KVARTA

DVB MONITOR V2
KVARTA USER'S MANUAL

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** Depends on the model*

1. INTRODUCTION

1.1. About KVARTA

For more than 10 years, Kvarta has been developing products for Broadcasters and CATV providers. Our devices are used by major radio and television broadcasters and regulatory agencies.

Broadcasting is our passion. We know what you want and we have designed many devices, which are perfectly adapted to your needs. These include RDS encoders, FM Radio monitors and CATV systems. KVARTA has a reputation for excellence and innovation among its clients and partners.

Our CATV, DVB Monitoring devices and RDS/RBDS encoders are growing in popularity due to their reliability, quality and functionality at exceptional prices. All of our products have been designed for professional broadcast use and are fully meet the standards. Our devices incorporate embedded web site and SNMP communication.

1.2. About DVB

Digital Video Broadcasting (DVB) is a suite of internationally accepted open standards for digital television. DVB standards are maintained by the DVB Project, an international industry consortium with more than 270 members, and they are published by a Joint Technical Committee (JTC) of European Telecommunications Standards Institute (ETSI), European Committee for Electrotechnical Standardization (CENELEC) and European Broadcasting Union (EBU).

2. DVB MONITOR Kvarta

2.1.INCLUDED ACCESSORIES

In your package, you should receive:

- Your DVB MONITOR
- Quick start notice
- AC main power cord
- Straight ethernet cable

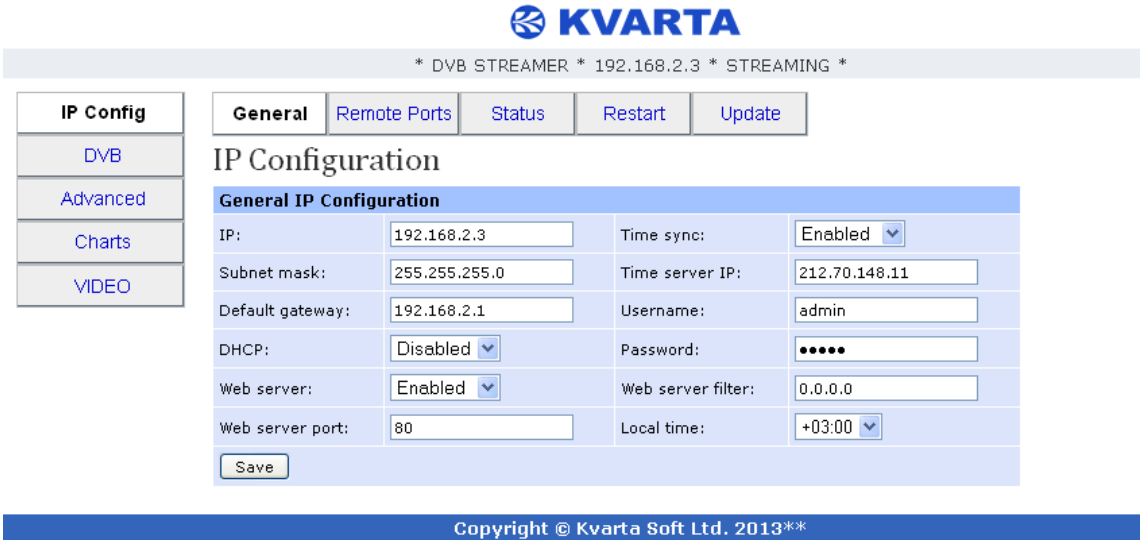
2.2.GENERAL SPECIFICATIONS OF THE DVB MONITOR

Communication ports	
Ethernet	100baseT – Web Server and UDP/TCP (SNMP/ASCII)
Frequency range and Modulation	
Frequency Range	46 MHz - 1004 MHz
Analog TV	NTSC , PAL/SECAM
Digital TV	DVB-T, DVB-H, DVB-C
Demodulator	
DVB-T	ETSI EN 300 744
DVB-H	ETSI EN 300 744 Annex F
DVB-C	ETSI EN 300 429 and ITU J.83 Annex A/C
Supports	QPSK/16/32/64/128/256QAM
Bandwidth	6MHz/7MHz/8MHz
Symbols rate	1MS/S-7MS/S
COFDM	2k,4k,8k
Measurements	
Standard	ETSI TR 101 290 V1.2.1
Level	30dBuV - 100dBuV (±2dBuV)
MER	19dB - 45dB (±2dB)
C/N	19dB - 40dB (±2dB)
SNR	19dB - 55dB (±2dB)
BER (DVB-C)	1E-1~ 1E-7
CBER,VBER (DVB-T)	1E-1~ 1E-7
MPEG Decoding	
Tables	PAT,PMT,SDT,TDT,TOT
Alarms	Service Audio/Video alarms with e-mail notifications and SNMP traps
Monitoring	
Alarms	Carrier count, Level(low, high), SNR(low), C/N(low), MER(low), BER(high), CBER(high), VBER(high), PAT/PMT/Audio/Video missing alarm
Log, E-mail, SNMP traps	Available
Power Supply	
Supply voltage	230V (115V optional)
Voltage tolerance	+/- 10%
Main AC frequency	45-65 Hz
Fuse	0.8A
Consumption	10 VA
Mechanical aspects	
Height	1U (44,5 mm)
Width	483 mm
Depth	220 mm
Net weight	2,5 kg
Info	
Updates	Available
Front panel LEDs	Power supply, LAN, Analog, DVB-C, DVB-T

3. Getting connected

3.1. Connecting to the embedded web site

1. Connect the Ethernet cable between the RJ45 and the network..
2. Open a Web browser (Mozilla ,Internet Explorer, …) and enter the encoder's IP address (Default: **192.168.2.3)** you just set in the previous step. Log in with the default username and password (admin/admin). The home page of the embedded web site is displayed:



NOTE: *Your computer should have IP address which is in the same network.*

3.2.LED Indication

POWER – Indicates that power supply is available.
LAN – Indicates LAN connection ON/OFF.
ANALOG - Indicates analog reception (blinking indicates parameter out of range or bad reception)
DVB-C - Indicates DVB-C reception (blinking indicates parameter out of range or bad reception)
DVB-T - Indicates DVB-T reception (blinking indicates parameter out of range or bad reception)

3.3.Back panel

Micro SD – 2GB containing configuration and web site files
LAN – Ethernet connection
IN A – RF input A
IN B – RF input B
IEC Connector – AC Power Supply connection 230V (115V optional)

NOTE: COM Port not available in DVB Monitor v2

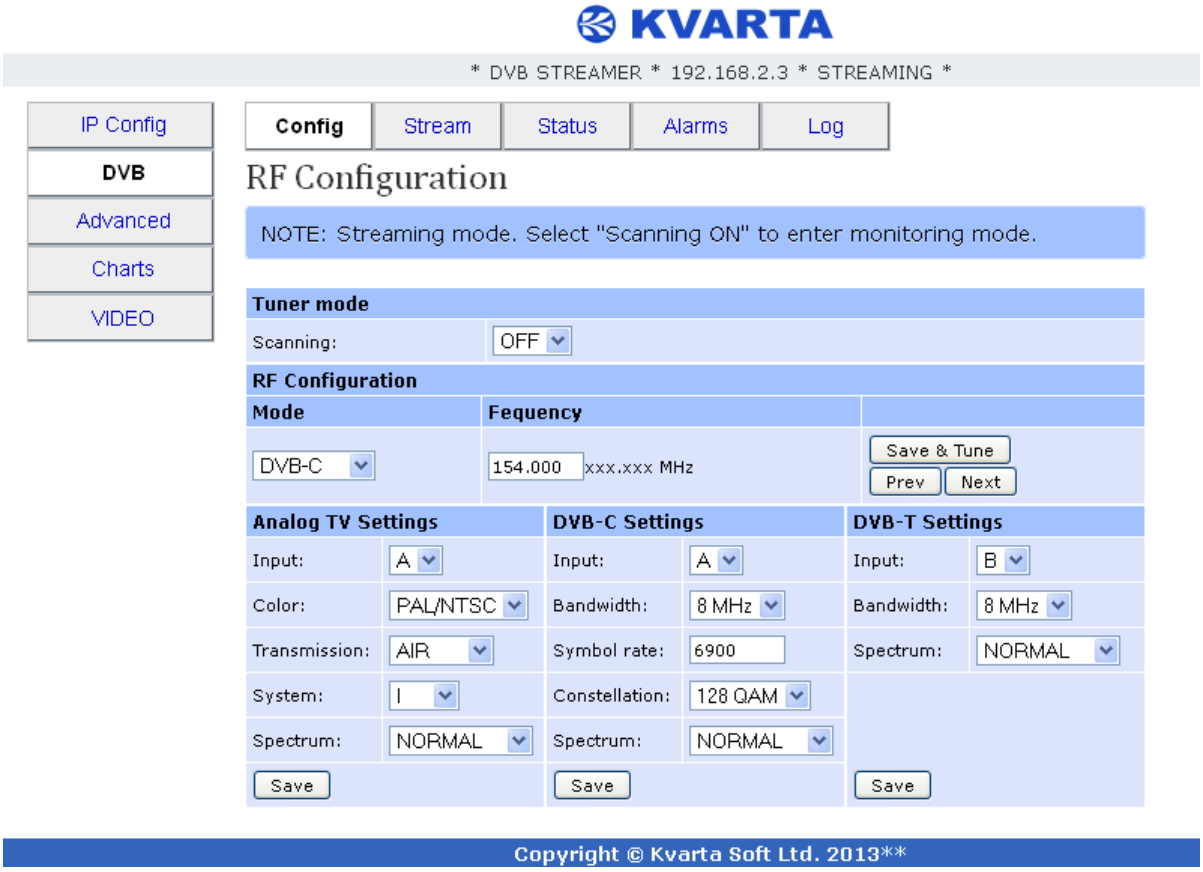
4. CONFIGURATION AND OPERATION

4.1. STREAMING mode (SCAN OFF) - single carrier measurements and streaming

4.1.1. RF Configuration

- Open the embedded web page and click **DVB -> Config**
- Scan mode should be off as it is in the picture below
- Select the modulation type Analog/DVB-C/DVB-T [1]
- Type the center frequency of the monitored carrier
- Click Save & Tune

