Digital Video Interfacing Products	C Alitronika - DVSstation IIII C III C IIII C IIIII C IIII C IIII C IIII C IIII C IIII C IIIII C IIIII C IIII C IIII C IIII C IIIII C IIIII C IIIII C IIIII C IIIII C IIIII C IIII C IIIII C IIIII C IIIII C IIIII C IIII C IIIII C IIIII C IIIII C IIII C IIIIII
DVSStation4	Alitronika DVSStation 4
Integrated Transport Stream Player Recorder	File Information Pogen Information PDI (Instantion District District Adaptions IF 12,551 base - 10129531 base - 10129531 base - 10129531 base - 0157015
Analyser TS Viewer DVB to IP conversion TS file Editor	Play controls P 10 controls No excos detected Ts Time (0.0000) HoE dr U 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Free, unlimited licence with every Alitronika device

Standard Features

- High performance MPEG-2 Stream Player, Recorder and Analyser supporting all Alitronika's devices.
- Automatically obtains the bitrate from the PCR during Recording and playing.
- Accurate estimation of bitrate when there is none in the PCR.
- Unlimited numbers of play loops.
- Supports sub-loops, partial file play.
- Recoding file selectable by size by duration of recording.
- Automatic correction of PCR/PTS/DTS and continuity counter.
- Integrated file information, (P)SI viewer.
- Allows Null packet insertion using hardware only.
- Allows PID filtering using hardware only.
- Support for Hardware Null packet and counter packet generation for testing without any load on the PC.
- Supports Error insertion.
- Allows user to set TOT/TDT.
- Supports Time stamping using hardware only.
- Integrated Hex editor for viewing/ Editing TS files.
- Multiple application can be run simultaneously on the same PC for recoding or playing of multiple Streams.
- Support unlimited number of LNB setting.
- Support DVB-T/S/C Tuner settings.
- Displays all operational registers of the hardware during play and record for diagnostics purposes.
- Displays Hardware and software buffer usages during play and record operations.
- Allows selection of DVB-ASI, DVB-SPI, RAW data, Burst or continuous mode.

Application

- Universal MPEG-2 Transport Stream generator and recorder for feeding or recording to/from any digital video equipments
- Transport Stream Recording.
- Transport Stream Playing.
- Transport Stream Analysing
- Transport Stream Monitoring.
- Video on Demand Server.
- Transport Stream Test Generator.
- High Speed Serial Data Link.



1 GENERAL DESCRIPTION

The layout of the DVSStation4 has the same familiar look as the DVSStation3 and many other application software. There are two basic screens, play & record. The screen shot below shows the play screen. As it can be seen the DVSStation4 has many functions, since it must support all Alitronika devices.

Therefore not all of these functions are used by all of the devices.

In general if a device does not support a function, then the option for selecting that function is disabled by the application software and is not selectable by the user.

For examples the play screen does not appear for devices that only have input and do not have any output capability, or the tuner settings only applies to the De-modulator devices such as AT800USB/PCI. In most cases the DVSStation4 pre-selects (Default) the options that are valid for a device.

As an example when a device has only DVB-ASI output, then this output is automatically selected by the application and the user need not make any selections.

📸 Alitronika - DVSstation IIII			
Device select Configuration Settings	Working Register Help		
	alitr	ronika DVSStation 4	
Play Record			,
Ter_578.ts	🗃 Open		
File Information	Program Information	Pid list Output Select Bitrate Adaptions Image: Depart (15.08 Kb/s) Image	/PTS "DT uity isertion ange
	No errors detected Ts Time op count: 0 Elapsed Time	me: 0:00:00 me: 0:00:00 ' ' ' ' ' DVB over IP Buffer size Lowlevel 6Mb Hardware 8Mb Software 10Me	

1.1 How to check the version

The version number and release date together with the address where you can get technical support can be viewed by clicking on "About" from the top tool bar.

