

## ELAD DUO-ART HF/50MHz amplifier



## FIRMWARE AND SOFTWARE UPDATE

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## Revision History

Revision	Date	Description
Rev 1.0	06/2018	<ul style="list-style-type: none"> <li>• Document creation.</li> </ul>
Rev 1.1	06/2018	<ul style="list-style-type: none"> <li>• Updated pictures.</li> </ul>

## Introduction

This document describes how to update the firmware and the software of the DUO-ART. The firmware manages the internal circuitry, the software manages the user interface (display and buttons).

**TO FACILITATE THE PROCEDURE, PLEASE UPDATE THE FIRMWARE FIRST, THEN UPDATE THE SOFTWARE .**

Please find here <http://sdr.eladit.com/FDM-DUO-ART/index.php?lang=EN> :

- **the latest firmware** : a HEX file with the version written in the filename, example : **“duo\_arcs\_\_v1\_00.hex”**;
- **the release status document** : a PDF document that indicates which ones are the latest available versions, example : **“ELAD DUO-ART - Release Status EN - 2018\_06\_19.pdf”**.

# 1 Firmware Update

Download the latest firmware version from the ELAD website.

In order to update the firmware, you need to install the Flash Magic software. This program is available here: <http://www.flashmagictool.com/>

**Before starting the firmware update, it is recommended to disable all antivirus programs in order to avoid any inconvenience.**

## 1.1 Enable Update

Before perform the firmware update it is necessary to enable it. Follow the steps below :

- turn on the DUO-ART and wait for the Main Window to be displayed,
- once done, press the **SET** button, scroll the menu using **UP** **DOWN** until you find the menu 93 "Firmware Update",

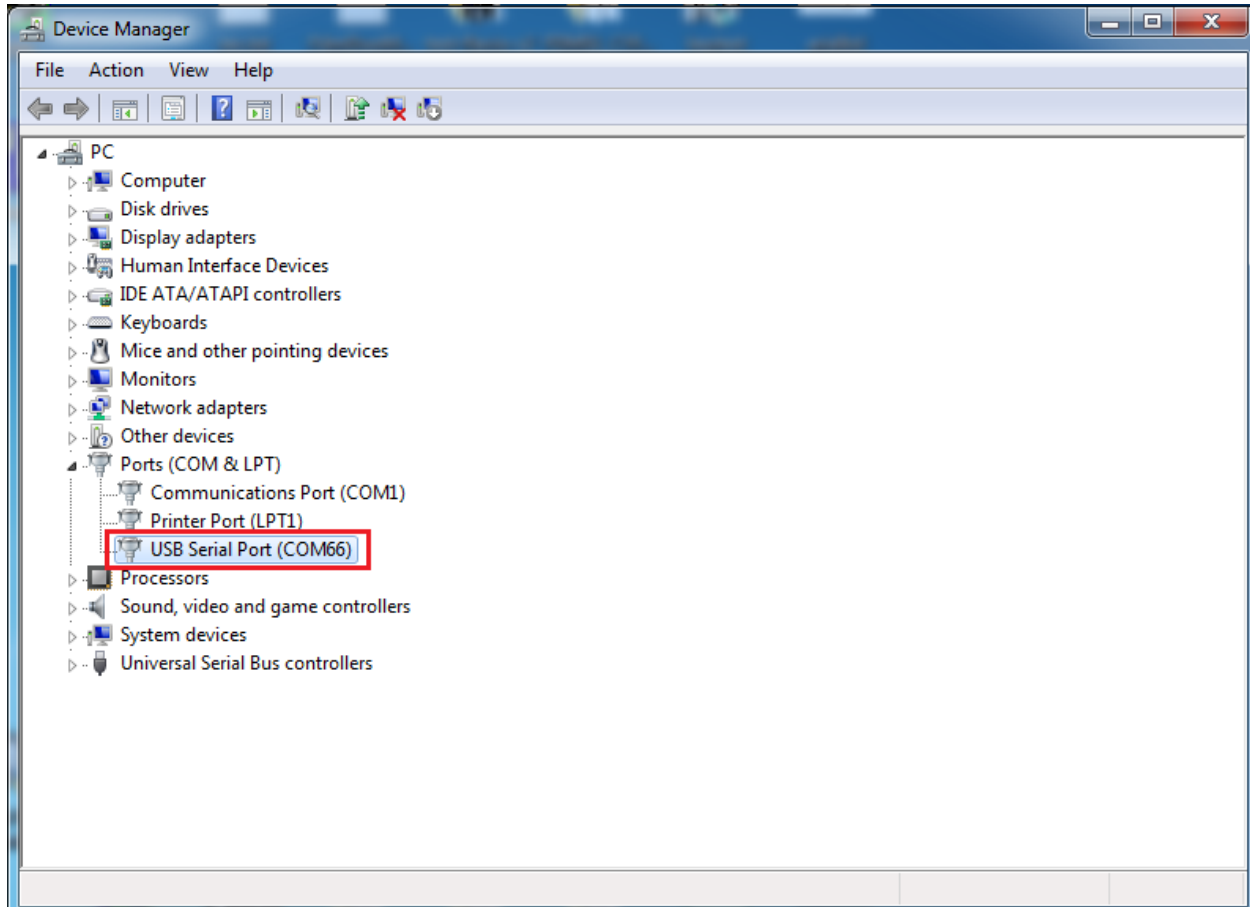
92 - SERVICE	Software Update (UI)	OFF
93 - SERVICE	Firmware Update	OFF
94 - SERVICE	Turn Off Hardware	OFF
<b>BACK</b>	<b>UP</b>	<b>DOWN</b>
		<b>ENTER</b>

