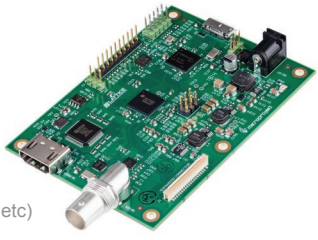
This document provides a brief introduction on how to install and run the Lattice USB3 Video Bridge Development Kit. Please refer to the Lattice USB3 Video Bridge Development Kit web page at **www.latticesemi.com/usb3** for further details on additional demo design files and other collateral included in the kit.

1 Check Kit Contents

The Lattice USB3 Video Bridge Development Kit contains the following items::

- Lattice USB3 Video Bridge Board
- 5V Power Supply
- USB 3.0 Cable
- Quick start guide



Please note that additional hardware may be required to complete this demo (PC, HDMI cable, etc)

Static electricity can shorten the lifespan of electronic components. Please observe these tips to prevent any damage that could occur from electro-static discharge:

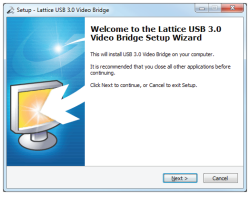
- Use anti-static precautions such as operating on an anti-static mat and wearing an anti-static wristband.
- Store the board in the anti-static packaging foam provided.
- Touch the metal USB housing to equalize voltage potential between you and the board.

2 Hardware Requirements

- PC with Intel 3rd generation Intel core processor or later
- Windows 7 or 8.x
- 4GB RAM or more

3 Install the development kit software and drivers

The necessary reference design files, bitstream, drivers and demo control application are available from the Lattice USB3 Video Bridge Development Kit web page at **www.latticesemi.com/usb3.**



The Lattice USB3 Video Bridge Board is pre-loaded with the Lattice USB3 Video Bridge bitstream and firmware.

You will need to install the required Lattice USB 3.0 Video Bridge Configurator application on you host PC. For the Windows environment, please download and execute the Lattice USB 3.0 Video Bridge Configurator Installer. It will automatically install the Lattice 3.0 Video Bridge Configurator application, which is used to control and update the board.

If you do not have Lattice Diamond® software (version 3.1 or later) installed on your PC, visit **www.latticesemi.com/usb3** for instructions on how to download the software and obtain a license.

4 Connect the Lattice USB3 Video Bridge board to the PC

1. Connect the Lattice USB3 Video Bridge board to the PC's USB 3.0 port (colored in blue), or marked with the USB SuperSpeed logo. It is suggested to use also the USB 3.0 ports which can provide extra power (usually additionally marked with a lightning icon).

2. The board will enumerate and be ready in several seconds, and appear in the Devices and Printers folder as Lattice USB 3.0 Video Bridge.

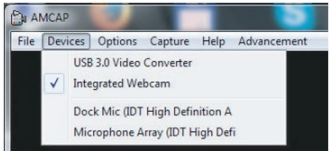
3. Connect an HDMI source to the board. The source should adjust to 1080p60 resolution to communicate correctly with the board.

5 Run the Video Capture demo with AMCAP

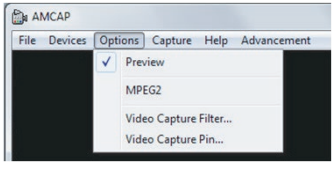
AMCAP application is a simple video viewer available from the Microsoft Windows SDK. Information on how to install AMCAP is provided on the Lattice website at: **www.latticesemi.com/usb3.**

1. Open AMCAP

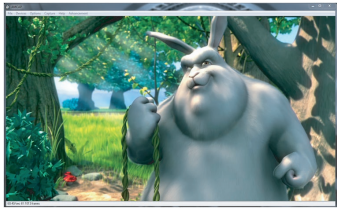
2. Check the selected capture device and select the **Lattice USB 3.0 Video Bridge** if not selected.



3. Ensure that the **Preview** mode is on to view live streaming.

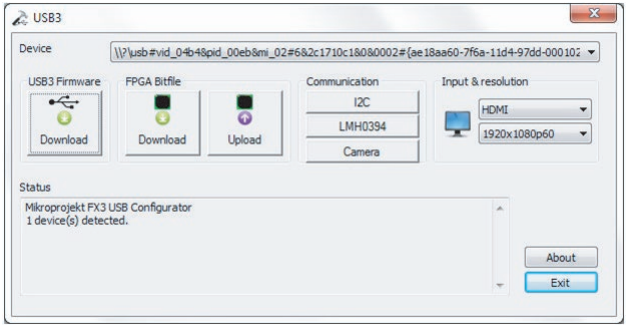


4. The stream from the connected HDMI source will play in the AMCAP window.



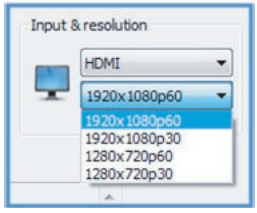
6 Control board and switch sources with the Lattice USB 3.0 Video Bridge Configurator application

1. Launch the Lattice USB 3.0 Video Bridge Configurator application from the Start menu



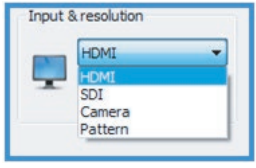
The tool can be used to configure the Lattice USB3 Video Bridge board and select the source or resolution of the input stream. It will automatically detect and connect the Lattice USB3 Video Bridge board.

2. In the **Input and resolution** box, you can change the resolution requested by the HDMI interface.



The resolution change will force the HDMI source to re-read the EDID information and output the selected resolution.

3. Also, source can be switched to any of the available sources. Select **Pattern** to display a 1080p Color Bar pattern.



Note: switching between sources and resolutions requires AmCap restart.

7 Done!

Congratulations! You have successfully installed the Lattice USB3 Video Bridge Development Kit and streamed video over a USB 3.0 link. Refer to EB88 - Lattice USB3 Video Bridge Development Kit User's Guide for the following:

- Detailed information on the board and the reference design
- Modifying and generating the demo bitstreams from the Lattice Diamond project files
- Configuring and tweaking the onboard interfaces and devices
- Updating the USB 3.0 Firmware and FPGA Design

For further information, reference designs and other collateral, refer to the Lattice USB3 Video Bridge Development Kit web page at **www.latticesemi.com/usb3.**

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