EUMETSAT

Technotrend S2-4200 Twin DVB-S2 Receiver EUMETCast Africa Windows Setup Guide

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Document Change Record

Version	Date of Version	Document Change Request (DCR) Number	Description of changes
	as on profile	*if applicable*	
v1	17/01/2018		Initial Release

Table of Contents

Table of Figures

Table of Tables

1   INTRODUCTION

Figure 1: TECHNOTREND TT-budget S2-4200 Twin Receiver

The purpose of this manual is to guide a user through the minimum necessary steps to allow the reception of EUMETCast Africa data (DVB-S) on the TECHNOTREND TT-budget S2-4200 Twin **satellite receiver**.

Please refer also to the TECHNOTREND TT-budget S2-4200 Twin Product Description Web Page*:*

http://www.technotrend.eu/2993/TT-budget_S2-4200_Twin.html

2   PREREQUISITES

Before performing the configuration please ensure the following steps have been addressed:

- A PC with a PCIe port is available for connecting the receiver;
- Operating System is compliant;
- Internet Explorer 9 and higher, Firefox 55 and higher or any other compatible browser;
- Administrator or Root access to the reception host system;
- The EUMETCast Africa antenna pointing has been performed correctly to EUTELSAT5W for DVB-S reception;
- An EKU has been obtained from the EUMETSAT user help desk;
- The reception host has the latest EUMETCast reception software installed;

3   DEVICE INSTALLATION
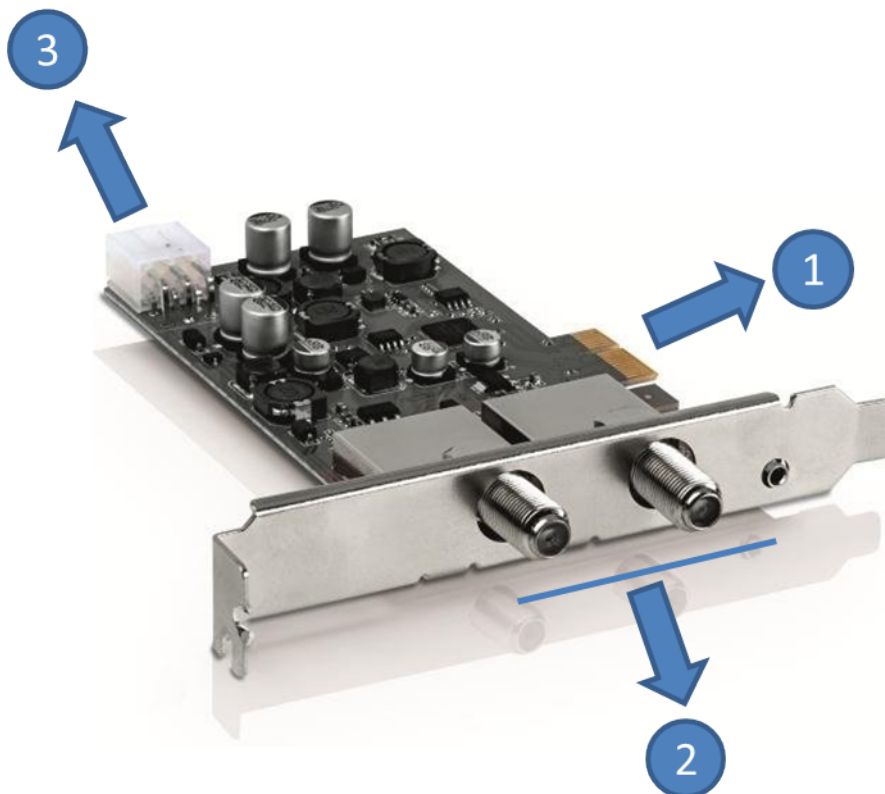
3.1   Physical Connections

Figure 2: TECHNOTREND TT-budget S2-4200 Twin Connectors

The connectors used in the TECHNOTREND TT-budget S2-4200 Twin device configuration are described in the following table:

Number	Connector
1	PCIe 1.x Connector
2	RF In
3	Power Cable Connector

Table 1: TECHNOTREND TT-budget S2-4200 Twin Connectors

- Plug-in the connector 1 to a free PCIe slot of your PC ;
- Connect the antenna cable to one of the two connectors 2;
- Connect the Power Cable Connector 3 to the power using a power cable (Optional)
- Install the windows drivers (see paragraph 3.2) ;
- Install and Configure BDADataEx (see paragraph 4) ;
- Configure Tellicast (see paragraph 5.1) ;

i.   On TECHNOTREND TT-budget S2-4200 Twin to get adapter 1 use the lower plug.

ii. The external power plug is optional. It needs to be used in very rare cases when there is no enough power from PCIe slot. (The LNB Input on TECHNOTREND cards can provide 450mA. If the user has only LNB connected on the coaxial cable, then the external power is not needed as one LNB is on average 100mA. If there are things like motor, DiSEqC devices on the same coaxial cable, then the power consumption can go up and external power be needed).
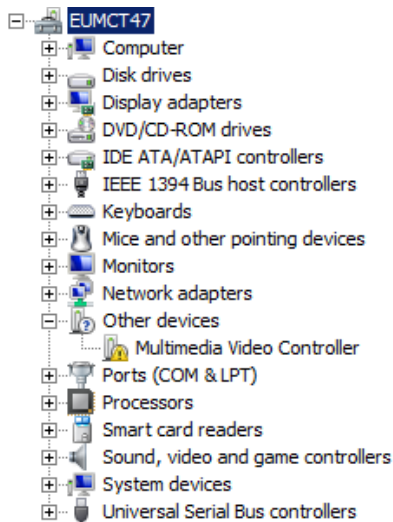
3.2   Windows Drivers Installation

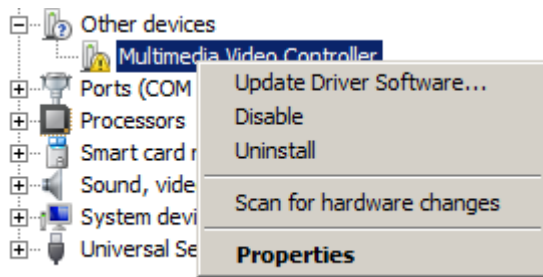a) You can find the latest windows driver at the Technotrend web site :

