EDIUS & Quick Sync Video Technology

How to turbocharge your workflow with Intel's Quick Sync Video
March 2015

APPLICATION NOTE

Introduction

Intel Quick Sync Video (QSV) is a feature that has been included in Intel Core processors from the second generation onwards. QSV is a feature of all current Core processors (Core i7, Core i5 and Core i3), and is especially useful for video editing because it significantly accelerates MPEG-2 and H.264 encoding. QVS will improve encoding irrespective of the CPU power available too, which is good news for editors working to a budget.

EDIUS has been optimized for QSV to give users super-fast H.264 export (for example to Blu-ray, AVCHD or XAVC S). This Application Note describes the workflow of EDIUS with Quick Sync Video.

Formats Accelerated by QSV When Exporting from EDIUS	
XAVC / XDCAM / XDCAM EX	No
XAVC S	Yes
AVC-Ultra / AVC-Intra	No
AVCHD	Yes
H.264/AVC	Yes
QuickTime	No
Blu-ray/iPod/iPad/PSP	Yes

Technology Overview

There are some conditions for using QSV. First — rather obviously — the processor has to support QSV (see table below). QSV is incorporated into the graphics processor, for example Intel HD Graphics or Intel Iris Graphics, so if the processor doesn't have a graphics processor it will not support QSV.

Secondly, you MUST have a monitor connected to the onboard graphics adapter. You can use an additional graphics card to drive your main monitor if you wish* (and take advantage of GPU FX acceleration for example), but the onboard graphics adapter should drive the second monitor. Most editors prefer a dual monitor setup in any case.

Finally, you need an application which supports QSV — step forward, EDIUS…

Processors that support QSV	
Haswell-E processor	No
Haswell processor	Yes
IvyBridge-E processor	No
IvyBridge processor	Yes
SandyBridge-E processor	No
SandyBridge processor	Yes
Previous Gen Intel processor	No
Legacy Intel Core2 processor	No

This might require additional BIOS settings – check with your systems integrator.

Performance with EDIUS

The following chart shows the encoding time with EDIUS when exporting one minute of 1920x1080/59.94i AVCHD footage to an H.264 video file. With QSV acceleration, the encode takes less than 20% of the time of a normal encode.

Encoding Time (sec)

QSV Encode	16
Normal Encode	84
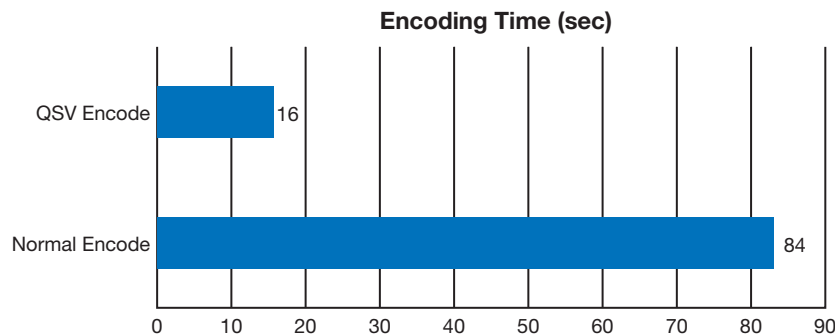
CPU: Intel Core i7-4810MQ, Memory: 16 GB, Storage: 500 GB HDD

Using Quick Sync Video with EDIUS

H.264/AVC or AVCHD Exporter

1) Select [Export] and [Print to File]. The [Print to File] window appears.