Play R	ecord	About Versions	ronika	DVSstation IIII Version 5.13 of: Oct 31 201 Copyright © Alitronika DVS The Recorder and Playback	2 is used with the	
Ter_57	Bits Program in	Dpen	PID Information	http://www.alitronika.com	14929411	tions
- 112,197,62 V Playtime * Before first After last ps 596794 pa Packet size Bit rate: 14	ersion File Windows XP Professi DVSStation API Analyzer Driver Firmware	Version 5.1 Service Pac 5.13 5.13 5.12 255.0 0.1	Location C:WINDOWS C:YFrogram Files/Alitronik C:YFrogram Files/Alitronik C:YOrgram Files/Alitronik C:WINDOWS/ssystm32 C:WINDOWS/ssystm32	a\DvsStation4\DvsStation4 .a\DvsStation4\ATDV_API4.dll a\DvsStation4\ATDV_API4.dll \Adrivers\ \Adrivers\	20735296 Re-max (Hw) Default	* DTS/PTS TOT/TDT Continuity Tools
Play controls	Fpga			Copy to Clipboard	Buntnode e	Error insertio
	Loop count:	0 Elapsed	Time: 0.00.00	HexEdt Viewer Ts Analyzer DVB over IP		

2 Play Mode

2.1 Selecting a TS file in play mode

To select a file to play simply click on " open" and then select the desired file from any location on your PC drives which it resides.

Alitronika - DVSstation IIII vice select Configuration Settings	Warking Register Help					
	alitr	onika	SVS	DVS	Station 4	
Play Record						
Ter_578.ts	🖻 Open					
File Information ■ Ter_578.ts ■ 112,197,631 bytes ■ Playtime: 4/- 60.13:sec ■ Before first packet: 187 ▲After last packet: 101 ■ S96794 packets ₽acket size: 188 Bit rate: 14,329,411 bps	Program Information Program Information Canvas/Ketnet for den G Nederland3 G Nederland2 Nederland1 .	PID Information PID In		Output Select © DVB SAMPTE Raw Data Her TP Gan V Senial © IF and RF Packet size	Bitate Ele: 14929411 RF: 20735296 V Re-mux (Hw) Default	Adaptions PCR + DTS/PTS TOT/TDT Continuity Tools
		 1012 Progra 1013 Progra 	m (172.56 m (263.54 🛩	 188 byte 188+16 byte 204 byte 		Error insertion Sub Range
Play controls			des	Buffer size		
	No errors detected Ts Time:	0.00.00	HexE dit			
Lo Toring To	op count: 0 Elapsed Time:	0.00.00	Viewer			
<u>0</u>			s Analyzer			
T			VB over IP			

2.2 Output Selection

The output modes, DVB, SMPTE, RAW data and Hardware Generated TP can be selected from the "Output Select" section shown. For devices which support both Serial (DVB-ASI) and Parallel (DVB-SPI), one or both outputs could be selected. For devices that only have one type of output this option is pre-selected by the application and there is no user option.

Alitronika - DV vice select Config	Sstation IIII guration Settings	Working Register Help alitr	onika	DVS	DVS:	Station 4	
Play	Record Ter. 578.ts	Com .					
File Information ■ Ter_578.ts − 112.197 − Playtime Before fi After last − 596794 − Packet Bit rate:	7,631 bytes x: +/- 60.13sec fint packet: 187 tt packet: 101 packets size: 188 14,929,411 bps	Program Information Program I	PID Information PID informatio	T (15.08 Kb/s) (15.08 Kb/s) T (15.08 Kb/s) T (1807 59 b/s) OT (1.88 Kb/s) T (24.57 Kb/s) ID (24.57 Kb/s) P(24.52 Kb/s) PMT (15.08 Kb/ PCR (3.68 Mb/s) Program (253.54	Output Select ● DVB SMPTE Raw Data Hw TP Gen ✓ Serial ✓ IF and RF ■ Table Select ● Table Select ● Table Select ● Table Select ● Table Select	Bituate Elie: 14323411 RF: 20735296 ✓ Re-mux (Hw) Default Options Burstmode Size 1	Adaptions PCR + DTS/PTS TOT/TDT Continuity Tools Error insertion Sub Range
Play controls		No errors detected Ts Time op count: 0 Elapsed Time	0.00.00 0.00.00 x x x	Gooder HexEdit Viewer Ts Analyzer DVB over IP	Buffer size Lowlevel 6Mb Plandware 6Mb Software 10Mb		

2.3 Selecting Output bitrate

The bitrate of the file to be played is shown in the "file" box of the bitrate section as show. The bitrate at which the file is played back is shown in the "Out" box.

