

SDI option



Revision as of December 19, 2008.

Installation and Setup Guide



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FCC Information

FCC ID:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded cables and I/O cards must be used for this equipment to comply with the relevant FCC regulations. Changes or modifications not expressly approved in writing by SoftLab-NSK Ltd. may void the user's authority to operate this equipment.

Limited Warranty

Our company warrants this product against defects in materials and workmanship for a period of one year from the date of purchase. During the warranty period, products determined by us to be defective in form or function will be repaired or replaced at our option, at no charge. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or as a result of service or modification other than by us.

This warranty is in lieu of any other warranty expressed or implied. In no event shall we be held liable for incidental or consequential damages, such as lost revenue or lost business opportunities arising from the purchase of this product.



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1. General Description

An SDI-I/O board (see Figure below) is connected to the FD300 board. This option is designed to be used in the Forward T product line to input/output SDI digital video signals.

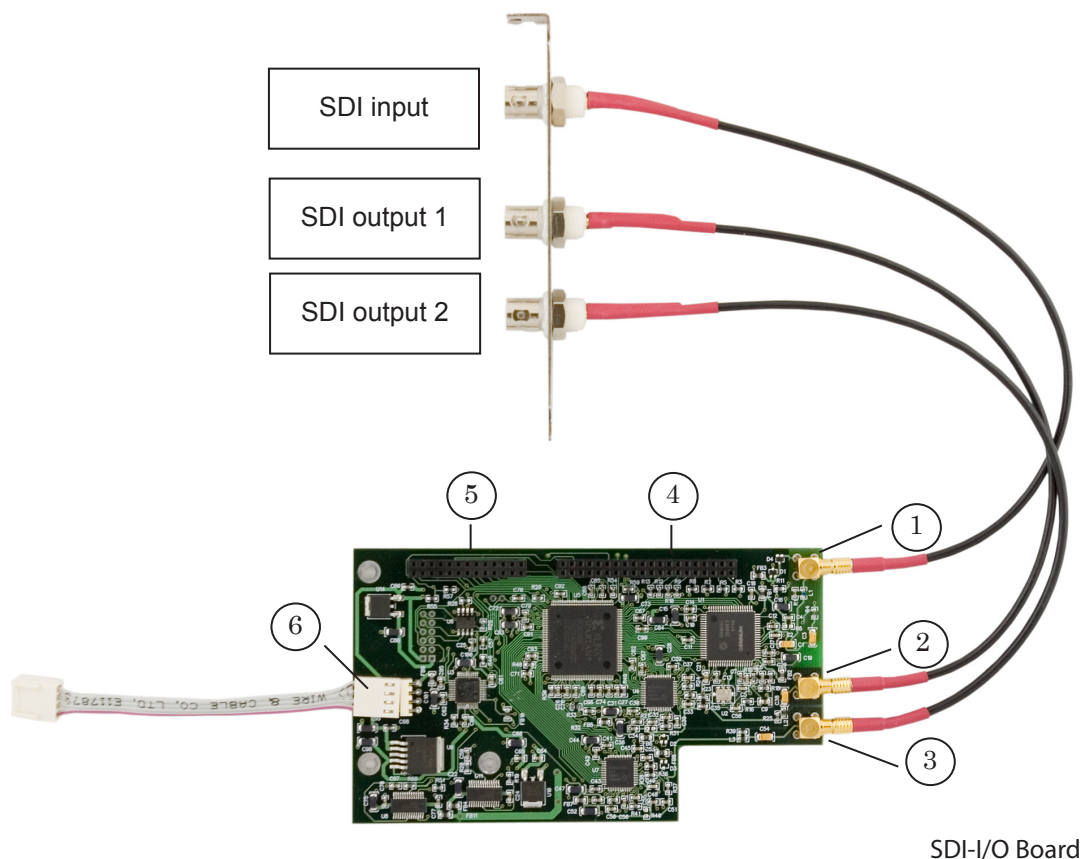
To input/output SDI signals, the three BNC connectors are used:

- SDI input (1) – SMPTE-259M-C receiver, provides receiving digital video signal in the ITU-R-601 format;
- SDI output 1 (2) and SDI output 2 (3) – two SMPTE-259M receivers, provide receiving digital video signal in the ITU-R-601 format.

