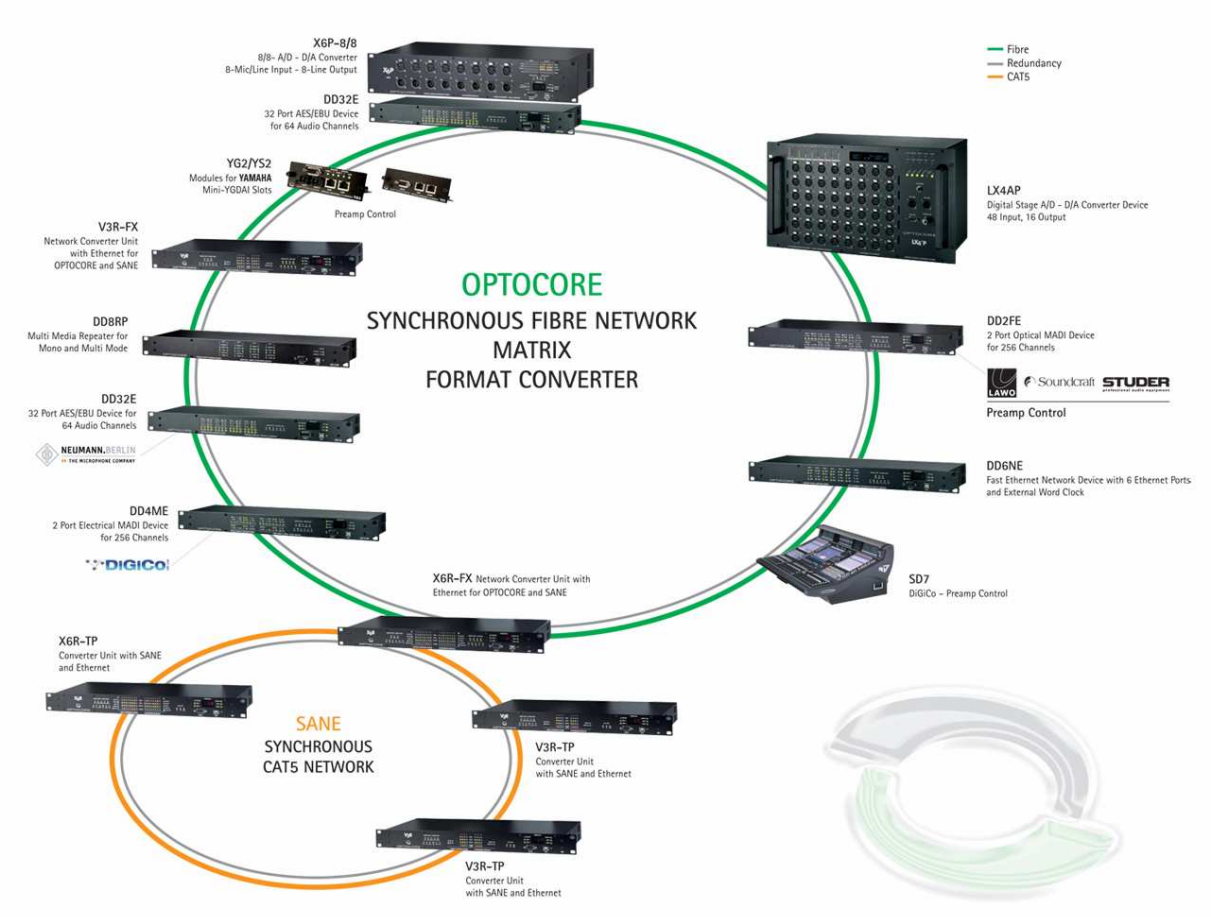
OPTOCORE



Optocore Quick Start Guide

Rev. 1.0

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Table of Contents

The following document gives a brief introduction to the Optocore firmware and software installation and basic configuration.

NOTE:

Do not connect Optocore devices before configuring each device's ID and basic Local Settings (Sample Rate) in Optocore Control Software!

