



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, Kvarita 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 Kvarita

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

<u>Communication ports</u>	
Ethernet	100baseT – Web Server and UDP/TCP (SNMP/ASCII)
<u>Frequency range and Modulation</u>	
Frequency Range	46 MHz - 1004 MHz
Analog TV	NTSC , PAL/SECAM
Digital TV	DVB-T, DVB-H, DVB-C
<u>Demodulator</u>	
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
<u>Measurements</u>	
Standard	ETSI TR 101 290 V1.2.1
Level	30dBuV - 100dBuV (± 2 dBuV)
MER	19dB - 45dB (± 2 dB)
C/N	19dB - 40dB (± 2 dB)
SNR	19dB - 55dB (± 2 dB)
BER (DVB-C)	1E-1~ 1E-7
CBER,VBER (DVB-T)	1E-1~ 1E-7
<u>MPEG Decoding</u>	
Tables	PAT,PMT,SDT,TDT,TOT
Alarms	Service Audio/Video alarms with e-mail notifications and SNMP traps
<u>Monitoring</u>	
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
<u>Power Supply</u>	
Supply voltage	230V (115V optional)
Voltage tolerance	+/- 10%
Main AC frequency	45-65 Hz
Fuse	0.8A
Consumption	10 VA
<u>Mechanical aspects</u>	
Height	1U (44,5 mm)
Width	483 mm
Depth	220 mm
Net weight	2,5 kg
<u>Info</u>	
Updates	Available
Front panel LEDs	Power supply, LAN, Alarm

2.3. TR101290 OPTION SPECIFICATION

TR101290 Option alarms	
Priority 1 alarms	TS Lock, PAT Interval, Continuity, PMT Interval, Missing PID
Priority 2 alarms	Transport error indicator, CRC, PCR Interval, PTS Interval, CAT
Priority 3 alarms	NIT Interval, SI repetition rate, Unreferenced PID, SDT Interval, EIT Interval, RST, TDT Interval
CA Alarms	ECM Maximum Interval, Scrambling change interval, EMM minimum bitrate

RF Alarms | Service Alarms | SFN Alarms | **TR 101 290** | CA Alarms | Active Alarms

TR 101 290 alarms (Duration ~20 seconds)

Priority 1	Alarm	Priority 2	Alarm	Priority 3	Alarm
TS Lock:	<input checked="" type="checkbox"/>	Transport err.:	<input type="checkbox"/>	NIT: 10000 ms	<input checked="" type="checkbox"/>
PAT: 600 ms	<input checked="" type="checkbox"/>	CRC:	<input checked="" type="checkbox"/>	SI rep. rate:	<input checked="" type="checkbox"/>
Continuity:	<input type="checkbox"/>	PCR: 50 ms	<input checked="" type="checkbox"/>	Unreferenced PID:	<input checked="" type="checkbox"/>
PMT: 600 ms	<input checked="" type="checkbox"/>	PTS: 800 ms	<input checked="" type="checkbox"/>	SDT: 2500 ms	<input checked="" type="checkbox"/>
Missing PID:	<input checked="" type="checkbox"/>	CAT:	<input checked="" type="checkbox"/>	EIT: 10000 ms	<input checked="" type="checkbox"/>
				RST:	<input checked="" type="checkbox"/>
				TDT: 31000 ms	<input type="checkbox"/>

DVB-T, 514MHz, 64QAM 8K 10:40:08
 GI:1/4 Cell ID:1 [MORE]

- RF STATUS ●●●●●●●●
 - DVB-T,514MHz, 64QAM 8K **LOCK**
 - LEVEL **63 dBµV**
 - CNR **32.7 dB**
 - MER **31.0 dB**
 - CBER **3.4E-2**
 - VBER **<1.0E-7**
- TR 101 290 ●●●
 - Priority 1 ●
 - TS Sync **OK**
 - PAT **OK**
 - Continuity -
 - PMT **OK**
 - Missing PID **OK**
 - Priority 2 ●
 - Transport -
 - CRC **OK**

2.4.SFN OPTION SPECIFICATION

<i>SFN Measurements & Alarms</i>	
SFN Impulse response	Accuracy $\pm 3\mu\text{s}$
SFN Impulse response Drift	Accuracy $\pm 3\mu\text{s}$
GPS Lock	Alarm
MIP packet	Alarm

RF Alarms | Service Alarms | **SFN Alarms** | TR 101 290 | CA Alarms | Active Alarms

Single Frequency Network Alarms		Alarm
Impulse response min:	0 μs	<input checked="" type="checkbox"/>
Impulse response max:	100 μs	<input checked="" type="checkbox"/>
SFN impulse response maximum drift:	10 μs	<input checked="" type="checkbox"/>
GPS no lock alarm:		<input checked="" type="checkbox"/>
MIP missing alarm:		<input checked="" type="checkbox"/>
Save		