When using the FD300 board to mix on the external mixer (see Section 5, setting procedure), SDI output 1 receives the Fill signal, and SDI output 2 – the Key signal. In other modes, both inputs receive the same signal.

The SDI-I/O board has two parallel connectors: a 40-pin connector (4) to control and transmit 8-bit parallel video stream in the CCIR656 format to the FD300 input and 26-pin connector (5) to receive 8-bit parallel video stream in the CCIR656 format from the FD300 board output.

A special connector (6) is designed to connect power supply from the FD300 board.

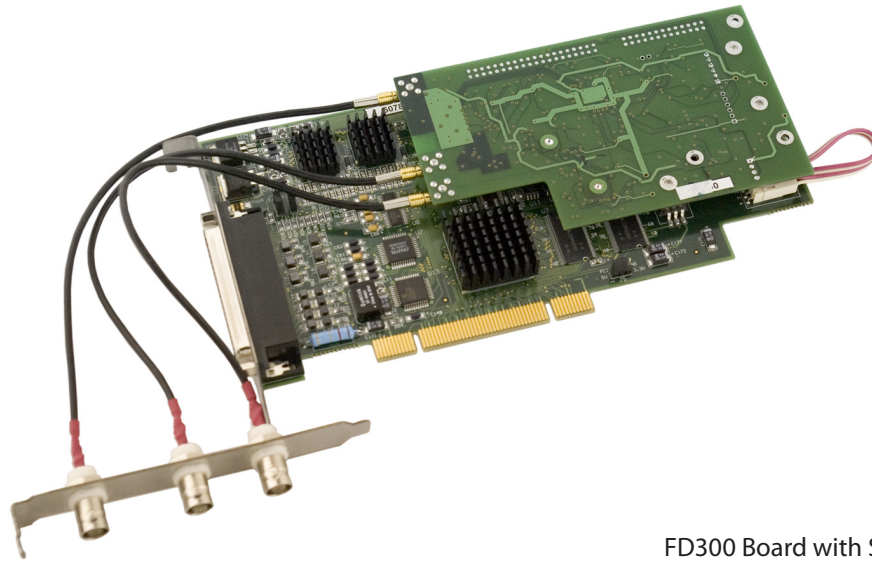


✓ **Warning:** The connector (6) on the SDI-I/O board is designed to connect power supply from the FD300 board only! Do not connect another power source to the connector!



2. Connection to the FD300 Board

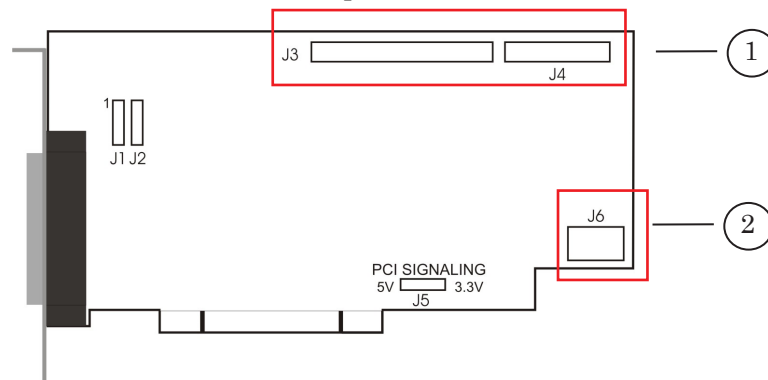
Usually, an FD300 board with the SDI option is supplied as a unit.