Optocore Control installation

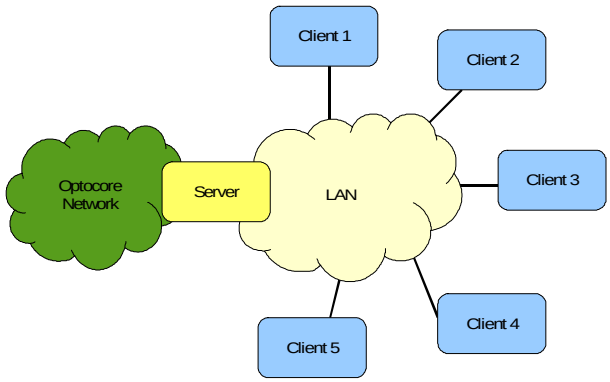
This chapter gives a short description of installing the Optocore Control software.

Client, Server and Workstation modes overview

In Optocore Control V2.14 Client/Server software, there are three installation options – Client only, Client and Server and Workstation. You should choose the correct mode during the installation.

If you require controlling the Optocore network from only one computer – you should choose the Workstation mode. This mode is preferred, when there is no need to use multiple Clients.

For more complex controlling scheme, with multiple Clients, you could take advantage of Client/Server mode. With Client/Server mode you can built a control network as in the picture.



The Server is connected to the Optocore Network by RS232 or USB cable. All Clients can manage the Optocore network through the Server connected to the same LAN network. You can set the access restrictions for each client separately.

On Server you should install the "Client and Server". On Client computers, which are not directly connected to Optocore device install "Client only" option.

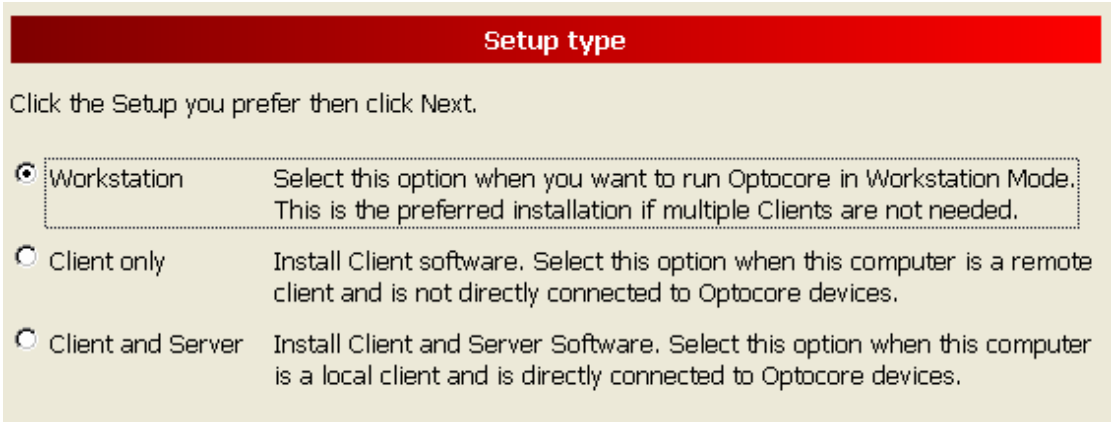
Software installation

NOTE:

The software is installed to "C:\Program Files\Optocore" folder by default. If you would like to preserve the previous version software, which was installed on your computer, you should change a name of the folder containing that version. In other case the previous version will be overwritten.

Start the Installation program on your computer and follow the installation wizard.

Choose the correct setup type that meets your requirements.



The next chapters of this Manual will refer to the Optocore Software working in Workstation Mode.