IP Config
DVB
Charts
Installation

Config	Status	Monitoring	Alarms	Log
--------	---------------	------------	--------	-----

DVB Status

Scan summary 10:24:33

	In	Type	Time	Duration	Carriers
	B	DVB-T	10:24:27	51 seconds	3 carriers

DVB-T (Input B)

N	Frequency	Level	CNR	MER	CBER	VBER
1	514.000 MHz 64QAM 8K GI:1/4 HP:2/3 LP:1/2	63 dB μV	32.7 dB	31.3 dB	3.7E-2	<1.0E-7
2	698.000 MHz 64QAM 8K GI:1/4 HP:2/3 LP:1/2	62 dB μV	29.6 dB	30.4 dB	2.6E-2	<1.0E-7
3	770.000 MHz 64QAM 8K GI:1/4 HP:2/3 LP:1/2	58 dB μV	30.1 dB	30.2 dB	3.3E-2	1.4E-6

DVB-T SFN Measurements (Input B)

N	Frequency	Impulse response	Drift	GPS	MIP
1	514.000 MHz Cell ID:1	16 μs	1 μs	OK	OK
2	698.000 MHz Cell ID:1	13 μs	2 μs	OK	OK
3	770.000 MHz Cell ID:1	13 μs	1 μs	OK	OK

Active Alarms (3/100)

Alarm	Mode	Frequency	Value	Threshold
UNREFERENCED PID: ERROR	DVB-T	514 MHz	PID:7985	-
UNREFERENCED PID: ERROR	DVB-T	698 MHz	PID:8014	-
VBER: HIGH	DVB-T	770 MHz	1.4E-6	1.0E-7

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:

KVARTA

* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config	General	Remote Ports	Status	Restart	Update
DVB	IP Configuration				
Advanced	General IP Configuration				
Charts	IP:	192.168.2.3	Time sync:	Enabled ▾	
VIDEO	Subnet mask:	255.255.255.0	Time server IP:	212.70.148.11	
	Default gateway:	192.168.2.1	Username:	admin	
	DHCP:	Disabled ▾	Password:	•••••	
	Web server:	Enabled ▾	Web server filter:	0.0.0.0	
	Web server port:	80	Local time:	+03:00 ▾	
	<input type="button" value="Save"/>				

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3. **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

The screenshot displays the DVB Monitor web interface. On the left is a navigation menu with options: IP Config, DVB, Streaming, VIDEO, Constellation, and Installation. The main content area has tabs for Config, Status, Stream, Alarms, and Log. The 'Config' tab is active, showing 'RF Configuration'. Under 'Device mode', 'Mode' is set to 'STREAMING (SCAN OFF)'. Below this, there are sub-tabs for 'General' and 'DVB-T Settings'. The 'DVB-T Settings' sub-tab is active, showing 'RF Configuration' with 'Mode' set to 'DVB-T' and 'Frequency' set to '770 MHz'. There are 'Save & Tune', 'Prev', and 'Next' buttons. Below the configuration section, a summary bar shows 'DVB-T 770 MHz 64QAM 8MHz 8K GI:1/4 Cell ID:1' and a 'LOCK' button. The main display area shows various signal quality metrics with numerical values and progress bars:

Metric	Value	Scale
LEVEL:	58 dB μ V	0 dB μ V to 100 dB μ V
CNR:	30.2 dB	0 dB to 45.0 dB
MER:	30.5 dB	0 dB to 45.0 dB
CBER:	1.9E-3	1.0E-1 to 1.0E-7
VBER:	<1.0E-7	1.0E-1 to 1.0E-7
TS Rate:	19.9 MBits	0 MBits to 60.0 MBits


Below the metrics, there are status indicators: 'SFN Measurements: GPS OK', 'MIP OK', and 'SFN READY'. Further down, more metrics are shown with progress bars:

Metric	Value	Scale
SFN Impulse Response:	13 μ s	0 μ s to 100 μ s
SFN Drift:	0 μ s	0 μ s to 100 μ s
Distance to transmitter:	3 km	0 km to 300 km

