

EMV-HDR

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Introduction

Introducing the EMV-HDR Recorder Application

The EMV-HDR is a software application which has been designed to allow capture of high resolution video sources from DVI/VGA/HDMI(non HDCP & Non Audio), YUV, Y/C, CV, HD-SDI /SD-SDI sources via the X-View DPX-E capture modules (optional).

The application can also be used with 3rd party capture devices which provide Directshow or WDM Windows drivers.

Using the EMV-HDR application users can record either single or multiple channels of video sources in H264 (MPEG4) file formats, the application will also recognise additional 3rd party encoders for users wishing to encode video in other file types.

The EMV-HDR can be supplied as a software application only for users who wish to configure their own hardware setup or it can be provided as custom built system configured to individual requirements (recommended), please contact e-mediavision or your local sales agent if you would like further information on a custom configuration.

You can contact e-mediavision via email at: info@e-mediavision.com

Getting Started

Before starting up the EMV-HDR application, make sure all of your video and audio sources that you wish to use to record from are powered up and connected correctly. If you connect or power up sources after the application has started, these devices may or may not appear in the capture device lists, if they do not appear then close the application and restart it again.

Always stop any recordings that are in progress prior to closing the EMV-HDR application, failure to do so may result in your video file being corrupted and the session file may need to be discarded.

Read the quick start guide on how to setup the EMV-HDR application for a record session.

System requirements

The EMV-HDR application has been designed to run on systems meeting the following requirements, the application may also work with lower specification systems however these would need to be tested accordingly:

- Windows 7 / 64Bit English OS with all service packs and hot fixes and MS updates installed
- 8GB of system RAM or better
- Desktop resolution of 1280 x 1024 or greater
- SATA or SSD OS Disk 200GB or better
- Gigabit LAN
- Intel i3/i5 or i7 multi core CPU
- Single or multi channel record disks
- DirectShow capture device filters and WDN Drivers for Win7
- Capture card - recommended single channel -XV-RGB-E1s (low profile) or Dual Channel -XV-RGB-E2s for DVI/VGA/HDMI inputs. XV-SD4+1 for 4 composite and 1 DVI/VGA input, XV-HDSDI2 for dual channel SDI inputs including 3G with Loop through, XV-SD8 for 8 inputs CV or Y/C.

Note: the HDMI input on the XV-RGB-E1/E2 capture cards does not support HDCP or Audio via the HDMI input.

Please do not use the EMV-HDR to record copywrite material unless you have the owners permission.

Getting help

If you require assistance with any question relating to the EMV-HDR application which is not answered by this user guide then please contact us via email at the following address:

info@e-mediavision.com

Please feel free to contact us with any suggestions or feature requests that you would like to see in future updates.

