

NATIONAL COMMUNICATIONS AUTHORITY



CONFORMANCE REGIME FOR THE CERTIFICATION OF RECEIVERS OF FREE TO AIR DIGITAL TERRESTRIAL TELEVISION (DTT) IN GHANA

v1.4

This document contains policies and procedures to help digital terrestrial television (DTT) receiver manufacturers, assembly companies, equipment dealerships, test labs, law enforcement agencies, regulators and the general public to ensure that all digital terrestrial television (DTT) receivers sold on the Ghana market conform to acceptable receiver standards. It details the requirements and the procedures necessary to make this possible.

July 2016

Version History

Version	Date	Changes	Remarks
1.0	30/01/2014	First Official Release	
1.1	31/03/2014	5 new laboratories added to Annex 2 and fees stated in Ghana cedis	
1.2	05/12/2014	1 new laboratory added to Annex 2 and fees updated	
1.3	31/12/2015	3 new laboratories added to Annex 2 and fees updated	
1.4	14/07/2016	One new laboratory added to Annex 2 and application fee for test suite and conformance logo updated. Link to the Ghana Miminim Technical Specifications of DTT Receivers replaced	

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1.0 INTRODUCTION

1.1 BACKGROUND

The Republic of Ghana is carrying out a transition of television broadcasting services in the frequency bands 174–230 MHz and 470–862 MHz from analogue to digital technology.

To ensure that all digital terrestrial television (DTT) receivers sold on the Ghana market conform to acceptable receiver standards, the National Communications Authority (Authority) has published standards for DTT receivers (set-top boxes, integrated digital television sets, etc). To enforce these minimum receiver standards, this conformance regime has been instituted and shall require all DTT receivers such as set top boxes (STBs) and integrated digital TV sets (iDTVs) sold in Ghana to pass a conformance test to be certified to use a receiver certification logo i.e. the Ghana thumb logos (see Annex 1). The logo will confirm to consumers that the receiver is Ghana DTT compliant.

The Authority has accredited and shortlisted eligible test labs (see Annex 2) to provide standard tests on all models of set-top boxes (STBs) and integrated digital television sets (iDTVs), to verify that these DTT receivers conform to the Minimum Requirements for Free to Air (FTA) Digital Television Receivers (attached as Annex 3).

1.2 LEGAL FRAMEWORK

Regulation of broadcasting spectrum and technical standards

Section 2 of the Electronic Communications Act, 2008, Act 775 mandates the National Communications Authority to regulate the radio spectrum designated or allocated for use by broadcasting organisations and providers of broadcasting services in accordance with the standards and requirements of the International Telecommunications Union and its Radio Regulations as agreed to or adopted by the Republic. In furtherance of carrying out this function, the law mandates the Authority to determine technical and other standards and issue guidelines for the operation of broadcasting organizations and bodies providing broadcasting services.

Regulation of terminal equipment

The Authority is mandated by Section 3(a) of the [National Communications Authority Act, 2008, Act 769](#) to establish and monitor the implementation of national communications standards and ensure compliance accordingly. The Authority has a mandate under Section 66 of the Electronic Communications Act, 2008, Act 775 to certify terminal equipment of public electronic communications network. Specifically, Section 66 of Act 775 states that:

- (1) Any terminal equipment sold or otherwise provided in this country may be connected to a public electronic communications network if the Authority certifies that the terminal equipment
 - (a) is safe for the user,
 - (b) is in compliance with international standards, and environmental, health and safety standards including standards for electromagnetic radiation and emissions,
 - (c) meets the requirements of electromagnetic compatibility provisions of international treaties relating to electronic communications,
 - (d) does not pose a risk of physical harm to the network,
 - (e) effectively utilises the electromagnetic spectrum and prevents interference between satellite and terrestrial-based systems and between terrestrial systems, and
 - (f) is compatible with the network.
- (2) The Authority, in certifying terminal equipment under subsection (1), may recognize similar approvals from other jurisdictions that it may specify.
- (3) Terminal equipment certified under this section shall bear labels or other markings determined by the Authority.
- (4) The Authority may regulate, prohibit the sale or other distribution or connection of terminal equipment or other device that is provided in the country primarily for the purposes of circumventing, or facilitating the circumvention of a requirement of this Act.”

