Products for work with NDI by SoftLab-NSK company

What is NDI (Network Device Interface)?

NDI (Network Device Interface) is one of IP video protocols along with SMPTE 2022-6 and ASPEN.

The interface is designed by the NewTek company. An IP connection is used to connect different devices among each other. This is an alternative of transmitting data based on the SDI standard primarily for HD video (and higher).
Unlike SMPTE 2022-6 and ASPEN (that requires a 10 GbE network), conventional 1GbE networks can be used to transmit IP video via the NDI protocol without any additional equipment.
For compression, the wavelet codec is used. The codec is free (unlike, for example, H.264). The coding algorithm does not depend on the resolution and frame rate.
There is a support for multi-channel sound.
The SoftLab-NSK company offers a complete set of products for working under the NDI protocol.

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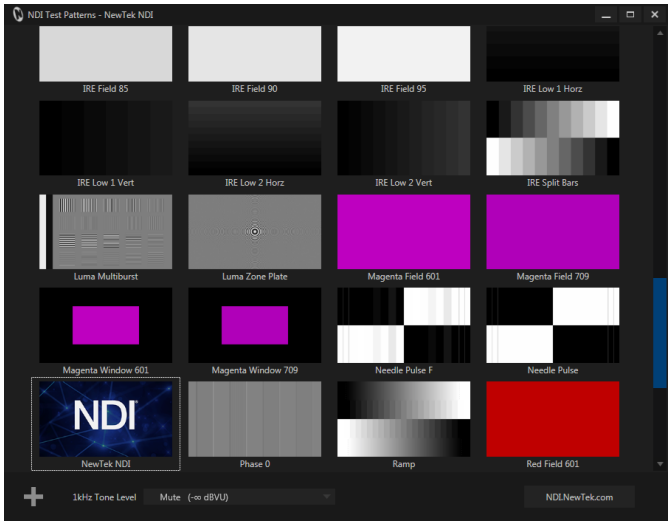
Tools for testing NDI streams designed by NewTek company

The NewTek company provides with a free set of applications, i.e. NewTek NDI® Tools that allows you to test work with NDI streams. You can download NewTek NDI® Tools installer from official company website only. The most interesting applications are "Test Patterns" and "Studio Monitor". The first application is used to configure test NDI streams, the second application - to review them.

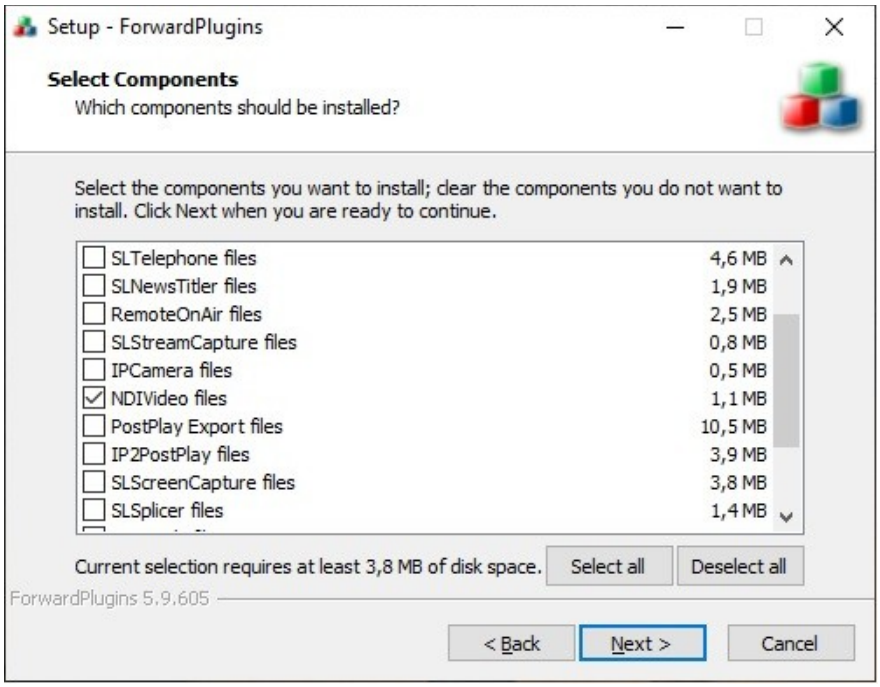


"Test Patterns". Run the application. Click of mouse button sets NDI stream up.