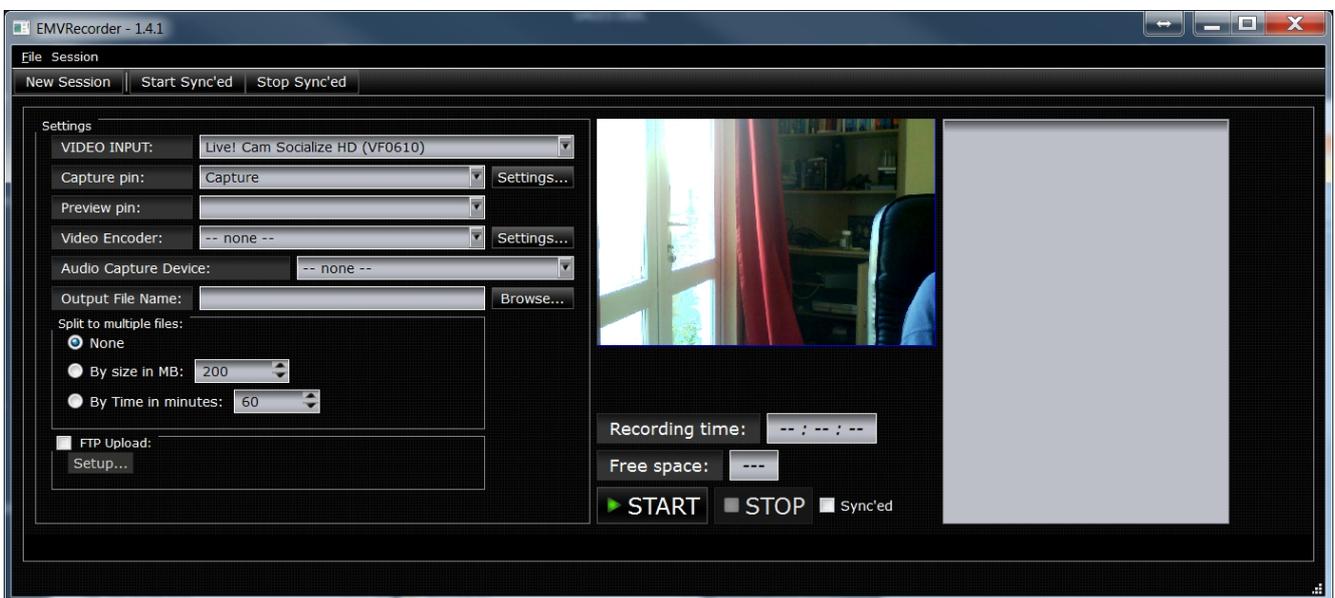
Main Interface

EMV-HDR Main User Interface

The main user interface as shown below, is displayed when the EMV-HDR application is started by double clicking on the desktop short cut.



The application opens with a single session recorder channel by default, to enable multi-channel sessions, new sessions have to be added by clicking on the New Session button.



Top Menu

File - click on File then Exit to close the application, you can also close the application by clicking on the X on the windows top right corner.

Session - New Session, Start & Stop Sync'ed, these are replicated functions same as the buttons in the menu below the top menu.

Quick Access Button Menu

[New Session](#) - Clicking on this button opens additional capture sessions for multi channel recordings.

[Start Sync'ed](#) - When multi channel sessions are enabled, you can start all the channels at once (which have synced ticked) by clicking on this button.

[Stop Sync'ed](#) - When multi channel sessions are enabled, you can Stop recording all the channels at once (which have synced ticked) by clicking on this button.

Settings

[Video Input](#) - the drop down box will list all the available capture devices or sources that are available.

[Capture Pin](#) - some capture devices have multiple inputs, the capture pin drop down box enables selection of the

required input.

[Capture Pin Settings](#) - some capture devices enable selection of input formats, resolution, frame rate etc, this settings button will open the devices capture settings menu if available.

[Preview Pin](#) - not used at this time.

[Video Encoder](#) - use the drop down box to select the desired video encoder, it is recommended to use X264VFW as the encoder, however you can select others if required.

[Video Encoder Settings](#) - once the video encoder has been chosen, clicking on this button will open the encoders settings menu if available.

[Audio Capture Device](#) - use the drop down box to select the audio device, for standard systems this will be one of the audio inputs on the motherboard which will either be Line Level / AUX or MIC IN. For multi channel recordings you can select one main channel to be recorded with video and audio and the others with just Video. If you need to record separate audio for each multi channel recording then you will need to ensure your system configuration has a multi channel audio capture card installed.

[Output File Name](#) - click on the browse button to select the location of your recording and enter a name for the file.

[Split to Multiple Files](#)

By default the setting is set as "None" which means that a single continuous recording will be made, however you can also split recordings by size or time segments, each part video file will be automatically numbered, this is useful if you want to FTP recordings onto an external storage location as the segments can start FTP transfer as soon as they are recorded.

[FTP Upload](#) - click on the set up button to open the FTP set up menu where you can enter the details of the external FTP location to upload the files to.

Preview Video Window - this displays the video from the capture device once the Video input and capture pin settings have been set.

[Recording Time](#) - this shows the elapsed time the recorder has been recording since Start was clicked.

[Free Space](#) - this shows the available free disk space remaining as the file is being recorded.

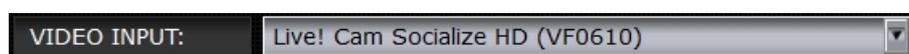
[Start](#) - Starts the recording

[Stop](#) - Stops the recording

[Synced](#) - by clicking this box (before starting recording) you can link channels in a multi channel recording session to start and stop at the same time using the top menu Start Synced and Stop Synced buttons.

Folder view - the grey panel on the right of the video preview will display the contents of the folder / disk where the file is being recorded.