2) Select [H.264/AVC] or [AVCHD] exporter in the left hand pane, and select an export option in the right hand pane. Click [Export]. QSV is supported by all options of both the H.264/AVC and AVCHD exporters.
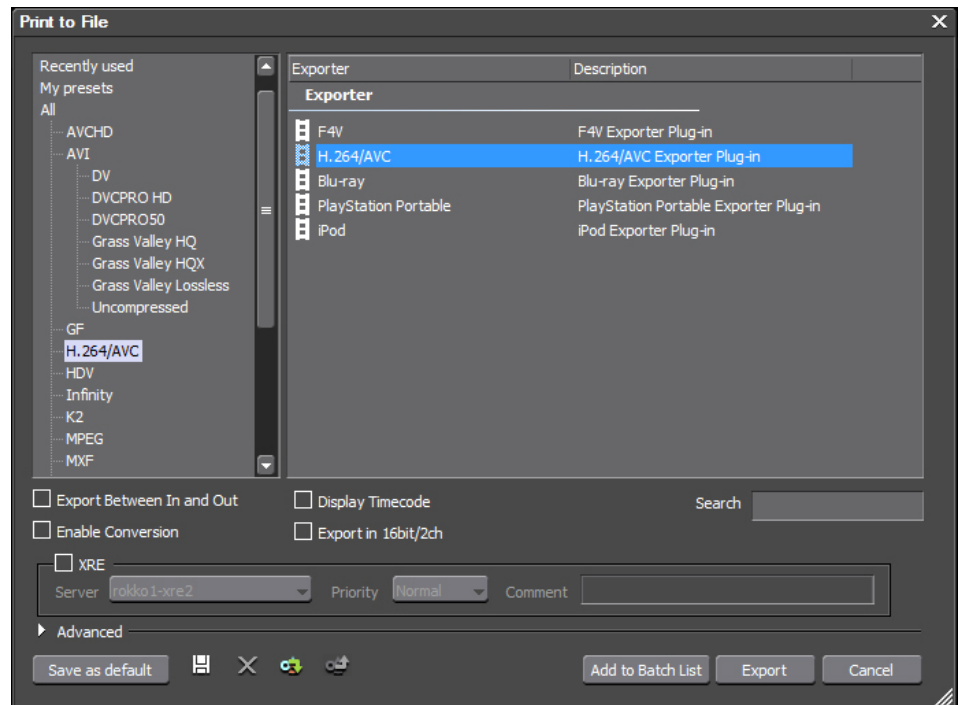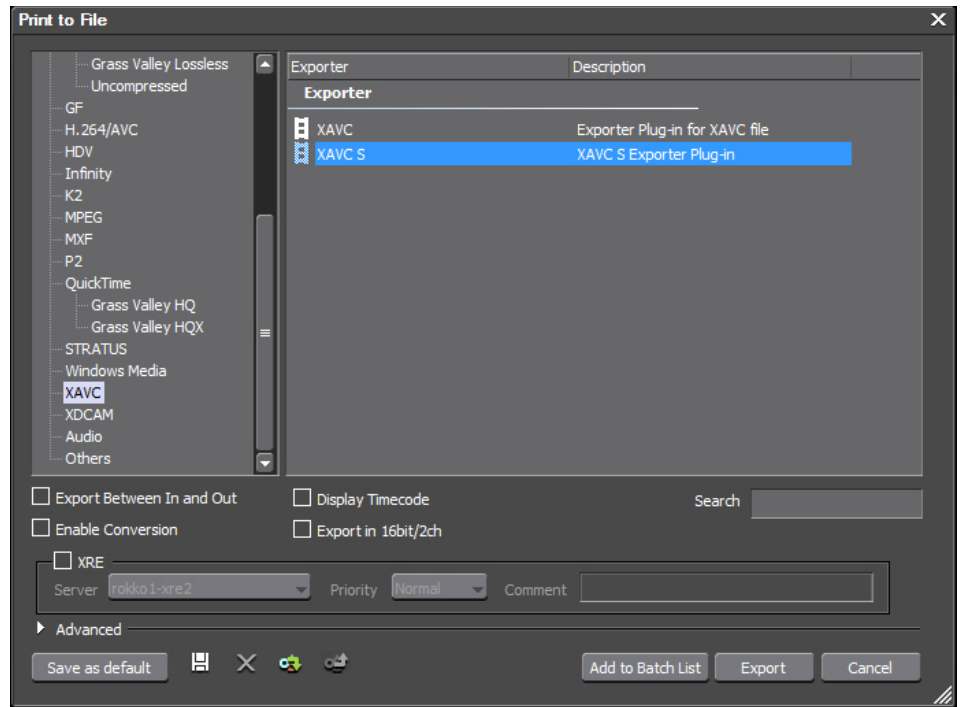
3) Ensure that the option to [Use Hardware Encoder] is checked. This enables Quick Sync Video.