- enter it using **ENTER** ,
- press **+** or **-** to change from OFF to ON,
- press **ENTER** to validate and verify that a confirmation is displayed.

FW UPDATE: please update firmware with FlashMagic and then reset hardware					
<b>MEM</b>	<b>IN-ATT</b>	<b>ANT</b>	<b>TUNE</b>	<b>SET</b>	<b>VIEW</b>
BANK1	StBy	2			1

## 1.2 Perform Update

Connect the AUX USB port of the DUO-ART to a USB port of your computer. Identify the USB port number : open the windows “Device Manager” and expand the “Ports (COM & LPT)” node. The AUX USB port is listed as “USB Serial Port”.



In this case the USB port number is COM66.

Then run Flash Magic and set the following parameters.

In the “Step 1 – Communication” section:

- Select LPC1766,
- COM Port: the USB COM port,
- Baud Rate: 230400,
- Interface: None (ISP).

In the “Step 2 – Erase” section:

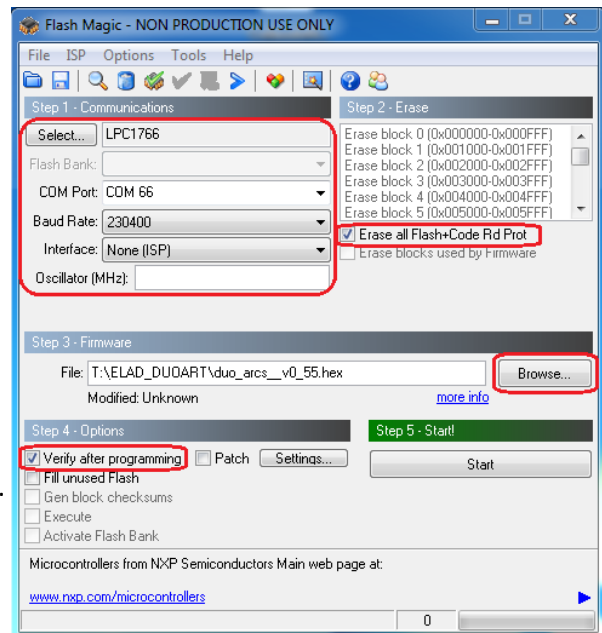
- Check “Erase all Flash+Code Rd Prot”.

