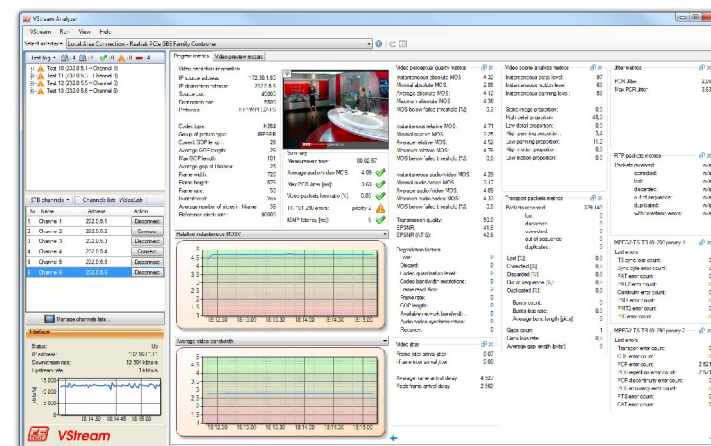


# VStream Analyzer

## Getting Started Guide



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## IMPORTANT:

**Register your VStream Analyzer Software.** When you install the VStream Analyzer software, you will be prompted to enter your registration license key. You must enter the information exactly as shown on the back of your CD/DVD case.

**Do not lose this registration information.** It will be required if you need to re-install the VStream Analyzer software. If you do not register your product, and choose to install as an evaluation, it will stop working after 30 days have elapsed.

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THE ABOVE IS A LIMITED WARRANTY AND THE ONLY WARRANTY MADE BY FREDERICK ENGINEERING. ANY AND ALL WARRANTIES FOR MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

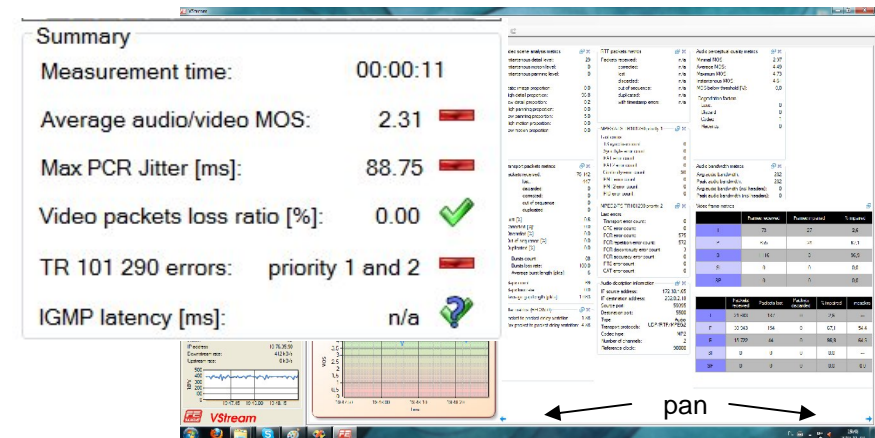
**TECHNICAL SUPPORT:** If you experience any problems installing your VStream Analyzer software, contact FETEST Technical Support at:

Phone: 410-789-7890  
Toll Free: 888-866-9001 (Within the US only)  
Fax: 410-789-7670  
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## 3.4 Summary and Advanced Test Metrics:

Review the Summary metrics for a quick signal quality check. Browse and pan throughout different advanced test metrics for details.




If summary reports a problem with low score and red or yellow flag, then consult advanced metrics for detail interpretation of these errors. Advanced metrics are located on the right side of the main window.