Basic configuration

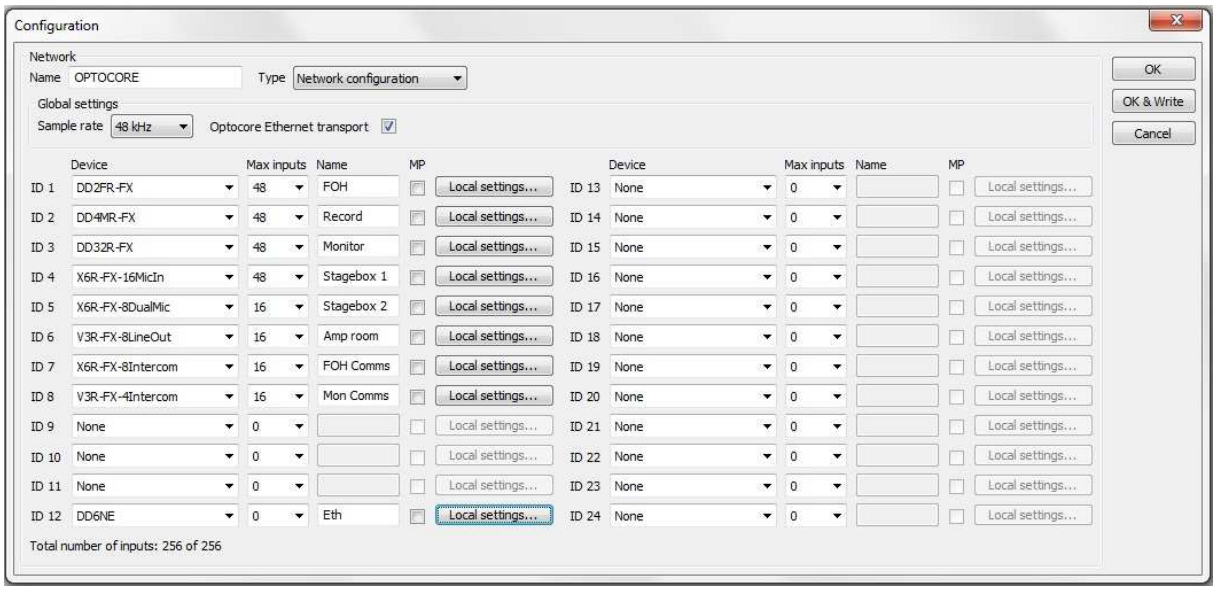
This chapter explains the basic configuration of an Optocore system step by step. Steps described here should be performed before connecting devices with each other.

Device ID and basic setup

Each Optocore device in the network must have a unique ID number. The first thing to do after starting an Optocore Control program is to assign a correct ID to each device.

Note that ID order does not indicate the devices order in the real network, however ID indicates the Word Clock Master Priority – the lower ID means the higher Word Clock Master Priority.

Enter the Set menu and a Configuration dialog. A Configuration window appears:



To add a new ID to your network, simply choose a device from the list. You should choose also the maximum number of inputs (this field is called Audio Input Map), which you want to use on this device. Remember that the maximum input number for a device may differ from available inputs. If you set up maximum input channels for each device, you will exceed a total number of inputs with only few devices. Optocore channel count is restricted only by the number of inputs!

EXAMPLE:

There are maximum 64 audio input channels available at DD32R, but you may need only one of four 16-channel ports as inputs. You can set 16 inputs for your DD32R in Configuration window and the remaining 48 input channels will be available for other IDs.

At the bottom of Configuration window, you can see the Total number of inputs. If you exceed the Total number of inputs, the text will turn red.

In configuration window you can also name each ID or set the Master Priority for each device.