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




* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config	Config	Stream	Status	Alarms	Log
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DVB	DVB Configuration																																																																																				
Advanced	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4">Stream Configuration</th> </tr> <tr> <th>Protocol</th> <th colspan="3">Mode</th> </tr> <tr> <td style="text-align: center;">UDP</td> <td colspan="3" style="text-align: center;">SPTS - Single Program Transport Stream</td> </tr> <tr> <td colspan="4" style="text-align: right;"><input type="button" value="Save"/></td> </tr> <tr> <th colspan="4">SPTS Configuration</th> </tr> <tr> <th colspan="4" style="text-align: right;">Total bitrate: 12.9 Mbps</th> </tr> <tr> <th>Service</th> <th>Destination</th> <th>Bitrate</th> <th></th> </tr> <tr> <td style="text-align: center;">Eurosport HD</td> <td style="text-align: center;">233.1.2.3:5441</td> <td style="text-align: center;">7688 kbps</td> <td style="text-align: center;"><input type="button" value="Update"/> <input type="button" value="Del"/></td> </tr> <tr> <td style="text-align: center;">NatGeo HD</td> <td style="text-align: center;">233.1.2.4:5441</td> <td style="text-align: center;">5249 kbps</td> <td style="text-align: center;"><input type="button" value="Update"/> <input type="button" value="Del"/> <input type="button" value="Add"/></td> </tr> <tr> <th colspan="4">Program List</th> </tr> <tr> <th>Name</th> <th>SID</th> <th>Frequency</th> <th>DVB</th> </tr> <tr><td>BNT 1</td><td>4340</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>bTV</td><td>4360</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>Nova TV</td><td>4380</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>bTV Action</td><td>4400</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>EK</td><td>4420</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>EK Carevec</td><td>4440</td><td>154.000</td><td>DVB-C</td></tr> <tr><td>TV 7</td><td>4500</td><td>154.000</td><td>DVB-C</td></tr> <tr style="background-color: #e0ffe0;"><td>Eurosport HD</td><td>4120</td><td>146.000</td><td>DVB-C</td></tr> <tr style="background-color: #e0ffe0;"><td>NatGeo HD</td><td>4140</td><td>146.000</td><td>DVB-C</td></tr> </table>					Stream Configuration				Protocol	Mode			UDP	SPTS - Single Program Transport Stream			<input type="button" value="Save"/>				SPTS Configuration				Total bitrate: 12.9 Mbps				Service	Destination	Bitrate		Eurosport HD	233.1.2.3:5441	7688 kbps	<input type="button" value="Update"/> <input type="button" value="Del"/>	NatGeo HD	233.1.2.4:5441	5249 kbps	<input type="button" value="Update"/> <input type="button" value="Del"/> <input type="button" value="Add"/>	Program List				Name	SID	Frequency	DVB	BNT 1	4340	154.000	DVB-C	bTV	4360	154.000	DVB-C	Nova TV	4380	154.000	DVB-C	bTV Action	4400	154.000	DVB-C	EK	4420	154.000	DVB-C	EK Carevec	4440	154.000	DVB-C	TV 7	4500	154.000	DVB-C	Eurosport HD	4120	146.000	DVB-C	NatGeo HD	4140	146.000	DVB-C
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- For MPTS just select the destination address for the IP stream



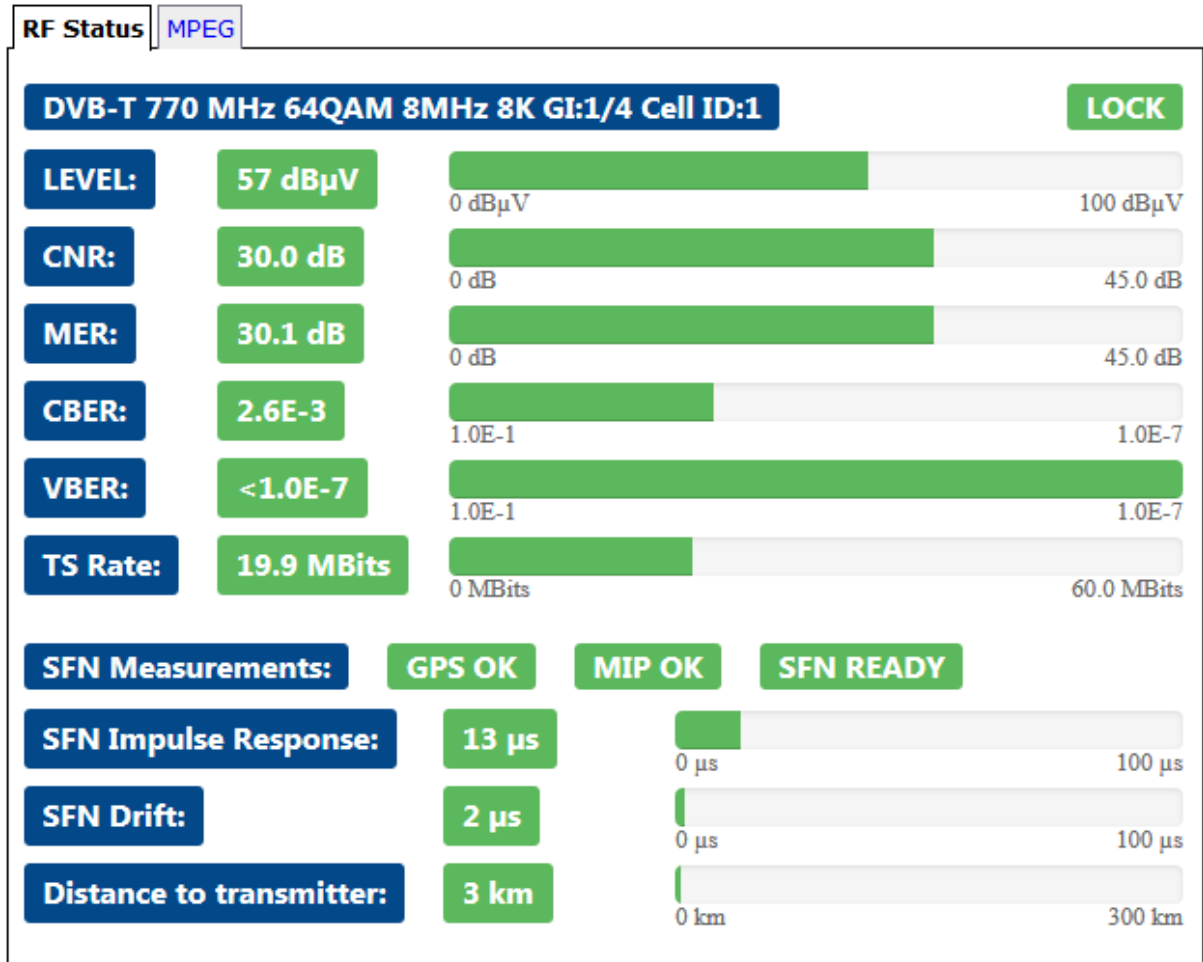
* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config	Config	Stream	Status	Alarms	Log
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4180	BNT 1 HD	BNT	running	free																																																										