Considering that DTT Receivers are terminal equipment for broadcasting networks which are public electronic communications networks, the Authority requires that all DTT receives sold in the Ghana market shall be tested for conformance to the Minimum Requirements for Free To Air (FTA) Digital Terrestrial Television (DTT) Receivers. Terminal equipment certified under this section shall bear the appropriate digital Ghana thumb logo.

1.3 SCOPE OF THIS CONFORMANCE REGIME

This conformance regime applies to all DTT receivers manufactured or assembled in Ghana or imported for use in Ghana. The term “DTT receiver” in this document refers to a set top box (STB), an integrated television set (iDTV) and any other device such as USB dongles, etc, that the consumer purchases in order to use DTT services in Ghana.

DTT Receivers promoted by Pay TV service providers shall also comply with this conformance regime.

2.0 THE CONFORMANCE PROCESS

2.1 LOGO AWARD PROCEDURE

The process for obtaining the conformance logo for DTT receivers in Ghana shall be as follows:

Step 1 – Check your product meets the Minimum Specifications for Free to Air Digital Terrestrial Television (DTT) Receivers in Ghana v1.1. This document is accessible at [http://nca.org.gh/downloads/Ghana_Minimum_Technical_Specifications_of_DTT_Receivers_v1_1a_June_2016_\(1\).pdf](http://nca.org.gh/downloads/Ghana_Minimum_Technical_Specifications_of_DTT_Receivers_v1_1a_June_2016_(1).pdf) . Manufacturers may obtain the Test Suite for the minimum specifications by sending a request to secretariat.dbmc@nca.org.gh and paying a fee of GH¢1,925.00 or US\$500.00 (for requests emanating from outside Ghana).

Step 2 – If your product meets the Minimum Requirements you can arrange for testing of your product at any of the conformance test laboratories listed in Annex 2 of this document. The test lab shall perform the tests as specified in the Ghana DTT test specifications and test suite. If the receiver fails the test, the manufacturer will have to rectify the anomalies in the design and perform the conformance tests again. It is only when the receiver(s) pass(es) the mandatory requirements of the Specifications that the manufacturer can proceed to step 3. The conformance test lab may charge a fee for its services.

Step 3 – If your product passes the conformance test you can then apply for a conformance logo by submitting an application to:

The Director General
National Communications Authority
1st Rangoon Close, Cantonments
P. O. Box CT1568, Cantonments, Accra
Ghana
Email: secretariat.dbmc@nca.org.gh.

Electronic applications are acceptable. The application shall have the following attachments:

- a) Laboratory Test report for Radio Frequency (RF) tests
- b) Laboratory Test report for Service Information/ Programme Specific Information (SI/PSI) tests
- c) Laboratory Test report for Electromagnetic Compatibility tests against CISPR 13 or EN55013
- d) Declaration of Conformity by the Manufacturer stating that their receiver(s) comply with the sections of the Minimum Requirements for FTA Digital Terrestrial Television Receivers document which are not covered by the test specifications and test suite. If a receiver does not

comply with any mandatory requirement, the Manufacturer shall clearly indicate it. The Authority may grant a logo award even if a Manufacturer states non-conformities if the stated reasons are tenable and the non-conformity cannot potentially affect the users in the reception of DTT services in Ghana.

Step 4: *Application Processing*

The Authority shall acknowledge receipt of the application within five (5) working days upon receipt of the application and shall notify the applicant of any outstanding issues with the application within this period. If the application is complete and satisfactory, the Authority shall grant the logo award within a period of not more than fourteen (14) days.

If the application is incomplete, or there are issues to be rectified, the applicant shall rectify them at his/her earliest convenience and notify the Authority of same. The Authority shall within a period not exceeding fourteen (14) days, grant the logo award after it receives notice that all issues have been rectified by the applicant.

