

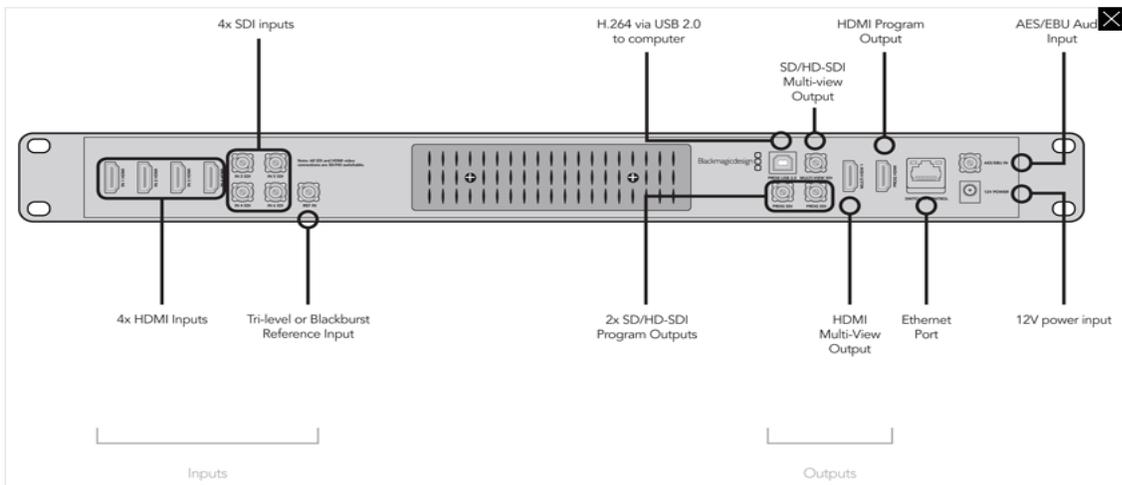
ATEM HD Clock Overlay for Thunder v1.2

The XOS Blackmagic ATEM includes the following components:

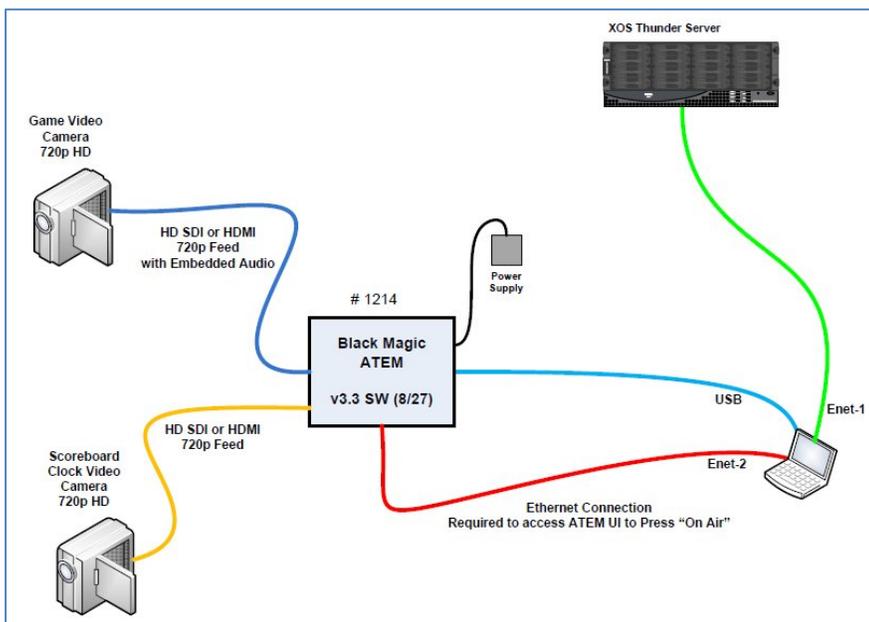
- ATEM unit with 12 Volt Power Supply
- USB Cable - ATEM to Laptop for Setup
- CAT-5E or 6 Ethernet cable - ATEM to Laptop
- Expresscard Ethernet port (Enet-2 in diagram below)

Video Requirements:

- Two HD video sources which can be either HDMI or HD-SDI 59.94
- The ATEM provides HD-SDI Output on Prog SDI
 - This should be connected to the H.264 Pro-Encoder for capture into Thunder