## 3.5 Test Results Management

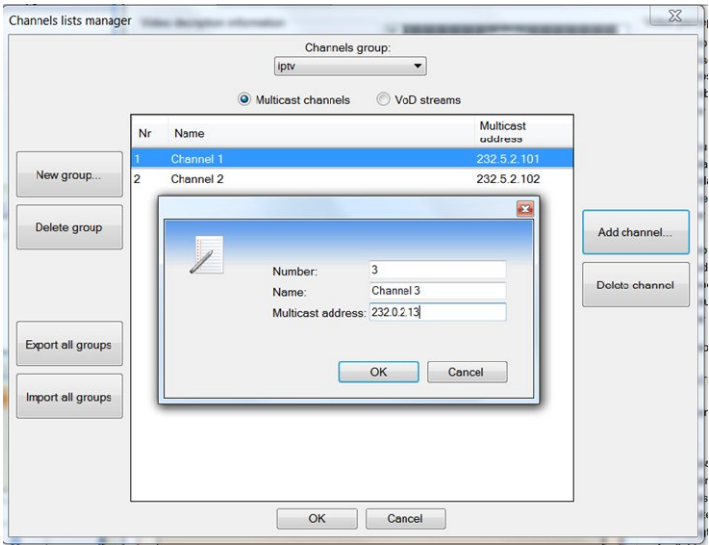
The screenshot shows the 'VStream - Test results' window. It contains a table of test results with the following columns: Start date, Duration, Multicast address, MOS, PCR jitter, Packet loss ratio, IGMP latency, TR 101290 errors, and Result. The table lists several test runs with varying MOS scores and error counts. At the bottom of the window, there are buttons for 'Remove selected...', 'Generate PDF', 'Show details', and 'Exit'.

Start date	Duration	Multicast address	MOS	PCR jitter	Packet loss ratio	IGMP latency	TR 101290 errors	Result
2/22/2011 9:32	00:01:10	232.5.2.104	4.22	2.31	0.0	n/a	priority 2	Warning
2/22/2011 8:21	00:00:49	232.5.2.101	1.25	5.25	20.6	n/a	priority 1 a...	Warning
2/22/2011 8:21	00:00:48	232.5.2.103	1.25	13.19	29.3	n/a	priority 1 a...	Warning
2/22/2011 8:21	00:00:48	232.5.2.104	1.25	15.00	44.2	n/a	priority 1 a...	Warning
2/22/2011 8:25	00:00:55	232.5.2.102	1.25	83.19	43.5	n/a	priority 1 a...	Warning
2/22/2011 8:26	00:01:10	232.5.2.104	1.25	14.31	43.5	n/a	priority 1 a...	Warning
2/22/2011 8:26	00:00:46	232.5.2.102	1.00	23.56	42.5	n/a	priority 1 a...	Warning
2/22/2011 8:27	00:00:17	232.5.2.102	1.25	25.63	43.1	n/a	priority 1 a...	Warning
2/22/2011 8:28	00:00:13	232.5.2.102	1.00	8.00	44.8	n/a	priority 1 a...	Warning
2/22/2011 8:28	00:00:30	232.5.2.102	1.00	14.63	44.3	n/a	priority 1 a...	Warning
2/22/2011 8:28	00:00:55	232.5.2.102	1.00	11.06	43.7	n/a	priority 1 a...	Warning

Press  to view test result log. Each record in the log can show full details and export it to a pdf file.

To add a new Channel list:

- Press Manage Channel List
- Click on Manage channel list.



- Enter New Group name as a channel list.
- Select either Multicast channels or VoD streams. For Multicast channels:  
Enter New Channel Number, Name , Multicast address and Port. Press OK.
- Or for VoD streams:  
Enter New Channel Number, Name and rtsp uri. Press OK..
- Repeat the above step for each additional channel (or rtsp uri) to be added to the Multicast (or VoD) group.

8. Video and audio preview of an active channel(s) can be viewed in the Video preview mosaic. Up to four channels can be pre-viewed simultaneously.

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## 1 VStream Analyzer Introduction

VStream Analyzer is a PC-based IPTV quality analyzer and set top box (STB) emulator. The STB emulation allows IPTV channel selection, viewing of the real-time decoded video stream and quality analysis with transport, perception and video metrics. Concise results are presented clearly on the PC's display and can also be saved to the hard drive in text or graphical formats.

Run VStream to quickly and easily determine if the IPTV signal is being delivered with the quality a viewer expects. You can use VStream to test the IPTV quality without an STB or television present. If the quality is sub-par, VStream will provide the information you need to pinpoint the source of the problem.