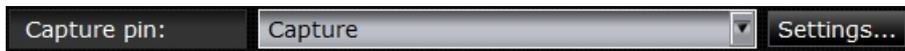
Video Input



Use the Video input down down box to select the required video input source, if your capture device has more than one input you may also need to set the Capture pin settings before you see video preview.

For systems configured with the optional DVI/VGA/HDMI/RGB/YUV capture card, the input selection should be XV-RGB-E1s, make sure your source is connected and powered up prior to starting the EMV-HDR application otherwise it may not be detected.

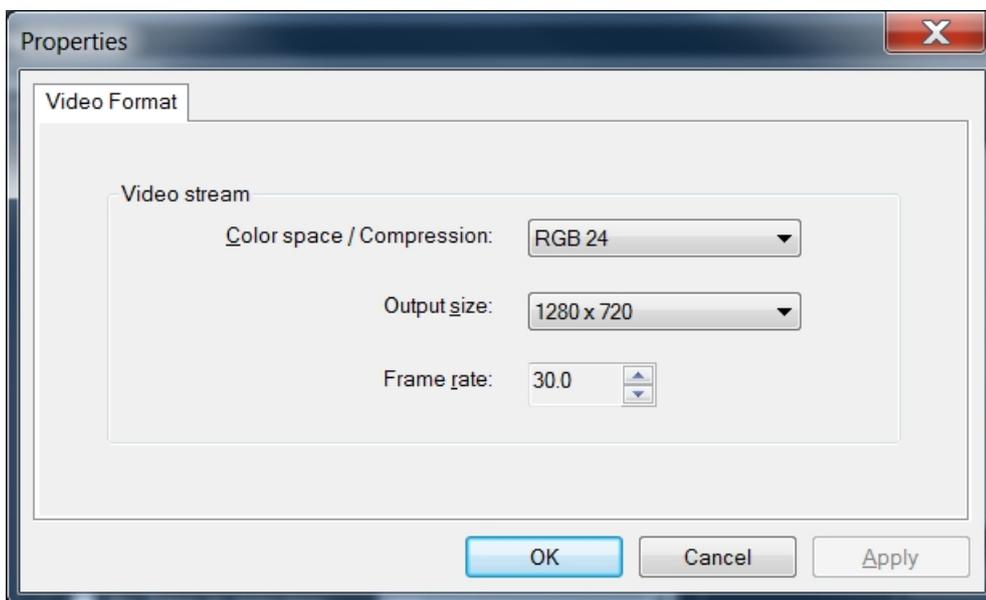
Capture Pin



The capture pin drop down box enables the selection of the required input when the capture card / device has more than one input.

The capture pin settings button will display any configurations options / menus provided by the capture device, which may then allow you to set video formats, resolutions, frame rate etc.

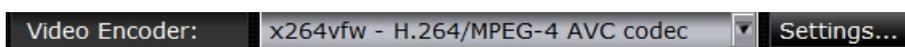
An example of available settings for the capture pin is shown below for a USB connected Web Cam camera, the exact options and menu settings are determined by individual capture device manufacturers and their drivers.