FD300 Board with SDI Option

Ensure that:

1. The SDI-I/O board is connected to connectors J3 and J4 (1) on the FD300 board.
2. The SDI board is connected to the FD300 board through the power cable (connector J6 (2)). The cable comes with the SDI option.



FD300 Board Connectors Layout Chart

Note, no additional connections are required to supply the FD300 board.

✓ **Warning:** Do not connect a power source to connector J6 on the FD300 board! Connector J6 is designed to connect an SDI board only!

3. The Board Registration

When the board is installed in your computer, perform the registration:

1. Launch the registration file (with the reg extension) located in the Registration folder on the installation CD.
If the file is not found, contact Support and state the board number.
2. When the registration is complete, restart the computer.



4. Setting the FD300 Board

To set parameters for the operation of the FD300 board with an SDI option, perform the following steps:

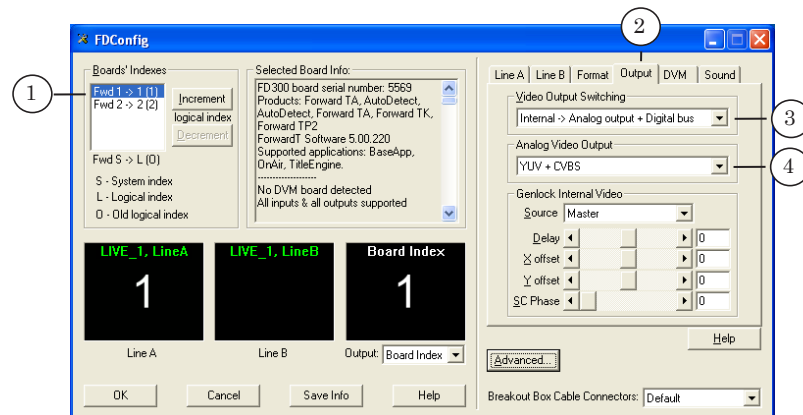
1. Launch the FDConfiguration program (see FDConfiguration User's Guide). Use the program icon located on the desktop or the Start menu command: Programs > ForwardT Software > Board Setup > FD300 Configuration

2. Select the required board from the Boards' Indexes list (1), the board serial number being indicated in the Selected Board Info field.

3. Select the Output tab (2). Select the modes of operation from the corresponding drop-down lists:

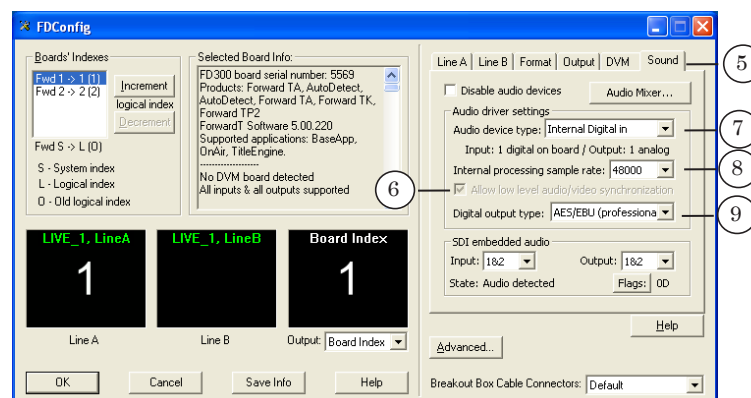
- Video Output Switching (3) – Internal->Analog Output+Digital bus;
- Analog Video Output (4) – the required mode of operation of the analog output (by the analog signal type used). It is recommended that you select the CVBS*3 value from the drop-down list when working with a digital video output only.

✓ **Important:** Select the SDI Fill + SDI Key mode when mixing on the external video mixer only!



4. Select the Sound tab (5). Ensure the Allow low level audio/video synchronization check box (6) is checked. Select the following values from the corresponding drop-down lists:

- Audio device type (7):
 - Internal Digital in – to work with embedded SDI audio;
 - Normal analog – if necessary to work with analog audio;
- Internal processing sample rate (8) – 48000 (corresponds to SMPTE-259M);
- Digital output type (9) – AES/EBU (professional) (required when playing audio on a Sony video recorder).