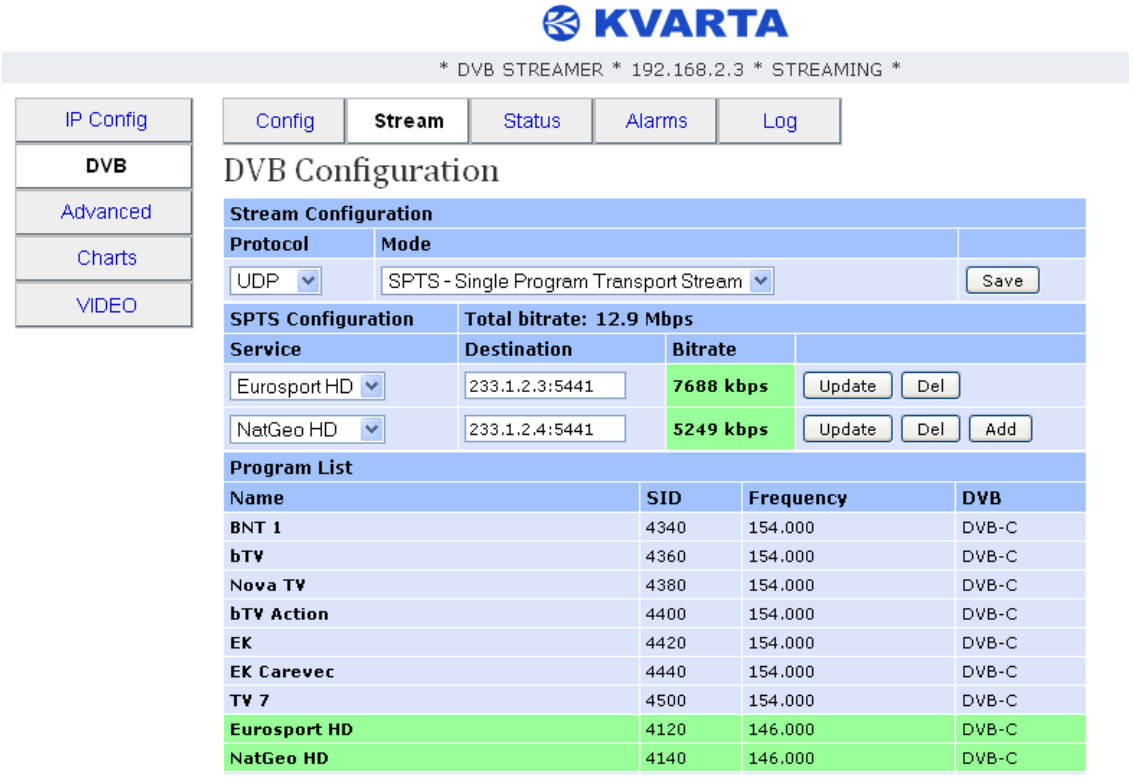
- Connect the RF Antenna or CATV source to IN A or IN B
- Select the appropriate Input (A or B) used for the type of modulation Analog/DVB-C/DVB-T
- Configure other relative settings like Bandwidth, Symbol Rate, Constellation and Spectrum.
- Click the Save button below the settings to store the configuration



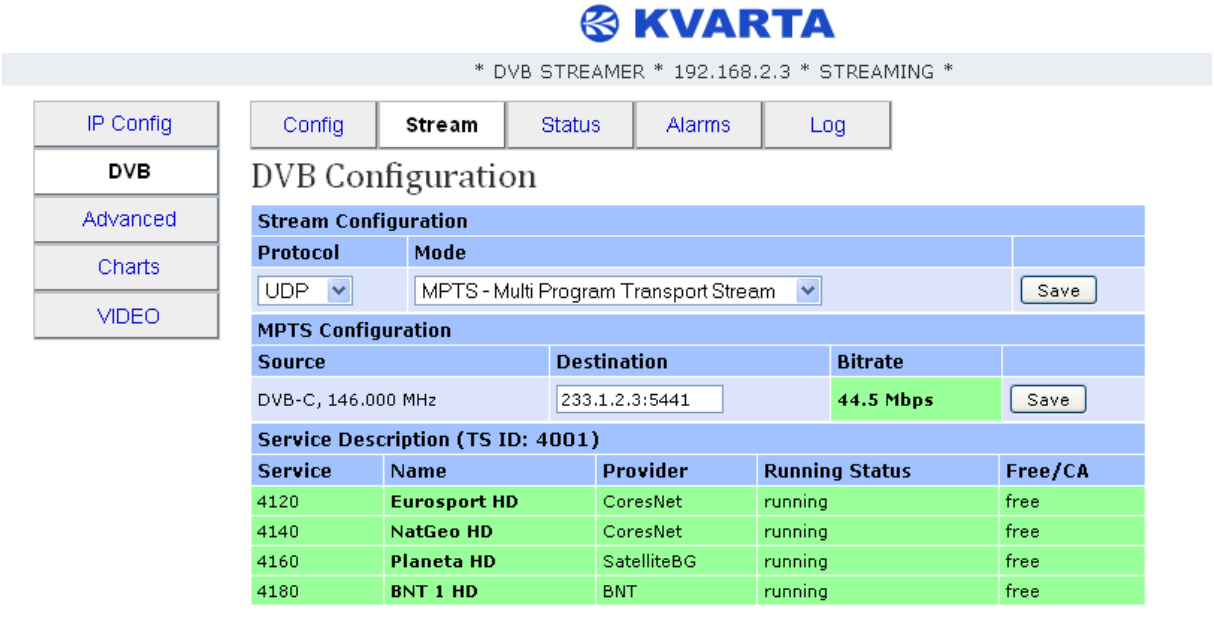
[1] Depends on the DVB Monitor model

4.1.2. Streaming configuration

- Open the embedded web page and click **DVB -> Stream**
- Select the protocol **UDP/RTP/RTSP/OFF**
- Select the type of MPEG TS : **MPTS** - Multi Program Transport Stream, **SPTS** – Single Program Transport Stream
- For SPTS select up to 5 services on the same frequency to be streamed



