**Digital Video Interfacing Products** 

# **DVSStationIP**

Integrated Transport Stream Player Recorder Analyser

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# Free, unlimited licence with every Alitronika device

# **Standard Features**

- High performance MPEG Transport 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.
- Automatic correction of PCR/PTS/DTS and continuity counter.
- Integrated file information, (P)SI viewer.
- Supports Time stamping using hardware only.
- Multiple application can be run simultaneously on the same PC for playing/recording of multiple Streams.
- Support DVB-T/T2/H/S/S2/C/C2 and ATSC Demodulator settings

#### pplication

- 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.



## **1 GENERAL DESCRIPTION**

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

#### Therefore not all of these functions are used by all 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 AT88IP.

In most cases the DVSStationIP 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.

DvsStation-IP	
Discover IP Boards	DVSStation IP
Record     Play       Network     Port number       Port number     1234       Mode     UDP       Output       Output       Recording Size       Too       C       Seconds       Too       C       MBytes	Program Information     Program Information     Program Information     Pid list
Record controls       No errors detected     Ts Bytes:     0 MB       Ts Time:     0:00:00       Ts Time:     0:00:00       Disable Analyzer	Signal Info Packet size - Bit rate [Mb/s] - ~ Sync Loss }=0 -

#### 2.1 Discover Function

The "Discover" function of DVSStationIP can be used to locate any Alitronika's IP devices.

DvsStation-IP	
Device	
Discover IP Boards alitronika	DVSStation <b>IP</b>
Record     Play       Network     Port number       Port number     1234       Mode     UDP       Judput       Recording Size       100	Program Information PID Information
Record controls       No errors detected     Ts Bytes:     0 MB       Ts Time:     0:00:00       Disable Analyzer	Signal Info Packet size - Bit rate (Mb/s) - - - Sync Loss }=0 -

#### 2.2 User Options

Once a device has been detected, DVSStaionIP shows 3 options.

- "Update" this function is used to update the device's Firmware whenever needed.

"Settings" which opens the Web Base Application in your browser.
"Reset to factory defaults"; in case of mistakenly selecting an invalid IP address and the device can no longer be found.

DvsStation-IP		
evice	alitronika <b>DVSS</b> ta	tion <b>IP</b>
Record Network	Play   Detected devices	
Port number Mode	1 500 C3         3 516 minute           192.168.1.101         1683259864522776582	
- Dutput testin Recording Size		
- Record controls	Update Settings Reset To Factory Defaults	Close
• # 🔳 Ů	Loop: 3 Ts Time: 0:00:00 □ Disable Analyzer Sync Loss }=0	

#### 2.3 Updating the Device's Firmware

This process will take a few seconds. Use this option only when & if you need it or have been told by the Application or Alitronika to do so.

During the updating process do not switch off, power down or disconnect the device from the IP connection otherwise the device will lose its firmware.

DvsStation-IP		- 0 X
Device	alitronika <b>DVSStation IP</b>	
Record Network Port number Mode	Play         X           Detected devices         X           IP address         Serial number           192,168,1.101         1683269864522776582	
Output testin		
Record controls	Update         Settings         Reset To Factory Defaults         Close           No errors detected         Ts Bytes:         0 MB         Packet size	
	T S Time:   0.00:00 □ Disable Analyzer Sync Loss }=0	

DvsStation-IP		
Device		
Device Find	alitronika <mark>RVS</mark>	DVSStation <b>IP</b>
IP adress	Serial	PID Information
192.168.1.108	18446744073709551615	Pid list
	C:\Program Files (x86)\Alitronika\DvsStation-IP\RemoteUpdateConsole.exe	
Sta	Arting Update Update Progress	
	Russen flack	
	Program hash	
	Close	
1		
Record controls		
	To citors decorded Is Bytes:   UMD	
• •• 1• • 500b.	3 ⊡ Ts Time:   0:00:00 Packet size · · · · · · · · · · · · · · · · · · ·	
	Disable Analyzer	
	Sync Loss 🦨	

# 2.4 Resetting to factory settings

If the device is not functional or cannot be detected by "Discover" function, for example in case of using an invalid IP address or forgetting the password, the Resetting to the factory settings will resolve the problem.