Example Configuration

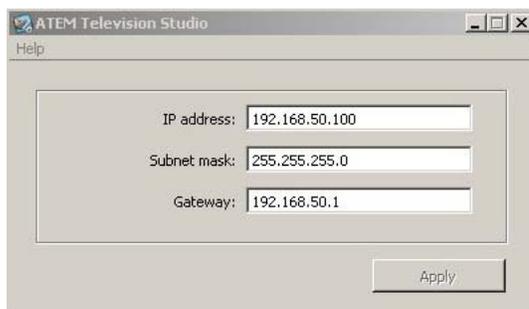


ATEM Setup & Configuration

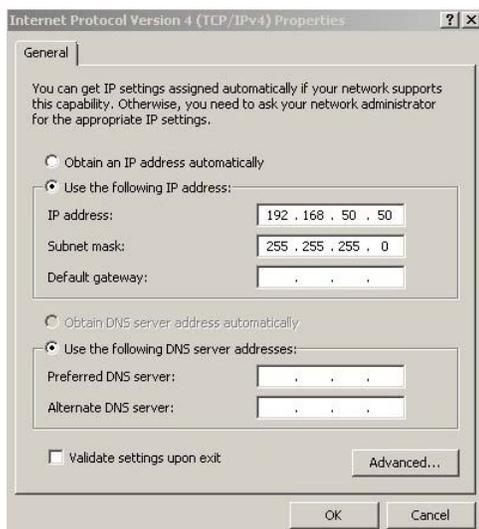
- The first step in setting up your ATEM is to connect the USB cable which will allow you to set up the IP address for your device:



- Run the **ATEM Setup Utility** tool and use the XOS recommended settings listed below
 - Note** - This will only need to be performed once upon initial configuration of your ATEM

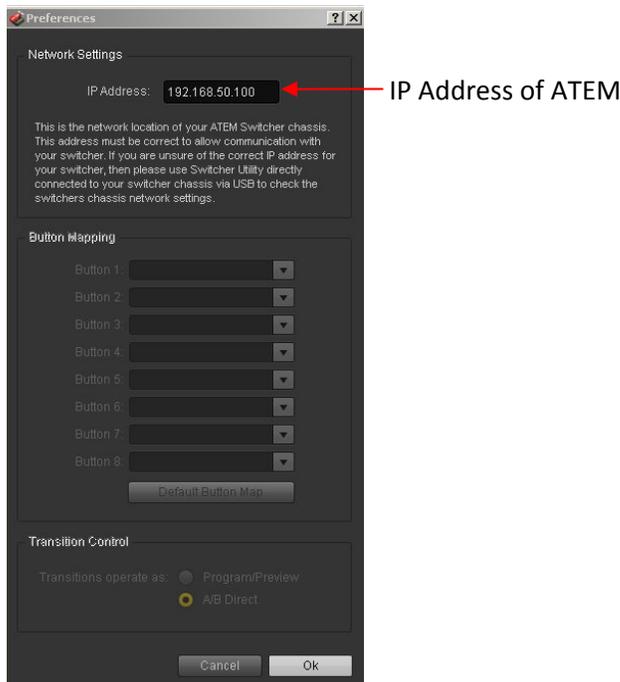


- Next an Ethernet cable must be connected between the laptop and the ATEM in order to use the ATEM UI to control the ATEM
- To connect via your laptop the IP address must be assigned to the Ethernet adaptor provided to be able to communicate with the ATEM device
 - Note** - the Default gateway should be left blank on the Laptop as shown below



ATEM Software Control

- When you launch the **ATEM Software Control** application on your laptop you will need to define the IP address of your ATEM device



- Click OK and if the Laptop can communicate to the ATEM over Ethernet the following UI will appear:

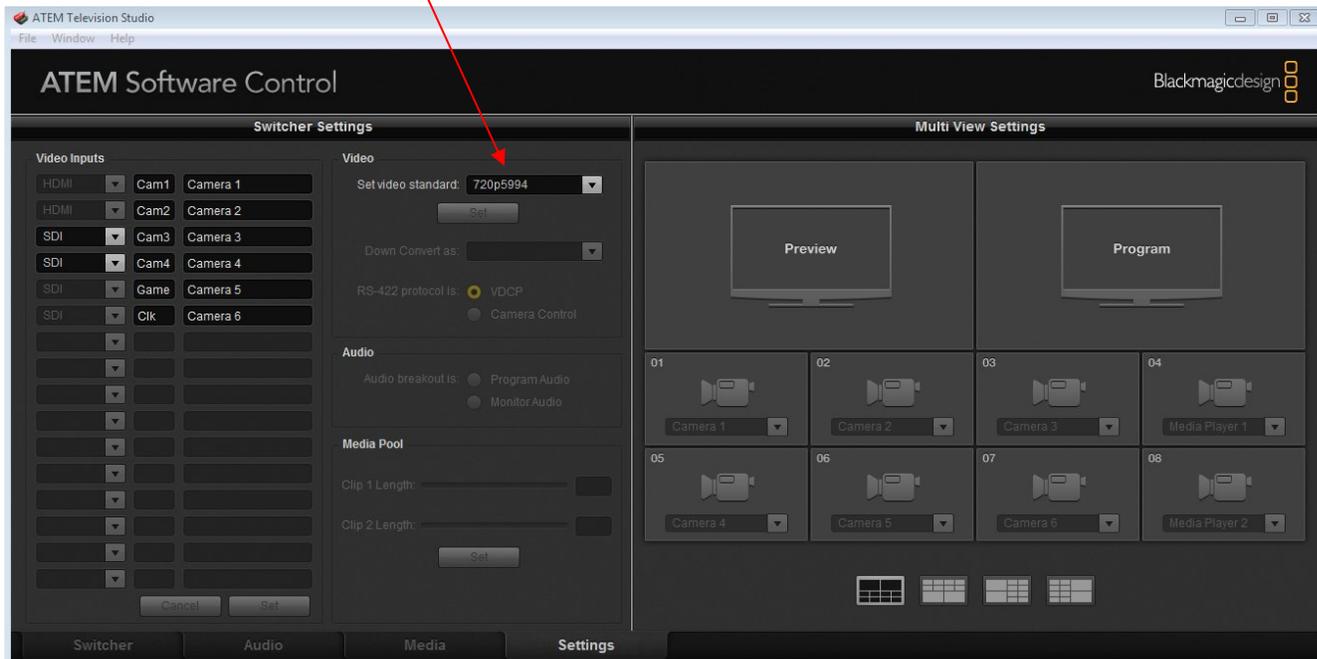


Be Sure to Select **On Air** to enable Video Key output to Program SDI

Settings Tab

Perform the following to configure the video format

- Note - For use with Thunder all Video Inputs must be 720p
 - Use an Up/Down/Cross Converter if necessary to provide the correct format
- Set video standard to 720p5994



- Now you should be able to use the **ATEM Software Control UI** to configure and operate your switcher
- First select your game camera feed as the program source
- Next press the “On Air” button to enable Video out to the Program SDI outputs.
- Before proceeding confirm that you have the ability to select a Video source and see the resulting Video Output to an HD-SDI monitor connected to Program SDI.
 - You can also use the Media Express Application to check video.

Audio Pass Through

Perform the following to configure audio pass through.

- On the bottom row of the ATEM Software Control UI click the Audio Tab
- The UI shown below should now appear



1

2

- In order to allow Audio to pass through as shown below you must:
 1. Select AFV (Audio Follows Video) for the channel with Game Audio
 2. Ensure that EXT has ON selected

Save Settings as the Startup State

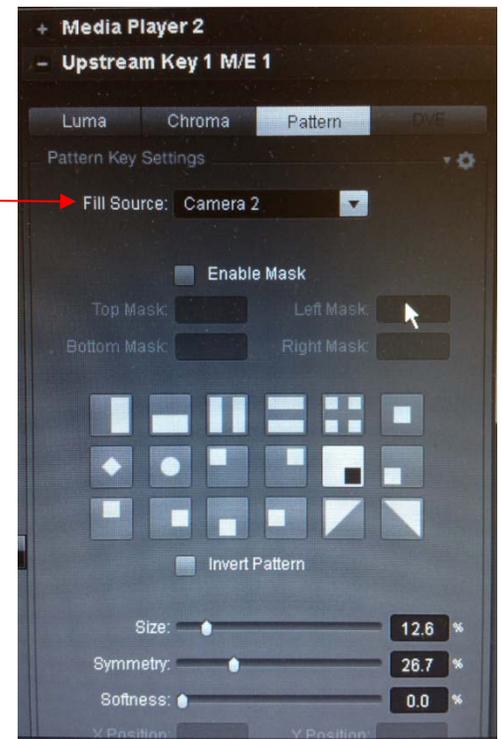
Perform the following to save your settings as the Startup State

- Note the state of the **On Air** button cannot be saved at this time
- You must click On Air via the ATEM UI after power up



Creating an Upstream Key to overlay Clock Video on Game Video

- The next task is to use the “Upstream Key1 M/E 1” to create an effect for the Clock video
 - Select the fill source as your clock camera
 - Choose the position you would like the clock to appear from the presets
 - We have chosen the lower right position for this example
 - Adjust the size and symmetry of the picture to meet your needs
 - Note: the secondary screen is “cut” to only show the area you define. This is not a resize of the secondary source. You will have to position the clock in the appropriate area of your shot to match this area.
 - In this example the clock is positioned in the lower right of the camera shot so it lines up with the key box for size and position
- In our example we created the following Upstream Key to put the Clock in the lower right hand corner of the Screen as shown:



Troubleshooting Tips

- **ATEM GUI is all Grey and Not Functional**
 - The laptop cannot communicate over IP (Ethernet) to the ATEM
 - Check network settings
 - Try pinging the ATEM
- **The ATEM and XOS BlackMagic H.264 Capture Devices use different drivers**
 - You need to have the correct matching driver loaded for USB capture to work.
 - ATEM = 1.8
 - BM H.264 = ??? (Need to get)
- **Media Express Application**
 - When using Media Express for Video verification you need to ensure that the Media Express App can connect to the ATEM.
 - If Media Express does not connect the Video Data Line will indicate 1080i and NOT reflect what the actual Video signal is.
 - Check the connection status under the Media Express Device Menu