"Studio Monitor". Run the application. Select NDI source for reviewing.

Installation of software

- First of all install NewTek NDI Redist software. It is necessary to work with products that deal with NDI protocol. You can download NewTek NDI® Tools installer from official company website only.
- All the necessary components for the operation of the Forward TA NDI product are always automatically installed by the installer of the main software. Only licenses for the Forward TA NDI product are required.
- All the necessary components for the operation of the NDIOut plug-in are always automatically installed by the installer of the main software. There is no need to run the plug-in installer for installing NDIOut. Only licenses for the NDIOut plug-in are required.
- All the necessary components for the operation with NDI streams as live inputs are always automatically installed by the installer of the main software. There is no need to run the plug-in installer for installing any additional software.
- To install the NDIVideo plug-in, use the standard product plug-in installer Forward - ForwardPlugins_Setup.

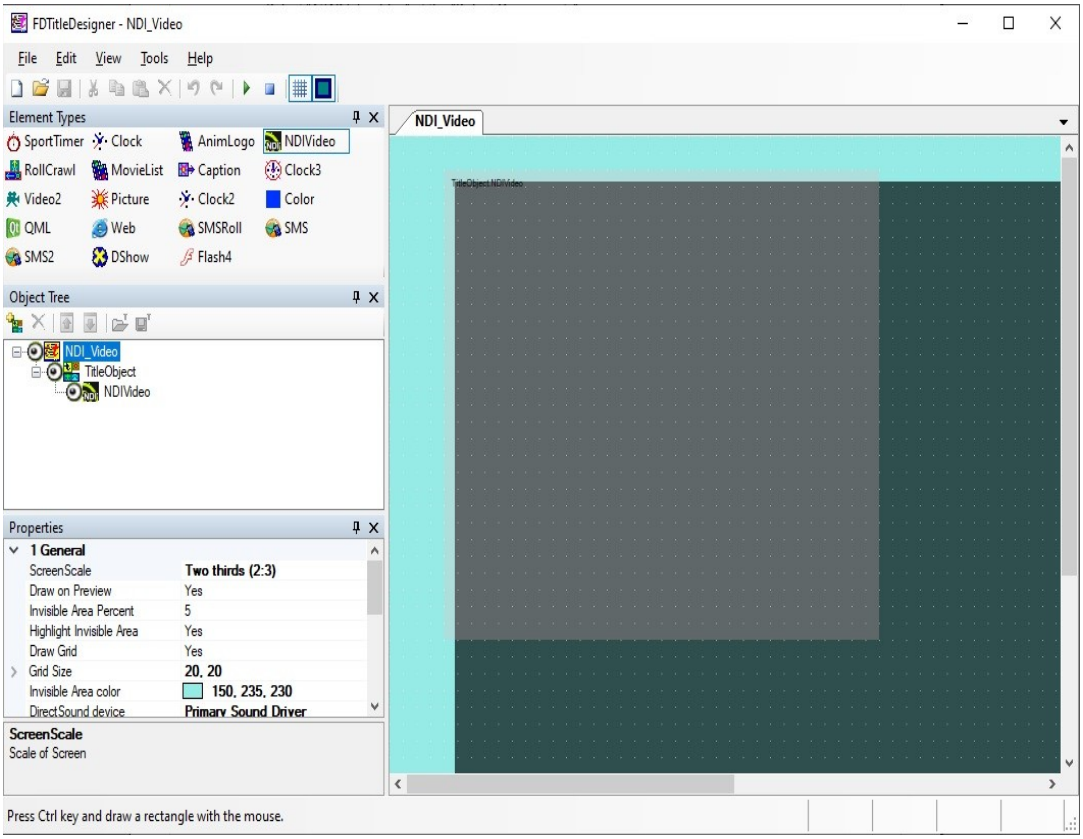


Select "NDIVideo files" at the "Select Components" page.