B DvsStation-IP				×
Device				
		alitronika 🔍	UVSSta	ation <b>IP</b>
Record	Play			
- Notwork	Detected devices			
Network	TTD and the set	Control on other		
Port number	192.168.1.101	1683269864522	776582	
Mode			Net Victor	
- Output				
testip				
Recording Size				
100				
	1			
	Upd	ate Settings Reset To Factory D	efaults	Close
Record controls	No errors detected	Te Butee: 0 MB		
🔸 ii 🔳 😆		To Times 0.00.00 Packel	t size -	
	3	Bit rate	[Mb/s] ·	
		Disable Analyzer		
1		Sync L	055 / .	

2.5 Use "Settings" to open the Web Base Application in your default browser.

🚏 DvsStation-IP		- 🗆 ×
Device		
	alitronika <b>PVS</b> DVSStation <b>IP</b>	
Record	Play	
- Network	Detected devices	
Port number	IP address Serial number	
Mode	192. 168. 1. 101 1683269864522776582	
Output testip Recording Size 100		
- Record controls	Update Settings Reset To Factory Defaults Close	
• ,, • •	No errors detected     Ts Bytes:     0 MB       Loop:     3     -       Image: Disable Analyzer     -       Sync Loss     -	

# 3.1 Login

In order to access the Web Based Management Software, a login process is required.

← → Ø http://192168.1.100/	ク - × O Waiting for 192.168.1.100 ×	n ★ ≎
	Windows Security	
	The server 192.168.1.100 is asking for your user name and password. The server reports that it is from login. Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent user of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint of the sent using basic authentication on a connection that isn't secure.           Image: Constraint on a connection that isn't secure.	
Default user	OK Cancel	
Default PassWor These should be	d : admin changed by the user after first time login.	

#### 3.2 Web Application Main Screen

The Web Application is designed to be as standard and as user friendly as possible. All the functions & feature are self-explanatory. For each device, such as AT240IP or AT60IP/AT88IP, only the applicable function & feature are displayed & are selectable.

Most of the settings are pre-selected and only a few ever need changing.

ج) الله الله: (192168.1109) الله الله: (192168.1109) الله الله: (192168.1109) الله: (192168.1109) الله: (192168.1109)	P Status Monitor 🗙			n 🛧 🌣	
Network Configuration					
Menu			Interface 1		
	Key	Value			
» Network Configuration	MAC Address	00:07:ED:FF:58:F0			
» DVB-ASI Input 1 Configuration	DHCP Mode	<b>I</b>			
» DVB-ASI Input 2 Configuration	IP Address	192.168.1.100			
» DVB-ASI Output 1 Configuration	Subnet Mask	255,255,255,0	1		
» DVB-ASI Output 2 Configuration	Gatev/ay	192.168.1.254			
	A	pply	Reset		
l					

#### 3.3 Input Settings



#### 3.4 Output Settings



### 4.1 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 drive which it resides.

Device	aliti	ronika <mark>RV</mark> S	DVSSt	ation <b>IP</b>
Record     Play       File	Ter_578.ts  Program Information  Program Program Information  Program Progra	PID Information           P Pid list           ① PAT (15.06 Kb/s)           ① 17 5.06 Kb/s)           ① 17 5.07 (208 Kb/s)           ① 17 5DT (208 Kb/s)           ② 17 5DT (208 Kb/s)           ② 101 PTOT (119.03           ② 101 PCR (3.10 Mb/s)           ① 102 Porgram (172.41           ④ 1020 PMT (15.06 Kb/s)	Output Ip Address Port number Mode Adaptions PCR TOT/TDT Continuity Adapt all	192 . 168 . 1 . 109 9150 RTP
Play controls	No errors detected Ts Time coop count 0 Elapsed Time	e: 0:00:24 e: 0:00:08	_	

## 4.2 Output Selection

Select the Device's IP address & send Transport Streams to it.