- For MPTS just select the destination address for the IP stream



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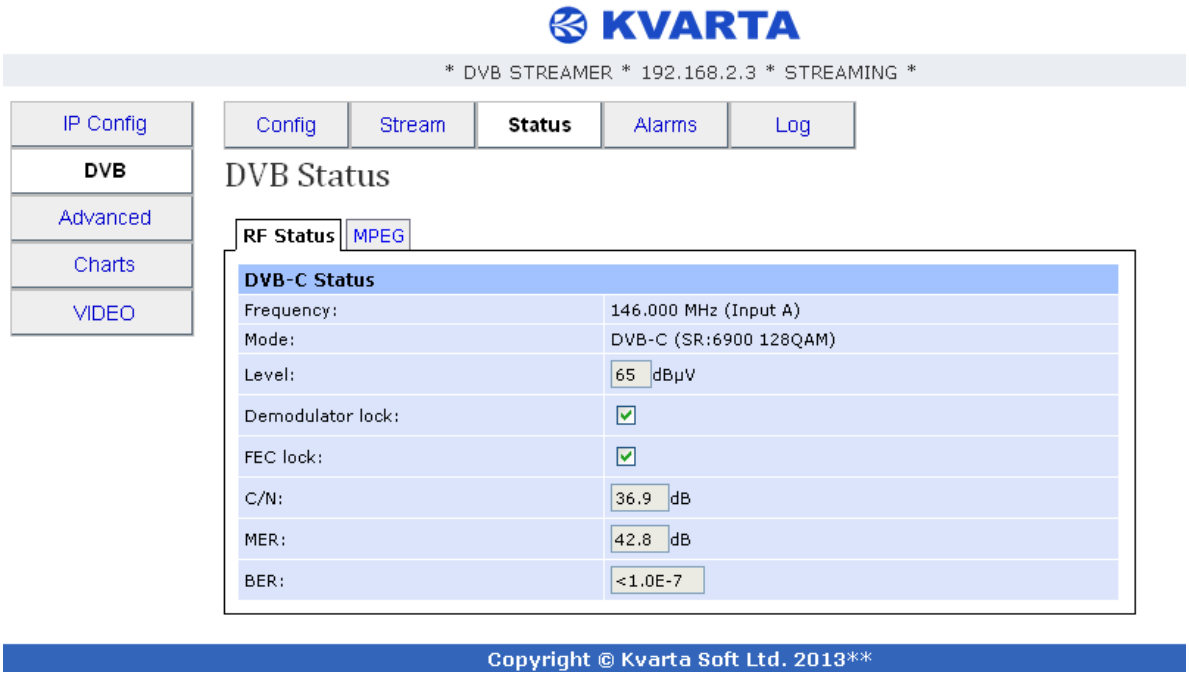
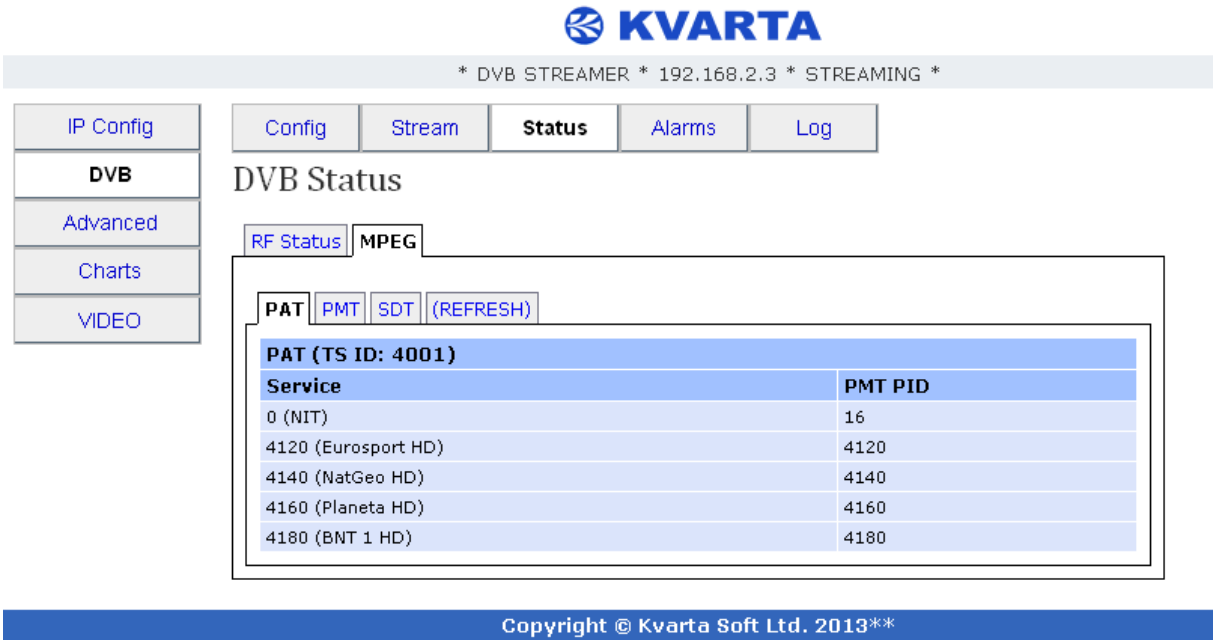
4.1.3. RF Measurements

- Checking the status and measured values
- Click **DVB -> Status -> RF Status**
- This web page constantly displays the measured RF parameters – Demodulator lock, FEC Lock, C/N, MER, BER and other measurements depending on the modulation type.

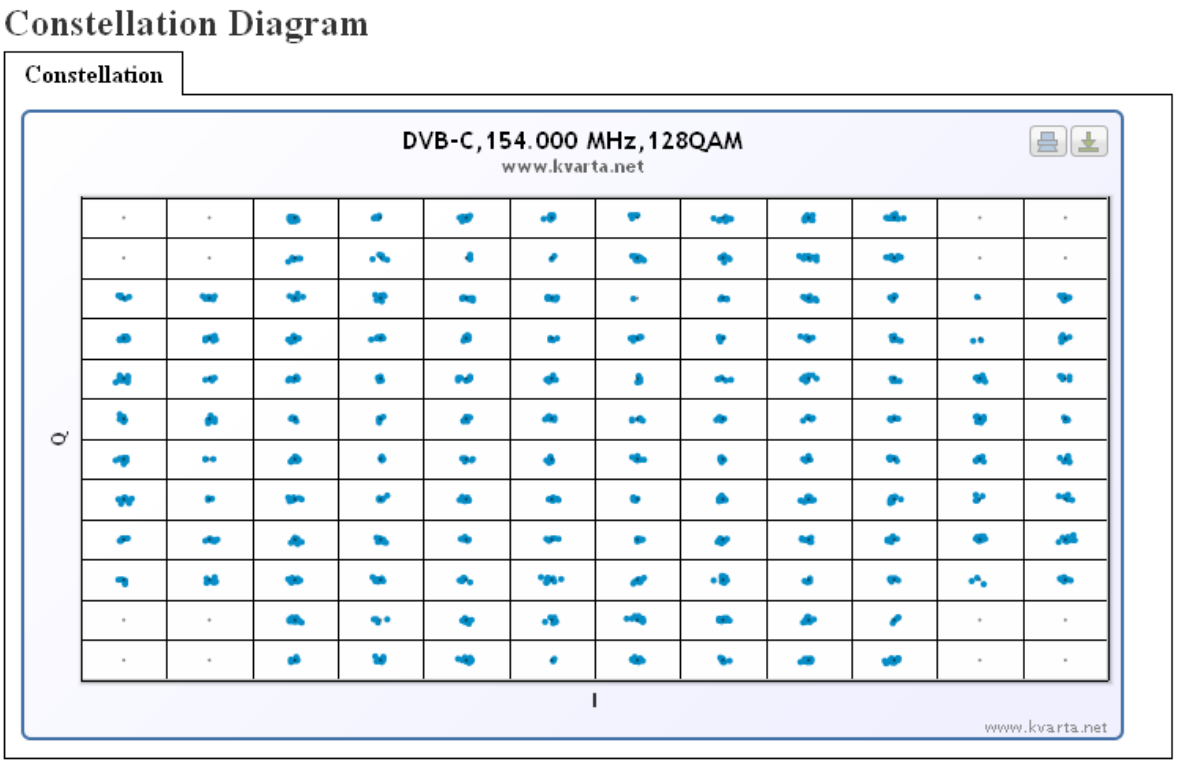


- Click the **DVB-> Status -> MPEG**
- This page displays various MPEG tables PAT , PMT, SDT, TDT, CAT, TOT (Click F5 to reload tables)
- You can also add or remove alarms for specific PIDs in the MPEG transport stream



4.1.4. Constellation diagram

- Click the **Charts** button in the side menu and the constellation diagram will be displayed

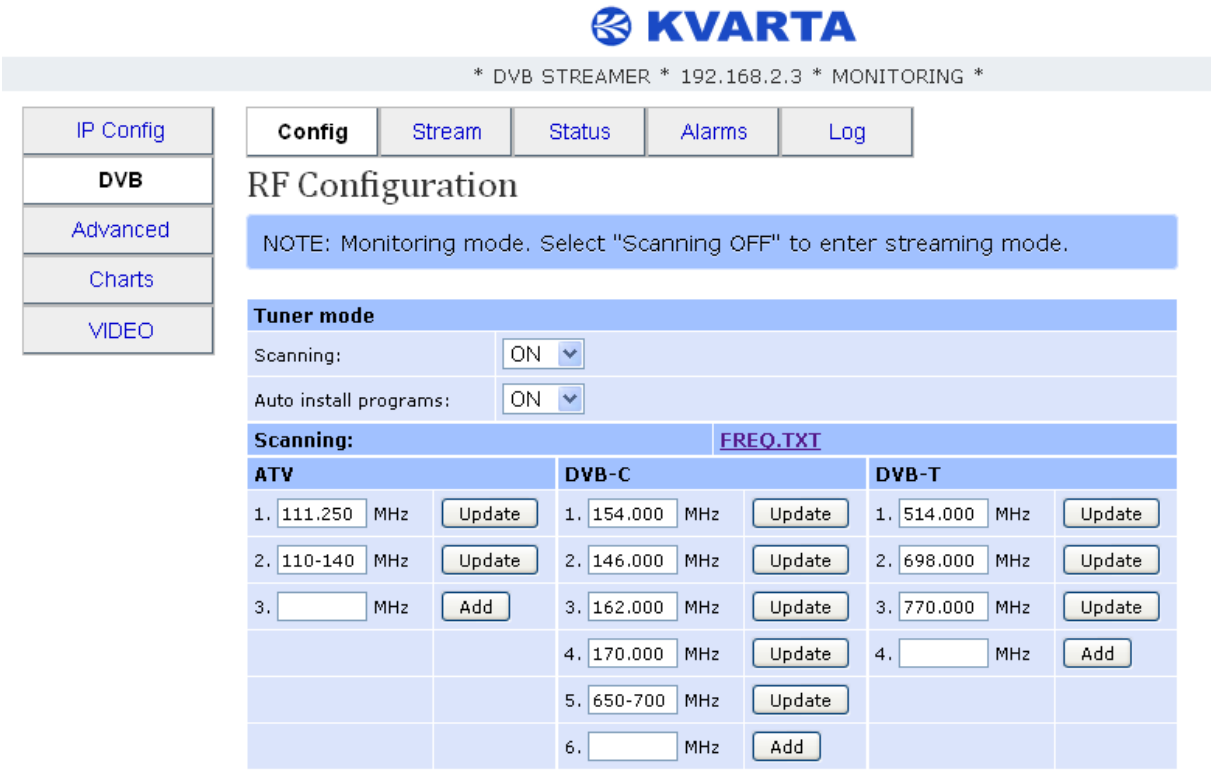


NOTE: This is available only for single frequency measurement.