The actual bit rate is obtained from the Transport Stream, but the output bit rate is user selectable. If the user wishes to play the TS at it original bitrate, then the "Re-Mux" function should be un-checked and the "Default" button selected. The Re-Mux function is carried out by the hardware.

Alitronika - DYSstation IIII evice select Configuration Settings	Working Register Help	onika	DVS	DVS	Station 4	
Play Record Ter_578.ts	Dpen					
File Information ■ Ter_578 ts - 112,197,631 bytes - Playtime: +/-60.13tec - Before first packet. 107 - After last packet. 101 - 596734 packets - Packet size: 188 - Bit rate: 14,323,411 bps	Program Information Image: Program Information	PIO Information PIO information 0 PAT 0 10AT 0 10A	(15.08 Kb/s) (15.08 Kb/s) (15.08 Kb/s) (74.57 Kb/s) (74.57 Kb/s) (74.57 Kb/s) (74.57 Kb/s) (74.57 Kb/s) (74.57 Kb/s) (74.56 Kb/ CR (16.68 Mb/s) "MT (15.08 Kb/ CR (16.68 Mb/s) "MT (172.55 Program (125.54	Output Select Output Select Other Senal Senal Packet size 0 188 byte 188-16 byte 204 byte	Bitrate Eile: 14929411 RF: 20735296 V Re-mux (Hw) Default Options Options Solutions	Adaptions PCR + DTS/PTS TOT/TDT Continuity Tools Error insertion Sub Range
Play controls	No errors detected Ts Time: pop count: 0 Elapsed Time:	0.00.00	Goodes HexEdit Viewer Ts Analyzer DVB over IP	Buffer size		

2.4 Output options

All Alitronika devices with output function support many useful play out options, such as burst mode in which the transport packets are transmitted in bursts. The burst size is user selectable.

Also there other function, Error insertion, play in loop and sub-loops, add extra 16 byte to a 188 byte packet size to make a 204 byte packet size and so on.

All these function are easily selectable by the user and need no further discussions.

Alitronika - DVSstation IIII Device select Configuration Settings	Working Register Help	onika <mark>DV</mark> S	DVS	Station 4	
Play Record Ter_578.ts	🚅 Open				
File Information Image: Ter_578 ts - 112,197,631 bytes - Playtime: +/- 60,13sec - Belore first packet: 187 - After last packet: 101 - 596794 packets - Packet tize: 188 - Bit rate: 14,929,411 bps	Program Information Program I	PID Information	Output Select O DVB O SMPTE Plane Data Her TP Sen Serial F and RF	Bitude Elie: 14929411 RF: 20735296 Default	Adaptions PCR + DTS/PTS TOT/TDT Continuity
		# 1010 PMT (15.08 Kb/ # 1011 PCR (3.68 Mb/s # 1012 Program (172.5€ # 1013 Program (263.54 ↔ ★	Packet size 188 byte 188+16 byte 204 byte	Options Burstmode Size	Tools
	No errors detected T s Time op count: 0 Elapsed Time 	0:00:00 HexE dR 0:00:00 Viewer Ts Analyzer DVB over IP	Buffer size Lowlevel 6Mb Hardware 8Mb Software 10Mb		

2.5 How to set the user selectable output options

The setting for all of these options can be accessed via "Setting" from the top menu bar. There is a separate window for each one of these options. They are all shown in the screen shot below, although they do not all appear at the same time. These functions include selecting loop & sub-loop size, TOT/TDT adaptation as well as bit error insertion.

Alitronika - DVSstation IIII	
Device select Configuration Settings Working Register Hep TOT / TDT Error Insertion Subloop Restore Defaults Play Record	Play sub range Image Start loop at (%) Image Image Image Stop loop at (%) Image
Ter., 578 in TOT / TDT Adaptation File Information Start playing with File Information Original file time Playing with 0.000 AM Descention packed too Descention packed too After last packed too Descention too Descento Descention too	OK
	A small description of the error insertion selected. Number of Bits / Bytes / Packets 1 Repeate after xxx Bits / Bytes / Packets 1000000

2.6 The Play panel

The play back interface is based on a typical control layout.

