

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

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Table of Contents

1	INTRODUCTION	5
2	PREREQUISITES	5
3	DEVICE INSTALLATION.....	6
3.1	Physical Connections.....	6
3.2	Windows Drivers Installation	7
4	CHANNEL TUNING USING BDADATAEX.....	10
4.1	BDADDataEx installation	10
4.2	Windows Emulated Network Adapter Configuration	11
4.3	BDADDataEx Configuration.....	13
4.3.1	Automatic Configuration.....	13
5	TELLICAST AND SYSTEM CONFIGURATION SETUP	15
5.1	Tellicast Setup.....	15
5.2	Firewall	15
5.3	Windows Routing Table	15
APPENDIX A	LIST OF ACRONYMS, TERMS & ABBREVIATIONS	16

Table of Figures

Figure 1:	TECHNOTREND TT-budget S2-4200 Twin Receiver	5
Figure 2:	TECHNOTREND TT-budget S2-4200 Twin Connectors.....	6
Figure 3:	BDADDataEx - EUMETCast Africa C-Band.....	14

Table of Tables

Table 1:	TECHNOTREND TT-budget S2-4200 Twin Connectors	6
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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

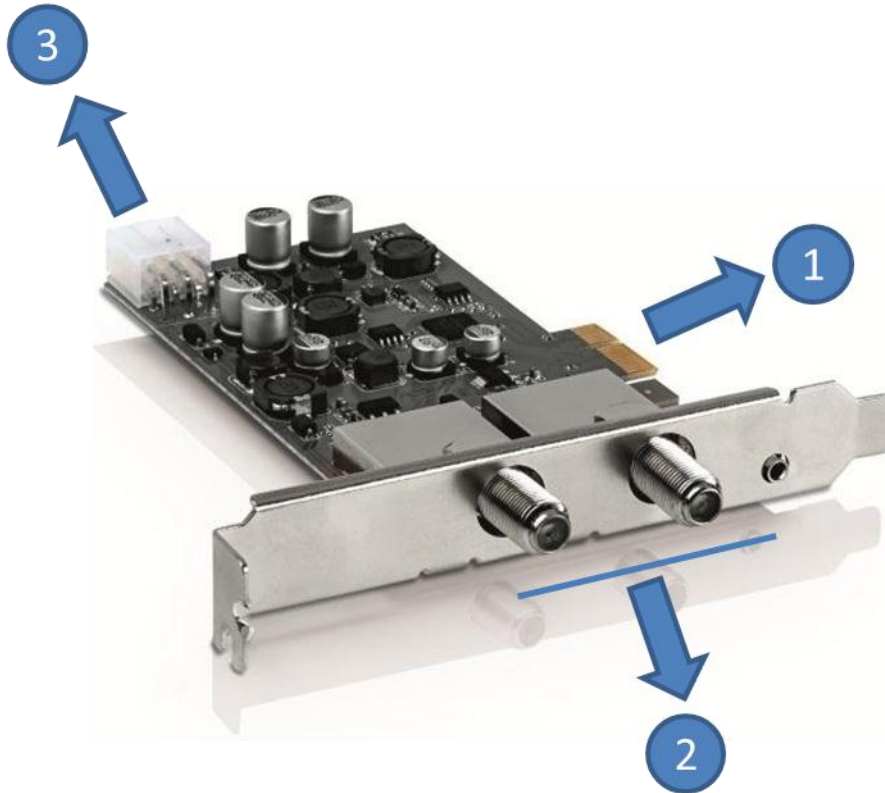


Figure 2: TECHNOTREND TT-budget S2-4200 Twin Connectors

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 not 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