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

RF Status | MPEG

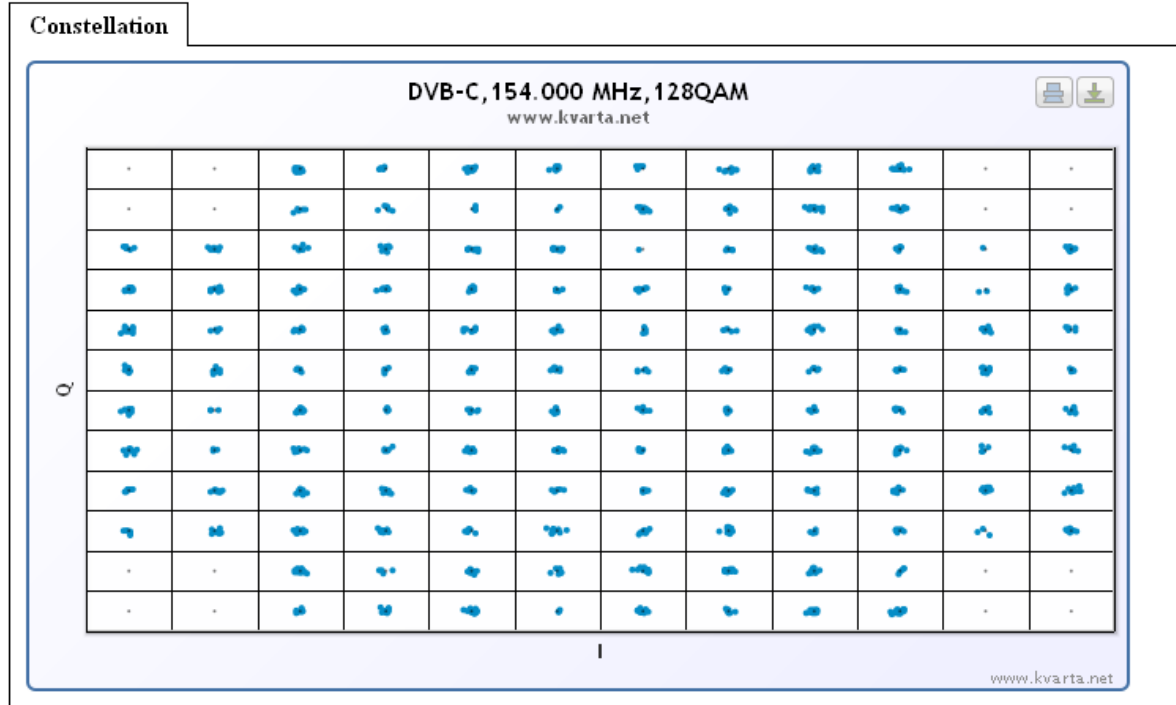
PAT | **PMT** | **MIP** | **SDT** | **EIT** | **NIT** | **TDT** | **TOT** | (REFRESH)