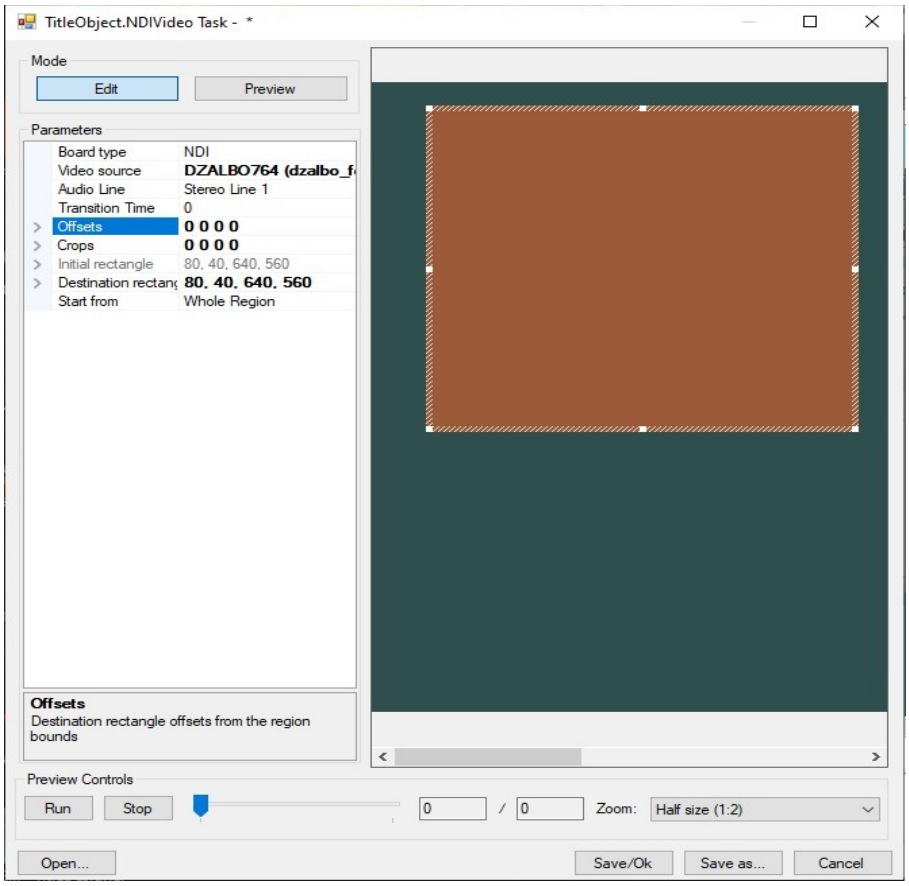
NDIVideo plug-in

Important: there must be a license for working with NDIVideo plug-in.

The NDIVideo plug-in is a title element designed for displaying NDI stream in the "Picture in Picture" format. The plug-in is analogous to the IPCamera plug-in. Its configuration repeats all features of Video2 title element completely. For example, the plug-in supports transition video effect, i.e. smooth resizing of video displaying area with simultaneous scaling of video image by area size.