Preview Pin

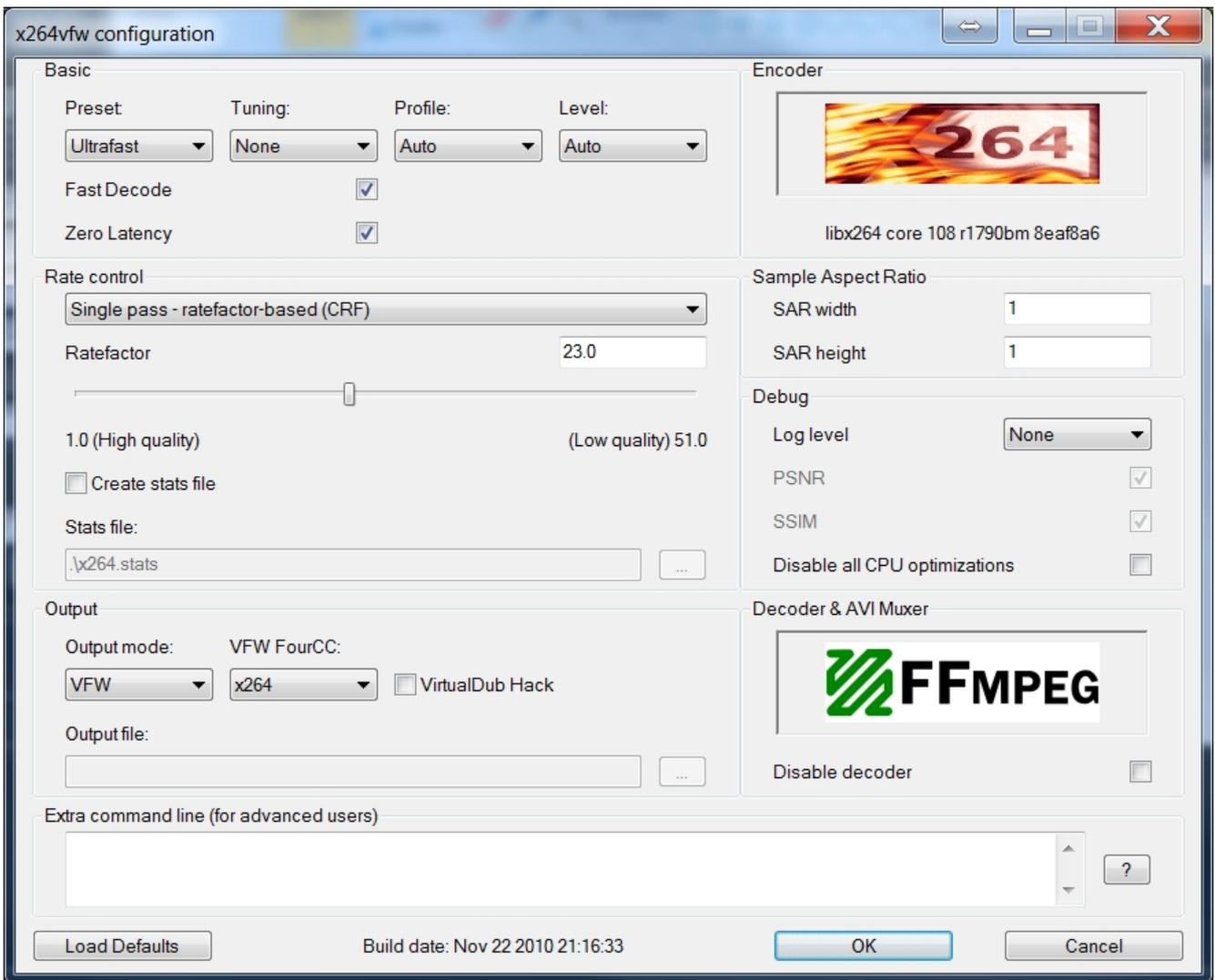
This is not used at this time.

Video Encoder



Use the Video encoder drop down box to select the required encoder, we recommend the use of the X264VFW encoder for best results, however you can use others if you wish. Note that not all encoders will accept non video resolutions or non video frame rates, therefore depending upon the source connected and its settings, you may or may not be able to use other encoders.

The settings button opens the chosen video encoders settings panel if available, the settings panel for the X264VFW encoder should be set according to the image below.



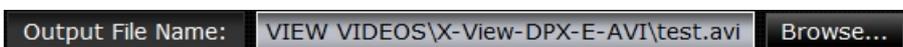
Audio Capture Device



Use the audio capture devices drop down box to select the required audio capture device, adjustments for audio levels / input selections etc are done via the devices control panel or via the windows audio control panel.

If using USB audio devices, then ensure that the device is connected and operational prior to starting the EMV-HDR recorder application, otherwise the device may not be detected until the application is restarted.

Output File name



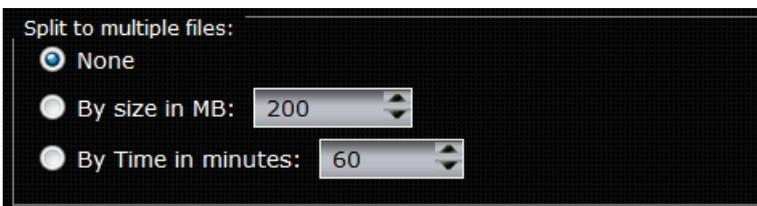
Click on the browse button to first select the drive / folder location for the recording and then enter a file name.