The Authority may require a representative sample of your product and this may be retained by the Authority. Should the Authority require a sample of the receiver, the request shall be made in the acknowledgement letter and the application shall be processed once the applicant shows a proof of shipping of the sample. The fee for the grant of the conformance logo shall be GHS1,925.00 or US\$500.00 (for requests emanating from outside Ghana) per model. An equipment model for the purpose of conformance shall refer to equipment with the same chassis, common software and equivalent Hardware. Separate EMC Test reports shall be however be provided for each supplementary model with the same chassis, common software and equivalent hardware

Step 5 – Product is awarded the relevant Digital Ghana thumb logo

Note: Manufacturers must obtain approval from the National Communications Authority before producing any product packaging/ publicity materials featuring the Digital Ghana thumb logo.

The Ghana DTT Receiver Verification Tests shall ensure compliance with the Ghana Minimum Requirements for FTA Digital Television Receivers and must be conducted at any of the laboratories listed in Annex 2; in addition to the regular factory testing for general quality and functionality control.

2.2 USE OF THE LOGO

A person or corporate entity shall not locally manufacture, assemble, import, store, offer for sale, sell, distribute or otherwise part with a Digital Terrestrial Television (DTT) receiver, unless the receiver bears the Digital Ghana thumb logo which indicates the television format it supports i.e. standard definition (SD) or High Definition (HD) unless the receiver is an engineering sample being submitted to the National Communications Authority for the purpose of obtaining conformance approval. The logo shall be fixed conspicuously at the back of the DTT Receiver and on the package that contains the receiver. The logo:

- a) shall be in full colour when it is affixed on the DTT receiver
- b) Shall be full colour if the logo is affixed on the package
- c) May be in “black and white” with the print and background in colours which preserve the legibility of the logo where printing is done on the package.

Only equipment/products that have been duly certified by the National Communications Authority, shall have the digital Ghana thumb logo affixed to them. Guidelines for the printing and use of the logo shall be provided to manufacturers who pass the conformance test and are awarded the conformance logo.

A person shall not remove the label on a DTT receiver before the first retail purchase of the receiver. The “first retail purchase” means purchase of the receiver by the first end user.

3.0 ENFORCEMENT OF CONFORMANCE REGIME

Manufacturers, Assemblers, Importers, Dealers, Retailers and/or sellers of Digital Terrestrial Television receivers shall ensure that these receivers have passed this conformance regime and shall affix the conformance logo to the receivers.

The National Communications Authority shall strictly enforce this conformance regime in accordance with the provisions of the Electronic Communications Act, 2008, Act 775. Applicants for the award of the conformance logo are advised to be mindful of Section 74 of Act 775 which states that “a person who knowingly gives false or misleading information to the Authority commits an offence and is liable on summary conviction to a fine of not more than one thousand penalty units or to a term of imprisonment of not more than three years or to both.” Per Section 73 (2) of Act 775, “Where an offence is committed by a corporate entity that entity is liable to a fine of not more than nine thousand penalty units and each director of that entity shall be deemed to have committed the offence.”

In accordance with Sections 71 and 72 of Act 775, an authorised officer of the Authority may enter a place or premises where he/she has reason to believe that a DTT Receiver is being manufactured, offered for sale or being disposed of, and:

- (a) test equipment or an article found in the place
- (b) examine a receiver displayed for sale, at a point of import, or at a warehouse
- (c) search for equipment, articles, books, records or documents that may provide evidence of (i) contravention of this Act or of Regulations, or
- (d) require the owner or person in charge of the place to give the authorised officer the reasonable assistance required for the examination or search of the place,
- (e) seize and take away equipment, articles, books, records or documents if it appears that there has been
 - (i) a contravention of this Act or of any Regulation or (ii) a breach of condition of licence or frequency authorisation, and lodge the items seized with the Authority.

The Authority shall publish a list of DTT receiver models that have been awarded the conformance logo on its website.

4.0 EFFECTIVE DATE OF CONFORMANCE REGIME

This conformance regime shall take effect from 1st January, 2014.

4.1 TRANSITIONAL PROVISION

The transitional period for the full implementation of this regime shall be from the effective date to 31st December 2014. During this period, manufacturers may affix the logo after import. This concession shall not apply after the transitional period expires.

Except for a used receiver, a person who has placed a DTT receiver on the market before the commencement of this conformance regime, shall within six (6) months after the commencement of this regime, apply for a conformance logo if the DTT receiver conforms to the Minimum specifications.

If a TV set has already been placed on the market before the commencement of this conformance regime, but does not conform to the Minimum specifications, it shall be marketed as an analogue TV set which shall require the use of a Set-top box which conforms to the Minimum specifications.