In addition to "Play ", "Pause" and "Stop" there is a progress bar and a timing indictor. Files may be played once or be "looped " to play continuously by selecting the loop option. This is particularly useful as a source of repeatable DVB, SMPTE or RAW data when testing other equipments for performance, conformance and fault diagnosis.

A loop counter shows the number loops played out.

The progress bar can be controlled by the user to move to a desired location in the file.

Alitronika - DVSstation IIII evice select Configuration Settings	Working Register Help alitr	onika <mark>DVS</mark>	DVS	Station 4	
Play Record					
File Information ■ Ter_578.ts − Playtime: +- 60.13 ecc − Before first packet: 187 − After last packet: 101 − 596794 packets − Packet size: 188 ■ Bit rate: 14.929,411 bps	Program Information Progra	PD Information PId list 0 PAT (15.08 Kb/s) 1 CAT (15.08 Kb/s) 1 CAT (15.08 Kb/s) 1 T 5DT (1.88 Kb/s) 1 T 5DT (1.88 Kb/s) 1 T 6 EIT (74.57 Kb/s) 2 1 0 (0.00 b/s) 2 21 MIP (2.42 Kb/s)	Dubut Select © DV8 © SMPTE © Raw Data (Her IP Gen © Senial © If and RF	Bitute Adaptions Elle: 14929411 ♥ PCR PLF: 20735296 + DTS ▼ Re-mux (Hw) Default	
		1010 PMT (15.08 Kb/ 1011 PCR (3.68 Mb/s 1012 Program (172.56 1013 Program (263.54 •	Packet size 188 byte 188+16 byte 204 byte 	Options Bustmode Size	Tools Error insertion Sub Range
Play controls	No errors detected Ts Time: oop count: 0 Elapsed Time:	0:00:00 0:00:00 Ts Analyzer DVB over IP	Buffer size Lowlevel SMD Handware SMD Software 104b		

2.7 File information window

The "File Information " window displays all the file properties, such as the size of the file, bitrate, packet size and other useful information about the TS file.

Alitronika - DVSstation IIII Device select Configuration Settings	Working Register Help alitr	onika <mark>DVS</mark>	DVS	Station 4	
Play Record	-				
File Information □ Ter_578.ts − 112,197.631 bytes − Playtime: +/- 60.13sec − Before first packet: 187 − After last packet: 187 − Sp6794 packets − Packet size: 188 − Bit rate: 14,929,411 bps	Conn	PD Information Pd lat Pd lat 1 CAT (15:00 Kb/s) 1 CAT (15:00 Kb/s) 1 F STT (1:00 Kb/s) 1 F STT (1:00 Kb/s) 1 F STT (1:00 Kb/s) 2 0 (0:00 b/s) 2 1 MIP (2:42 Kb/s) 2 1 MIP (2:42 Kb/s) 2 1 MIP (2:42 Kb/s) 3 2 1 MIP (2:42 Kb/s) 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Duput Select © DVB SMPTE Raw Data Her TP Sen Serial © IF and RF	Elitrate Elit: 14329411 RF: 20775296 V Re-max (Hw) Default	Adaptions PCR + DTS/PTS TOT/TDT Continuity
		1010 PM1 (15:08:Kb/ 1011 PCR (3:68 Mb/s 1012 Program (172:56 1013 Program (263:54 • 1013 Program (263:54 •	Packet size 188 byte 188+16 byte 204 byte	Options Durstmode Size 1	Tools Error insertion Sub Range
Play controls	No errors detected Ts Time: p count: 0 Elapsed Time:	0.00:00 HexE dit 0.00:00 Viewer 1 Ts Analyzer DVB over IP	Buffer size Lowlevel 6Mb Handware 6Mb Software 10Mb		

2.8 Program Information Window

The section shows most of the useful information about the content of the TS.