4.2. MONITORING mode (SCAN ON) – multiple carrier monitoring and alarms

4.2.1. RF Configuration

- Open the embedded web page and click **DVB -> Config**
- Select Scanning ON to enable monitoring mode



- Enter frequency range or exact carrier frequency for faster scanning
  NOTE: You can enter both scan range and exact frequencies. For example: 150-180 this will scan from 150 MHz to 180 MHz
- Click Save & Tune

- Connect the RF Antenna or CATV source to IN A or IN B
- Select the appropriate Input (A or B) used for the type of modulation Analog/DVB-C/DVB-T
- Configure other relative settings like Bandwidth, Symbol Rate, Constellation and Spectrum.
- Click the Save button below the settings to store the configuration

4.2.2. Monitoring status

- Check the status and measured values for the configured scan ranges and frequencies
- Click **DVB -> Status** to check RF parameters and carriers found

Config | Stream | **Status** | Alarms | Log

DVB Status

Scan summary					
	In	**Type**	**Time**	**Duration**	**Carriers found**
	A	Analog TV	10:55:53	5 seconds	5 carriers
	A	DVB-C	10:55:46	33 seconds	10 carriers
	B	DVB-T	10:55:48	2 seconds	0 carriers

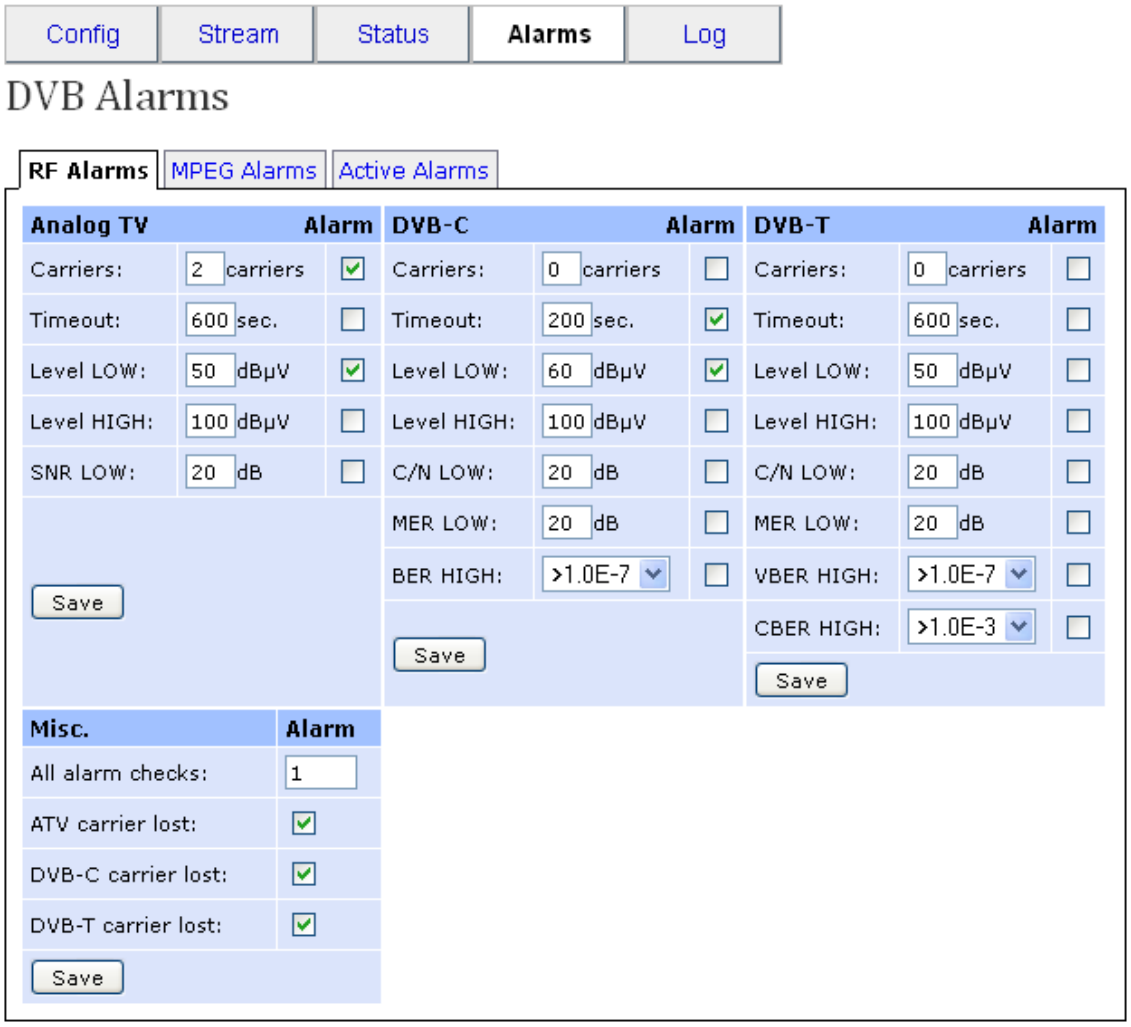
Analog TV Carriers (Input A)			
N	**Frequency**	**Level**	**SNR**
1	111.250 MHz	65 dBµV	41.0 dB
2	111.250 MHz	64 dBµV	39.5 dB
3	119.250 MHz	67 dBµV	41.5 dB
4	127.250 MHz	65 dBµV	41.0 dB
5	135.250 MHz	67 dBµV	41.0 dB

DVB-C Carriers (Input A)					
N	**Frequency**	**Level**	**CNR**	**MER**	**BER**
1	154.000 MHz SR:6900 128QAM	65 dBµV	36.8 dB	42.3 dB	<1.0E-7
2	146.000 MHz SR:6895 128QAM	66 dBµV	36.6 dB	42.3 dB	<1.0E-7
3	162.000 MHz SR:6905 128QAM	66 dBµV	36.6 dB	42.2 dB	<1.0E-7
4	170.000 MHz SR:6900 128QAM	66 dBµV	36.5 dB	42.0 dB	<1.0E-7
5	650.000 MHz SR:6900 128QAM	55 dBµV	31.2 dB	33.6 dB	1.3E-6
6	658.000 MHz SR:6900 128QAM	56 dBµV	36.1 dB	40.6 dB	<1.0E-7
7	666.000 MHz SR:6900 128QAM	55 dBµV	35.6 dB	40.9 dB	<1.0E-7
8	674.000 MHz SR:6900 128QAM	59 dBµV	34.6 dB	38.8 dB	<1.0E-7
9	682.000 MHz SR:6900 128QAM	57 dBµV	35.9 dB	41.3 dB	<1.0E-7
10	698.000 MHz SR:6900 128QAM	57 dBµV	31.8 dB	34.1 dB	<1.0E-7

4.2.3. RF alarms

NOTE: Alarms are only working while the device is in monitoring mode. (SCAN ON)

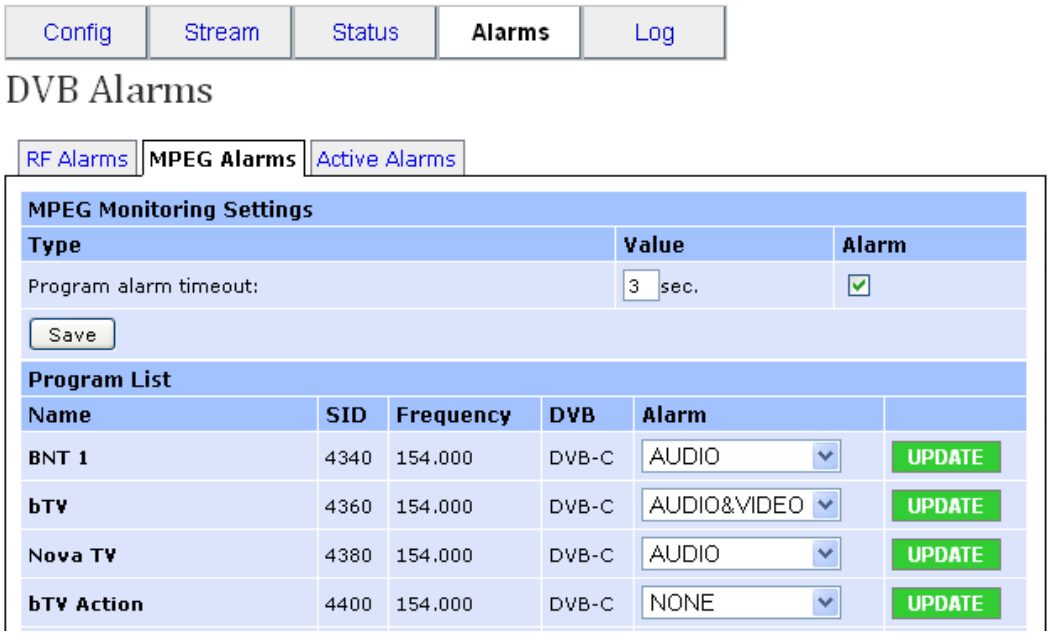
- Click **DVB -> Alarms -> RF Alarms**
- Click the tick next to the alarm to enable it.