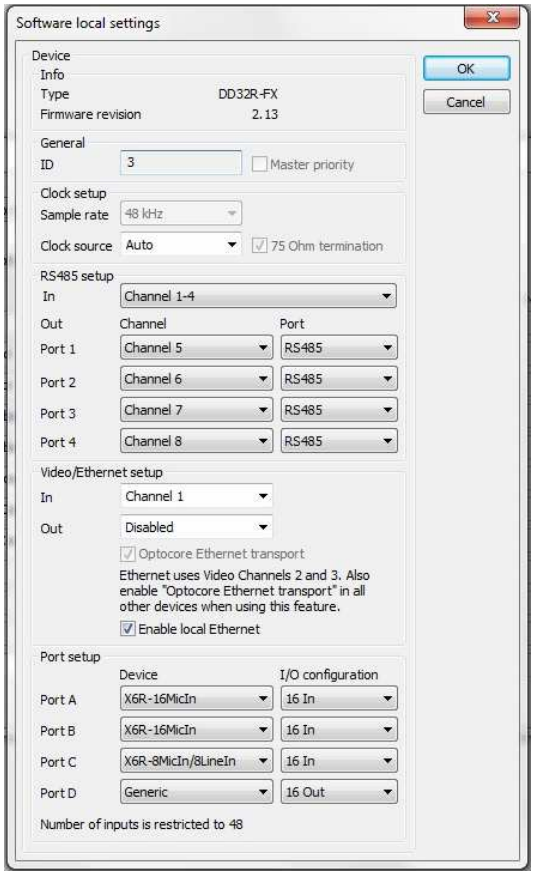
Software local settings

The next step in Optocore configuration is to prepare Local settings for each device.

In Configuration window press Setup button in Local settings column.

In Software Local Settings window you can define the clock source, RS485, Ethernet and Video transport and the port settings for each device.

Note that the look of Local Settings window depends on the device type selected.



Port setup

If there is Optocore converter connected to one of the

AES/EBU port, you should set the correct Device and I/O configuration in Port setup section. If there is a third party device, you should choose Generic. The Port setup field differs for different type of devices. For MADI devices it is possible to choose from 56 or 64 version of AES10 MADI standard. For Sane port setup, please refer to the SANE Quick Start Guide.

EXAMPLE:

Your Optocore device is DD32R-FX and there is a X6R-8MI/8LO connected to port A, and an AES/EBU device from other manufacturer with 16 analogue outputs connected to port B. In DD32R's Local Settings set for Port A – X6R Device and 8/8 Reversed I/O Configuration. For Port B you should set Generic Device and 16 Out I/O Configuration.

Word Clock setup

You can manually choose the Word Clock source (Int - Internal or BNC - External on BNC connector) or you can set Auto mode (if there is an external Clock source connected to the device, the Clock switches to BNC). BNC option can be chosen only when there is a Master Priority flag checked for this device in Configuration window.

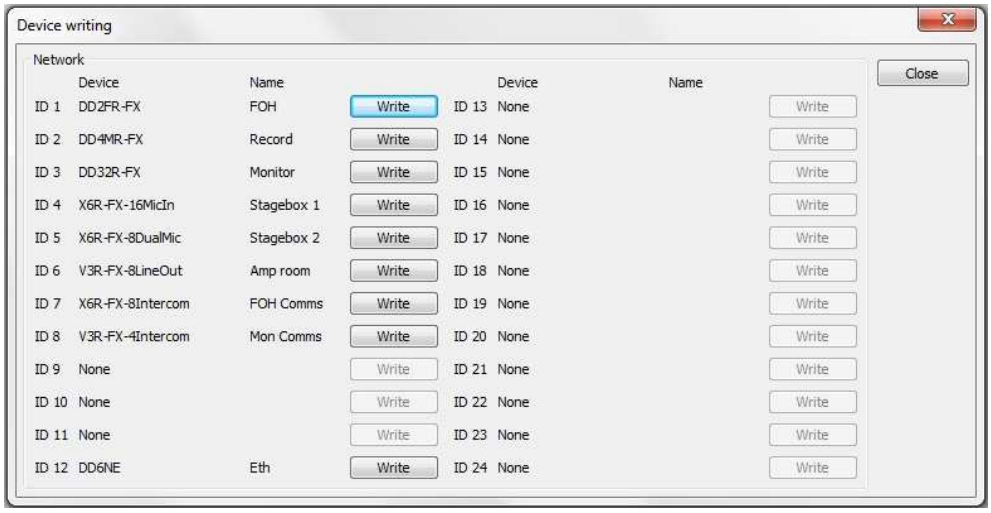
RS485 setup

If you wish to send RS485/RS422 signal via Optocore network you have to setup the RS485 transmission. There are 32 channels for RS485 transport available in the network. Typically each device can input/output 4 channels. You can set the input channels into bank of fours. If you want to output RS485 from the network, you can pick up the Channel (one of 32) for one of four physical ports and select the Port type – RS485 or RS422.