### 1.1 Features

VStream Analyzer software will turn your PC into a powerful IPTV analyzer that can be operated with sheer ease and simplicity. Check out these features:

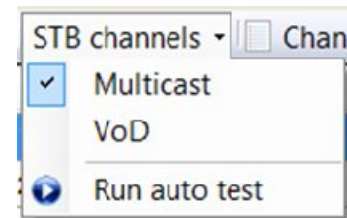
- Operates under Windows XP, Windows 7 (16 or 32 bit)
- Real-time video preview
- Complete STB emulation
- Summary results with pass/fail indication
- Comprehensive Statistics and graphical results
- Save results
- Perceptual quality metrics
- Video Stream metrics
- Transport Stream metrics

6. To stop the test of all IPTV streams, disconnect the Ethernet cable. Test results for all channels will be saved on the PC hard drive, but all displayed metrics will be reset to zeroes.

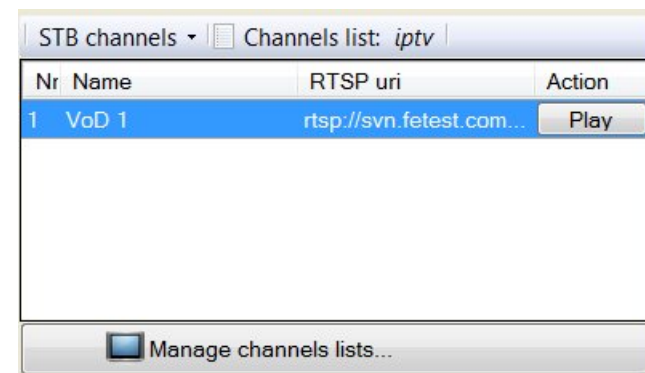
### 3.3 Set Top Box Emulation

The Set Top Box Emulation Test allows connection to IPTV streams for quality of service and displays the decoded stream on the preview screen. Depending on the PC hardware limitations, you can view the video preview for 1-4 channels.

Set Top Box emulation has 3 modes: Multicast, VoD and Auto test.

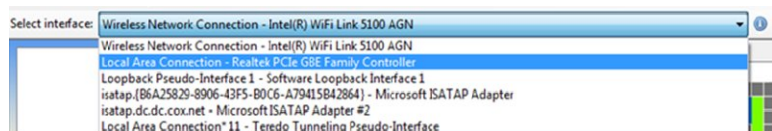


- The Multicast mode initiates an IGMP Join request when the **Connect** button is depressed and an IGMP Leave request when the **disconnect** button is depressed.
- The VoD (video on demand) mode works the same way except it uses RTSP requests protocol to connect the RTSP uri (stream). To start/stop click on Play/Stop.



- When depressed, Run Auto test scans automatically channel by channel for the selected channel list.

- Repeat the above step for each additional channel to be added to the group
- Select the desired Ethernet port of the PC (10/100, GigE or WiFi)



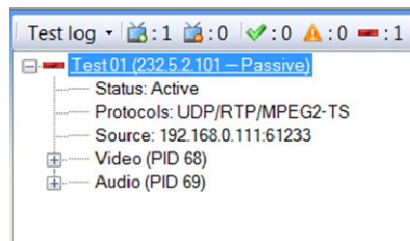
- Connect the IPTV stream under test to the selected port
- Proceed to either Passive Test or Set Top Box Emulation Test

## 3.2 Passive Testing

The Passive Test allows monitoring any IPTV streams, present at the selected interface, for quality of service and displays the decoded stream on the preview screen. Up to four channels can be monitored.

To start the Passive Test :

- Vstream will automatically connect to the IPTV stream present at the selected Ethernet port.
- The stream will show up in the test log box as **Passive** and its test begins.
- The channel metrics will show current readings and the stream audio/video will be displayed ( if available).
- To view metrics and preview of another channel, click on the desired channel in the Test Log box.
- Go to section 3.4.