Set-top boxes that do not conform to the minimum specifications shall not be sold in the Ghana market.

4.2 DATA COLLECTION REQUIREMENTS

The requirements of the [TV Licensing Decree, 1966, NLCD 89](#) shall apply to the manufacture, assembly, importation, dealership, sale, hiring and/or repair of Digital Terrestrial Television receivers. In addition, data shall be collected on STBs in a bid to build a database of the ownership of TVs to which STBs would be connected. The Authority is empowered under Section 3(p) of the [National Communication Authority Act, 2008, Act 769](#), to obtain requisite information from any person for purposes of the performance of its functions. The data shall be managed in accordance with the Data Protection Act, 2012, Act 843.

The following data shall be submitted by the 15 of each month for the preceding month, to the Secretariat of the Digital Broadcasting Migration via secretariat.dbmc@nca.org.gh:

- (1) Manufacturers or Assemblers (Section 7 of NLCD 89)
 - the number of television receiving sets [(or set-top boxes) per model] manufactured or assembled by him during that month
- (2) Customs Division of the Ghana Revenue Authority (Section 8 of NLCD 89)

- a return indicating the names and addresses of all persons who imported television receiving sets [(or set-top boxes)] during that month and the number of such sets imported by each such person.

(3) Dealers and Retailers (Section 6 of NLCD 89)

- a return indicating the names and addresses (residential (at least suburb and city) and telephone numbers) of all persons to whom any television receiving sets have been sold, let on hire or otherwise disposed of by him during that month.

ANNEX 1: CONFORMANCE LOGOS



Figure 1: HD Logo for receivers that supports both High Definition (HD) and Standard Definition (SD)



Figure 2: SD Logo for receivers that supports only Standard Definition (SD)

ANNEX 2: ACCREDITED CONFORMANCE TEST LABORATORIES

No.	Name of Applicant	Address	Approved Test Categories			Test Lab Category
			RF	S/P SI	EMC	
1.	DTG Testing Limited (DTGTL)	5th Floor, 89 Albert Embankment, London, SE1 7TP, UK. Phone: +44 (0)20 7 840 6550 Fax: +44 (0)20 7840 6599 Email: customerservices@dtg.org.uk Contact person: Ewa Tracz , Client Services Co-ordinator	x	x		Independent
2.	National Testing & Inspection Center for Radio & TV Products (TIRT)	No.7, Jiuxianqiao, North Road, Chaoyang District, Beijing, China Mail: Box 743, Beijing, China, 100015 Http://www.tirt.com.cn EMAIL: Liuzhigang@tirt.com.cn Telephone: 086-10-59570518 Fax: 086-10-59570553 Contact person: Liu Zhigang , Vice General Manager	x	x	x	Independent
3.	Eurofins Digital Testing	Castlemead, Lower Castle Street, Bristol, BS1 3AG, United Kingdom Tel: +44 (0)1179 896 100 E-mail: SimonJarvis@eurofins.com Web: www.eurofins-digitaltesting.com/	x	x		Independent
4.	Altech Multimedia (AMM)	Altech Multimedia Ltd; 1, Montgomery Drive, Mount Edgecombe, Kwa Zulu Natal South Africa 4300 Contact Person: Simon Hoffe Tel: +2731 508 2884 ; Mobile: +27 82 869 7441 Email: simon.hoffe@altech-multimedia.com	x	x	x	Self-Testing / Third Party Testing
5.	SONY EMCS (Malaysia) Sdn. Bhd.	Postal Address : Lot 4, Jalan P/1, Bangi Industrial Estate, 43650 Selangor Darul Ehsan, Malaysia Contact Person: Mr. Stephen Cleary Stephen.Cleary@ap.sony.com Telephone: +60 (0)3 8929 6845 Fax: +60 (0)3 8929 6800	x	x	x	Self-Testing
6.	SONY EMCS EMC/RF Test Laboratory Main Lab	Postal Address : Kisarazu Site 8-4 Shiomi, Kisarazu-shi, Chiba, 292-0834, JAPAN. Contact Person: Mr. Teruki Kurihara			x	Self-Testing