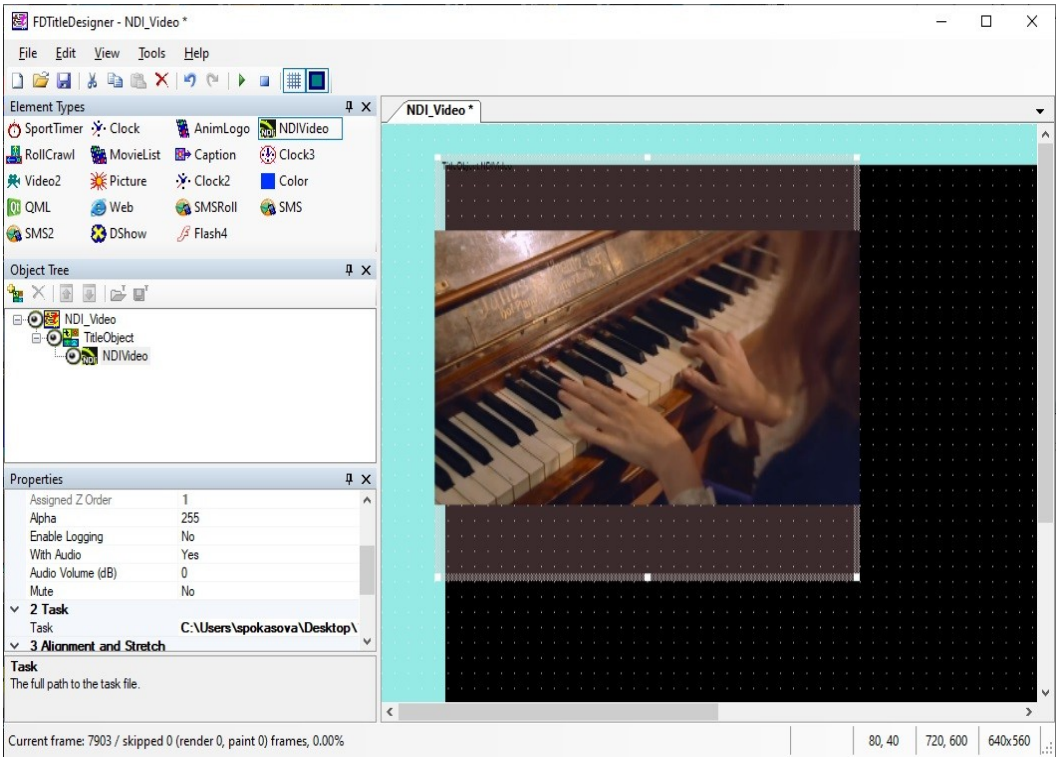


The SLLiveSettingsEditor program is used for creating and editing tasks for NDIVideo title element.



The "Video source" list displays all available NDI sources.

Important: as search of NDI sources takes a lot of time then it is required to open and close this list several times.