http://www.technotrend.eu/2899/PC-Produkte.html

The version used for EUMETSAT testing was v.4.2.0.0

bda-treiber_4.2.0.0

b) Go to Windows Devices

EUMCT47
  Computer
  Disk drives
  Display adapters
  DVD/CD-ROM drives
  IDE ATA/ATAPI controllers
  IEEE 1394 Bus host controllers
  Keyboards
  Mice and other pointing devices
  Monitors
  Network adapters
  Other devices
    Multimedia Video Controller
  Ports (COM & LPT)
  Processors
  Smart card readers
  Sound, video and game controllers
  System devices
  Universal Serial Bus controllers
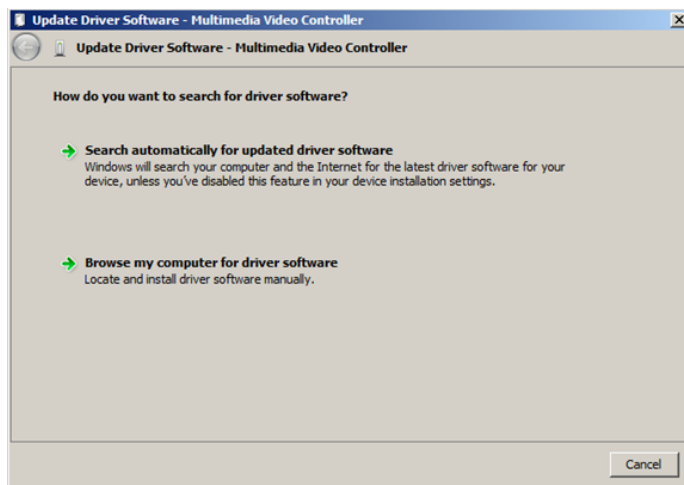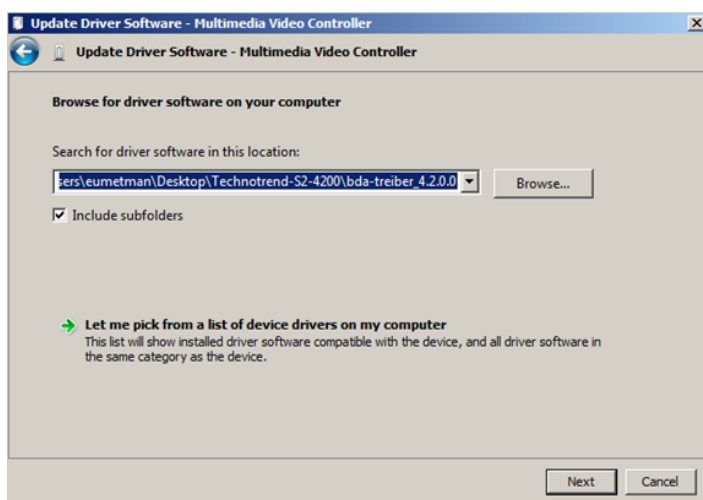
c) Right Click on the "Multimedia Video Controller" and select "Update Driver Software"
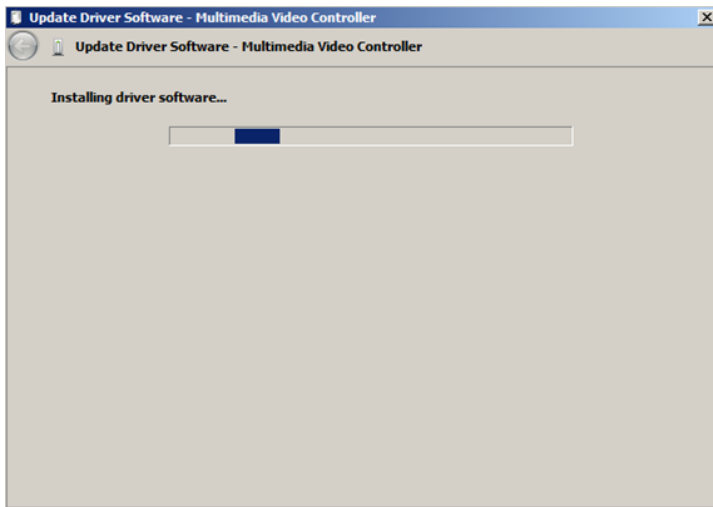
d) Select "Browse my computer for driver software"
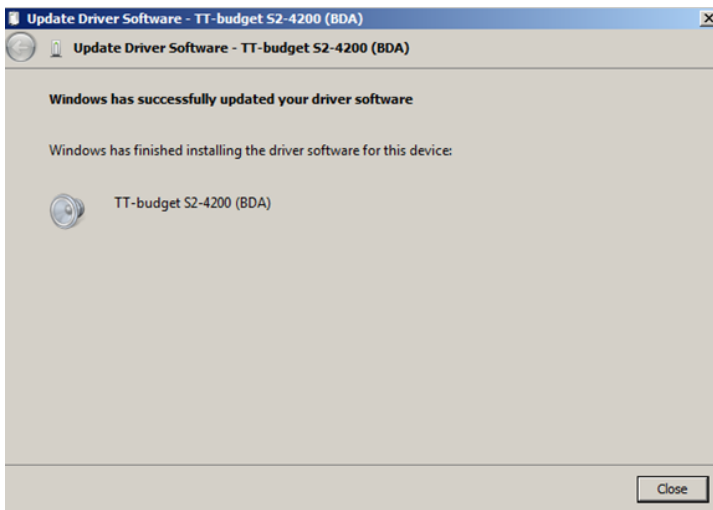

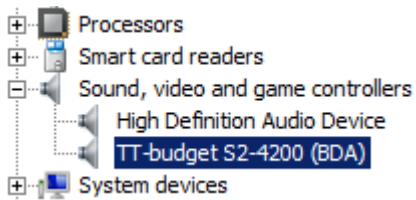e) Select the directory where you have extracted the bda drivers and click on "Next"

f) You will now see a message "Installing driver software …"

g) And then a pop window informing you that the "Windows has successfully updated your driver software"

h) You can now see the TECHNOTREND TT-budget S2-4200 under the Windows Device Manager :