NOTE: Carriers alarm is the minimum number of carriers.
NOTE: Timeout alarm is the maximum time spent scanning.

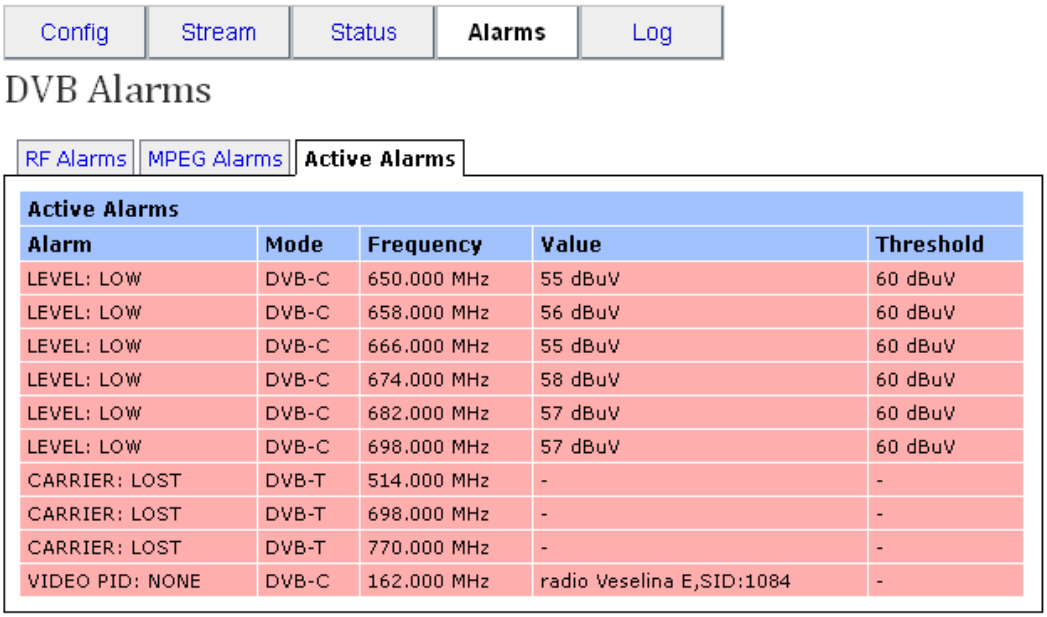
4.2.4. MPEG alarms

- Click **DVB -> Alarms -> MPEG Alarms**
- An alarm will be triggered if data for the specified service is missing for more than 3 seconds.
- The DVB Monitor automatically searches for Audio or Video PID and if such not found an alarm is triggered.



4.2.5. Active Alarms

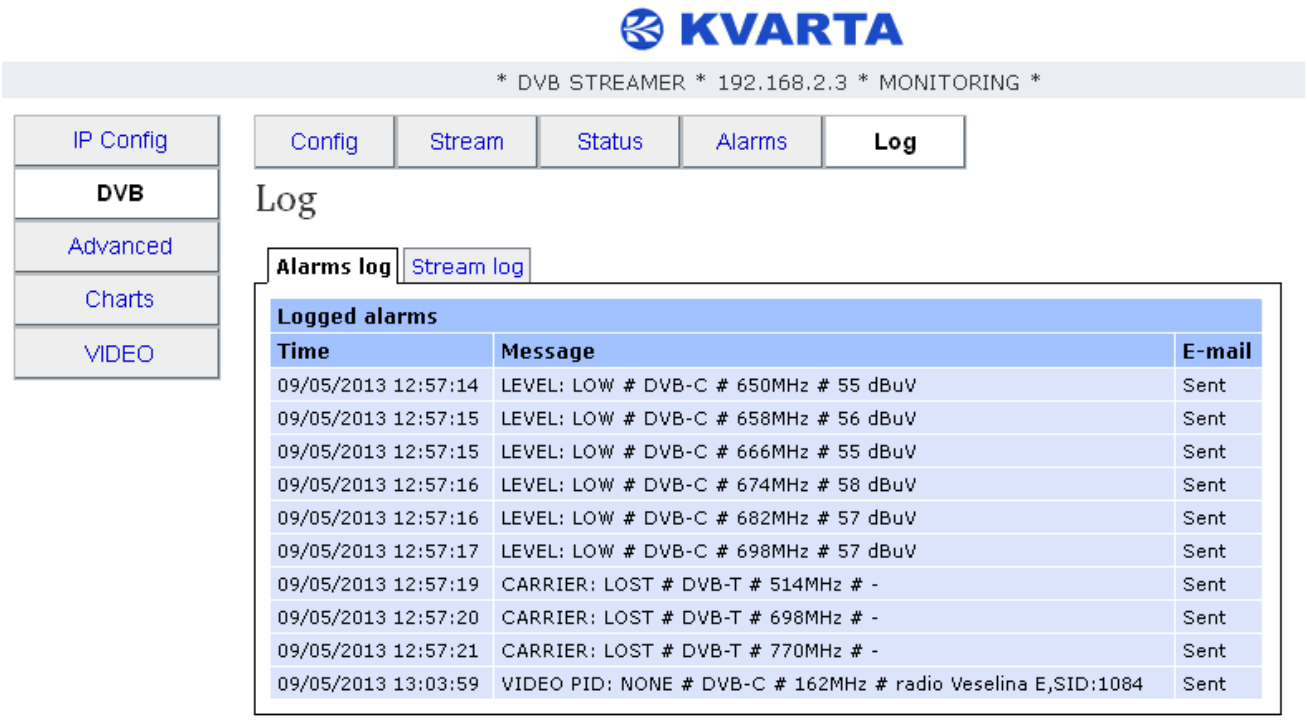
- Click **DVB -> Alarms -> Active Alarms**
- You can see all currently active alarms with just one click.



4.3. Log

4.3.1. Alarms log

- Click **DVB-Monitor -> Log -> Alarms log**
- Displays log with 20 of the latest alarms.



4.3.2. Stream log

- Click **DVB-Monitor -> Log -> Stream log**
- Displays log with 20 of the latest stream changes.

4.4. Advanced Configuration

4.4.1. E-mail client configuration

NOTE: DVB Monitor supports Login authentication (no SSL). For assistance, please, contact us.

- Click **E-mail** in the side menu
- Set appropriate SMTP server and authentication configuration
- Configure e-mail parameter and subject (can include alarm text using the macro <ALARM>)

E-mail Configuration

SMTP Client	
SMTP ALARM:	Enabled
Server:	smtp.yourmailserver.com
Port:	587
Authentication:	Enabled
Username:	username
Password:	••••••••
DNS by DHCP:	Enabled
DNS:	8.8.8.8
E-mail	
From:	you@xxxx.com
To:	you@xxxx.com
Cc:	
Bcc:	
Subject:	DVB STREAMER - <ALARM> Use <ALARM> to insert alarm message.
Text:	Sent by: DVB STREAMER
Save Test Message	

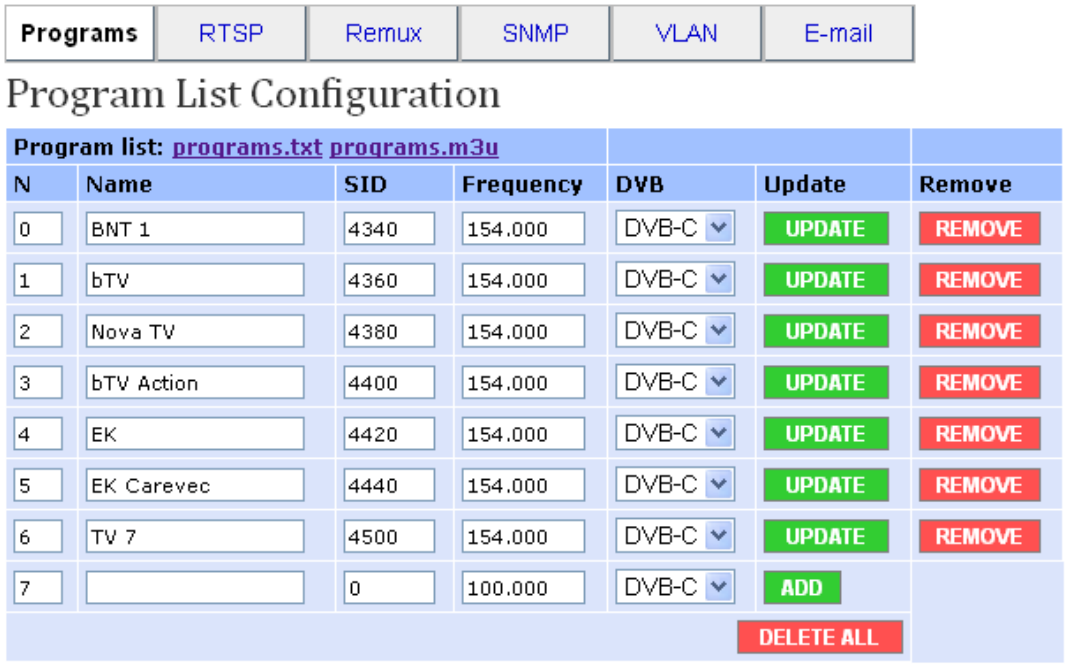
4.4.2. SNMP configuration

NOTE: Please, contact us for more support at support@kvarta.net

SNMP Configuration	
SNMP:	Enabled
Read only community:	000000000000
Read write community:	private
Traps server IP:	0.0.0.0
Traps port:	162
Traps community:	public
Save	

4.4.3. Programs configuration

- Click **Advanced -> Programs** to configure programs.
- programs.m3u can be loaded in VLC for video monitoring
- You can add/edit/delete all parameters for the services found in the multiplex.