PAT (TS ID: 5500)	
Service	PMT PID
1 (BNT1)	5511
10 (BNT2)	5521
12 (BNT1_HD)	5441
19 (BNT HD)	5551

4.1.4. Constellation diagram

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

Constellation Diagram



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

IP Config	Config	Status	Monitoring	Alarms	Log
DVB	RF Configuration				
Charts	Device mode				
Installation	Mode:	MONITORING (SCAN ON) ▾			
	Monitoring:	FREQ.TXT			
	Analog TV DVB-C DVB-T				
	DVB-T Frequencies			DVB-T Settings	
	1. 514	MHz	Update	Input:	B ▾
	2. 698	MHz	Update	Bandwidth:	8 MHz ▾
	3. 770	MHz	Update	Spectrum:	NORMAL ▾
	4.	MHz	Add	Save	

- Enter exact carrier frequency
- 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	

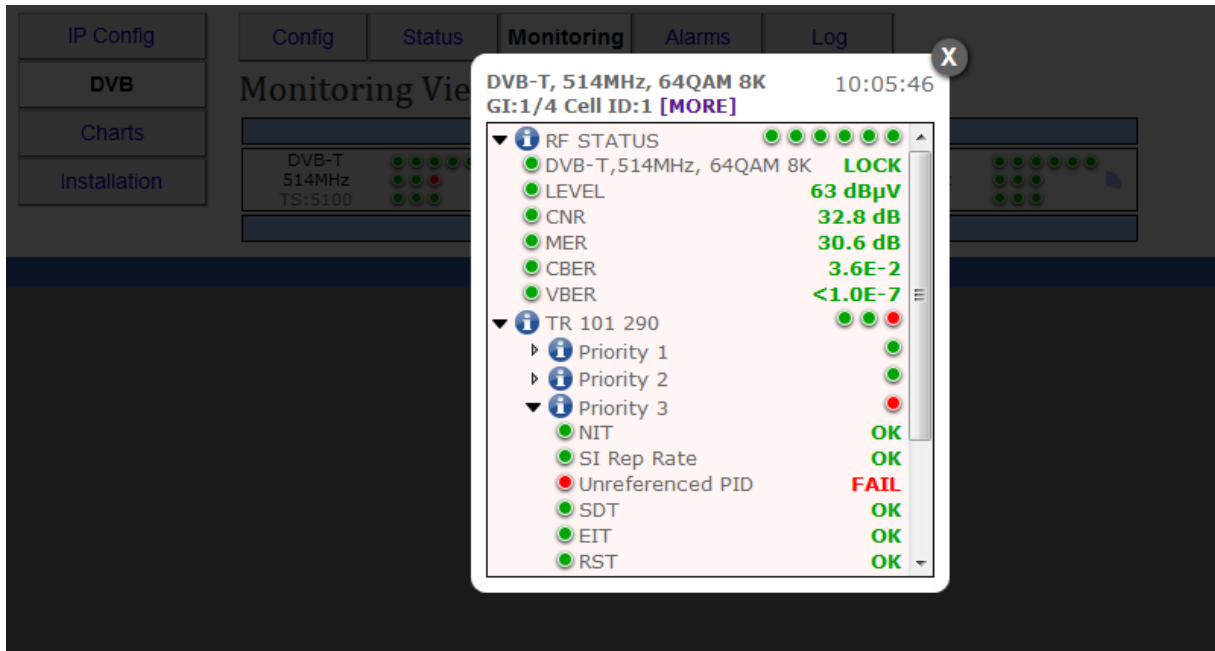
- Click **DVB -> Monitoring** to check RF parameters and carriers found

NOTE: This view is only available with TR 101 290 option

IP Config	Config	Status	Monitoring	Alarms	Log
-----------	--------	--------	-------------------	--------	-----

DVB	Monitoring View								
Charts	<table border="1"> <thead> <tr> <th colspan="3">DVB-T</th> </tr> </thead> <tbody> <tr> <td>DVB-T 514MHz TS:5100</td> <td>DVB-T 698MHz TS:5300</td> <td>DVB-T 770MHz wait...</td> </tr> </tbody> </table>			DVB-T			DVB-T 514MHz TS:5100	DVB-T 698MHz TS:5300	DVB-T 770MHz wait...
DVB-T									
DVB-T 514MHz TS:5100	DVB-T 698MHz TS:5300	DVB-T 770MHz wait...							
Installation	10:02:43								

- When clicking additional detailed information is displayed (Clicking on [MORE] displays the detailed information for all PIDs and Sections)



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.