DvsStation-IP Device		
	alitronika <mark>DV/S</mark>	DVSStation <b>IP</b>
Record     Play       File     -       -     File       -     - <tr< th=""><th>Ter_578.ts         Dpen           Program Information         PID Information           ⊕ Program Information         ⊕ Pid list           ⊕ Nederland1         ⊕ 16 NIT (714.17 b/s)           ⊕ Nederland3         ⊕ 16 NIT (714.17 b/s)           ⊕ Nederland2         ⊕ 18 EIT (74.27 Kb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 1013 Program (72.21)           ⊕ 1013 Program (72.41)         ⊕ 1012 PCP (3.10 Mb/s)           ⊕ 1012 PMT (15.06 Kb/s)         ⊕ 1012 PCP (3.10 Mb/s)</th><th>Output       Ip Address       Port number       9150       Mode       RTP         Adaptions       PCR       T DT / TDT       Continuity       Adapt all</th></tr<>	Ter_578.ts         Dpen           Program Information         PID Information           ⊕ Program Information         ⊕ Pid list           ⊕ Nederland1         ⊕ 16 NIT (714.17 b/s)           ⊕ Nederland3         ⊕ 16 NIT (714.17 b/s)           ⊕ Nederland2         ⊕ 18 EIT (74.27 Kb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 101 PCP (3.10 Mb/s)           ⊕ 101 PCP (3.10 Mb/s)         ⊕ 1013 Program (72.21)           ⊕ 1013 Program (72.41)         ⊕ 1012 PCP (3.10 Mb/s)           ⊕ 1012 PMT (15.06 Kb/s)         ⊕ 1012 PCP (3.10 Mb/s)	Output       Ip Address       Port number       9150       Mode       RTP         Adaptions       PCR       T DT / TDT       Continuity       Adapt all
Play controls	No errors detected Ts Time: 0:00:24 pop count: 0 Elapsed Time: 0:00:08	

#### 4.3 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, when testing other equipment 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.

P DvsStation-IP	
alitronika 2005	DVSStation <b>IP</b>
Record         Play           File         Ter_578.ts	Output       Ip Address     192.168.1.109       Pot number     9150       Mode     RTP       Adaptions       PCR       TOT/TDT       Continuity       Adapt all
Play controls     No errors detected     Ts Time:     0:00:24       Image: I	

#### **4.4 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.

DvsStation-IP Device	alitr	ronika <mark>DVS</mark>	DVSS1	tation <b>IP</b>
Record     Play       File     File       □ Ter_578.ts     -112,197,531 bytes       □ Playtime: +/- 60,13sec     -Before first packet: 187       □ After last packet: 100     -596794 packet: 00       □ 596794 packets     -Packet size: 188       □ Bit rate: 14,929,411 bps	Ter_578.ts  Program Information  Program Information  Generation  Program Information  Program Information  Program 1nformation  Progr	PID Information           □ Pid list           □ Pid list           □ Pid list           □ Fid list	Output Ip Address Port number Mode Adaptions PCR TOT/TDT Continuity Adapt all	192 . 168 . 1 . 109 9150 RTP
Play controls	No errors detected Ts Time op count: 0 Elapsed Time	: 0.00.24 : 0.00.08 	1	

#### 4.5 Program Information Window

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



#### 4.6 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, DVSStationIP supports a Real Time Quick Transport Stream Analyser. The DVSStationIP is an integrated transport stream player, generator, recorder and monitor and 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. DVSStationIP 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.

DvsStation-IP vice	alitı	ronika <mark>DVS</mark>	DVSS	tation <b>IP</b>
Record         Play           File         -           - File Information         -           □ Ter_578.ts         -           - Playtime: +/- 60.13sec         -           - Before first packet: 187         -           - After last packet: 100         -           - 536734 packets         -           - Packet size: 188         -           - Bit rate: 14,929,411 bps         -	Ter_578.ts         Program Information         ⊕ Program Information         ⊕ Redefland1         ⊕ Nederland3         ⊕ Canvas/Ketnet         ⊕ Nederland2	PID Information           PID Information           PId list           #: 0 PAT (15.06 Kb/s)           #: 1 CAT (15.06 Kb	Output Ip Address Port number Mode Adaptions PCR TOT/TDT Continuity Adapt all	192 . 168 . 1 . 109 9150 RTP
Play controls	No errors detected Ts Time poop count: 0 Elapsed Time	x 0.00.24 x 0.00.08		

#### 5.1 Record Screen

The Record function allows Receive, Monitor and Record Transport Streams.