In the “Step 3 – Hex File” section:

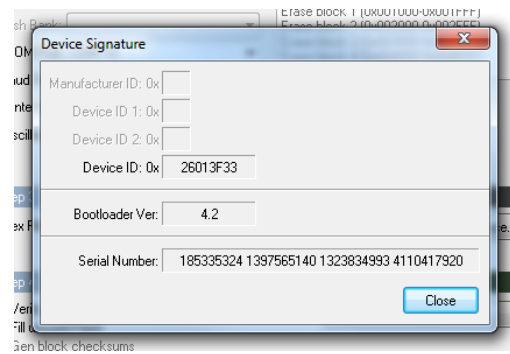
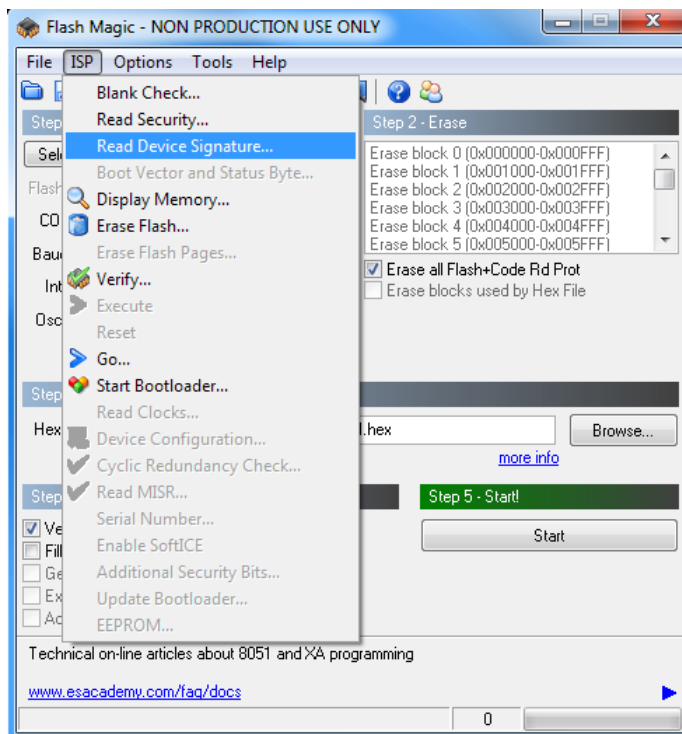
- Click on Browse and select the update “.hex” file.

In the “Step 4 – Options” section:

- Check “Verify after programming.”



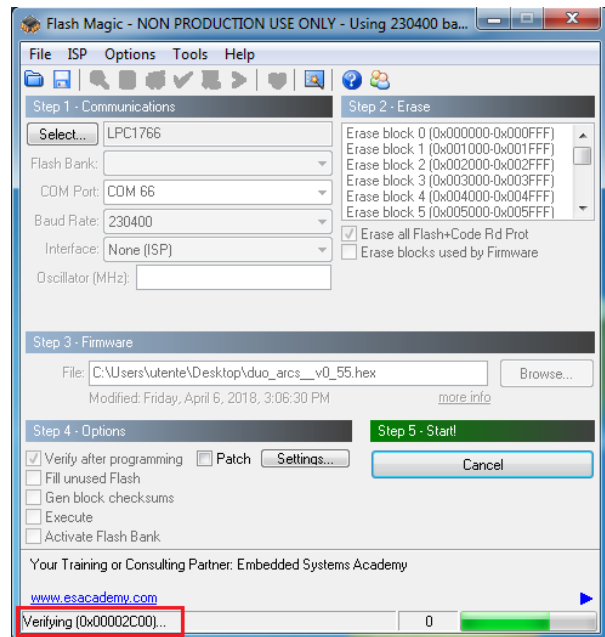
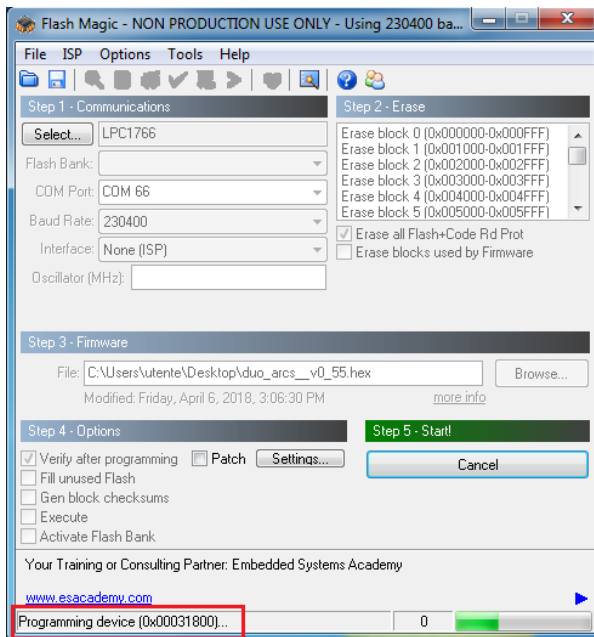
Check the communication with the DUO-ART clicking on “ISP” and then on “Read Device Signature”. If the communication with the DUO-ART is working, a new window with some device information is opened.