Config	Stream	Status	Alarms	Log
--------	--------	--------	---------------	-----

DVB Alarms

RF Alarms		MPEG Alarms		Active Alarms	
Analog TV		Alarm		DVB-C	
Carriers:	<input type="text" value="2"/> carriers	<input checked="" type="checkbox"/>	Carriers:	<input type="text" value="0"/> carriers	<input type="checkbox"/>
Timeout:	<input type="text" value="600"/> sec.	<input type="checkbox"/>	Timeout:	<input type="text" value="200"/> sec.	<input checked="" type="checkbox"/>
Level LOW:	<input type="text" value="50"/> dBµV	<input checked="" type="checkbox"/>	Level LOW:	<input type="text" value="60"/> dBµV	<input checked="" type="checkbox"/>
Level HIGH:	<input type="text" value="100"/> dBµV	<input type="checkbox"/>	Level HIGH:	<input type="text" value="100"/> dBµV	<input type="checkbox"/>
SNR LOW:	<input type="text" value="20"/> dB	<input type="checkbox"/>	C/N LOW:	<input type="text" value="20"/> dB	<input type="checkbox"/>
<input type="button" value="Save"/>		MER LOW:		<input type="text" value="20"/> dB	<input type="checkbox"/>
		BER HIGH:		<input type="text" value=">1.0E-7"/>	<input type="checkbox"/>
		VBER HIGH:		<input type="text" value=">1.0E-7"/>	<input type="checkbox"/>
		CBER HIGH:		<input type="text" value=">1.0E-3"/>	<input type="checkbox"/>
		<input type="button" value="Save"/>		<input type="button" value="Save"/>	
Misc.		Alarm			
All alarm checks:	<input type="text" value="1"/>				
ATV carrier lost:	<input checked="" type="checkbox"/>				
DVB-C carrier lost:	<input checked="" type="checkbox"/>				
DVB-T carrier lost:	<input checked="" type="checkbox"/>				
<input type="button" value="Save"/>					

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.



DVB Alarms

RF Alarms **MPEG Alarms** Active Alarms

MPEG Monitoring Settings					
Type	Value	Alarm			
Program alarm timeout:	3 sec.	<input checked="" type="checkbox"/>			
<input type="button" value="Save"/>					
Program List					
Name	SID	Frequency	DVB	Alarm	
BNT 1	4340	154.000	DVB-C	AUDIO	<input type="button" value="UPDATE"/>
bTV	4360	154.000	DVB-C	AUDIO&VIDEO	<input type="button" value="UPDATE"/>
Nova TV	4380	154.000	DVB-C	AUDIO	<input type="button" value="UPDATE"/>
bTV Action	4400	154.000	DVB-C	NONE	<input type="button" value="UPDATE"/>

4.2.5. Active Alarms

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



DVB Alarms


RF Alarms MPEG Alarms **Active Alarms**

Active Alarms				
Alarm	Mode	Frequency	Value	Threshold
LEVEL: LOW	DVB-C	650.000 MHz	55 dBuV	60 dBuV
LEVEL: LOW	DVB-C	658.000 MHz	56 dBuV	60 dBuV
LEVEL: LOW	DVB-C	666.000 MHz	55 dBuV	60 dBuV
LEVEL: LOW	DVB-C	674.000 MHz	58 dBuV	60 dBuV
LEVEL: LOW	DVB-C	682.000 MHz	57 dBuV	60 dBuV
LEVEL: LOW	DVB-C	698.000 MHz	57 dBuV	60 dBuV
CARRIER: LOST	DVB-T	514.000 MHz	-	-
CARRIER: LOST	DVB-T	698.000 MHz	-	-
CARRIER: LOST	DVB-T	770.000 MHz	-	-
VIDEO PID: NONE	DVB-C	162.000 MHz	radio Veselina E,SID:1084	-

4.3. Log

4.3.1. Alarms log

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



* DVB STREAMER * 192.168.2.3 * MONITORING *

IP Config

DVB

Advanced

Charts

VIDEO

Config
Stream
Status
Alarms
Log

Log


Alarms log
Stream log

Logged alarms		
Time	Message	E-mail
09/05/2013 12:57:14	LEVEL: LOW # DVB-C # 650MHz # 55 dBuV	Sent
09/05/2013 12:57:15	LEVEL: LOW # DVB-C # 658MHz # 56 dBuV	Sent
09/05/2013 12:57:15	LEVEL: LOW # DVB-C # 666MHz # 55 dBuV	Sent
09/05/2013 12:57:16	LEVEL: LOW # DVB-C # 674MHz # 58 dBuV	Sent
09/05/2013 12:57:16	LEVEL: LOW # DVB-C # 682MHz # 57 dBuV	Sent
09/05/2013 12:57:17	LEVEL: LOW # DVB-C # 698MHz # 57 dBuV	Sent
09/05/2013 12:57:19	CARRIER: LOST # DVB-T # 514MHz # -	Sent
09/05/2013 12:57:20	CARRIER: LOST # DVB-T # 698MHz # -	Sent
09/05/2013 12:57:21	CARRIER: LOST # DVB-T # 770MHz # -	Sent
09/05/2013 13:03:59	VIDEO PID: NONE # DVB-C # 162MHz # radio Veselina E,SID:1084	Sent