p DvsStation-IP	
Device	
alitronika	DVSStation <b>IP</b>
Record Play	
Network Pott number 9150 RTP Close RTP Output Close RTP Open Restip.ts Open	Program Information         PID Information           ⊡ Program Information         ⊡ Pid list           ⊡ één         ⊡ 0 PAT (15.03 Kb/s)           ⊡ Nederland1         ⊡ 1 CAT (15.03 Kb/s)           ⊡ Nederland3         ⊡ 1 CAT (15.03 Kb/s)           ⊡ Nederland2         ⊡ 1 R ITT (74.25 Kb/s)           ⊡ Nederland2         ⊡ 1 SUT (17.05 b/s)           ⊡ 81 Stuffing (58.05 Kb/s)         ⊡ 1 SUT (15.02 Kb/s)           ⊡ 81 Stuffing (58.05 Kb/s)         ⊡ 100 PMT (15.02 Kb/s)
Record controls  Record	B: 101 P Crogan (122 x Kb/s)           B: 101 P Crogan (122 x Kb/s)           B: 101 P Program (22 x Kb/s)           B: 101 P Program (122 x Kb/s)           B: 102 PMT (15.06 Kb/s
Ts Time:   0.00.35	Packet size 188 Bit rate [Mb/s] 14.929 

#### 5.2 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.

The DysStation-IP	
alitronika	DVSStation IP
Record     Play       Network     9150       Port number     9150       Mode     RTP       Utput	Program Information         PID Information           ⊕ één         ⊕ 0 Pid list           ⊕ 0 Pid list         ⊕ 0 Pid (15 03 Kb/s)           ⊕ 1 CAT (15 03 Kb/s)         ⊕ 1 CAT (15 03 Kb/s)           ⊕ 1 CAT (15 03 Kb/s)         ⊕ 1 CAT (15 03 Kb/s)           ⊕ 1 CAT (15 03 Kb/s)         ⊕ 1 CAT (15 03 Kb/s)           ⊕ 1 CAT (15 03 Kb/s)         ⊕ 1 CAT (15 03 Kb/s)           ⊕ 1 CAT (15 03 Kb/s)         ⊕ 1 B NIT (63 56 b/s)           ⊕ 1 B EIT (74 25 Kb/s)         ⊕ 1 B EIT (74 25 Kb/s)           ⊕ 101 PDT (15 02 Kb/s)         ⊕ 1010 PMT (15 02 Kb/s)           ⊕ 1010 PMT (15 02 Kb/s)         ⊕ 1011 PDG (3 37 Mb/s)           ⊕ 1012 Program (253 20 Kb/s)         ⊕ 1013 Program (253 20 Kb/s)           ⊕ 1020 PMT (15 06 Kb/s)         ⊕ 1020 PMT (15 06 Kb/s)           ⊕ 1020 PMT (15 06 Kb/s)         ⊕ 1020 PMT (15 06 Kb/s)           ⊕ 1020 PMT (15 06 Kb/s)         ⊕ 1020 PMT (15 06 Kb/s)
Record controls     No errors detected     Ts Bytes: 62 MB     Joop: 3      Ts Time: 0:00:35     Disable Analyzer	Signal Info Packet size 188 Bit rate [Mb/s] 14.929  Sync Loss }=0 0

**5.3 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.

evice alitronika	DVSStation IP
Record     Play       Network     Port number       9150	Program Information         PID Information           ⊕ Program Information         ⊕ Pid list           ⊕ Nederland1         ⊕ 1 CAT (15.03 Kb/s)           ⊕ Nederland3         ⊕ 1 CAT (15.03 Kb/s)           ⊕ Carwas/Ketnet         ⊕ 17 SDT (20 Kb/s)           ⊕ Nederland2         ⊕ 18 EIT (74.25 Kb/s)           ⊕ 1010 PMT (15.02 Kb/s)         ⊕ 1010 PMT (15.02 Kb/s)           ⊕ 1010 PMT (15.02 Kb/s)         ⊕ 1010 PMT (15.02 Kb/s)           ⊕ 1012 Program (123.22 Kb/s)         ⊕ 1012 Program (123.22 Kb/s)           ⊕ 1012 PCR (2.37 Mb/s)         ⊕ 1012 PCR (2.30 Kb/s)           ⊕ 1012 PCR (2.37 Mb/s)         ⊕ 1012 PCR (2.37 Mb/s)           ⊕ 1012 PCR (2.37 Mb/s)         ⊕ 1012 PCR (2.37 Mb/s)           ⊕ 1012 PCR (2.37 Mb/s)         ⊕ 1012 PCR (2.37 Mb/s)
Record controls           No errors detected         Ts Bytes:         62 MB           Ts Bytes:         0:00:35           Disable Analyzer	Signal Info Packet size 188 Bit rate [Mb/s] 14.929  Sync Loss ]=0 0



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