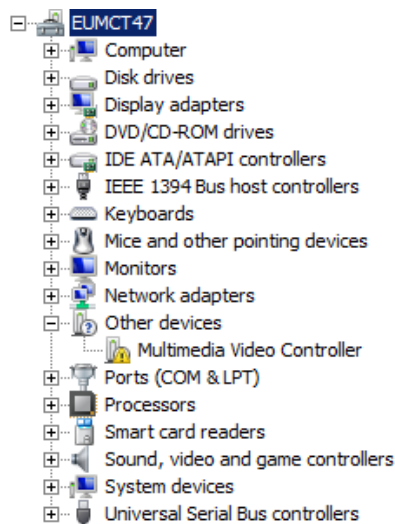
- a) You can find the latest windows driver at the Technotrend web site :

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

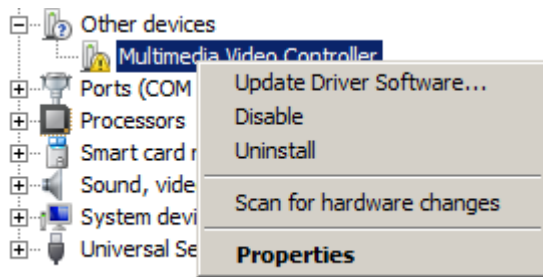
The version used for EUMETSAT testing was v.4.2.0.0

 **bda-treiber_4.2.0.0**

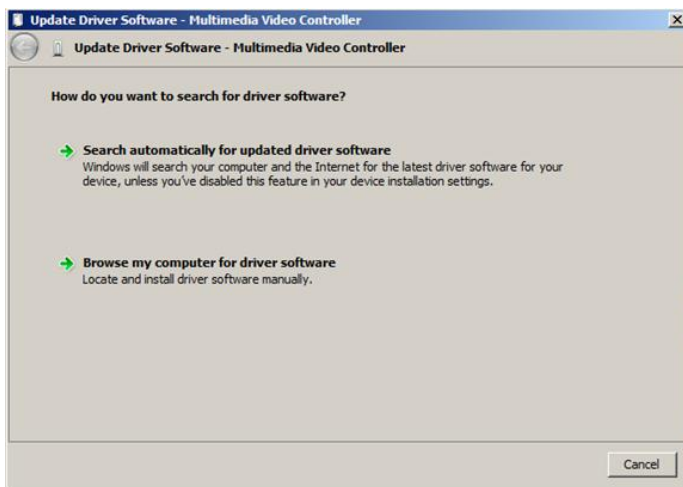
- b) Go to Windows Devices



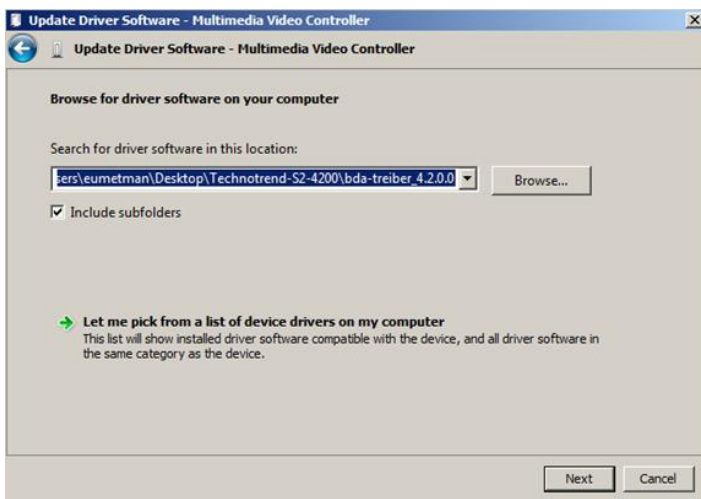
- c) Right Click on the “Multimedia Video Controller” and select “Update Driver Software”