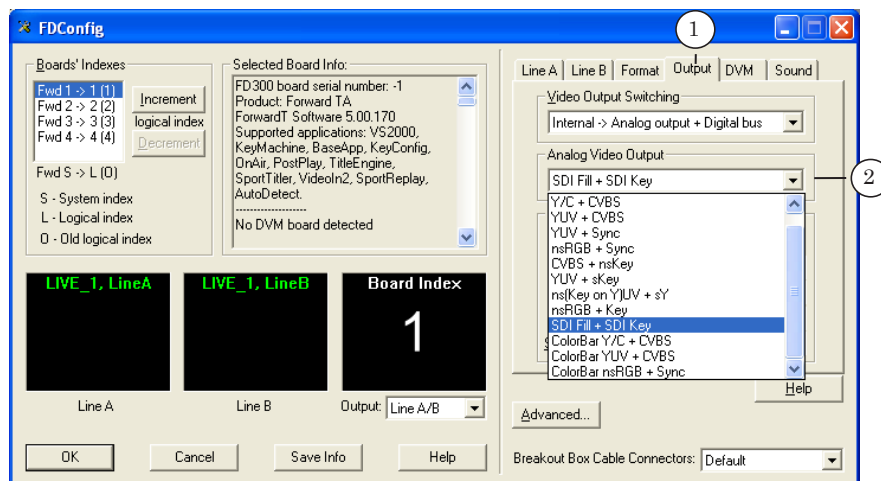


5. Select the Line A (or Line B) tab. Select Digital from the Input drop-down list.
6. Click OK to save the changes and close the program window.
7. Restart the computer to apply the changes.

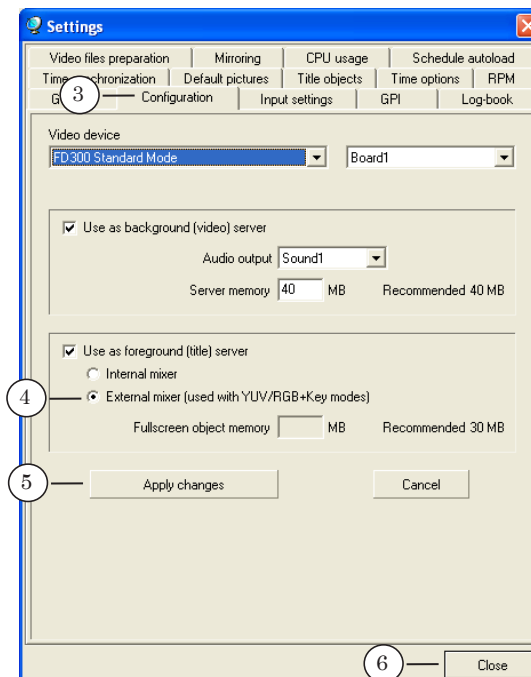
5. Setting Operation in the Mode of Mixing on the External Mixer

If mixing (combining the passthrough video with the video from the board via the alpha channel) is to be performed on the external video mixer, perform the following steps in addition to those described in Section 4:

1. Select the Output tab (1) in the FDConfiguration program window. Select the SDI Fill + SDI Key mode from the Analog Video Output (2) drop-down list.



2. In the FDO nAir program, open the Settings window and select the Configuration tab (3). Select the External mixer... radio button (4).



3. Click Apply changes (5), then – Close (6) to close the Settings window.



Useful Links

ForwardT Product Line: Description, Software Delivery, Documentation, Ready Solutions

<http://www.softlab-nsk.com/forward/index.html>

Tech Support

<http://www.softlab-nsk.com/support.html>

e-mail: forward@softlab.tv

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Forums

<http://www.softlab-nsk.com/forum> (currently available in Russian only)