4) Click [Save] and the export will start.
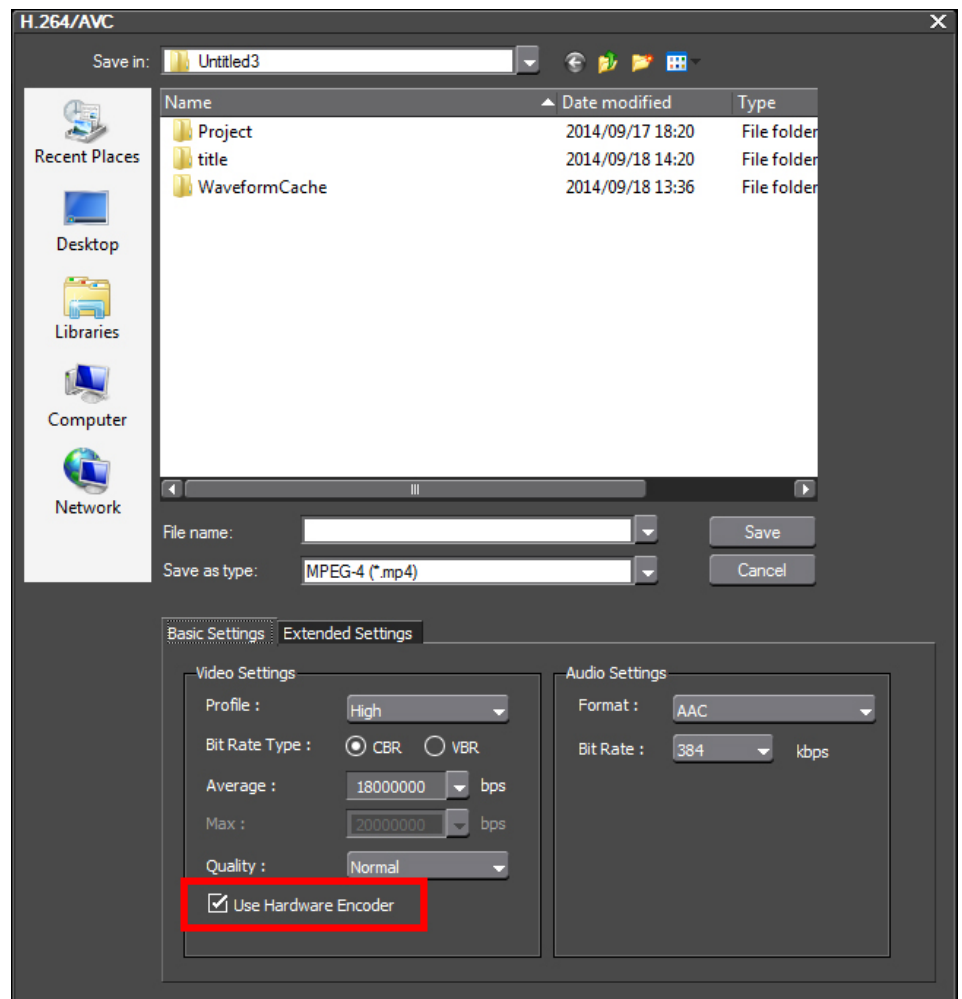
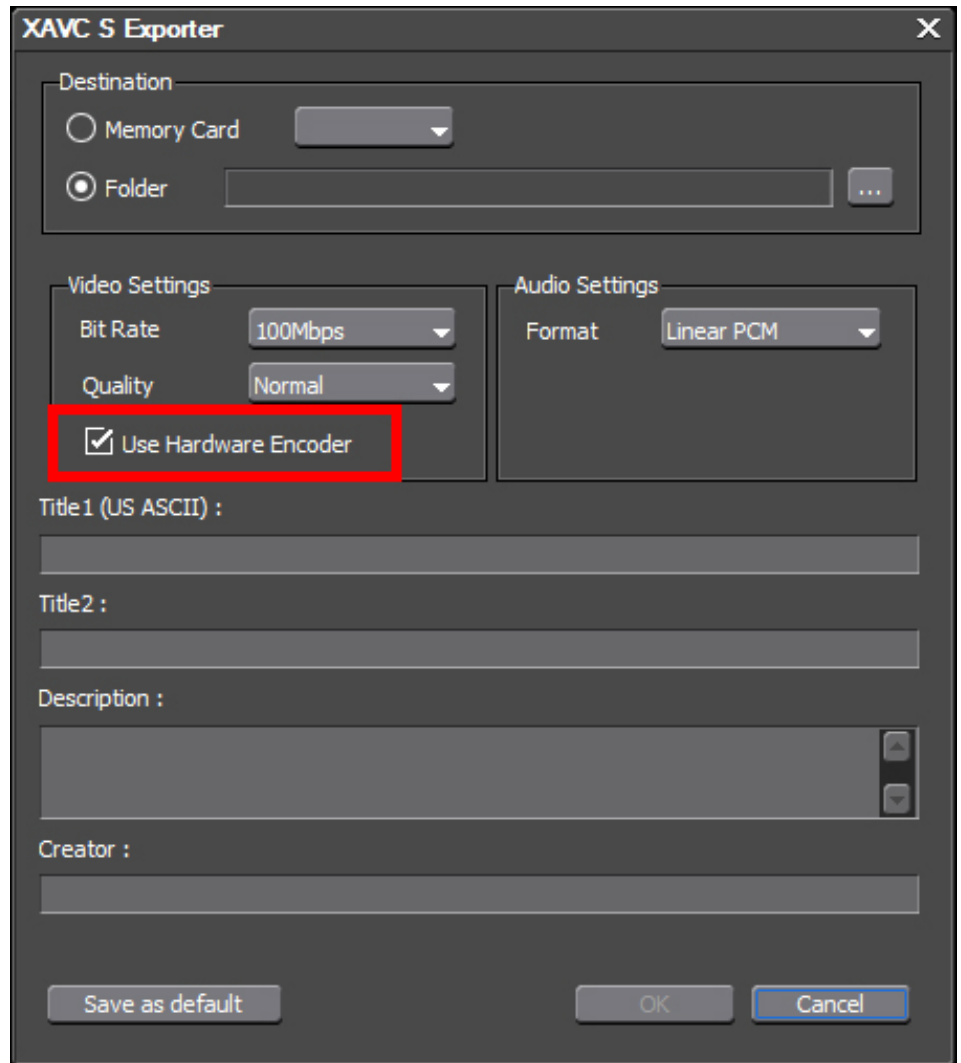**XAVC S Exporter**