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4.3.2. Stream log

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



* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config

DVB

Advanced

Charts

VIDEO

Config
Stream
Status
Alarms
Log

Log

Alarms log
Stream log

Logged stream events	
Time	Message
09/05/2013 13:10:26	UDP # MPTS # 233.1.2.3:5441
09/05/2013 13:10:33	UDP # SPTS # (2)
09/05/2013 13:10:33	UDP # SPTS # 233.1.2.3:5441 # (1/2) Eurosport HD
09/05/2013 13:10:33	UDP # SPTS # 233.1.2.4:5441 # (2/2) NatGeo HD
09/05/2013 13:10:37	UDP # SPTS # (3)
09/05/2013 13:10:37	UDP # SPTS # 233.1.2.5:5441 # (3/3) NatGeo HD
09/05/2013 13:10:39	UDP # SPTS # 233.1.2.5:5441 # (3/3) Planeta HD

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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@xxx.com
To:	you@xxx.com
Cc:	
Bcc:	
Subject:	DVB STREAMER - <ALARM> Use <ALARM> to insert alarm message.
Text:	Sent by: DVB STREAMER
<input type="button" value="Save"/> <input type="button" value="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
<input type="button" value="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.

Programs	RTSP	Remux	SNMP	VLAN	E-mail
-----------------	------	-------	------	------	--------

Program List Configuration

Program list: programs.txt programs.m3u						
N	Name	SID	Frequency	DVB	Update	Remove
0	BNT 1	4340	154.000	DVB-C	UPDATE	REMOVE
1	bTV	4360	154.000	DVB-C	UPDATE	REMOVE
2	Nova TV	4380	154.000	DVB-C	UPDATE	REMOVE
3	bTV Action	4400	154.000	DVB-C	UPDATE	REMOVE
4	EK	4420	154.000	DVB-C	UPDATE	REMOVE
5	EK Carevec	4440	154.000	DVB-C	UPDATE	REMOVE
6	TV 7	4500	154.000	DVB-C	UPDATE	REMOVE
7		0	100.000	DVB-C	ADD	
						DELETE ALL

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.



* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config
DVB
Advanced
Charts
VIDEO

Programs	RTSP	Remux	SNMP	VLAN	E-mail
----------	-------------	-------	------	------	--------

RTSP Configuration

RTSP Configuration			
RTSP Port:	<input type="text" value="554"/>	Playlist:	programs.m3u
RTSP Filter:	<input type="text" value="0.0.0.0"/>	Device URL:	<input type="text"/>
<input type="button" value="Save"/>			

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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.

Programs	RTSP	Remux	SNMP	VLAN	E-mail
----------	------	--------------	------	------	--------

Remultiplexer

BNT 1

SPTS Configuration			
Source	Remultiplexer	Destination	
BNT 1	ON	233.5.5.5:5401	Update
SDT Table	EIT Table	TDT Table	
ON	OFF	ON	Update
Remultiplexer Configuration			
PAT Configuration		PMT Configuration	
RESET CONFIG			
IN SID	OUT SID	IN PCR PID	OUT PCR PID
4340(BNT 1)	4340	4341	4341
	SAVE		SAVE
IN TS ID	OUT TS ID	IN PID	OUT PID
4002	4002	4341	4341
	SAVE		SAVE
IN PMT PID	OUT PMT PID		
4340	4340	4344	4344
	SAVE	4342	4342
	SAVE		SAVE
SDT Configuration			
IN NET ID	OUT NET ID		
0	0		SAVE
IN SERVICE	OUT SERVICE		
BNT 1	BNT 1		SAVE
IN PROVIDER	OUT PROVIDER		
CoresNet	CoresNet		SAVE