4   CHANNEL TUNING USING BDADATAEX

In order to tune your DVB card with the satellite you need a generic Tuning Tool like BDADataEx made by CrazyCat. This Tool is working with many DVB devices. The choice is up to the users.
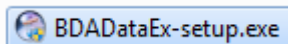
4.1   BDADataEx installation

You can find the latest BDADataEx software at the CrazyCat BDADataEx web site:

http://crazycat69.narod.ru/sattelite/DVBDataEx/BDADataEx-setup.zip

The version used for EUMETSAT testing was v.1.1.4.9
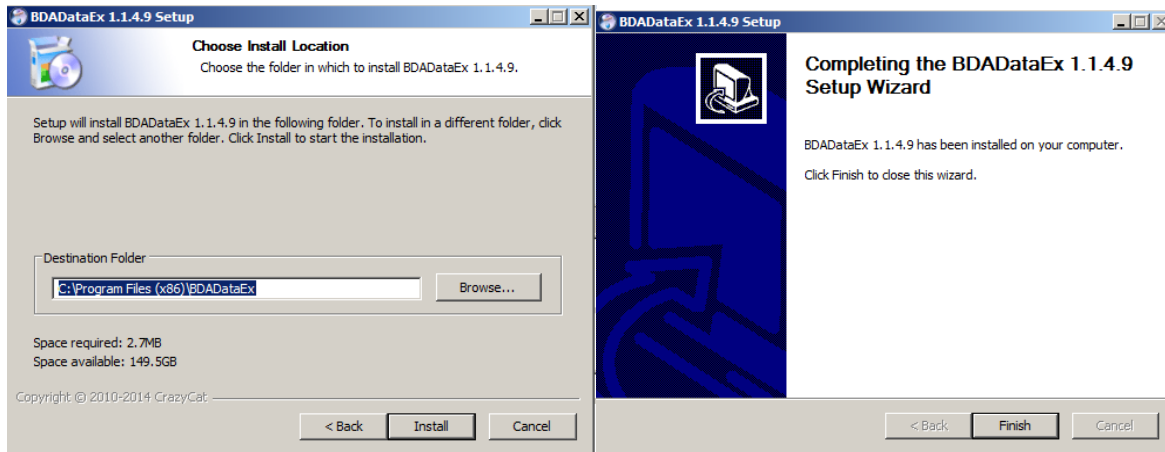
a) Download / unzip BDADataEx-setup.zip on your disk
b) Install BDADataEx-setup.exe