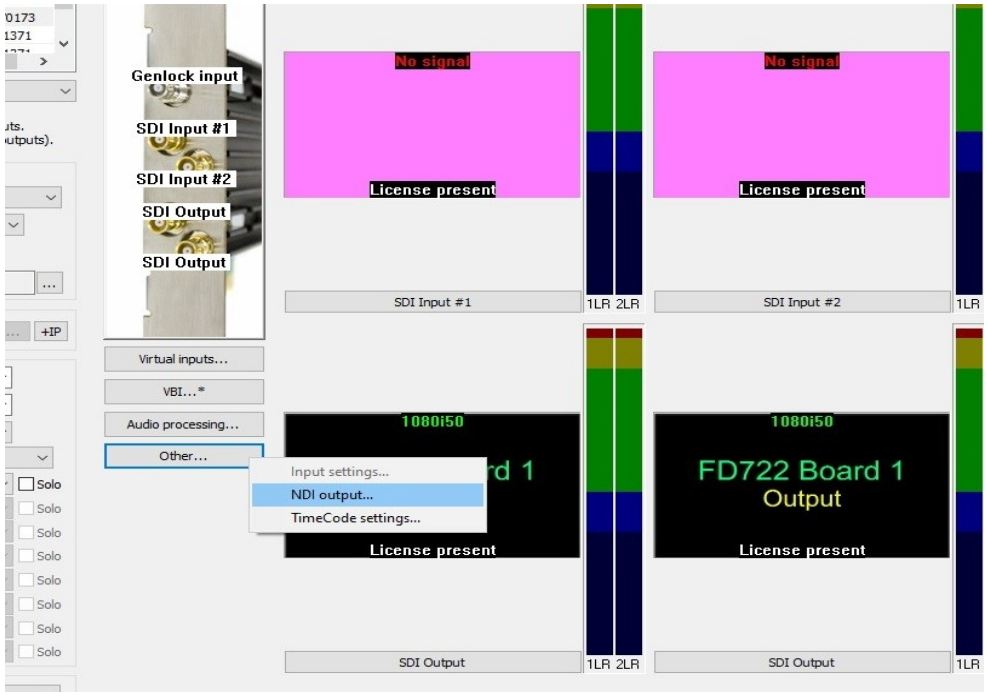


Configuration of NDI output

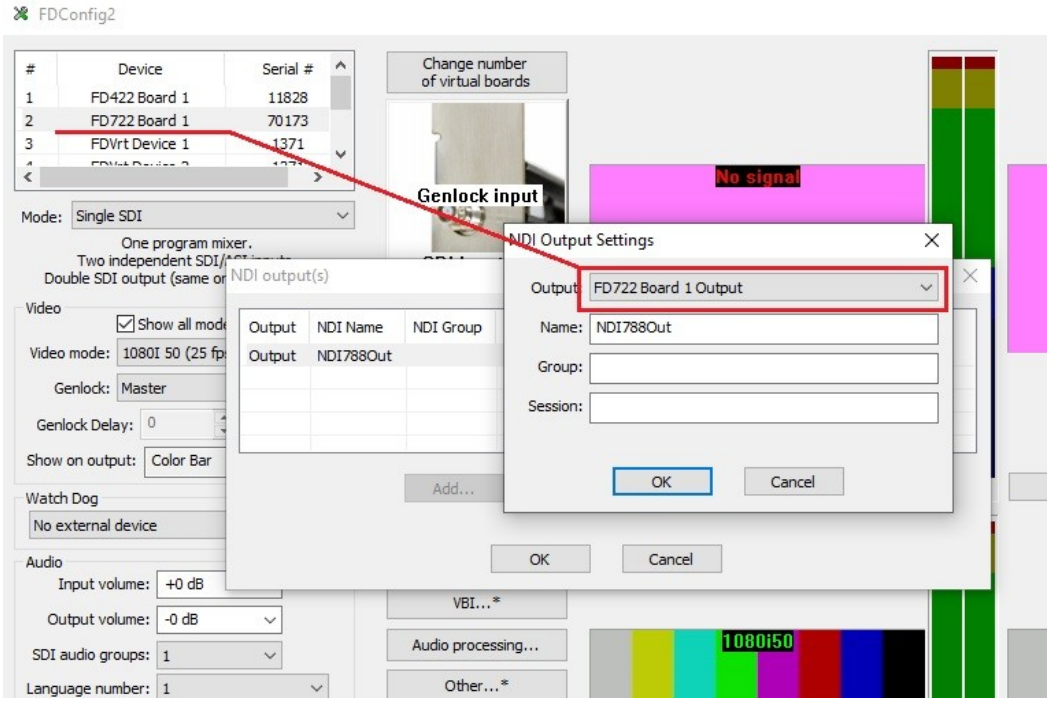
Important: there must be a license for working with Forward TA NDI product or NDIOut plug-in.

In this case NDI stream is generating simultaneously to signal from output of board (real or virtual).

Run the FDConfig2 application.



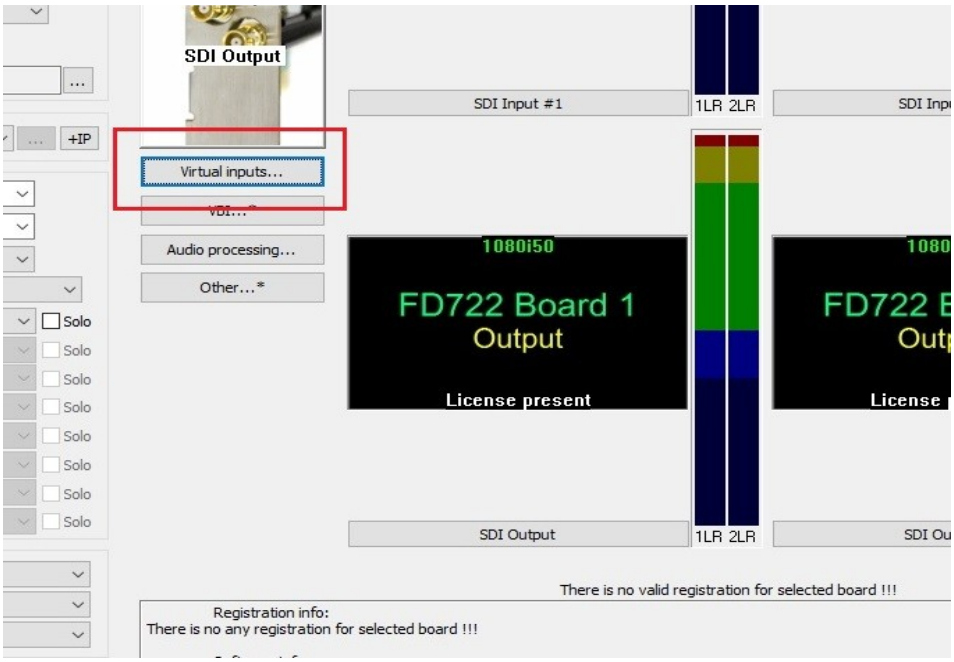
Select "Other" -> "NDI output..."