4.4.4. RTSP configuration

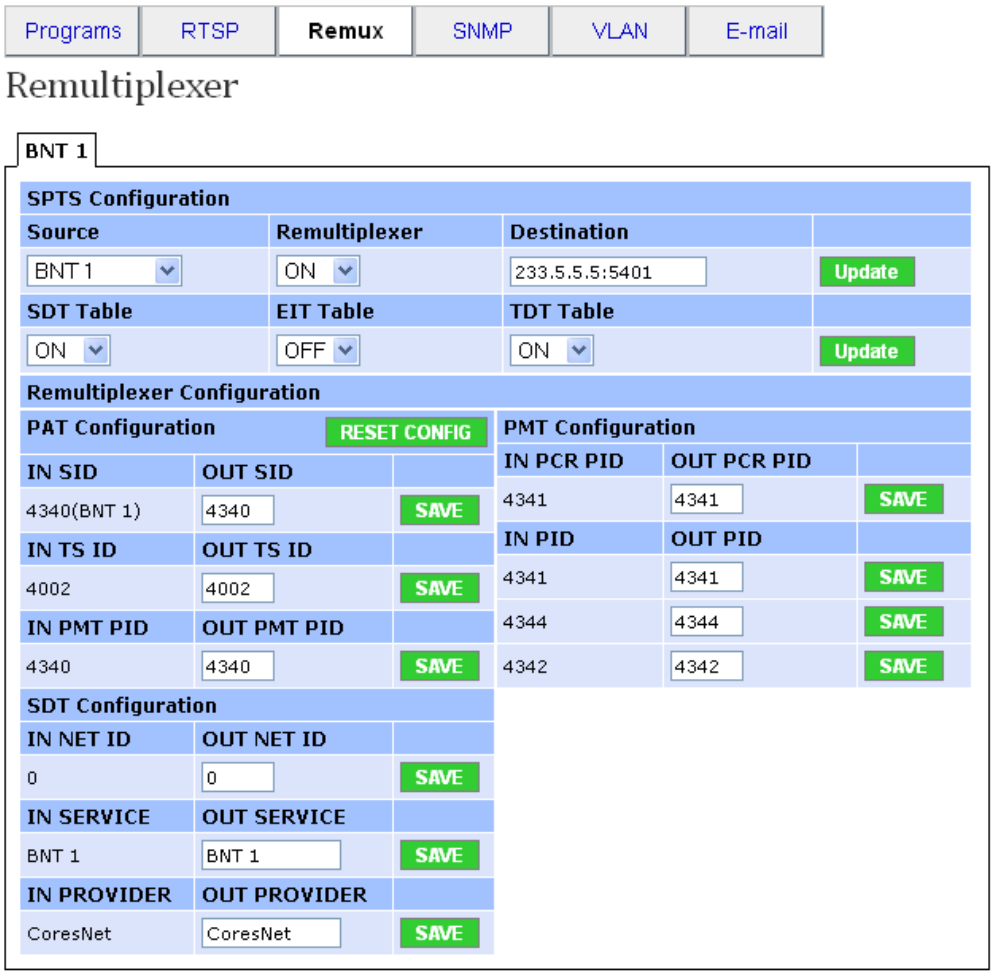
- Click **Advanced -> RTSP** to enter real time streaming protocol specific configuration
- The device URL can be used if the device is behind router
- programs.m3u can be loaded in VLC for video monitoring

NOTE: You should be in Streaming mode and RTSP should be the protocol. Only one RTSP client is supported.

4.4.5. Remuxer Configuration

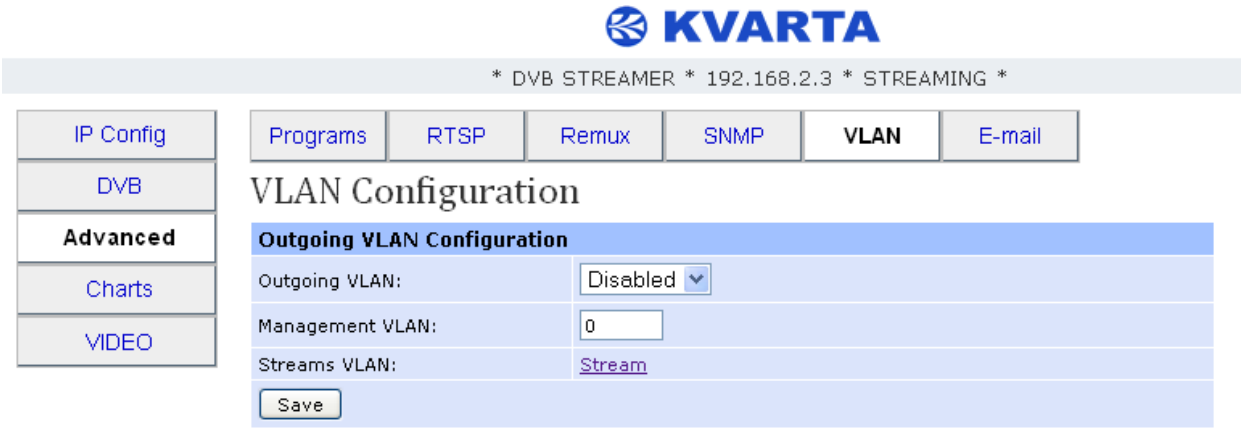
- Click **Advanced -> Remux** to enter SPTS remultiplexer specific configuration
- You can reconfigure the output SID, PIDs, Service Name, Provider Name, etc.

NOTE: It is only working in Streaming mode and SPTS streams.



4.4.6. VLAN

- Click **Advanced -> VLAN** to configure VLAN settings for the output streams or the management