1) Select [Export] and [Print to File]. The [Print to File] window appears.

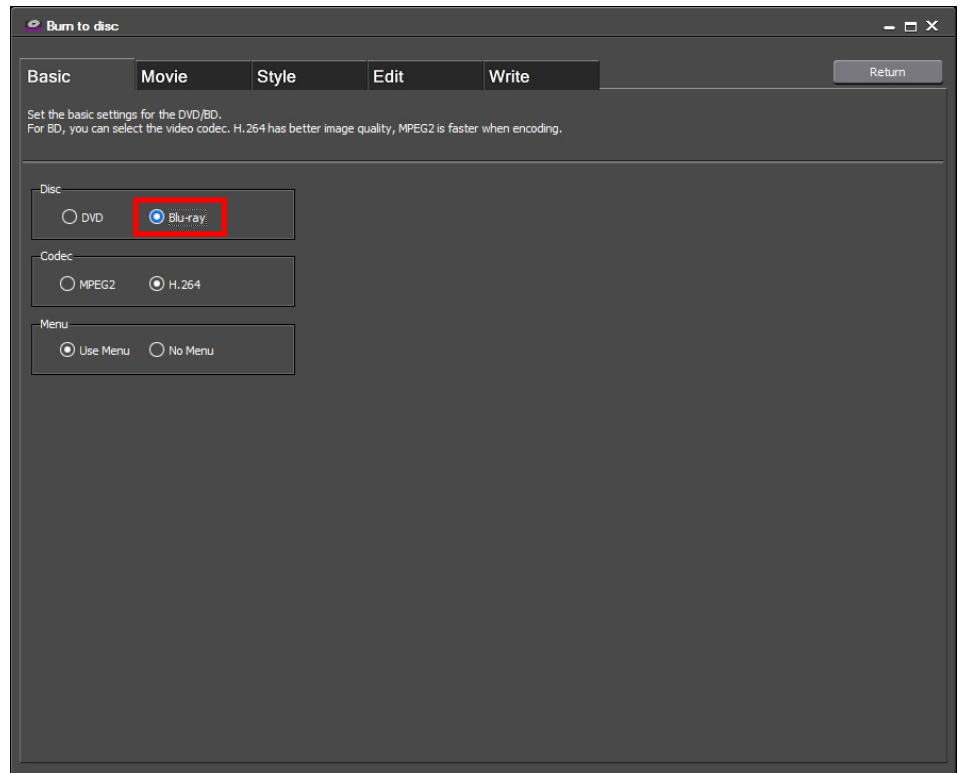2) Select [XAVC] exporter in the left hand pane, and select [XAVC S] in the right hand pane. Click [Export].

3) Ensure that the option to [Use Hardware Encoder] is checked.

4) Click [Save] and the export will start.