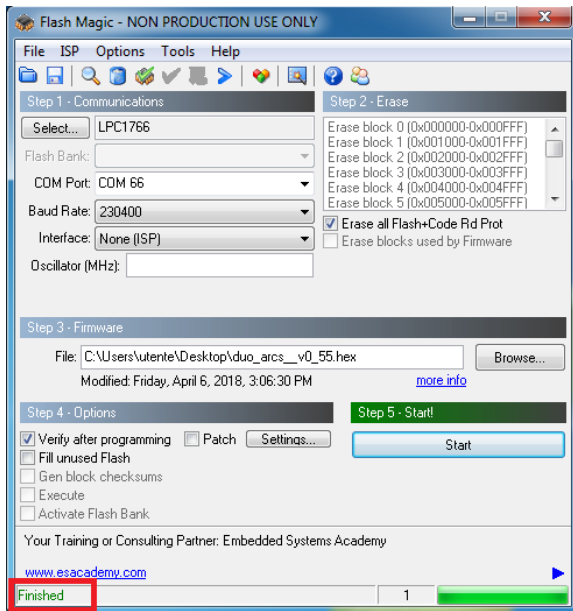
If the communication is working it is possible to proceed with the firmware update. Click on “close” on the “Device Signature” window. In the Flash Magic main window, click on “Start” to begin the programming.

Flash Magic will now proceed to program the firmware.

Then, Flash Magic performs the programming verification.



Wait until the end of the process, it should result like the picture bellow.



Finally turn off the DUO-ART, wait for a few seconds and turn it on.

**If some problems occur during the firmware update procedure, please contact the ELAD technical assistance.**

## 2 Software Update (UI)

### 2.1 Set LAN Settings

To perform the software update the DUO-ART must be connected to the internet. To do this follow these steps :

- turn off the DUO-ART,
- connect the DUO-ART to your local LAN;  
use an Ethernet/LAN cable and connect it on one side to the RJ45 connector of the DUO-ART and from the other side to your router/switch/modem,
- turn on the DUO-ART and wait for the Main Window to be displayed,
- once done, press the **SET** button, scroll the menu using **UP** **DOWN** until you find the “LAN” menu group, menu number 50 to number 53,


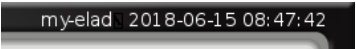
43 - PLOT	Offset	0.00dBm
50 - LAN	IP	192.168.2.185
51 - LAN	Subnet	255.255.255.0
<b>BACK</b>	<b>UP</b>	<b>DOWN</b>
		<b>ENTER</b>

- enter a correct value for the IP address,
- enter the correct values for the Subnet, Gateway and DNS.

**It is not necessary to repeat the LAN setting at every software update.**

### 2.2 Check LAN Connection

To check the LAN connection, see the string in the upper right corner of the display.

-  means the DUO-ART is not connected to the LAN.
-  means the DUO-ART is connected to the LAN.

## 2.3 Perform Update

To perform the software update follow these steps :

- press the **SET** button to open the menu, scroll it using **UP** **DOWN** until you find the menu 92 “Software Update (UI)”,

91 - SERVICE	Remote Service	OFF
92 - SERVICE	Software Update (UI)	OFF
93 - SERVICE	Firmware Update	OFF
<b>BACK</b>		
	<b>UP</b>	<b>DOWN</b>
<b>ENTER</b>		

- enter it using **ENTER** ,
- press **+** or **-** to change from OFF to ON,
- press **ENTER** to validate and start the software update,
- if the software is already updated the following message is displayed,

**UI is running last version**

- if the update start correctly the following message is displayed,

**Update UI in progress: Wait for reset (max 5 min)**

- finally, the DUO-ART reboots and finishes the software update.

**If some problems occur during the software update procedure, please contact the ELAD technical assistance.**