Attronika Dystation ini	Working Register Help	ronika <mark>DVS</mark>) DVS	Station 4	
Play Record					
Ter_578.ts File Information Ter_578.ts Ter_578.ts Playtime: +/- 60.13tec Before first packet: 187 After last packet: 187 After last packet: 101 S96794 packets Packet size: 188 Before: 14.929.411 here	Program Information □ ¬* Program Information □ - TV Canvas/Ketnet □ - TV Canvas/Ketnet □ - TV Mederland3 □ - TV Nederland2 □ - TV Nederland1	PtD Information Ptd Iat # 0 PtAT (15.00 Kb/s) # 1 CAT (15.00 Kb/s) # 16 NIT (807.59 b/s) # 17 SDT (1.80 Kb/s) # 18 EIT (74.57 Kb/s) # 20 (0.00 b/s) # 21 MIP (2.42 Kb/s)	Output Select © DVB © SMPTE © Rem Dista O Hail TP Sen © Senial © IF and RF	Bitate Ele: 14529411 RF: 20735296 V Re-mux (Hw) Default	Adaptions PCR + DTS/PTS TOT/TDT Continuity
		 1010 PMT (15.08 Kb/ 1011 PCR (3.68 Mb/s) 1012 Program (172.55 1013 Program (263.54 v) 	Packet size 188 byte 189+16 byte 204 byte	Options Durstmode Size 1	Tools Error insertion Sub Range
Play controls	No errors detected Ts Time sop count: 0 Elapsed Time	C 000.00 HexEdR C 000.00 Viewer Ts Analyzer DVB over IP	Buffer size Lowlevel 6Mb Hardware (5Mb Software 10Mb		

2.9 PID Information Window

The Real Time Integrated Transport Stream analyzer displays the result of the stream analyses in this window. Alitronika's powerful application software, DVSStation4 supports a Real Time Quick Transport Stream Analyser. The DVSStation is an integrated transport stream player, generator, recorder and monitor and now has an integrated TS analyser function. This is not a full transport stream analyser, since it does not display all the information about the TS, which is being recorded or played back, but when working with a lot of TS a simple tool is sufficient to show what is in the TS streams. DVSStation4 is just the right tool for such cases. It generates a complete list of the PIDs used in the transport stream. The PID information is then displayed as seen.



2.10 Buffer Usage Display

All Alitronika devices have 8 or 16 MB SDRAM on board, used as hardware buffer. In addition there two software buffer of 10 and 20 MB to ensure the smooth buffering and provide sufficient memory resources during play and record. Although in most cases the bitrate on the incoming or out going transport streams are far lower than to be of any concerns, but there are situations in which the memory usage may be of some concern. The "Buffer Size" window displays the memory usage graphically. In addition the actual numerical values of memory in use are also made available to the user. See the next section.

1	Fiecord	1 0 mm				
Ter_578.ts 112.197	.631 bytes	Program Information	PO Information Pol lat * 0 PAT (15:00 Kb/s)	Output Select	Bitrate Eile: 14929411	Adaptions
112.197.531 bytes Playtime: + 60.13mc Betare finit packet: 107 After last packet: 107 596794 packet: Packet size: 180 Bit rate: 14.529.411 bps	* 3V den * 3V Nedeland) * 3V Nedeland? * 3V Nedeland?	* 1 CAT (15.08 Kb/s) * 16 NIT (807.59 b/s) * 17 SDT (1.89 Kb/s) * 18 EIT (74.57 Kb/s) * 20 (0.00 b/s) * 21 MIP (2.42 Kb/s)	C Rev Data RF: Her TP Gen Serial F and RF	RF: 20735296	Continuity	
			* 1010 PMT (15.08 Kb/ * 1011 PCR (3.68 Mb/s * 1012 Program (172.56 * 1013 Program (263.54	Packet size © 188 byte ○ 188+15 byte	Options Burstmode Size	Tools

2.11 Working registers

At the hart of every Alitronika device is a powerful FPGA. Most of the functions of the devices are carried out by the Firmware residing in this FPGA. The firmware communicates with the application software via the deriver through a series of working resisters. These registers, described in details in the datasheet of the devices, contain all the information as regard to setting and the operation of the devices. Normally there is no need for the user to know about these. But they can be powerful tools during diagnostics of errors and other conditions. They are made accessible to the user via "FPGA Register" option in the top menu bar as seen below. The Hardware buffer usage can be read directly.



2.12 Hex file Editor

Again when working with a lot of TS, during playing & recording it is often very useful to be able to edit a section of the TS file. DVSStation4 provides a free to use Hex editor for such a situations. Simply clicking on "Edit it" button will activate it.