Once the location and file name have been entered you should see the folder view panel next to the video preview

window update to show the current folder contents. As the recording starts you will also see the file being recorded, this provides a quick visual indication that the file(s) are being recorded.



Split to multiple files



This Split to Multiple Files settings panel allows you to choose how to record the file(s), by default it is set to "None", which means that the video file will be a single continuous recorded file.

You can also opt to set the channel to automatically split the files either by a pre-set size or by time segments, the recorded segments will automatically be numbered sequentially.

FTP Upload



The FTP upload option allows recorded video files to be copied across to a remote FTP storage location.

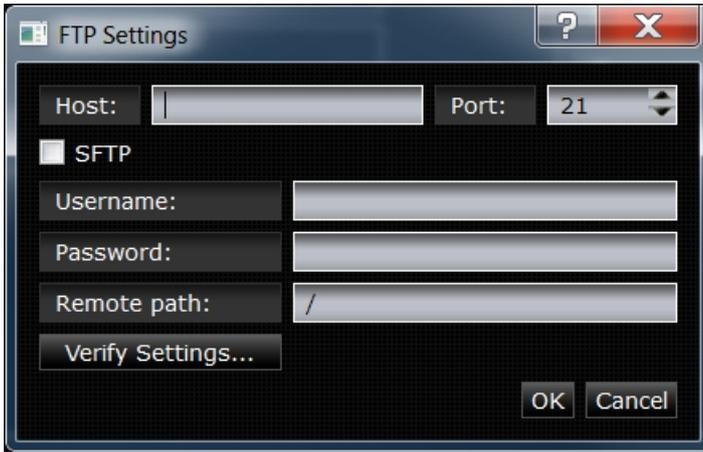
In order for FTP to work correctly, the EMV-HDR system needs to be connected to the LAN/WAN network and correctly configured for network access to the FTP storage system.

To enable FTP upload, click on the FTP upload box which will then enable the setup button.

Click the setup button to display the FTP settings panel as shown below, in here you need to enter details with regard to your network and ftp setup.

Click on verify settings button to make sure the connection is working normally, in case of any errors, recheck the information entered and if this is correct then contact your IT support to check network / router setup and access.

Click on OK to apply the settings.



Recording Time



The recording time label will display the duration the recording has been running since the Start button was clicked, the display is in Hours/Minutes/Seconds

Free space



The Free space label will display the amount of free disk space remaining as the video is being recorded.

This provides a quick visual indication if you are going to run out of space before the recording is complete, in which case you can stop the recording and switch to another location.