c) Click on Next> to select the needed components (select all) and then Next

**Technotrend S2-4200 Twin DVB-S2 Receiver EUMETCast Africa
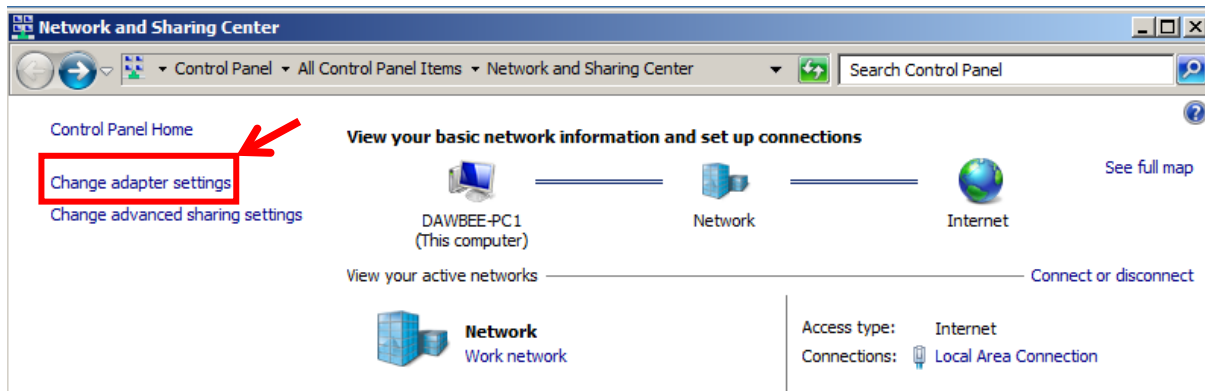Windows Setup Guide**
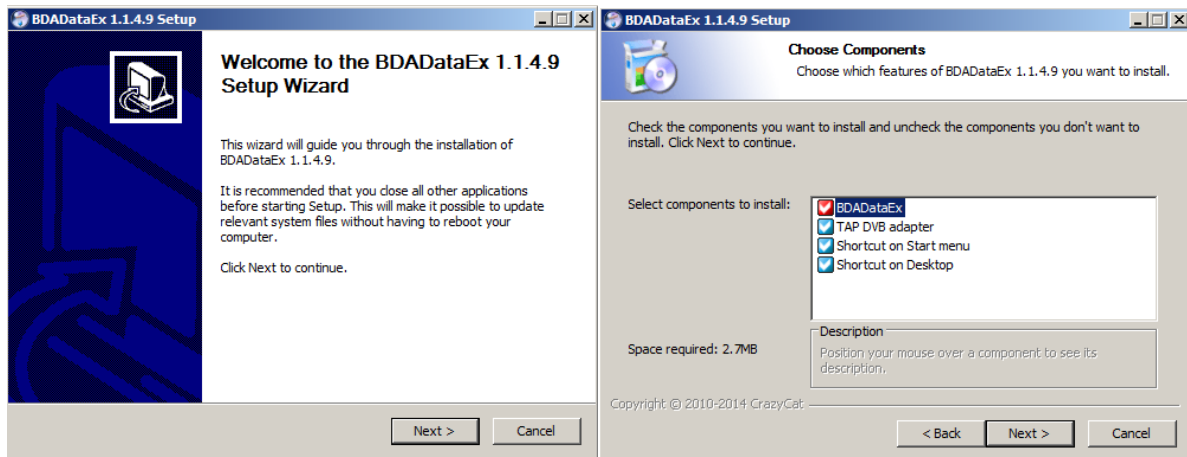
d) Click on Next> to select the installation path and then Finish to complete the
installation
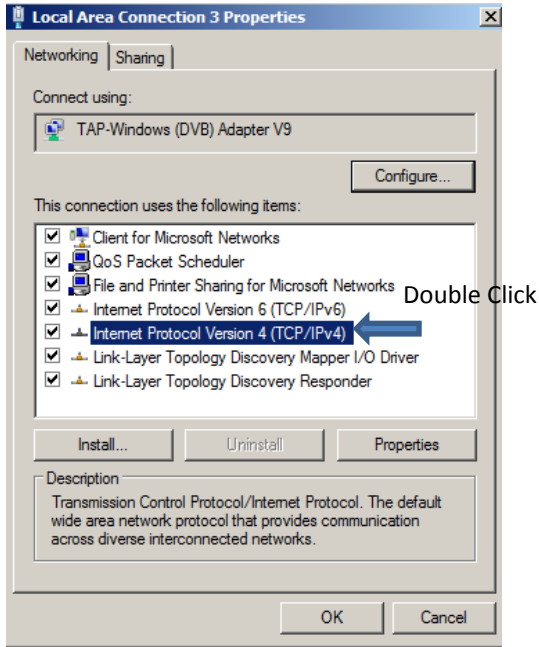