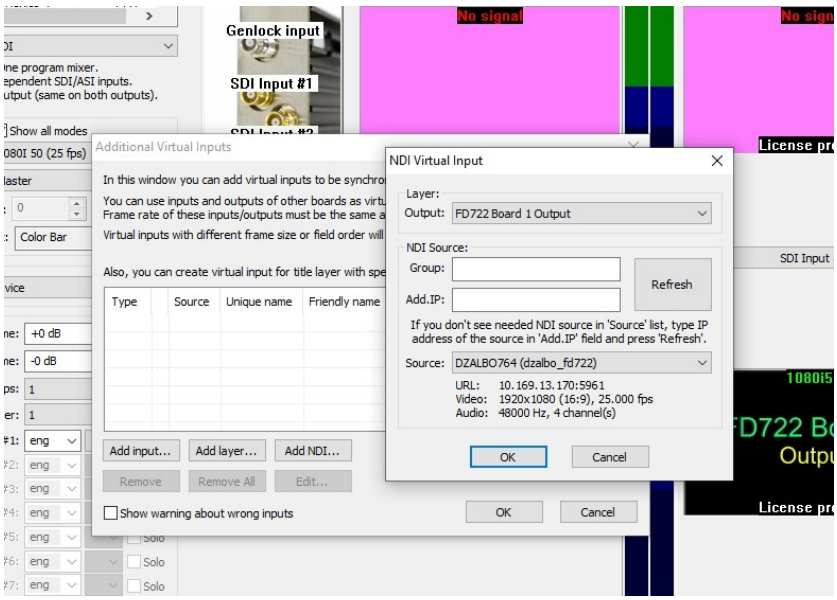
Select "Add..." in the "NDI output (s)" dialog window. Then select output of board (real or virtual) in the "Output" list for which it is needed to generate NDI stream simultaneously. Type name of the stream in the "Name" field. Other parameters ("Group", "Session") are optional and as a rule are not used at work. Click "Ок" and close "NDI output (s)" dialog window.

Configuration of NDI input

Run the FDConfig2 application.



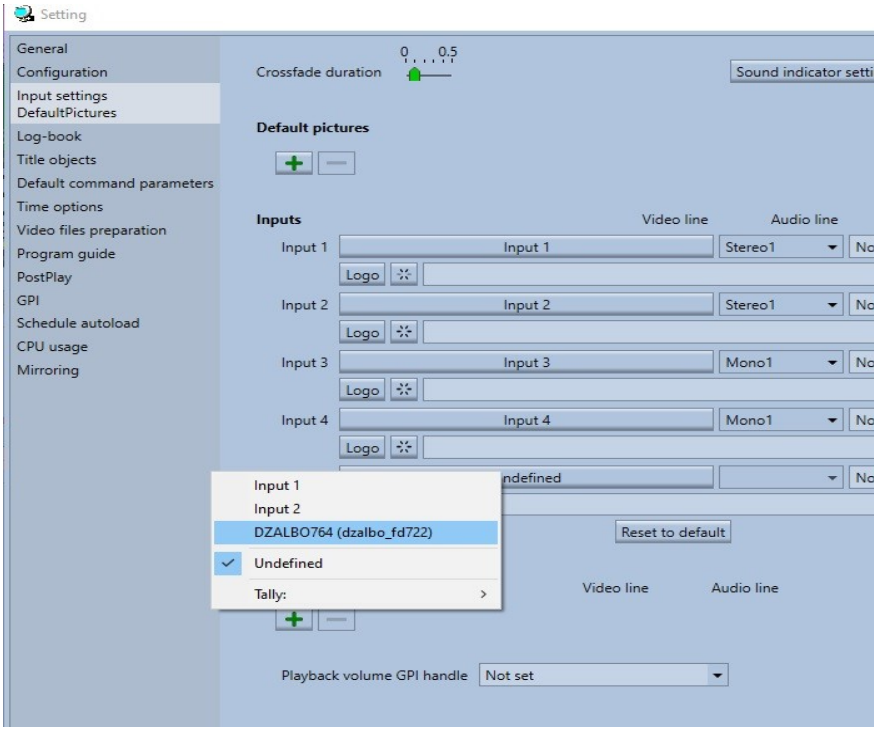
Click "Virtual inputs...".



Click "Add NDI" in the "Additional Virtual Inputs" dialog window.

Select in "Additional Virtual Inputs" dialog window, from the "Output" list output of board that will display virtual input. Type name in the "Name" field that is displayed in the OnAir program window later. The "Refresh" button is used to NDI source list with NDI sources. Select NDI stream in the "Source" list that you want to display.

Run the OnAir program.



Select earlier configured input from NDI source from the list on the "Settings"->"Input settings" tab (NDIInput1 is in our case).