4.4.6. VLAN

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



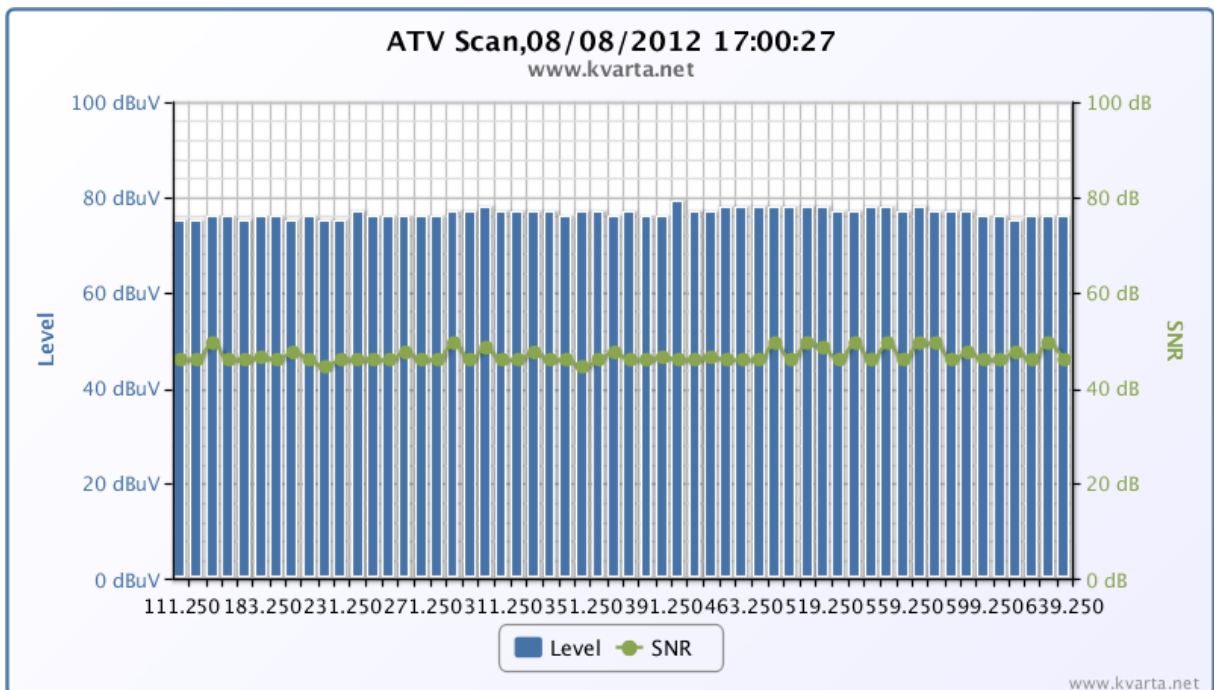
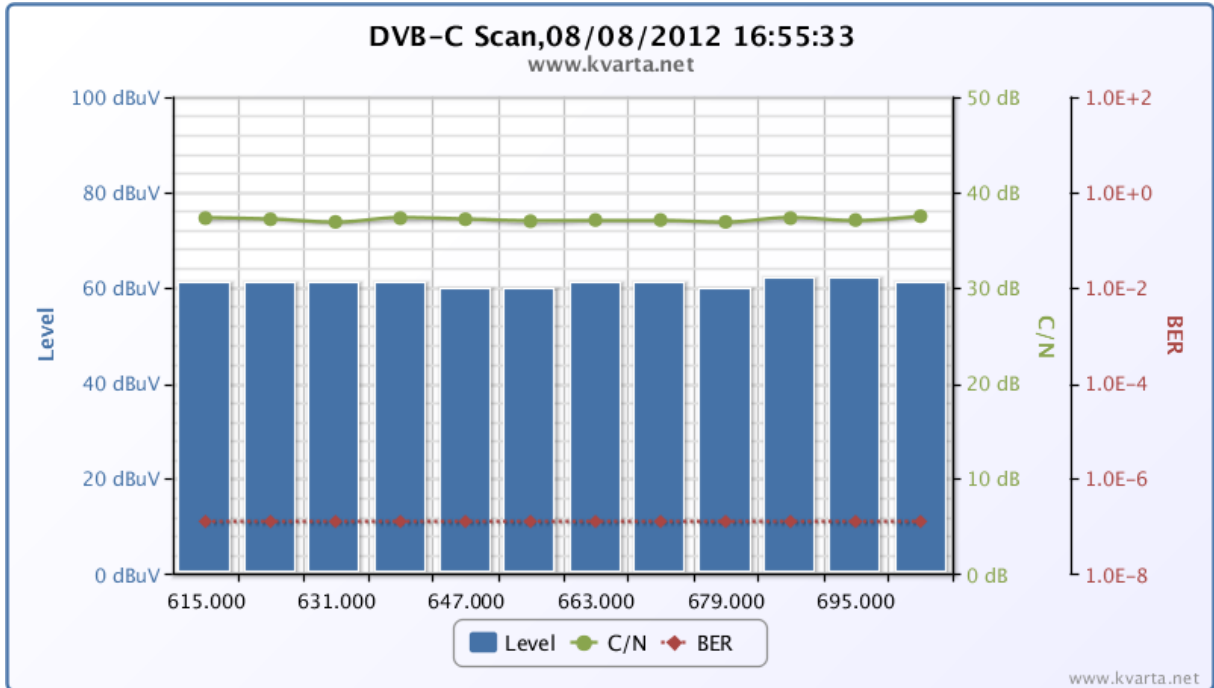
* DVB STREAMER * 192.168.2.3 * STREAMING *

IP Config	Programs	RTSP	Remux	SNMP	VLAN	E-mail
DVB	<h3>VLAN Configuration</h3>					
Advanced	Outgoing VLAN Configuration					
Charts	Outgoing VLAN:		Disabled			
VIDEO	Management VLAN:		0			
	Streams VLAN:		Stream			
	Save					

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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

```