## 1.2 System Requirements

### Minimum Requirements:

- Processor: duo core Pentium or AMD ( i5 or i7 recommended)
- 500 MB RAM in addition to Windows minimum requirements
- 150 MB hard disk space
- Super VGA monitor, 800x600 resolution
- DVD Rom drive
- Mouse or tablet
- Ethernet interface

## 2 Installing VStream Analyzer

### 2.1 Setup Wizard

- Insert the VStream DVD/CD and follow the Setup Wizard instructions, click NEXT.
- The Wizard will check if three additional required applications, (.NET Framework, VLC media player and WinPcap), are already installed on this PC. Follow the Wizard prompts to install any of these applications, if needed.

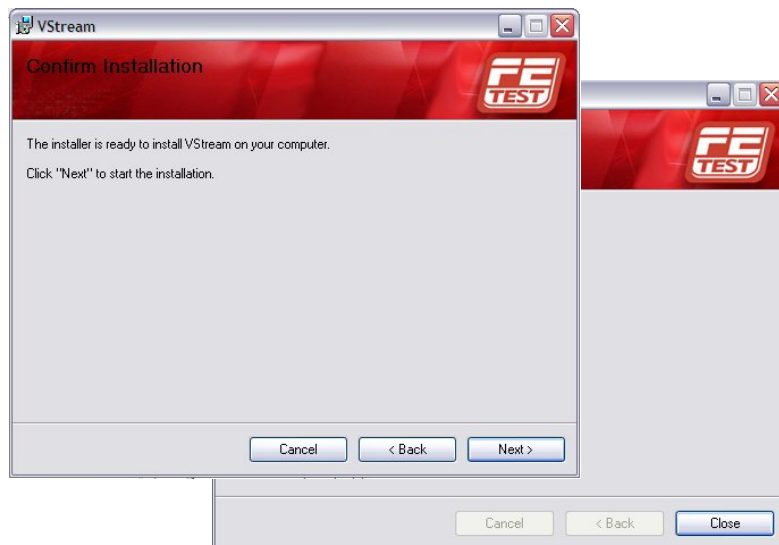




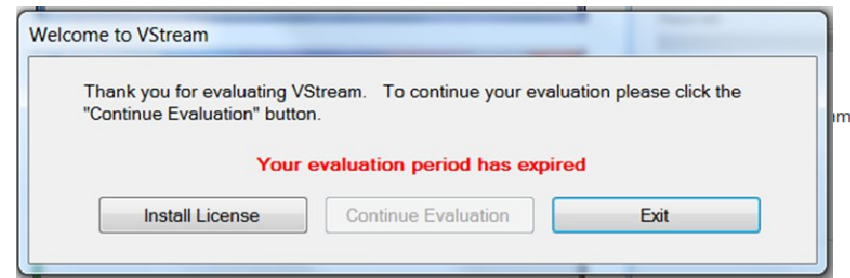
3. Select an installation folder or use the default C:\Program Files (x86)\FETest\Vstream\



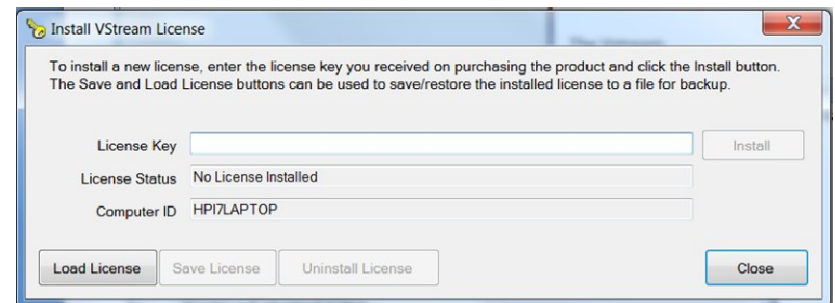
4. Confirm installation



5. Choose to install with the provided license key; otherwise select to install as Evaluation to enable a 30 day evaluation.



6. Locate and start the VStream application . If this is an evaluation version, press the Continue Evaluation button. If this is a first time installation with a license, enter the provided license key and wait for VStream Analyzer to open.



### 3 Running VStream Analyzer

Running VStream is easy. You just need to set up your channel list, connect to a stream, select a test method and let VStream determine the IPTV quality being delivered.

#### 3.1 Test Setup

1. Start VStream application
2. Click on Manage channel list
3. Enter New Group name as a channel list
4. Enter New Channel Number, Name, Multicast address and Port