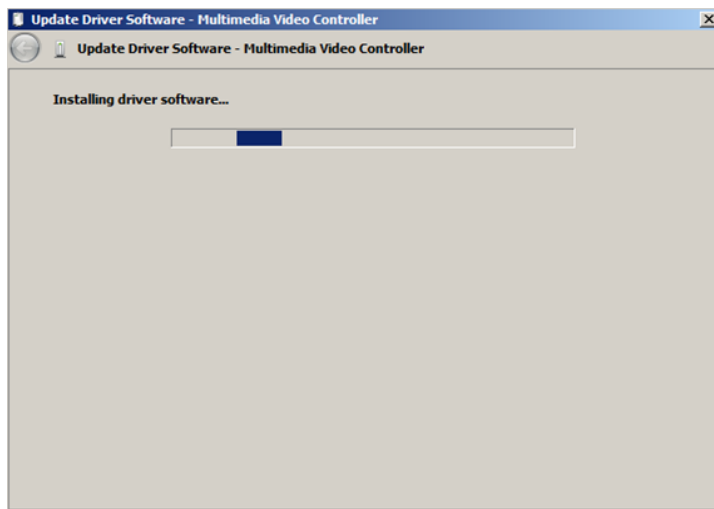
d) Select “Browse my computer for driver software”



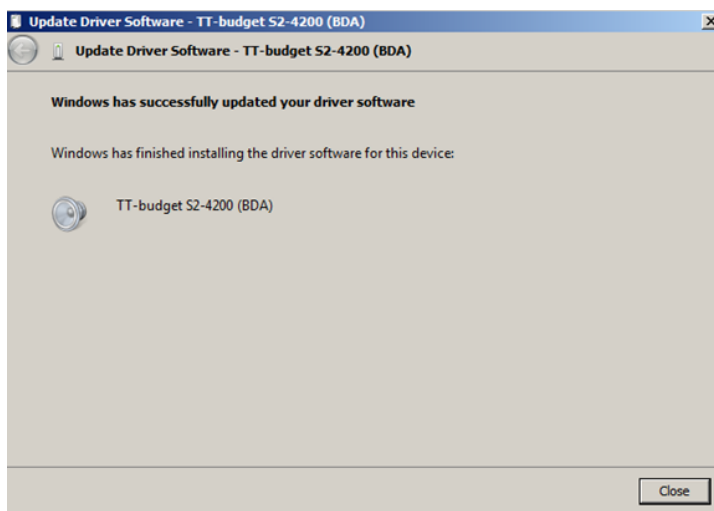
e) Select the directory where you have extracted the bda drivers and click on “Next”



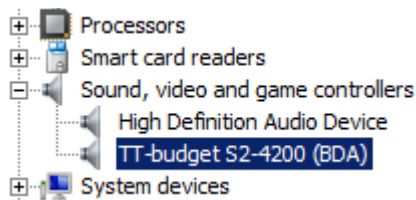
f) You will now see a message “Installing driver software ...”



- 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 BDADDataEx made by CrazyCat. This Tool is working with many DVB devices. The choice is up to the users.

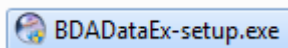
4.1 BDADDataEx installation

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

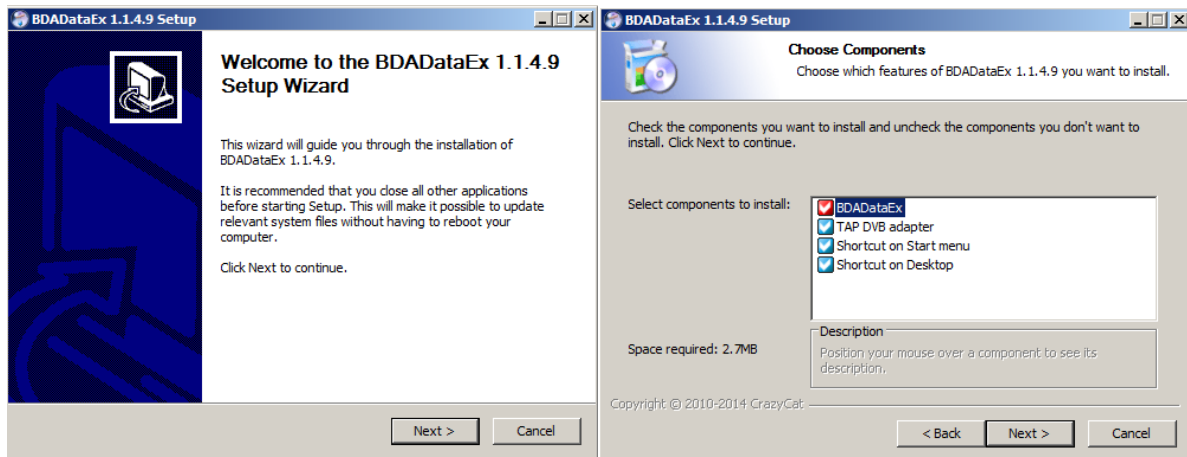
<http://crazycat69.narod.ru/sattelite/DVBDataEx/BDADDataEx-setup.zip>