4.2 Windows Emulated Network Adapter Configuration

a) Open Network & Sharing Center & select "Change adapter settings"
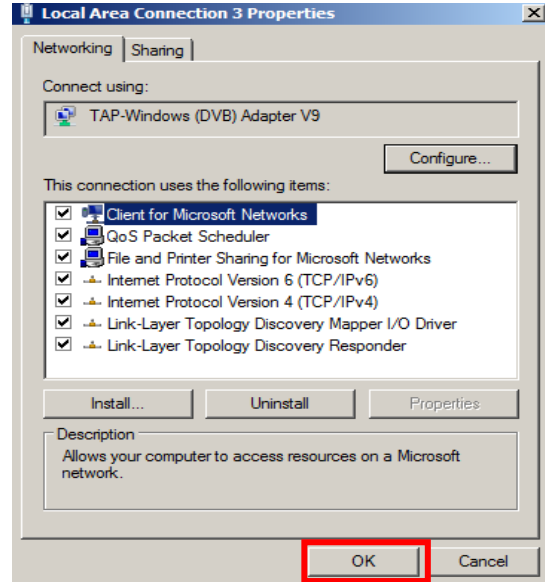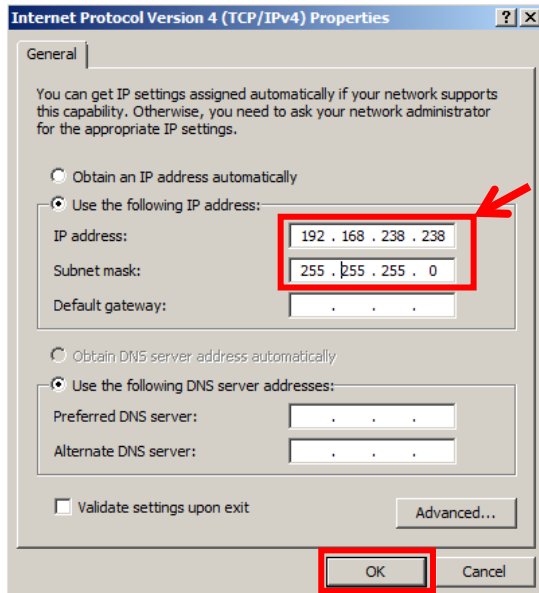

b) Double click on TAP Network Connection. We will define the network address of the
virtual network card presented by the software so that TelliCast knows where to find
its data.
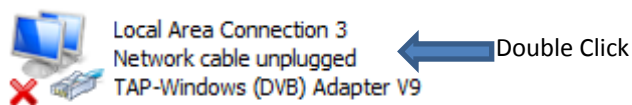
c) Double click on the "TCP/IPv4"

d) Use 192.168.238.238 for IP address & Subnet Mask 255.255.255.0 and click OK. Close the main Local Area Connection Properties window by clicking on "OK"
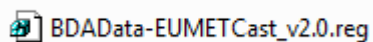
4.3 BDADataEx Configuration

4.3.1 Automatic Configuration

a) Download the BDAData-EUMETCast.reg file from the EUMETSAT ftp site :

ftp://ftp.eumetsat.int/pub/OPS/out/user/EUMETCast_Support/EUMETCast_Licence_cd/Windows/DVB_devices/TOOLS/

b) Double click on the BDAData-EUMETCast_v2.0.reg.