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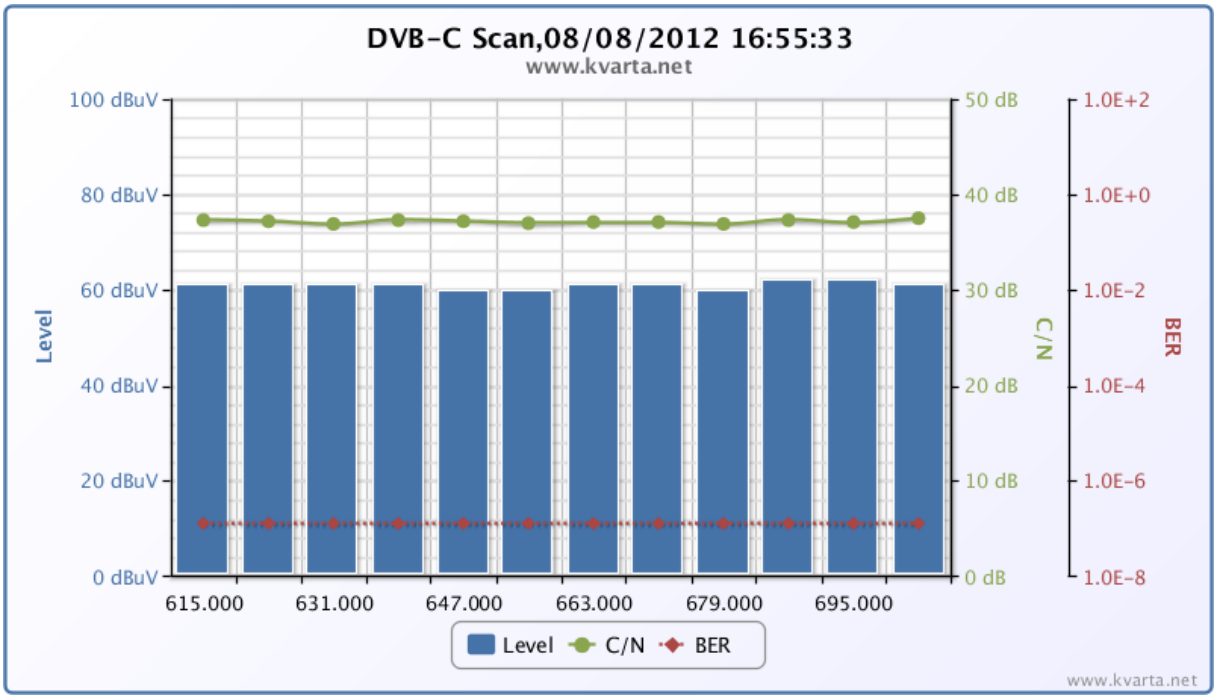
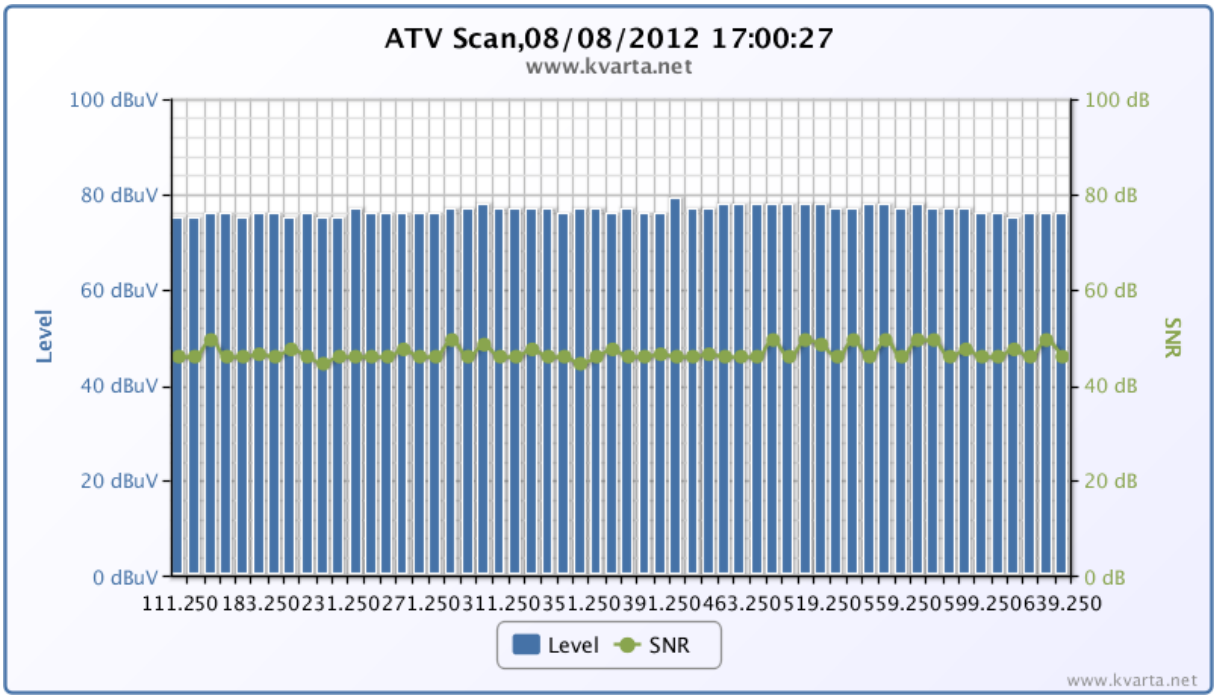
4.5. Charts

- Click **Charts** in the side menu to view a graphical representation of the RF parameters (works only in scan mode)





5. GLOSSARY

DVB – Digital Video Broadcasting

DVB-C – Digital Video Broadcasting - Cable

DVB-T – Digital Video Broadcasting – Terrestrial

SNMP – Simple Network Management Protocol

SMTP – Simple Mail Transfer Protocol

PID – Packet Identification

PAT – Program Allocation Table

PMT – Program Map Table

NIT – Network Identification Table

TDT – Time and Date Table

TOT – Time Offset Table

SDT – Service Description Table

CAT – Conditional Access Table

APPENDIX A -
DVB MONITOR ASCII COMMAND SET

A.1. DEFAULT VALUES

Parameter	Default Value
IP	192.168.2.3
Mask	255.255.255.0
Gateway	192.168.2.1
DHCP	Disabled
Web Server	Enabled
Web Server : <username>,<password>	admin,admin
CT synchronization:	Enabled
Time server IP :	129.6.15.28

A.2. Configuration and special files on the device

a. **config.ini – Keeps all configuration information (windows configuration file)**