Device writing

The good practice for the first setup of Optocore system is to prepare a configuration file with the Configuration and Local Settings for all devices and then send the configuration to the devices.

After setting up a Software Local Settings, you can write your configuration to the devices. You must connect to each device locally; the devices shouldn't be connected in Optocore network yet. To connect to the device, you need an USB or RS232 cable (in Administration / Server Options dialog you should set up a connection type – either RS232 with a correct COM port or USB).



In Configuration window choose OK & Write option. The Device writing dialog appears. Press the Write button for the device that you are connected to. It is very important to ensure that the correct Write button with the appropriate ID is pressed. If a configuration contains several devices of the same type, Write command will transfer the ID and settings without any warning even when double IDs are assigned.

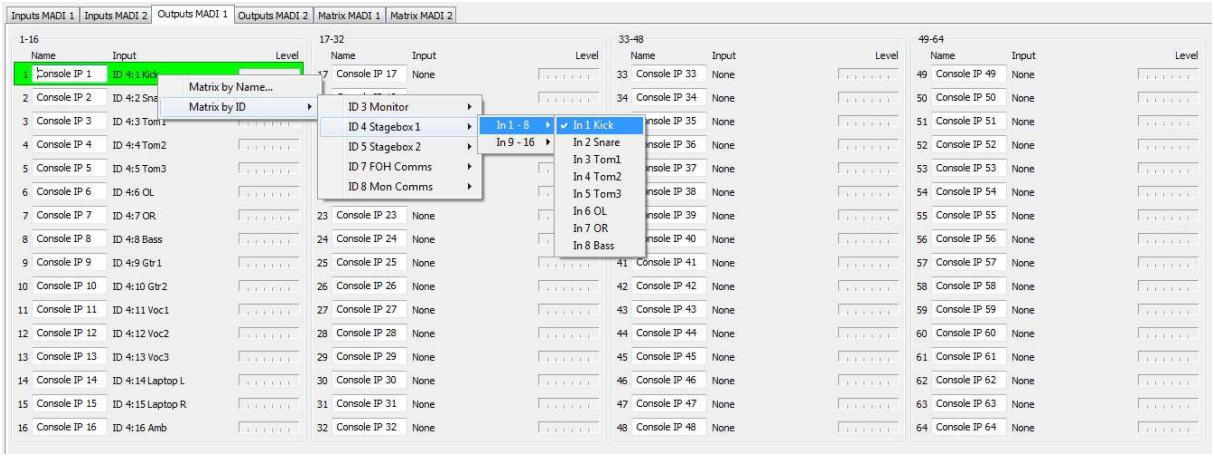
You should do the Write command for each device. Then you can connect the network with fiber cables. Remember that you don't have to keep the ID order, when connecting Optocore devices.