BDAData-EUMETCast_v2.0.reg

c) If you see any security message just click "Run" and "Yes"
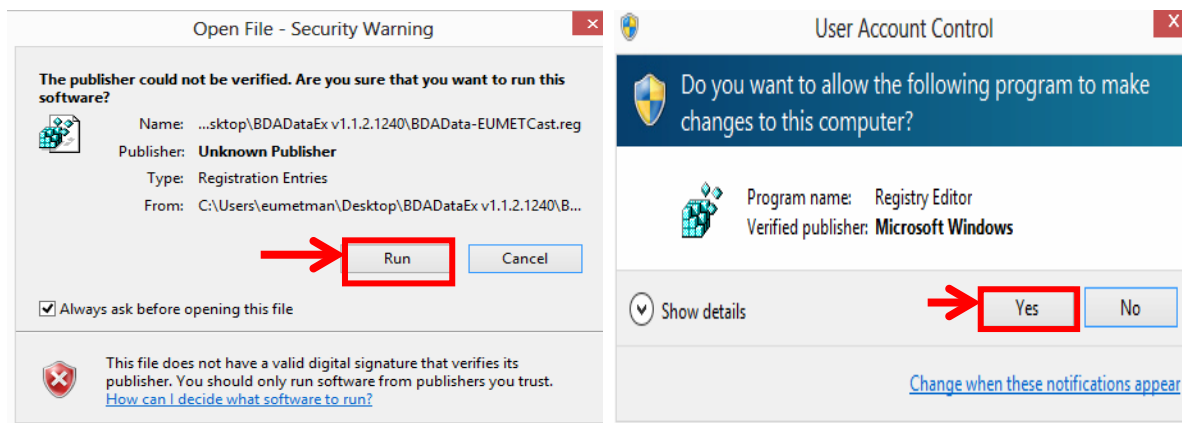
d) On the "Registry Editor" Window click on "YES"
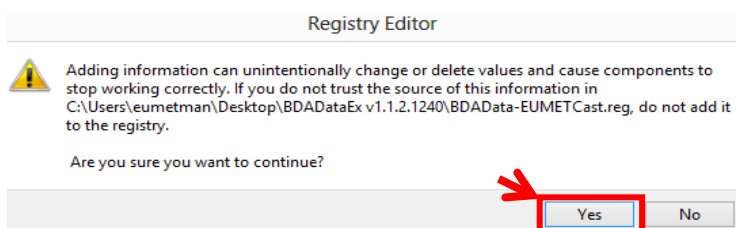
e) If settings successfully added to the registry, you get the following message. Click then on "OK".
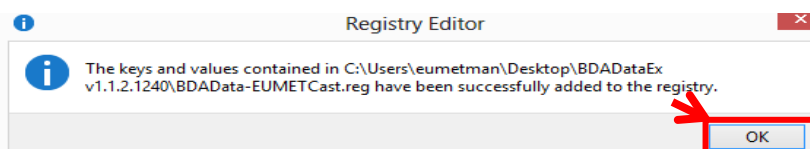
f) Start the BDADataEx program

BDADataEx.exe ⬅ Double Click and run

g) Select the used DVB Device and then Click on "OK". You can also select that this would be the "Default device".
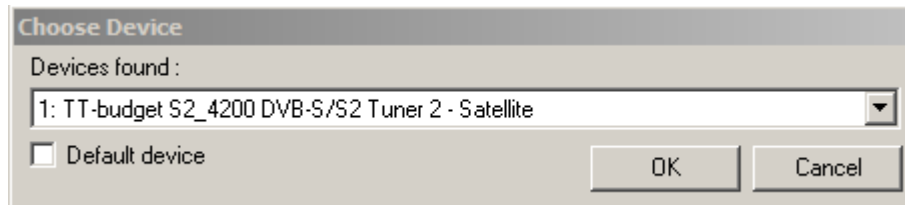
h) In the pop up window and in the first TAB "Status/Tuner" select the EUMETCast Africa Service

 If everything is OK the "Tuner-Status" should be green, if not check your reception (antenna pointing, optimization, cabling etc) :

Figure 3: BDADataEx - EUMETCast Africa C-Band

5   TELLICAST AND SYSTEM CONFIGURATION SETUP

5.1   Tellicast Setup

After the steps above have been completed, the Tellicast application must be given the fixed IP from which the data can be taken:

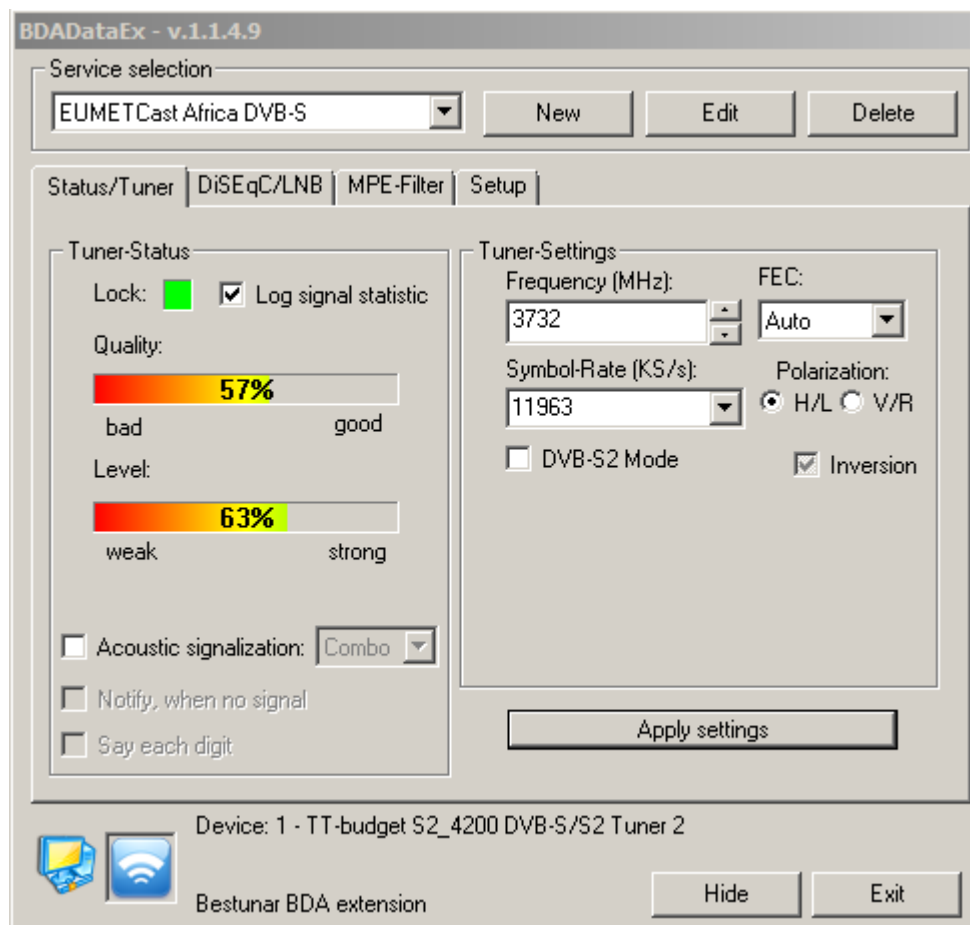Into the configuration file cast-client_xxx.ini the "*interface_address*" must be set to the reception host local IP Address:

interface_address=192.168.238.<nnn>

e.g.
interface_address=192.168.238.238

N-B: The interface_address parameter can be commented or deleted from cast-client_xxx.ini and the Tellicast application will search the multicast data on all the interfaces available on the host; that is not recommended when the reception host is used to receive another data flow, the Tellicast client application is not able to distinguish between the flows a priori!

5.2   Firewall

Make sure the firewall allows traffic from the interface address in 5.1!

5.3   Windows Routing Table

If the TelliCast fails to work, being either stuck in the yellow T-icon state or, if the network cable is connected after the system was working, the icon alternates between the "pink" and "red" states.

This may be related to the default multicast entries in the TCP/IP routing table.

To solve this problem, you need to tell Windows that the addresses handled by Tellicast must always be reached through the interface_address which you set up in cast-client_xxx.ini file (192.168.238.nnn).

In the Start menu, All Programs, Accessories menu, you will find an item named Command Prompt.

Right-click on this item, and select Run as administrator. Enter the following command (replace IP_address with the local IP address of 6.1) :

route delete 224.0.0.0 (Please note that this might disable services which use multicast as protocol e.g. streaming services.

route -p ADD 224.0.0.0 mask 240.0.0.0 *IP_address* metric 1

e.g., if *IP_adress* = 192.168.238.238
route delete 224.0.0.0
route -p ADD 224.0.0.0 mask 240.0.0.0 192.168.238.238 metric 1

Then restart the computer

APPENDIX A   LIST OF ACRONYMS, TERMS & ABBREVIATIONS

Acronyms, Terms & Abbreviations	
BS	Basic Service
DVB-S, DVB-S2	Digital Video Broadcast, a broadcast standard
EUMETCast	EUMETSAT multicast based broadcast system
EUMETSAT	European Meteorological Satellite Organisation
HVS	High Volume Service
ISI	Input Stream Identifier
LNB	low-noise block downconverter
MODCOD	Modulation & Coding
PID	Packet IDentification