Start / Stop



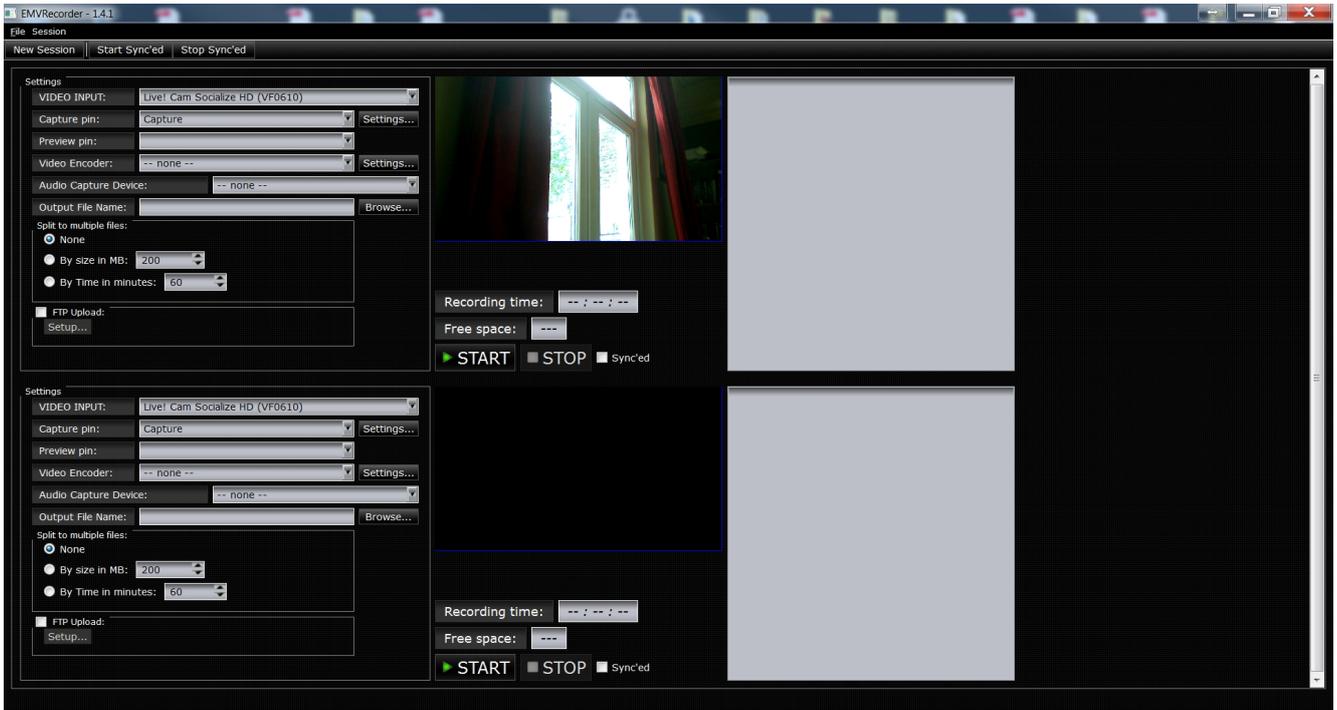
The start and stop buttons are used to either start or end a recording. You can use these buttons for single channel recordings and in the case of multi channel recordings (Synced) you should use the Synced Start and Stop controls in the top menu, which will then start and stop all of the channels that have been set to sync.

New Session



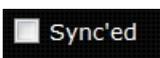
By default the EMV-HDR application opens in a single channel capture session, to enable multi channel capture sessions, click on the New Session button to open additional channels as required.

Note: each capture channel needs to be set up individually, for filename, video input etc.



Multi session capture example screen shot.

Synced Recording



With multi session channel recording you can click each channels Synced box, this will then link the channels so that you can use the Start Synced button to start capture on all channels at once or use the Stop Synced button to stop all channels at once.

Quick Start Guide - Recording

This quick start guide explains how to make a recording with the EMV-HDR.

1. Before starting the EMV-HDR application, ensure that any external video sources and audio sources are connected to the system and switched on.



2. Start the EMV-HDR application by double clicking on the desktop short cut.



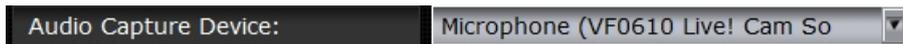
3. Use the Video Input drop down box to select the video input, when selected the video should appear in the preview window, for certain devices the video input may appear after the next step.



4. Click on the settings button next to the capture pin, depending upon the video device you may need to select the input and resolution and frame rate.



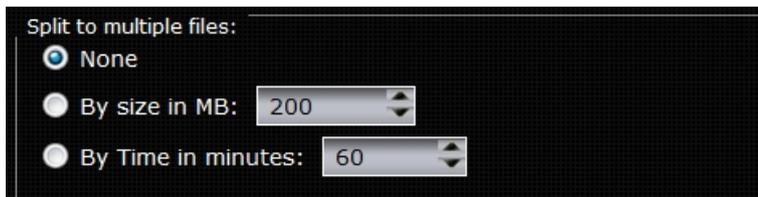
5. Click on the Video Encoder drop down box and select x264vfw as the encoder.



6. Click on the Audio capture device drop down box and select the audio input



7. Click on the Browse button next to Output File name and select the location for your recorded files and enter a file name.



8. Split to multiple files - you can leave this setting if you simply want a single file to be recorded or you can choose to split the recording into multiple files either by time segments or by file size.



9. Click on the Start button to start recording, the recording time indicator will display how long a recording session has been running for and the free space indicator will display how much free space you have left on

your recording disk.