🕼 Ter	_578	HexEdi	t											
File Ec	lit Sea	rch View	Tools	Help										
New	Dpen	L Save	X Cut	ि Copy ।	Paste I	≌n n Undo Re	a 🔾 do Find	Calc	्रि Types	🔊 Spawn		DVSSt	ation 4	
	D00 D10 D20 D30 D40 D50 D50 D50 D70 D80 D80 D80 D80 D80 D80 D80 D80 D80 D8	04 07 C9 48 B0 1E AC C3 6B AB E6 D6 A7 4A 4C 77 8B 39 67 9B A7 26 00 38 33 81 40 37 C9 7F E3 C9 7F E3 C9 FE 4E 0F 32 EC 82 EC 82	D1 EF 88 6C 807 74 004 76 BA 67 DE CDB 37 DE DE CDB 50 17 55 55 11C 03 11C 03 58 F3 60 40 F17 18 80 15 E7 60	18 79 50 28 1E 72 27 0C 44 28 46 A7 CE A2 D2 17 83 6E 61 A2 03 F4 68 60 68 66 EF 00 04 20 050 D0 06 AE 07 39 08 66 FF 90 90 17	$\begin{array}{cccccc} 72 & 2D \\ F2 & C4 \\ F6 & 72 \\ CC & B5 \\ F2 & DE \\ C1 & E2 \\ BE & 56 \\ 15 & B4 \\ CC & 39 \\ 04 & 52 \\ 98 & 8D \\ 41 & FC \\ 68 & 18 \\ D0 & 1B \\ 80 & 19 \\ 03 & 01 \\ 89 & C4 \\ 10 & 42 \\ 81 & 3F \\ D5 & 00 \end{array}$	4D BE AB 3D B6 51 20 F8 15 6E C4 48 42 BD 01 88 9B 0B 44 39 B 0B 44 39 F4 B0 00 05 00 66 C0 CB 30 35 E0 0D 74 E7 74 E7 01 F1 E8 45 43 36 BE 14	$\begin{array}{c} F9 & 45 \\ 0C & AE \\ AB & F7 \\ 5E & 42 \\ 71 & E0 \\ E7 & BB \\ 60 & E3 \\ 9B & D9 \\ FF & F8 \\ F1 & 52 \\ F1 & 54 \\$	DC 81 8C 60 60 022 72 EF 53 63 62 33 77 9F 59 91 77 9F 59 91 07 53 90 55 90 55 90 34 6E C9 90 34 6E C9 90 34 62 E0 50 00 82 7C 80 00 80 00 80 80 00 80 00 80 00 80 00 80 00 80 00 80 00 80 00 80 00 80 80 00 80 000 80 00 80 00 80 000 80 00 80 00 80 00 80 00 80 00 80 00 80 00 800	$\begin{array}{ccccc} 45 & 6E \\ 68 & C2 \\ 6E & 61 \\ AE & 7F \\ 2E & E3 \\ A6 & DD \\ 35 & 03 \\ 94 & 89 \\ D9 & 40 \\ A8 & A4 \\ 4E & E1 \\ 1E & 64 \\ 1E & $		E. En [. `ha . `na Br] ;b3 ;b3 ;v5 .].@ S Rn.N. Gd 5V BrB B 	Red B Island Island Red B Red B R B R B R B R B R B R B R B R B R B B R B B R	hale iz 14929411 pions pions Dustmode	Adaptions PCR + DTS/PTS TOT/TDT Continuity Tools Error insertion
				C	Cursor: 00	000000			Value: 0)4 112197631 byte	es OVR	6 byte S		Sub Range
Play	II) Loop:	Loop o	o errors det count:	0 1	To T Elapsed T	ime: 0 ime: 0	100.00	- Goodies HexEdit Viewer Tis Analyzer DVB over IP	Lowley Jacobie	rel 6Mb are 3Mb are 10Mb		

3 Record and Monitor

3.1 Record Options

The recording and monitoring of transport streams is as simple as playing. Most of the options are device dependent. So if a device does not support a DVB-SPI input, the option is not enabled. The application software selects most of the options by default; some are left to the user to select. For example users are able to select to record from DVB-ASI or DVB-SPI input of a device that supports both. Other options are entirely of the users choosing such as the size of the file to be recorded.

Files could be recorded according to the size of by selecting a time period.

