



# **TECHNICAL SPECIFICATION**

**FOR**

**DIGITAL TELEVISION  
BROADCASTING RECEIVER SYSTEM (DVB-T2)**

**ISSUED BY**

**BOTSWANA COMMUNICATIONS REGULATORY  
AUTHORITY**

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# Technical Specification for Digital Television Broadcasting Receiver System (DVB-T2)

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## Scope

This specification applies to all digital television satellite receiver broadcasting system (DVB-T2) to be used in Botswana.

## Entry into Force

This specification shall enter into force on 15/01/2016.

## Document History

Description	Status	Date
Digital Television Broadcasting Receiver System (DVB-T2)	Original V1	11/12/2015

## Spectrum Allocation

The following frequency band has been allocated for use of digital terrestrial television broadcasting systems (DVB-T2) in Botswana:  
VHF: 174 to 230 MHz, UHF: 470 to 862 MHz

## Health, Safety, and Generic Emissions

The following universal specifications shall be applied.

**TS0001:** Health, Safety and Generic Emissions of Radio and Telecommunications Terminal Equipment

## Technical, Spectrum and EMC Requirements

The following Standards need to be considered in the design of the DVB-T2 receivers:

**ETSI EN 300 468 v1.13.1 (2012-04):** Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems

**ETSI EN 300 472 v1.3.1 (2003-05):** Digital Video Broadcasting (DVB); Specification for Conveying ITU-R System B Teletext in DVB bit-streams

**ETSI EN 300 706 v1.2.1 (2003-04):** Digital Video Broadcasting (DVB); Enhanced Teletext Specification

**ETSI EN 300 743 v1.4.1 (2011-10):** Digital Video Broadcasting (DVB); Subtitling systems

**ETSI EN 300 744 v1.6.1 (2009-01):** Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television

**ETSI EN 302 755 v1.3.1 (2012-04):** Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)

**ETSI ES 202 184:** MHEG-5 Broadcast Profile

**ETSI TS 101 154 v1.10.1 (2011-06):** Digital Video Broadcasting (DVB) Specification for the use of Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream

**ETSI TS 102 006 v1.3.2 (2008-07):** Digital Video Broadcasting (DVB); Specification for System Software Update in DVB Systems

**ETSI TS 102 366 v1.2.1 (2008-8):** Digital Audio Compression (AC3, Enhanced AC3) Standard

**ETSI TR 101 211 v1.9.1 (2009-06):** Digital Video Broadcasting (DVB) Guidelines on implementation and usage of Service Information (SI)

**ETSI TR 101 162:** Digital broadcasting systems for television, sound and data services; Allocation of Service Information (SI) codes for Digital Video Broadcasting (DVB) systems

**IEC 60169-2:** Radio-frequency connectors – Part 2: Coaxial unmatched connectors

**IEC 60728-5:** Cable networks for television signals, sound signals and interactive services – Part 5

**ISO/IEC 13818-3 (Apr 1998):** Information technology - Generic coding of moving pictures and associated audio information - Part 3: Audio

**ISO/IEC 14496-3 (Sep 2009):** Information technology - Coding of audio-visual objects - Part 3: Audio

**ISO/IEC 3166-1:** Countries and Subdivisions Codes (2006)

**ISO/IEC 8859:** Information technology 8-bit single-byte coded graphic character sets (1998)

**ITU-T Rec. H.222.0 / ISO/IEC 13818-1 (2012):** Information technology – Generic coding of moving pictures and associated audio information: Systems

**ITU-T Rec. H.262 / ISO/IEC 13818-2 (2012):** Information technology – Generic coding of moving pictures and associated audio information: Video

**ITU-T Rec. H.264 / ISO/IEC 14496-10 (01/2012):** Infrastructure of audio-visual services - Coding of moving video: Advanced video coding for generic audio-visual services

**ITU-R Rec. BT.653-3 (02/1998):** Teletext systems

**NorDig Rules of Operation, ver 1.0** - As applicable: minimum standard reference

**NorDig Unified Test plan, ver 2.4** - As applicable: minimum standard reference

**NorDig Unified Requirements ver 2.5.1**- As applicable: minimum standard reference

**Important Note:** The revision numbers of the documents given in the approval standard are the minimum standards that apply. Should updated versions of these documents be published, the latest version will always apply. This also applies to documents where no revision number is currently quoted

## **Additional Requirements**

Additional requirements exist for the use of Digital terrestrial television broadcasting system (DVB-T2) at this time. A licence must be obtained before equipment of this type can be used in Botswana. This licence will detail conditions of use and any additional requirements which must be met.

## **Obtaining Technical Standards**

ETSI technical standards may be obtained free of charge for individual use from the ETSI web site. [www.etsi.org](http://www.etsi.org)

CENELEC, IEC and CISPR standards may be obtained at cost from, or through [www.cenelec.org](http://www.cenelec.org) and from [www.iec.ch](http://www.iec.ch) respectively