The version used for EUMETSAT testing was v.1.1.4.9

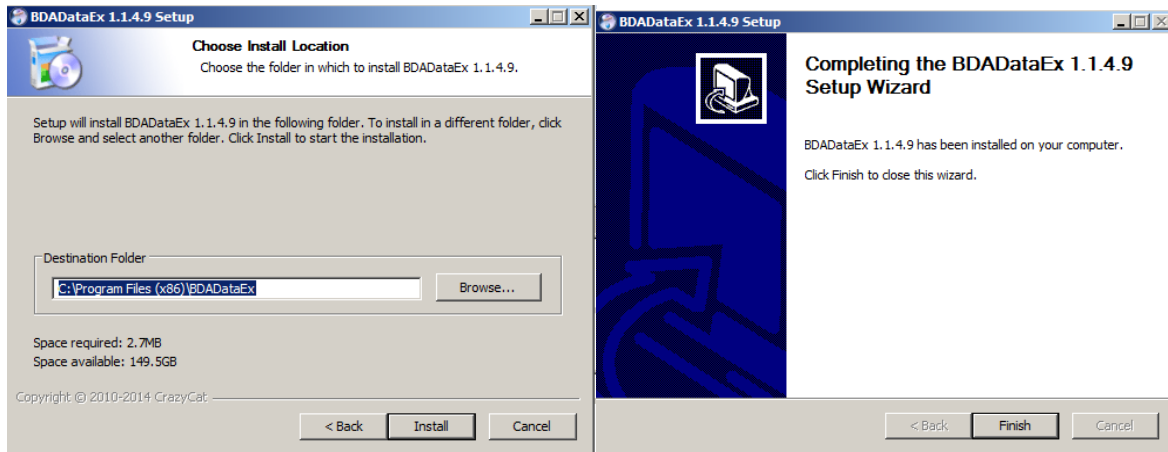
- a) Download / unzip BDADDataEx-setup.zip on your disk
- b) Install BDADDataEx-setup.exe