Channel routing

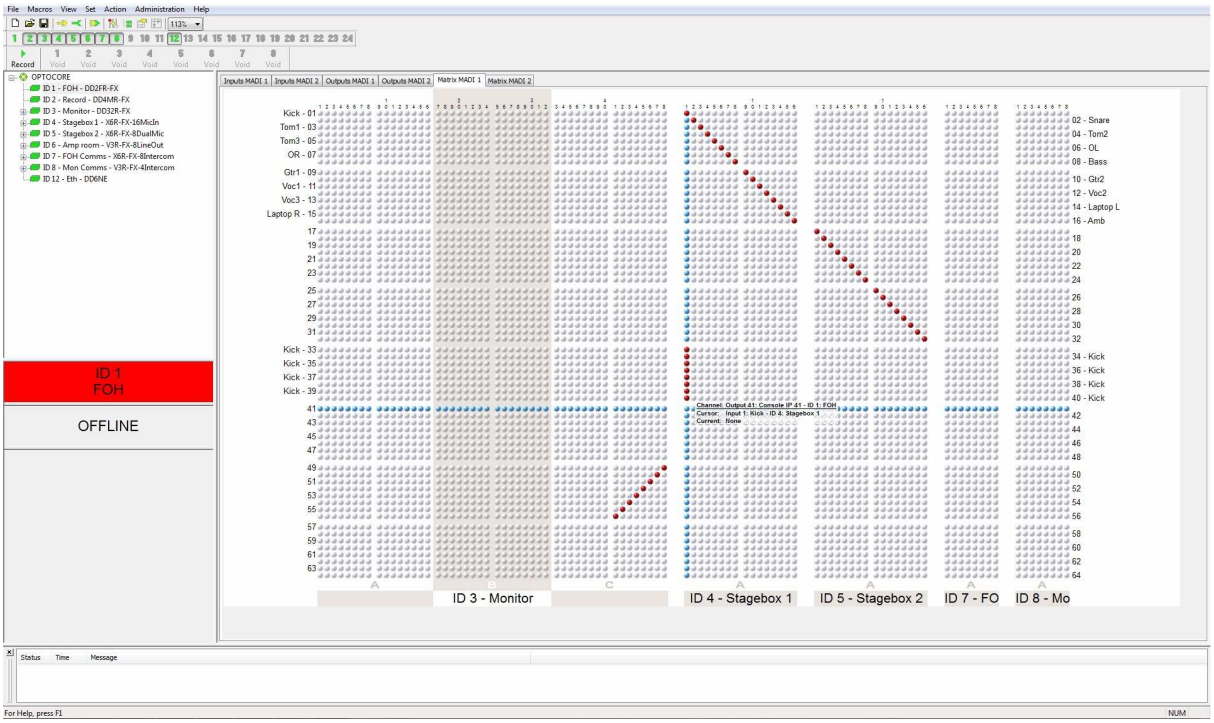
When the basic setup is ready, you can route audio channels between the Optocore devices. In the main Optocore Software window, you can see the Network Tree on the left. When you click one of the devices, you are able to set up a routing for that device.

There are four different ways to set up a routing in Optocore: by input (by ID), by output (by ID or by Name), in matrix view or setting multiple channels.

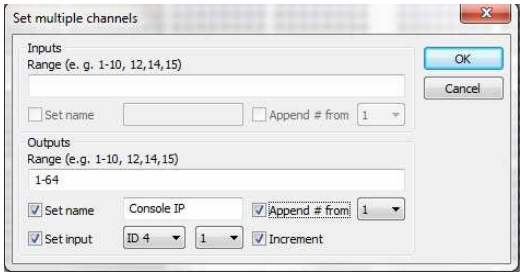
If you want to set up a routing by input/output, you should pick up a correct tab in main window and right click on the channel, which you want to route. Then you can matrix by Channel Name or by ID.



You can route all channels in matrix as well. Choose the tab Matrix for the correct output. Remember that the Matrix view shows you the output channels of the chosen ID device that are available and inputs from each ID on the network. You cannot route multiple inputs to one output, however you can route one input to multiple outputs. Routing is done by clicking a cross-point on the matrix. Multiple channels can be routed by clicking and dragging in the selected direction.



Routing and other operations on multiple channels can be also performed from the *SET / MULTIPLE CHANNELS* dialog. You can set routing for an output channel range by setting a range and input ID. Set Multiple Channels dialog enables you also to set the multiple input and output channel name, gain and phantom.