10. When you want to stop the recording simply click on the stop button.

Multi Channel recording

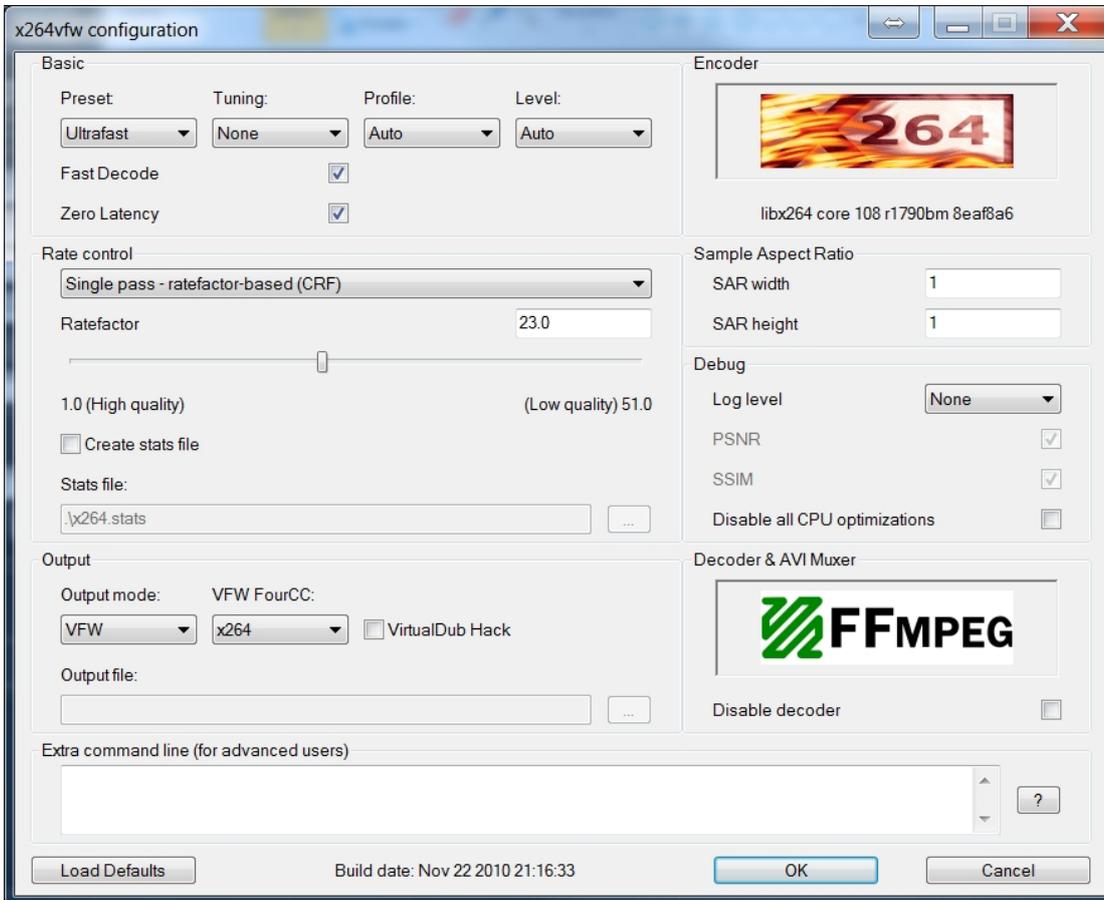
Multi Channel Recording

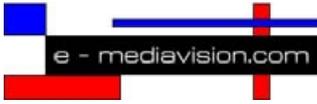
If you want to make a multi channel recording (assuming that you have a multi input capture device and video source and a multi channel audio input device if you want individual audio for each clip) follow the steps outlined below.

1. Click on the New Session button to add new capture sessions as per the number of video inputs you want to record.
2. Set up each sessions recording parameters as normal for a single channel recording (refer to quick start guide on how to set up the recording).
3. Next click on the Synced box next to the stop button on each channel, this will then link the channels together for single control.
4. When ready to start recording click on the Start Synced button at the top menu and the channels will all start to record.
5. When you want to stop a recording click on Stop Synced

X264 Encoder Setup

The picture below shows the recommended set up of the parameters of the X264 Video encoder.





e-mediavision.com, based in London, England, is a world leader in real time video graphic systems for sports, news, weather, financial, education and a/v application markets, as well as multi-image display solutions with its award winning X-View DPX-E display processors.

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X-View DPX-e - multi display processors and capture cards - www.x-viewmedia.com

EMV-HDR - high resolution multi channel recorder

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