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

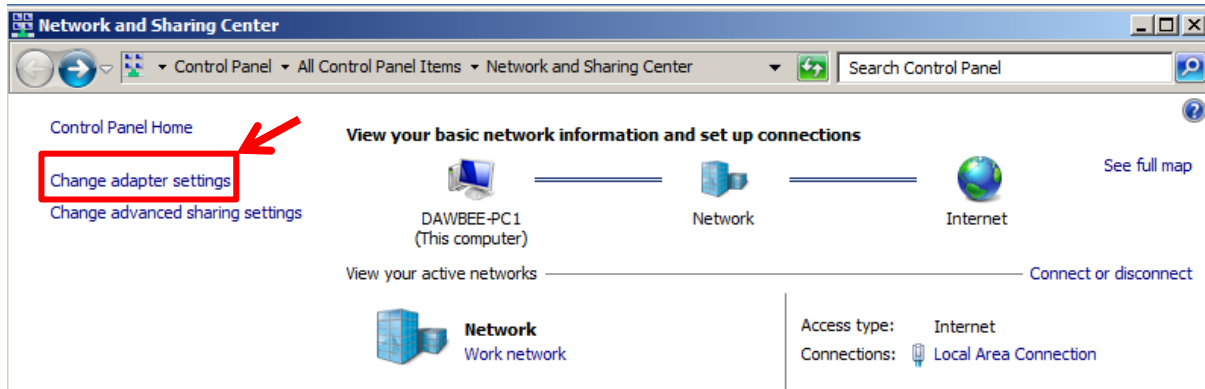


- d) Click on Next> to select the installation path and then Finish to complete the installation

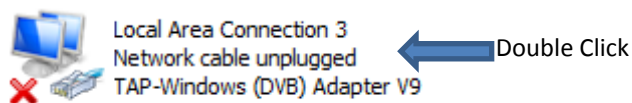


4.2 Windows Emulated Network Adapter Configuration

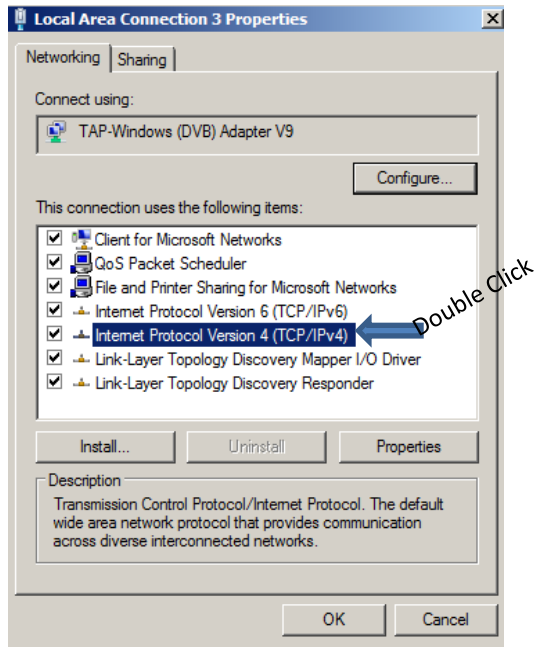
- a) Open Network & Sharing Center & select “Change adapter settings”



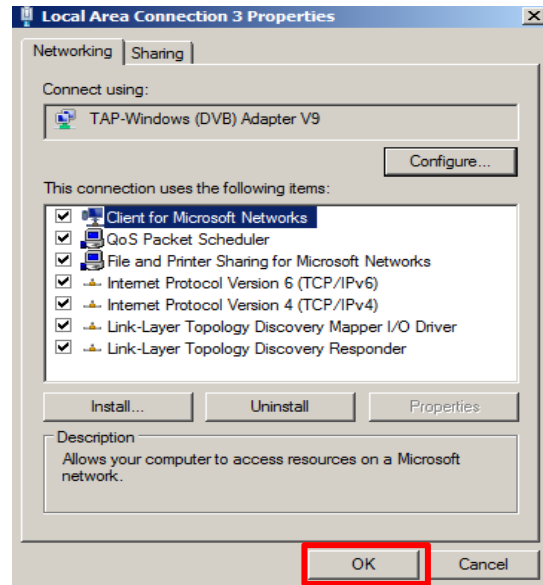
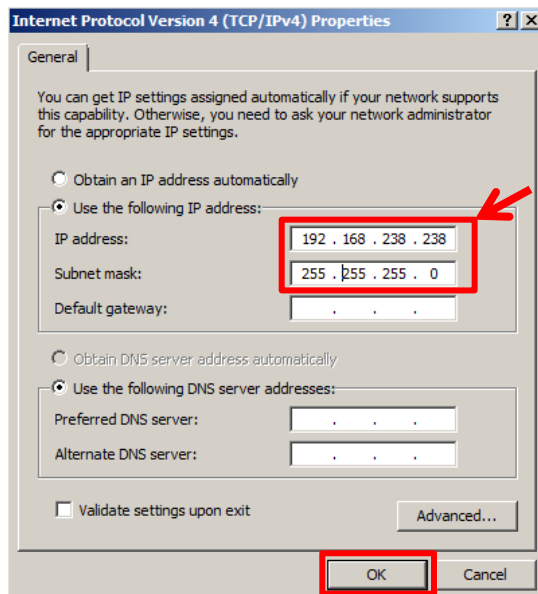
- b) Double click on TAP Network Connection. We will define the network address of the virtual network card presented by the software so that TelliCast knows where to find its data.