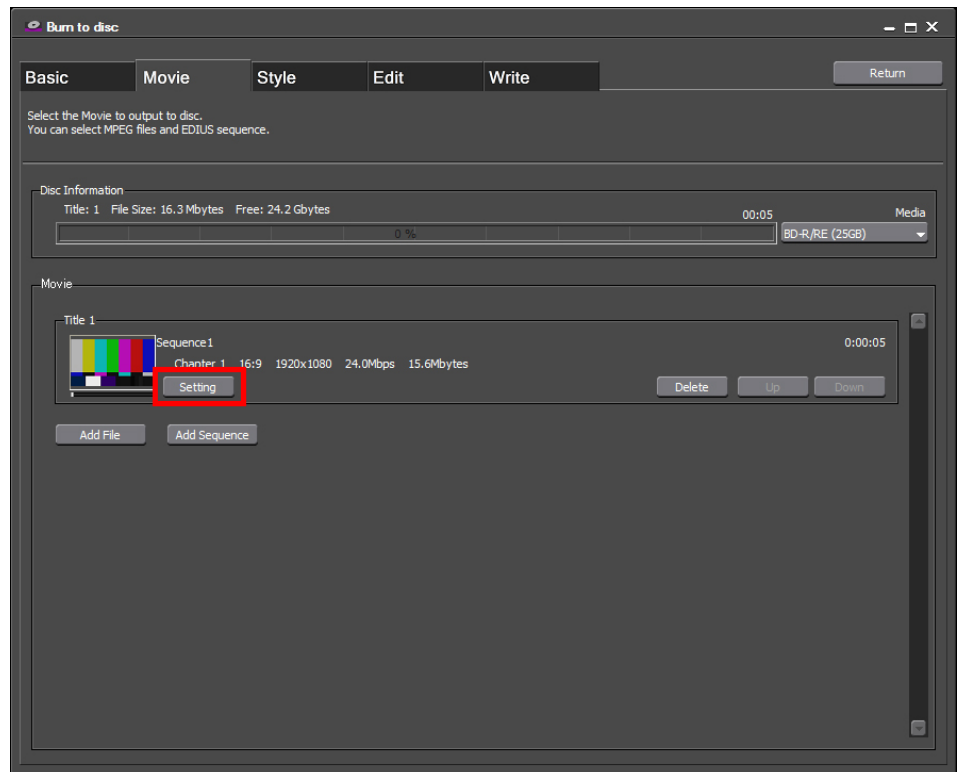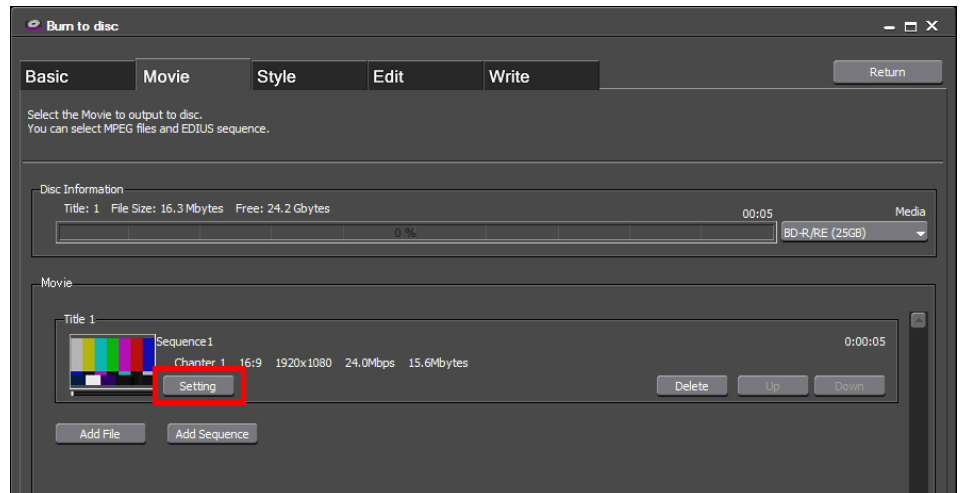**Burn to Disc**

1) Select [Export] and [Burn to Disc]. The [Burn to Disc] window appears.

2) Select [Blu-ray] in the Disc section, and click on the [Movie] tab.

3) Click the [Setting] button.

4) Ensure that the option to [Use Hardware Encoder] is checked.

5) Click [OK] and return to the Burn to Disc process.

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