

ISBN 978-0-626-28809-9

SANS 862:2013

Edition 2.1

SOUTH AFRICAN NATIONAL STANDARD

Set-top box decoder for free-to-air digital terrestrial television

WARNING

This standard references other documents normatively.

SANS 862:2013
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Table of changes

Change No.	Date	Scope
Amdt 1	2013	Amended to update the normative references (see clause 2), to include the abbreviation CGMS-A (see 3.2), to define single RF frequency, TFS, NM and HEM input modes (see 4.3.1), to clarify the situation regarding the levels of RF channels when TFS is supported (see 4.3.3.5.3), to indicate that CGMS-A (copy once set) should be provided with composite (CVBS) video output and that the decoder shall provide a single HDMI output with HDCP enabled output for HD content (see 4.4.2.5), to indicate that receivers shall include an HDMI output with HDCP enabled for HD content (see 4.4.3.7.2), to make all the descriptions in table 19 compulsory (see 4.7.2); to change the way schedule information shall be carried and to delete reference to an MHEG application (see 4.7.4), to modify the requirements for HDMI connectors (type A with HDCP) enable (see 4.12.3), to replace the DVB-SSU simple profile with the DVB-SSU enhanced profile (see 6.3.2.1 and 6.3.3) and to replace the requirements for the user interface (see clause 7).

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance derived from the publication *NorDig unified requirements for integrated receiver decoders for use in cable, satellite, terrestrial and IP-based networks* (ver 2.2.1).

Foreword

This South African standard was approved by National Committee SABS/TC 074, *Communication technology*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in January 2014.

A vertical line in the margin shows where the text has been technically modified by amendment No. 1.

This document supersedes SANS 862:2012 (edition 2).

At various places in this document, reference is made to broadcasting service licensees. In South Africa, this means the free-to-air individual broadcasting service licensees or their appointed agents (trusted third parties). Contact details for these broadcasting service licensees are available from the Independent Communication Authority of South Africa (ICASA):

Independent Communication Authority of South Africa
Blocks A, B, C and D, Pinmill Farm
164 Katherine Street
Sandton
2146

Introduction

Digital terrestrial television (DTT) broadcasting has been trialled in South Africa since 1 November 2008 using the Digital Video Broadcasting Terrestrial System (DVB-T). In January 2011 the Second Generation Digital Video Broadcasting Terrestrial System (DVB-T2) was confirmed as the transmission standard to be used in South Africa. Therefore, this revision of SANS 862 incorporates the requirements for DVB-T2.

Initially, the DTT service will be available in parallel with the existing analogue network, but it is anticipated that the analogue network will be switched off from December 2013.

The objective of this document is to provide requirements for a set-top box decoder (STB decoder) which, in conjunction with an analogue television receiver, will provide good quality video and sound for the viewer, and to ensure the lowest possible cost for the free-to-air set-top box decoder.

Where the document is silent on a specific feature, that feature is regarded as being optional. The inclusion of optional features can be seen as part of the marketing strategy of the manufacturer.

For the South African DTT networks, cached MHEG applications and data will be used to avoid the high bandwidth needs of carousels.

The MHEG-5 application environment, in accordance with ISO/IEC 13522-5, ETSI ES 202 184 and the *MHEG-5 Profile for South Africa*, has been selected for easy integration. The South African MHEG-5 profile supports a return path, but this is optional in this document.

The DTT Free to Air User Interface Specification will provide a defined framework for conformance measurement. Information will be available at <http://www.sabc.co.za/wps/portal/SABC/dtt> or <http://www.etv.co.za/dtt>.

The STB decoder should also be capable of providing interactive services, and control means are required to prevent subsidized STB decoders from being used outside South Africa.

The main functional elements specified for security are:

- a) a secure over-the-air software and bootstrap loader;
- b) a mechanism to prevent STB decoders from functioning in non-RSA DTT networks;
- c) STB control system that will enable mass messaging.

Detailed security requirements are not specified in this document. The STB decoder manufacturer is responsible for the implementation of the security requirements specified by the free-to-air individual broadcasting service licensees in South Africa and for the proper configuration of the chipsets.

Manufacturers can obtain the security requirements from the free-to-air individual broadcasting service licensees in South Africa or from their appointed agents (trusted third parties) (see foreword).

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