- 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”



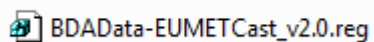
4.3 BDADDataEx Configuration

4.3.1 Automatic Configuration

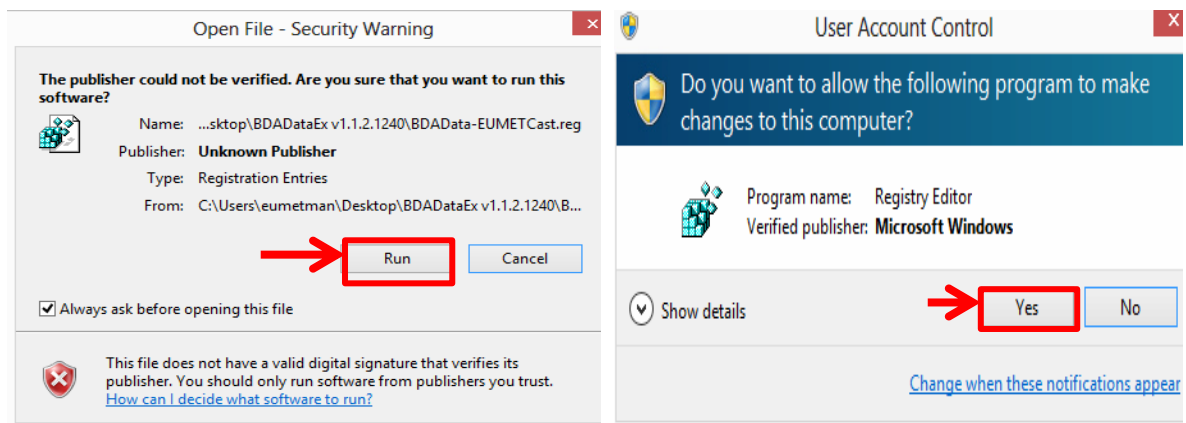
- a) Download the BDADData-EUMETCast.reg file from the EUMETSAT ftp site :

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

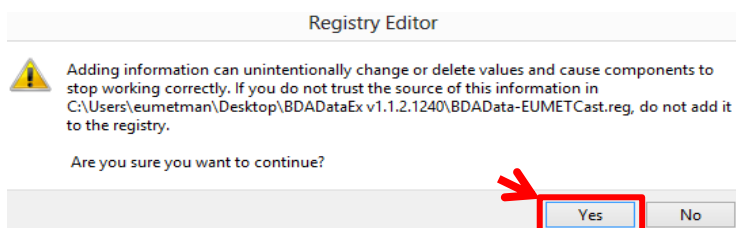
- b) Double click on the BDADData-EUMETCast_v2.0.reg.



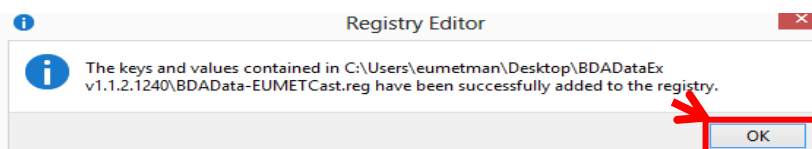
- c) If you see any security message just click “Run” and “Yes”



- d) On the “Registry Editor” Window click on “YES”