b. **freq.txt – Keeps monitoring frequencies (comma separated file)**

c. **programs.txt – Keeps programs on the device (comma separated file)**

d. **help.txt – ASCII commands description file**

e. *****.mib – SNMP MIB file**

A.3. ASCII COMMANDS

```
-- ***********************************************
-- Device Model: DVB MENTOR 0.05B (10/05/2013)
-- Auto-generated file!
-- Definitions apply to DVB MENTOR
-- Supported ASCII COMMANDS
-- for more information support@kvarta.net
-- Kvarta Soft Ltd (www.kvarta.net)
-- ***********************************************

--
-- The 'GENERAL' group;
--

IP                          read-write      IP Address
```

```
MASK                          read-write     Sub. network mask
GATEWAY                       read-write     Gateway IP Address
DHCP                          read-write     DHCP Enable/Disable
DNS                           read-write     DNS Server IP
DNS_BY_DHCP                   read-write     DNS Server by DHCP
CT_SERVER_ON                  read-write     Clock time server used
CT_SERVER_IP                  read-write     Clock time server(RFC-868)
CT_OFFSET                     read-write     Clock time offset
LOG                           read-write     Logs All Ip connections
USERNAME                      read-write     Set/Display username
PASSWORD                      read-write     Set/Display password
TCP_TIMEOUT                   read-write     Timeout in seconds if no
communication,close socket
VLAN_ON                       read-write     Outgoing VLAN On/Off
TCP_VLAN                      read-write     Management VLAN
MODEL                         read-only      Device model
VERSION                       read-only      Firmware version
DEVICE_NAME                   read-write     Name of the device(Location)
WEB_SNMP_SERVER               read-only      SNMP Server On/Off
WEB_SMTP_AUTH                 read-only      E-mail authentication On/Off
WEB_SMTP_ALARM                read-only      E-mail alarms On/Off
MAC                           read-only      Reads the MAC address
CURRENT_IP                    read-only      Reads the current IP address
CURRENT_MASK                  read-only      Reads the current sub. network
mask
CURRENT_GATEWAY               read-only      Reads the current gateway IP
address
DHCP_STATUS                   read-only      Reads DHCP status
UPDATE_AVAILABLE              read-only      Reads if there is update
available
UPDATE_START                  write-only     Starts un update

--
-- The 'WEB' group;
--

WEB.SERVER                    read-write     Embedded Web Server On/Off
WEB.PORT                      read-write     TCP port of the web
server(Default:80)
WEB.FILTER                    read-write     Allowed HOST IP to connect to
the web server
WEB.VLAN                      read-write     VLAN of the web server

--
-- The 'FTP' group;
--

FTP.SERVER                    read-write     Embedded FTP Server On/Off
FTP.PORT                      read-write     TCP port of the FTP
server(Default:21)
FTP.FILTER                    read-write     Allowed HOST IP to connect to
the web server
FTP.VLAN                      read-write     VLAN of the FTP server

--
-- The 'TCP' table;
--

TCP(???).TYPE                 read-write     Remote port TCP/UDP/OFF
TCP(???).PORT                 read-write     Remote port TCP/UDP port
number
TCP(???).FILTER               read-write     Remote port input IP filter
```

```
TCP(???).PROTOCOL              read-write     Remote port protocol
ASCII/SNMP
TCP(???).VLAN                  read-write     Remote port VLAN

--
-- The 'SNMP' group;
--

SNMP.SERVER                    read-write     SNMP Server On/Off
SNMP.TRAP_PORT                 read-write     SNMP Traps destinatio port
SNMP.RO_PASSWORD               read-write     SNMP read only community
string
SNMP.RW_PASSWORD               read-write     SNMP read write community
string
SNMP.TRAP_PASSWORD             read-write     SNMP trap password
SNMP.TRAP_SERVER1              read-write     SNMP trap server(1) IP
SNMP.TRAP_SERVER2              read-write     SNMP trap server(2) IP
SNMP.TRAP_SERVER3              read-write     SNMP trap server(3) IP
SNMP.TRAP_SERVER4              read-write     SNMP trap server(4) IP

--
-- The 'SMTP' group;
--

SMTP.SEND                      COMMAND        SMTP Send e-mail command
SMTP.ALARM                     read-write     SMTP e-mail alarms
Enable/Disable
SMTP.SERVER                    read-write     SMTP server url address
SMTP.PORT                      read-write     SMTP server port
SMTP.AUTH                      read-write     SMTP authentication
enable/disable
SMTP.USER                      read-write     SMTP authentication username
SMTP.PASSWORD                  read-write     SMTP authentication password
SMTP.FROM                      read-write     E-mail From address
SMTP.TO                        read-write     E-mail To address
SMTP.CC                        read-write     E-mail CC address
SMTP.BCC                       read-write     E-mail BCC address
SMTP.SUBJECT                   read-write     E-mail subject.Macro <ALARM>
can be used.
SMTP.TEXT                      read-write     E-mail signature

--
-- The 'TUNER' group;
--

TUNER_MODE                     read-write     Tuner mode Analog/DVB-C/DVB-T
FREQUENCY                      read-write     Tune frequency
SCAN                           read-write     Set SCAN On(Monitoring) or
Off(Streaming)
AUTO_INSTALL                   read-write     Automatically install new
programs during scan
ATV_INPUT                      read-write     Input 0=A or 1-B
ATV_COLOR                      read-write     0-PAL_NTSC or 1-SECAM
ATV_SPECTRUM                   read-write     0-Normal; 1-Invert
ATV_TRANS                      read-write     0-Terrestrial; 1-Cable
ATV_SYS                        read-write     0-B;1-GH;2-M;3-N;4-I;5-DK;6-
L;7-LP;
DVBT_INPUT                     read-write     Input 0-A or 1-B
DVBT_BW                        read-write     Default bandwidth
6/7/8(default)
DVBT_SPECTRUM                  read-write     0-Normal, 1-Inverted
DVBC_INPUT                     read-write     Input 0-A or 1-B
```

```
DVBC_BW                         read-write      Default bandwidth
6/7/8(default)
DVBC_QAM                        read-write      Default constellation
16/32/64/128/256
DVBC_SYMBOLS                    read-write      Default symbol rate 1000 -
7000
DVBC_SPECTRUM                   read-write      0-Normal, 1-Inverted
TUNE_SAVE                       COMMAND         Save tuner configuration
TUNE_NEXT                       COMMAND         Go to next carrier
TUNE_PREV                       COMMAND         Go to previous carrier
ALARM_CHECK                     read-write      Alarm checks before sending e-
mail or snmp trap.

--
-- The 'FREQUENCY_FILE' group;
--

FREQUENCY_FILE.FILENAME         read-write      Filename of the frequency file
FREQUENCY_FILE.SAVE             COMMAND         Saves all monitoring
frequencies.
FREQUENCY_FILE.LOAD             COMMAND         Loads all monitoring
frequencies from file.

--
-- The 'F' table;
--

F(???).ATV                      read-write      Set frequency or scan range
F(???).DVBC                     read-write      Set frequency or scan range
F(???).DVBT                     read-write      Set frequency or scan range

--
-- The 'ATV' group;
--

ATV.EXPECTED                    read-write      Expected carriers during
monitoring
ATV.EXPECTED_ON                 read-write      Carrier count alarm On/Off
ATV.TIMEOUT                     read-write      Scan timeout in seconds
ATV.TIMEOUT_ON                  read-write      Scan timeout alarm On/Off
ATV.LEVEL_LOW                   read-write      Low level threshold in dBuV
ATV.LEVEL_LOW_ON                read-write      Low level alarm On/Off
ATV.LEVEL_HIGH                  read-write      High level threshold in dBuV
ATV.LEVEL_HIGH_ON               read-write      High level alarm On/Off
ATV.SNR_LOW                     read-write      SNR low level threshold in dB
ATV.SNR_LOW_ON                  read-write      SNR low level alarm On/Off
ATV.LOST_ON                     read-write      Carrier lost alarm On/Off

--
-- The 'DVBC' group;
--

DVBC.EXPECTED                   read-write      Expected carriers during
monitoring
DVBC.EXPECTED_ON                read-write      Carrier count alarm On/Off
DVBC.TIMEOUT                    read-write      Scan timeout in seconds
DVBC.TIMEOUT_ON                 read-write      Scan timeout alarm On/Off
DVBC.LEVEL_LOW                  read-write      Low level threshold in dBuV
DVBC.LEVEL_LOW_ON               read-write      Low level alarm On/Off
DVBC.LEVEL_HIGH                 read-write      High level threshold in dBuV
DVBC.LEVEL_HIGH_ON              read-write      High level alarm On/Off
DVBC.CNR_LOW                    read-write      SNR low level threshold in dB
DVBC.CNR_LOW_ON                 read-write      SNR low level alarm On/Off
```

```
DVBC.MER_LOW                    read-write      MER low threshold in dB
DVBC.MER_LOW_ON                 read-write      MER low alarm On/Off
DVBC.BER_HIGH                   read-write      BER high threshold 0=1e-
7,1=1e-6 ...max 7
DVBC.BER_HIGH_ON                read-write      BER high alarm On/Off
DVBC.LOST_ON                    read-write      Carrier lost alarm On/Off

--
-- The 'DVBT' group;
--

DVBT.EXPECTED                   read-write      Expected carriers during
monitoring
DVBT.EXPECTED_ON                read-write      Carrier count alarm On/Off
DVBT.TIMEOUT                    read-write      Scan timeout in seconds
DVBT.TIMEOUT_ON                 read-write      Scan timeout alarm On/Off
DVBT.LEVEL_LOW                  read-write      Low level threshold in dBuV
DVBT.LEVEL_LOW_ON               read-write      Low level alarm On/Off
DVBT.LEVEL_HIGH                 read-write      High level threshold in dBuV
DVBT.LEVEL_HIGH_ON              read-write      High level alarm On/Off
DVBT.CNR_LOW                    read-write      SNR low level threshold in dB
DVBT.CNR_LOW_ON                 read-write      SNR low level alarm On/Off
DVBT.MER_LOW                    read-write      MER low threshold in dB
DVBT.MER_LOW_ON                 read-write      MER low alarm On/Off
DVBT.VBER_HIGH                  read-write      VBER high threshold 0=1e-
7,1=1e-6 ...max 7
DVBT.VBER_HIGH_ON               read-write      VBER high alarm On/Off
DVBT.CBER_HIGH                  read-write      CBER high threshold 0=1e-
7,1=1e-6 ...max 7
DVBT.CBER_HIGH_ON               read-write      CBER high alarm On/Off
DVBT.LOST_ON                    read-write      Carrier lost alarm On/Off

--
-- The 'MPEG' group;
--

MPEG.PID_TIMEOUT                read-write      MPEG alarm timeout in seconds
MPEG.PID_TIMEOUT_ON             read-write      MPEG alarms On/Off

--
-- The 'RTSP' group;
--

RTSP.PORT                       read-write      RTSP port configuration
(Default:554)
RTSP.FILTER                     read-write      RTSP input IP filter
RTSP.ADDRESS                    read-write      RTSP address if device behind
router(Default:empty string) uses current IP
RTSP.PROG                       write-only      Select RTSP program to stream

--
-- The 'STREAMING' group;
--

STREAM_PROTOCOL                 read-write      Select streaming protocol
OFF/UDP/RTP/RTSP
STREAM_TYPE                     read-write      Select MPEG TS stream type
MPTS/SPTS
STREAM_COUNT                    read-write      Select stream count for SPTS
only
STREAM_VLAN                     read-write      Select default streaming VLAN

--
```

```
-- The 'PROGRAMS' group;
--

PROGRAMS.REMOVE                 COMMAND         Command to delete all programs
from the list
PROGRAMS.DELETE                 COMMAND         Command to delete all programs
from the list
PROGRAMS.SAVE                   COMMAND         Command to save programs to
programs.txt file
PROGRAMS.LOAD                   COMMAND         Command to load programs from
programs.txt file
PROGRAMS.NEW                    COMMAND         Command to create new program
--
-- The 'P' table;
--
P(???).INDEX                    read-write      Program index in the list
P(???).SID                      read-write      Program SID number
P(???).FREQ                     read-write      Program frequency
P(???).NAME                     read-write      Program service name
P(???).DVB_MODE                 read-write      Program DVB mode DVB-C/DVB-T
P(???).ALARM                    read-write      Program alarm type
none/audio/video
P(???).REMOVE                   COMMAND         Command to remove the program
from the list
P(???).DELETE                   COMMAND         Command to remove the program

--
-- The 'S' table;
--

S(???).RESET                    COMMAND         Reset remuxer settings
S(???).ADDRESS                  read-write      Stream destination IP address
and port
S(???).SID                      read-write      Streaming sid number
S(???).VLAN                     read-write      Streaming VLAN
S(???).REMUX                    read-write      Streaming remuxer On/Off
S(???).SDT_EN                   read-write      Stream SDT table On/Off
S(???).EIT_EN                   read-write      Stream EIT table On/Off
S(???).TDT_EN                   read-write      Stream TDT table On/Off
S(???).OUT_SID                  read-write      Stream REMUX ouput SID
S(???).OUT_TS                   read-write      Stream REMUX ouput TS
S(???).OUT_PMT_PID              read-write      Stream REMUX ouput PMT PID
S(???).OUT_NET_ID               read-write      Stream REMUX ouput NET ID
S(???).OUT_PCR_PID              read-write      Stream REMUX ouput PCR PID
S(???).OUT_SNAME                read-write      Stream REMUX ouput service
name
S(???).OUT_PNAME                read-write      Stream REMUX ouput provider
name
S(???).ES_COUNT                 read-write      Stream REMUX elementary
streams count
S(???).IN_PID(???)              read-write      Stream REMUX input elementary
stream PID
S(???).OUT_PID(???)             read-write      Stream REMUX output elementary
stream PID
S(???).DELETE                   COMMAND         Command to delete the SPTS
stream
S(???).ADD                      COMMAND         Command to add new SPTS stream
--
-- The 'COMMANDS' group;
--

RESET                           COMMAND         Software reboot of the device
```