Alitronika - DVSstation IIII (AT290USB DVB-S/S2/	SNG, Hub 4, Port 6)		
evice select Configuration Setting	s Working Register Help			
		alitronika <mark>PVS</mark>	DVSSta	tion 4
Play Record				
	🎯 Open			
Program Information	Pid Information	Input Select ● DVB ● Serial ● SMPTE ● Raw Data	Recording Size Seconds MBytes 100	Hardware PID litter Enable PID Filtering Exclusive PID Table
		Signal Info Carrier Detect Lock Symc	Options	Record Select () Input
		Packet size - Bit rate (Mb/s) - Data Emors - Search Less -		Bitude RF: 20735296
		Spectors +	Time Stamping	
Record controls	No errors detected	T s Bytes: 0 MB Goodes T s Time: 0 00:00 Viewer Disable Analyzer T s Analyzer DVB over IP	Buller Size Lowlevel (Mp Hardware 100) Software 1000	

2.2 Loop Through, Pass Through, Time stamping.

Most of Alitronika device with an input also have a loop through, this is useful in cases when the signal has to be used by another device in the chain. In most case when the device also has an output, the input signal can be "Passed through " to the output during recording, hence eliminating the use of a router if the signal has to be used by more than one device. During the recording of a transport stream, the "Time stamping" function could be enabled. This function is entirely carried out by the hardware. Transport Packets are time stamped, that is the time of arrival of the 11th byte (which contains the PCR) of every TP is market by a 32 bit counter. These 4 bytes are added to the start every packet.

🕈 Alitronika - DVSstation IIII. (AT Demo Device)							
Device select Confi	guration Settings	Working Register Hel	p				
			alitro	onika	DVS	DVSStatio	on 4
Play	Record						
「		💕 Open					
- Program Informa	tion	PidInformation		Input Select	 Serial Parallel LVDS 108 31.664 0 	Options Loop through Loop Reclocking Pass Through ASI Convert ASI to SPI LVDS	Hadware PID Rer Enable PID Rering Exclusive PID Table Record Select Imput
				Sync Loss	- 0 0	Time Stamping	
Record controls	C Loop Lo	No errors detected op count:	Ts Bytes: Ts Time: Disable A	0 M8 0 00:00 knalyzer	Goodes HexEdit Viewer Ts Analyzer DVB over IP	Bulle Soe Producer Silo Colliver Dilo	

2.3 PID filtering

All of the Alitronika devices with input support PID filtering. The merit and usefulness of PID filtering is not the subject of this user manual. Some application may require PID filtering to reduce the amount data for further processing. When PID filtering in done by the hardware it further frees up processing power. In order to keep the size of the PID table, two types of PID tables could be defined by the user. An "Exclusive" PID table excludes all the PIDs in the transport stream, which are in the PID table. An "Inclusive" PID table lets all the PID in the table through and filters out the rest. The type, the size and the content of the PID tables are selected by the user.

📓 Alitronika - DVSstation IIII (AT Demo Device)		
Device select Configuration Settings Working Register	Help	
Alitronika - DVSstation IIII (AT Demo Device) Device select Configuration Settings Working Register Play Record Play Record Play Record Play Record Play Record Play Record	Sel Pid Pid PID Table Image: Constraint of the state Image: Constraint of the state Sel Pid Pid Pid 0 Plant the Pid Pid Pid 1 1 Pid Pid Pid 1 1 1 Pid Pid Pid 1 1 1 Pid Pid <td>Hardware PID filter Enable PID Filtering Exclusive PID Table</td>	Hardware PID filter Enable PID Filtering Exclusive PID Table
in Loop count	Cancel	
	Disable Analyzer DVB over IP	ere 046

2.4 Tuner setting

Alitronika devices with RF tuners like Cable, Satellite, Terrestrial demodulator devices, allow the user to select the desired channel, frequency, modulation mode and other parameters.

The tuner settings are accessible via the "Configuration" option from the top menu bar. Т

The screenshot below	w shows the options	for devices with DVB-C	(Cable QAM) function
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2.5 Satellite tuner and LNB Power

Alitronika's DVB-S devices with satellite tuners on board also support settings as well as supplying power for the LNB units. Setting for multiple LNB units may be saved & selected as they are used. The DVB-S devices supply power supply for Vertical, Horizontal and an extra 1V DC to compensate long cables. This option may only be selected if a long cable used between the tuner & the LNB units. Screenshots below show the available user options for the DVB-S tuner and the LNB device.