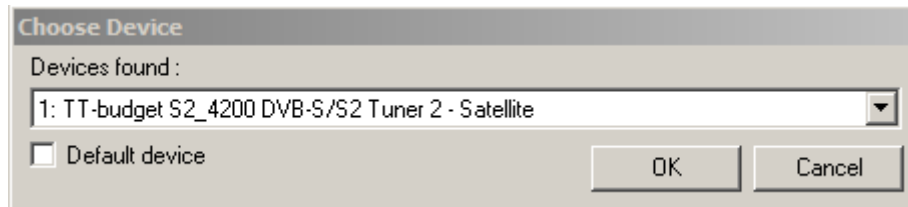
- e) If settings successfully added to the registry, you get the following message. Click then on “OK”.



- f) Start the BDADDataEx program

 BDADDataEx.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) :

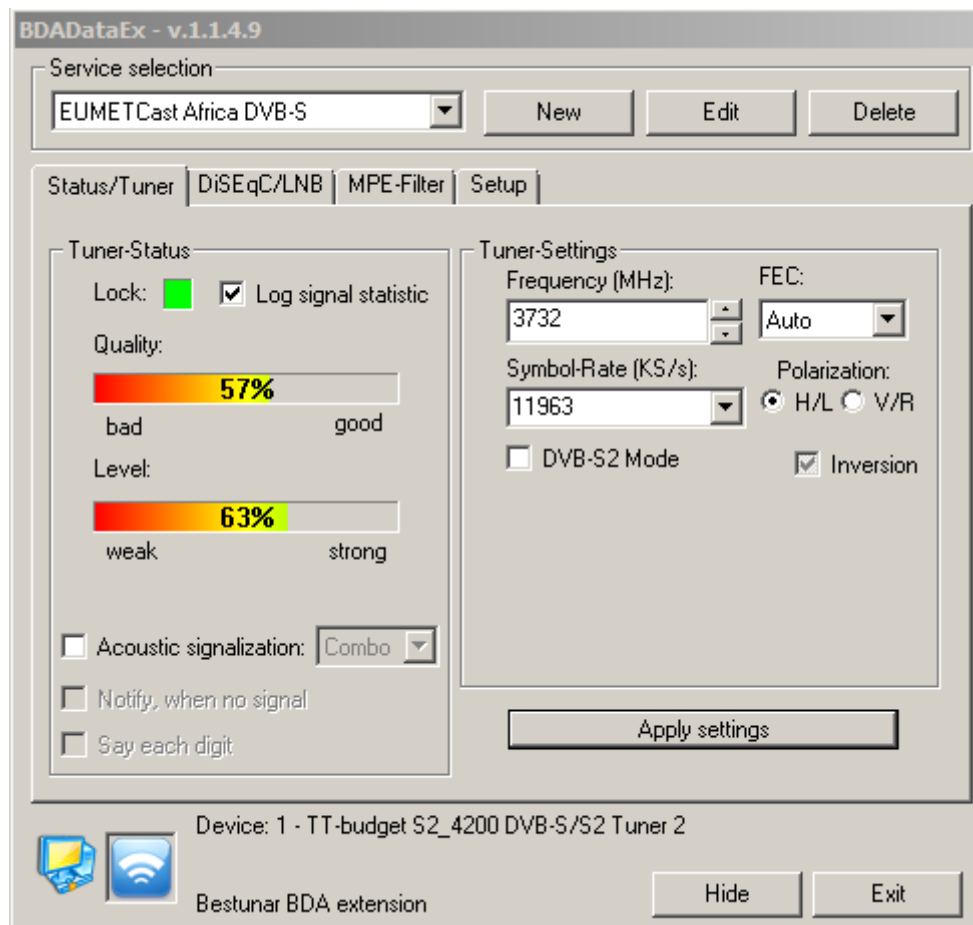


Figure 3: BDADDataEx - EUMETCast Africa C-Band

5 TELICAST 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_adrrress = 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