Sending routing to the device

After creating the routing for the system, you should send a configuration to the devices. With the Send command in Action menu you send a routing, gain settings and phantom power to all devices in the network. The Send All command sends also a Local Settings to the devices through the network (however ID cannot be changed by using a Send All command).

Going online

Now you can go online by clicking Set -> Online Mode. If *OPTIONS / ABSENT DEVICE* is set to *KEEP* or *ASK*, all devices of the configuration will stay visible in the network tree even if they are not physically present in the network. The Log window will display the status of the devices and connections as well as any fault reports in real time.

After ensuring that the complete system is stable and all I/O meters indicate a normal level, the network is ready to use.

Firmware upgrade

To update a firmware you need a PC computer running Windows XP/Vista/7 with an USB interface and Serial RS232 port (or USB to RS232 adapter). For the RS232 connection COM ports from 1 to 4 are supported. For the R Series devices it is possible to upgrade the firmware directly with USB.

NOTE:

Please note that Serial interfaces on computer are not normally capable of "Hot Plugging". Switch off the computer to avoid damage before establishing the serial connection between Optocore device and the computer.

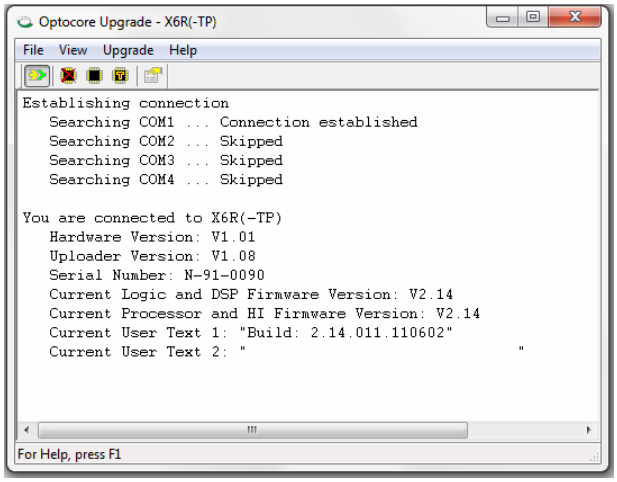
The firmware upgrade must be done for each device separately.

Startup dialog

Start the Optocore Update program by double clicking the OptcrUpgrade.exe icon. After starting the update program, a startup dialog appears on your screen.

Choose the device that you are upgrading and choose the COM port of your computer which is connected to the device (you can also choose an "Autoselect" option - the computer will search through all available COM ports).

Entering Upgrade Mode



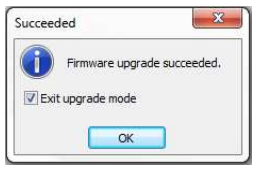
If the connection is established correctly, the program will enter the Upgrade Mode.

You can check the current firmware version that is installed at Optocore device. The software gives information about current Logic and DSP Firmware version and about Processor and HI firmware version. Furthermore, the User Text 1 field indicates the more detailed information about firmware – the exact firmware revision, date of release and a type of firmware.

Upgrading procedure

NOTE:

Before upgrading the device, erase all settings! (use a menu Upgrade -> Erase all settings).



Upload firmware by choosing the option Upload Firmware from the Upgrade menu. Wait until the uploading is finished. When leaving the Upgrade Mode, the device will reboot and will be ready to use after few seconds. Local settings in Optocore Control software must be set again.

Cold boot

A Cold Boot is an option to upgrade the firmware if problem occurred when entering the Upgrade Mode. In such case program shows a message, which summarizes the Cold Boot procedure. Follow the steps described in the message box to initiate the Cold Boot:

1) Power down the device,

2) Select the COM port that you are using to connect to the device,

3) Press OK button,

4) After pressing the OK button turn on the device within 10 seconds.

The communication should be established and you will see the screen the same as in “warm boot”.

If problem with entering the upgrade mode remains after running Cold Boot procedure, please contact Optocore support team.

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