🛃 Alitronik	a - DVSstation IIII (AT Demo De	rice)
Device select	Configuration Settings Working Rec	ister Help
	Tuner Modulator Program configurations	alitronika
Play	Administrator Login FPGA Firmware update StandAlone Firmware update	Tuner Settings X Satellite Tuning LNB
Program	Information Pid Inform	Settings Signal Bit error rate Frequency 11 GHz 11.000003 Signal Bit error rate Polarity Vertical Viterbi Code Symb. Rate 22.5 MBaud Signal Strength 63997 FEC Rate 3/4 SNR / MER 17.0 dB
Record o	I Coop count	ed 3 C Ts Time: 0.00:00 Viewer Disable Analyzer DVB over IP

Alitronika - DVSstation IIII (AT Demo De	vice)	
Device select Configuration Settings Working Re Tuner Modulator Program configurations Administrator Login Play FPGA Firmware update Program configurations Program configurations	alitronika DVS DVS	Station 4
StandAlone Firmware update Program Information Program Information Record controls No emoss di Image: Standalogic Controls No emoss di	Satellite Tuning LNB Input Frequency Range Low Switch point High 10 11 12 GHz Local Oscillator Frequencies Low High 10 10 GHz LNB Power ON Ext. Voltage (long cable)	
	Disable Analyzer Ts Analyzer DVB over IP	

2.6 Terrestrial Tuner

Alitronika's DVB-T devices with terrestrial tuners need only a few parameter to be set, these are shown in the screen shot below.

2.7 Carrier detection, lock and synchronization

Alitronika devices with any type of input, DVB-ASI, DVB-SPI, DVB-C, DVBS or DVB-T, first detect the presence of a valid signal, then the receiver modules on board these devices lock into the incoming Transport Stream, if needed after decoding, and then synchronize to the input TS.

There are three indicators showing the status of each of these. A red colour, naturally, indicates lack of a valid signal of lock or the device is not able to synchronize to the input stream.

When everything is correct, normal operating condition, the indicators all show green and other information such as TS packet size, bitrate, error rate and synch error appear as shown in the following screen shots. The recording or monitoring can then start.



📓 Alitronika - DVSstation	IIII (AT Demo Device)			
Device select Configuration	Settings Working Register Help			
		alitronika 🔍	DVSStat	tion 4
Play Rec	ord			
[💕 Open			
Program Information	Pid Information	Signal Info Carrier Detect Lock Sync Packet size Bit rate [Mb/s] Data Errors Sync Loss	188 31.664 0 0	Hadware PID Rer Enable PID Rening Exclusive PID Table Record Select © Input
Record controls Image: Image	No errors detected	Ts Bytes: 0 MB Heat Ts Time: 0.00.00 View Disable Analyzer Ts Anal DVB ov	St Putter Size	

3.8 The Record panel

The Record interface is also based on a typical control layout with "Record" and " Stop" buttons. The progress bar indicates the status of recording. A byte or time indictor is also present.

Alitronika - DVSstation IIII (A	T290USB DVB-S/S2/DSNG, Hub 4	, Port 6)		
Device select Configuration Settings	Working Register Help			
	alitro	onika <mark>DVS</mark>) DVSStati	on 4
Play Record				
-	😅 Open			
- Program Information	Pid Information	Input Select © DVB © Serial O SMPTE O Raw Data	Recording Size Seconds MBytes 100	Hardware PID filter Enable PID Filtering Exclusive PID Table
		Signal Info Carrier Detect Lock Sync	Options	Record Select () Input
		Packet size - Bit rate [Mb/s] - Data Errors - Syric Loss -	Time Stamping	Bitute B/F: [20735296
Record controls Decord controls Loop: Lo	No errors detected Ts Bytes: op count: 3 Ts Time: Disable A	0 MB 0:00:00 Analyzer DVB over IP	Buffer Size Lowlevel (Mb Hardware 1046 Software 1046	

3.9 The Integrated TS analyzer

During recording or monitoring the integrated TS analyser indicated the content of the incoming TS as shown below. Both Program and PID information are available.



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