No.	Name of Applicant	Address	Approved Test Categories			Test Lab Category
			RF	SI/P SI	EMC	
		Teruki.Kurihara@jp.sony.com Telephone: +81 (0)438-37-2750				
7.	SONY KODA EMC Test Laboratory	1 Suzumegairi, Sakazaki, Kohta-cho, Nukata-gun, Aichi Zip 444-0194, Japan Contact Person: Mr.Yasunori Yamada Yasunori.Yamada@jp.sony.com Telephone: +81 (0)564-62-6649			x	Self-Testing
8.	Electronics Testing Centre, Taiwan	No. 8, Lane 29, Wen-Ming Rd., Lo-Shan Tsun, Kui-Shan Hsiang, Taoyung Hsien, Taiwan, R.O.C. Contact Person: <i>Paula Lai/ 賴怡秀</i> Tel: +886-3-3280026 #585 Email: paulalai@etc.org.tw			x	Independent
9.	Quietek Corporation	No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C. Contact Person: Sabina Chen Tel : +886-2-8601-3788#2110 Fax : +886-2-8601-3789 E-Mail : sabinachen@quietek.com Skype: sabinasoso 24451 台北縣林口鄉瑞平村瑞樹坑5-22 號			x	Independent
10.	DTV Accredited Compliance Lab (part of Samsung Electronics)	Address – Mokotowska 1, 00-640 Warsaw, Poland Contact Person: Daniel Nowicki Email: (d.nowicki@samsung.com), Telephone: +48 22 377 84 63	x	x		Self-Testing
11.	CS & Environment Centre of Samsung Electronics Co. Ltd	416 Maetan 3 – Dong, Yeongtong – Gu, Suwon – Si, Gyeonggi – Do, 443 – 742, Korea			x	Self-Testing
12.	EMC Compliance Co. Ltd.	65 Sinwo-Ro, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, 443-390, Korea			x	Self-Testing
13.	Nemko Korea	No. 159, Osan-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea, 449-852 Tel : 031-322-2333, Fax : 031-322-2332			x	Independent
14.	Vestel Electronics Corporation	Organize Sanayi Bolgesi, 45030, Manisa, Turkey Contact Person : Motoshi Bito TEL: +90 (236) 233 25 82 / +90 (530) 6600 400	x	x	x	Self-Testing

No.	Name of Applicant	Address	Approved Test Categories			Test Lab Category
			<i>RF</i>	<i>SI/P SI</i>	<i>EMC</i>	
15.	Bureau Veritas Consumer Products Services (Hong Kong) Limited	No. 47-2, 14 th Ling, Chia Vil., Lin Kou Dist., New Taipei City, Taiwan (R. O. C) Contact Person: Ms Yemmy Soong TEL: +886-3-318-3232 EMAIL: yemmy.soong@tw.bureauveritas.com			x	Independent
16.	UL Japan, Inc.	4383-326, Asamacho, Ise-shi, Mie, 516-0021, Japan Contact Person: Mr. Kei Uehara TEL: +81 (0) 596 24 8409	x		x	Independent
17.	Digital TV Testing Laboratory, Telecom Technology Center	No. 3, Luke 1 st Rd., Luzhu District, Kaohsiung City 82151, Taiwan TEL: +886-7-6955078 FAX: +886-7-6955009 Mobile: +886-9-56842766	x	x	x	Independent

This list shall be updated as and when new laboratories are accredited.

ANNEX 3: MINIMUM SPECIFICATIONS FOR DIGITAL TERRESTRIAL TELEVISION (DTT) RECEIVERS IN GHANA

[http://nca.org.gh/downloads/Ghana_Minimum_Technical_Specifications_of_DTT_Receivers_v1_1a_June_2016_\(1\).pdf](http://nca.org.gh/downloads/Ghana_Minimum_Technical_Specifications_of_DTT_Receivers_v1_1a_June_2016_(1).pdf)

**ANNEX 4: APPLICATION FORM FOR CONFORMANCE CERTIFICATION OF
DIGITAL TERRESTRIAL TELEVISION RECEIVER(S) - NCA FORM AP09**

<http://www.nca.org.gh/downloads/AP09.pdf>

or

<http://www.nca.org.gh/downloads/AP09.doc>