE MODE POWER FOR THIS MODEL	XX, W
MIN POWER (ACTIVE MODE)	XX, W

ENERGY (CSTB)	
MAX TEC	YY, kWh/yr
TOTAL ENERGY CONSUMPTION (TEC) FOR THIS MODEL	YY, kWh/yr
MIN TEC	YY, kWh/yr

Figure 1: Coloured/monochrome MEPS indicated for simple set-top box and complex set-top box respectively

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8. For all the situations mentioned in paragraphs 2 to 4 and paragraph 7, it shall be possible for the customer to obtain, on request, a printed copy of the label and the Product Information Sheet.

PART SIX

(regulation 26(2)(a))

Information to be provided in the case of distance selling through the Internet

1. The appropriate label made available by suppliers in accordance with the Third Schedule shall be shown on the display mechanism in proximity to the price of the product.
2. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in the Third Schedule.
3. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in paragraph 5 of this Part.
4. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
5. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall
 - (a) indicate the total energy consumption of the product in the box in hundred per cent black, Calibri Bold and in a font size equivalent to that of the price; and
 - (b) have the minimum energy performance standards in hundred per cent black.

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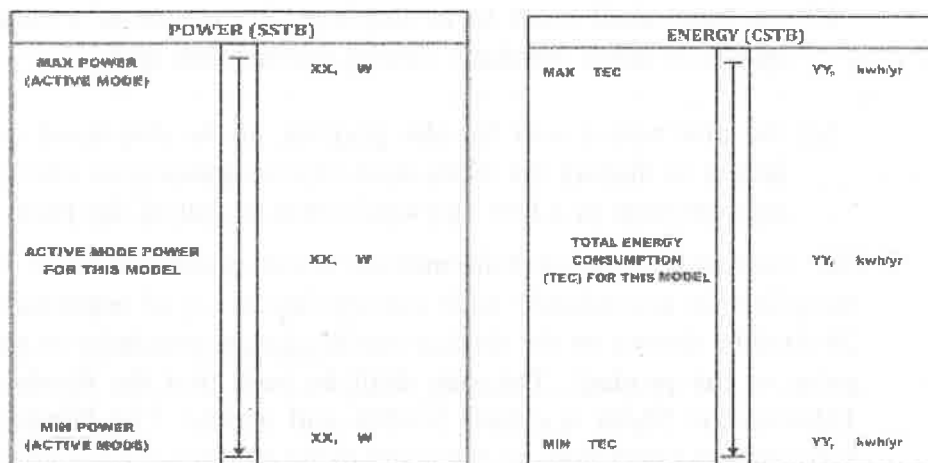


Figure 2: Coloured/Monochrome MEPS indicated for simple set-top box and complex set-top box

6. In the case of a nested display, the sequence of display of the label shall be as follows:
 - (a) the image referred to in paragraph 5 of this Part shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label set out in the Third Schedule;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

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- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism; and
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the annual total energy consumption in a font size equivalent to that of the price.
7. The electronic Product Information Sheet made available by suppliers in accordance with subregulation (2) of regulation 26 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the Product Information Sheet is clearly visible and legible. The Product Information Sheet may be displayed using a nested display or by referring to the product database, in which case the link used for accessing the Product Information Sheet shall clearly and legibly indicate 'Product Information Sheet'. If a nested display is used, the Product Information Sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

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FIFTH SCHEDULE

VERIFICATION PROCEDURE FOR MARKET SURVEILLANCE

(regulation 33(2))

1. Measurements

For the purposes of compliance and verification of compliance with the applicable requirements of these Regulations, measurements and calculations shall be made using harmonised Standards, as specified in the First Schedule, or using other reliable, accurate and reproducible methods which take into account the generally recognised state-of-the-art measurements, and produce results deemed to be of low uncertainty.

2. Verification Procedure

When performing the market surveillance checks referred to in regulation 33, the Commission and the Standards Authority shall apply the following verification elaborated in this Schedule:

Total Energy Consumption, Standby mode, On mode and Automatic Power Down

For power consumption larger than 1.00 W or where energy consumption requirements formulated in TEC result in an energy requirement larger than 1.00kWh/year in at least one power mode, the relevant verifying authorities shall test one single unit as follows:

- (a) the model shall be considered to comply with the provisions set out in the Second Schedule if the results for active and standby mode conditions, as applicable, do not exceed the limit values by more than ten per cent; and
- (b) where the result in paragraph (a) is not achieved, three more units shall be tested. The model shall be considered to comply with these Regulations if the average of the results of the latter three tests for active and standby mode conditions, as applicable, does not exceed the limit values by more than ten per cent.

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For power or energy consumption smaller than, or equal to, 1.00 W or 1.0 kWh, the relevant verifying authorities shall test one single unit as follows:

- (a) the model shall be considered to comply with the provisions set out in the Second Schedule, as applicable if the results for active or standby mode conditions or TEC, as applicable, do not exceed the limit values by more than 0.10 W or 0.10 kWh respectively; and
- (b) where the result in paragraph (a) is not achieved, three more units shall be tested. The model shall be considered to comply with these Regulations if the average of the results of the latter three tests for active or standby conditions, as applicable, does not exceed the limit values by more than 0.10 W or 0.10kWh, as may be applicable.

Where the results in paragraphs (a) and (b) are not achieved, the model shall be considered not to comply with these Regulations.

The verification tolerances defined in this Schedule relate only to the verification of the measured parameters by the Commission and the Standards Authority and shall not be used by the manufacturer as an allowed tolerance on the values in the technical documentation to achieve compliance with the requirements. Declared values shall not be more favourable for the manufacturer than the values reported in the technical documentation.

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HON. DR. MATTHEW OPOKU PREMPEH

Minister responsible for Energy

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