



**CRAN**

Communications Regulatory Authority of Namibia

# Minimum Technical Standards for Set-Top Box decoders

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**Public Hearing  
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# Regulatory Framework

## □ Basis of regulation-

- Section 129(1)(f) of the Communications Act read with subsections (4), (5), (6) and (7)
- SADC minimum specification for Set-Top Boxes

## □ Applicability-

- All Set-Top Box decoders imported and sold
- Set-Top Box decoder providers including
  - Broadcasting Service Licensees
  - Signal Distribution Licensees
  - Multiplex Licensees
  - Decoder manufacturers/distributors/retailers
  - The public

# Spectrum Band Applicable

| Band |         | SADC<br>Frequency<br>Range<br>MHz | Namibia<br>Frequency<br>Range<br>MHz |
|------|---------|-----------------------------------|--------------------------------------|
| VHF  | VHF III | 170 - 230                         | 174 - 230                            |
|      | VHF III | 230 - 238                         |                                      |
|      | VHF III | 246 - 254                         |                                      |
| UHF  | UHF IV  | 470 - 582                         | 470 - 582                            |
|      | UHF V   | 582 - 694                         | 582 - 694                            |

**8 MHz channel spacing**

# System Features

| Description           | SADC<br>Minimum Standard                            | Namibia<br>Minimum Standard         |
|-----------------------|---|-------------------------------------|
| System standard       | DVB-T2  | DVB-T2                              |
| Video decoding        | MPEG-4  | MPEG-2 and MPEG-4                   |
| Video resolution      | Standard Definition and/<br>or High Definition only | Standard Definition                 |
| Conditional<br>Access | No conditional access<br>module to be embedded      | Not required                        |
| Video Profile         | MPEG-4 MP@L3<br>PAL I/B/G modulator                 | MPEG-4 MP@L3<br>PAL I/B/G modulator |
| OTA Download          | Yes   | Yes                                 |
| Memory                | 8 MB RAM and 16 MB Flash                            | 8 MB RAM and 16 MB Flash            |
| Audio                 | Mono and stereo                                     | Mono and Stereo                     |

# Software Features

| Description  | SADC<br>Minimum Standard | Namibia<br>Minimum Standard |
|--|--------------------------|-----------------------------|
| Middleware   | Embedded<br>No royalty   | Embedded<br>Royalty Free    |
| Now & Next banner<br>with programme<br>information EPG | Yes                      | Not specified               |
| Parental Lock  | Yes                      | Not specified               |

# Hardware Features

| Description         | SADC<br>Minimum Standard   | Namibia<br>Minimum Standard  |
|---------------------|--|--|
| <b>Power Supply</b> | <b>Internal 160-264V AC and<br/>47-63 Hz</b><br><b>External AC to DC adaptor</b><br><b>Over and under voltage<br/>protection</b><br><b>Over heating protection</b> | <b>Internal 160-264V AC and<br/>47-63 Hz</b><br><b>Or external AC to DC adaptor</b><br><b>Over and under voltage<br/>protection</b><br><b>Over heating protection</b>  |
| <b>Connections</b>  | <b>IEC 60169-2</b><br><b>RF IN – Female</b><br><b>RF OUT – Male</b><br><b>Audio/Video (RCA) or<br/>HDMI</b><br><b>Serial/USB for software<br/>upgrade</b>          | <b>IEC 60169-2</b><br><b>RF IN – Female</b><br><b>RF OUT – Male</b><br><b>Audio/Video (RCA)</b><br><b>Serial/USB for software<br/>download</b><br><b>Ethernet Port</b> |

# Hardware Features (Cont.)

| Description                      | SADC<br>Minimum Standard   | Namibia<br>Minimum Standard   |
|----------------------------------|--|---|
| <b>Front Panel/<br/>Exterior</b> | <b>Standby functionality (with<br/>sleep mode)</b><br><b>Volume (V- &amp; V+)</b><br><b>Channel change (Ch- &amp; CH+)</b><br><b>One tri-colour LED<br/>indication required</b><br><b>Menu with accept<br/>functionality</b><br><b>USB 2.0 interface</b> | <b>Standby functionality</b><br><b>Volume (V- &amp; V+)</b><br><b>Channel change (Ch- &amp; CH+)</b><br><b>One tri-colour LED indication<br/>required</b><br><b>Channel Scan</b><br><b>Menu</b> |



# Namibian DTT Identification No.

## Namibian DTT Identification Number

| Manufacturer's Identification Number |   | Manufacturer's Model Number |   | Transmission Type | Unique Serial Number |   |   |   |    |    |    |     |     |
|--------------------------------------|---|-----------------------------|---|-------------------|----------------------|---|---|---|----|----|----|-----|-----|
| 1                                    | 2 | 3                           | 4 | 5                 | 6                    | 7 | 8 | 9 | 10 | 11 | 12 | chk | chk |

The format of the numbers shall be in ASCII

The manufacturer's code is allocated by the licensor (CRAN)

The manufacturer's model number is selected by the manufacturer

The transmission type e.g. 1-digital terrestrial television is selected by the manufacturer

The serial number is made up of non-consecutive numbers

Two check digits using an approved cyclic redundancy check digit scheme

**Only unique standard, not part of SADC minimum standards**

# Miscellaneous

| Description                  | SADC<br>Minimum Standard  | Namibia<br>Minimum Standard   |
|------------------------------|---|---|
| <b>Accessories</b>           | <b>Manual in preferred language</b><br><b>Remote control</b><br><b>Remote control batteries</b><br><b>Power adaptors</b><br><b>RF and RCA cable</b> | <b>An English instruction manual</b><br><b>Standard remote control and batteries</b><br><b>Required adaptors</b><br><b>RF cable</b> |
| <b>Quality/<br/>Warranty</b> | <b>1 year minimum period of warranty from manufacturer</b>  | <b>1 year minimum period of warranty from manufacturer</b><br><b>Local repair and/or swop facilities in Namibia</b>                 |

# **Submissions by entities that have registered prior to the public hearing**

**Tea Break**

# Conclusion of Process

- ❑ **All comments as well as submissions made today will be considered prior to the Authority's final regulations**
  
- ❑ **The following aspects but not limited to will be considered**
  - Applicability: Set-Top Box decoders for digital terrestrial broadcasting only or all set-top boxes
  - Software features: Electronic Program Guide
  - Hardware features: Ethernet port, USB 2.0 port, tri-colour LED
  - Accessories : RF and RCA cable
  - Namibian DTT Identification number
  - Retrospective applicability
  - Specification on for free-to-air set top boxes
  - Should middleware be royalty free
  - System features: Mono or stereo sound

# Next Steps

- ❑ Finalisation of minimum technical standards for Set-Top Box Decoders
- ❑ Submission to CRAN Board of Directors for approval
- ❑ Regulations setting out Minimum Technical Standards for Set-Top Box Decoders will be effective on publication in Government Gazette

**Thank you!**