MIXED-SIGNAL DEVICES, INC.

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EZ-XO GUI User Guide

AUTHOR: Denny Yuen

MIXED-SIGNAL DEVICES, INC.

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1 INTRODUCTION

EZ-XO GUI is proprietary software from Mixed Signal Devices, Inc (MSDI) supporting all MSDI Ultra-Low RMS jitter XO Engineering Evaluation Kit (EVK). This software is intended to be used in and supported for Microsoft Windows 10/11 only.

Figure 1 shows the EZ-XO GUI.

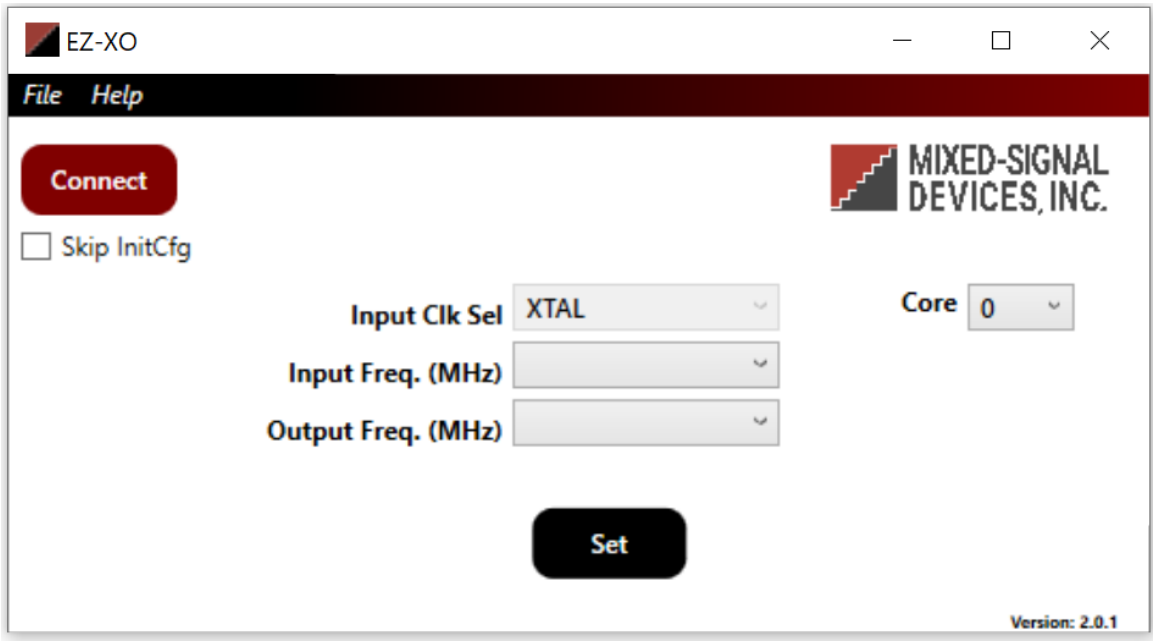

Figure 1: MSDI proprietary EZ-XO GUI

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2 SOFTWARE INSTALLATION

2.1 Delivery

The software is delivered in a zip file. First, unzip the EZ-XO.zip file. Navigate to the EZ-XO directory. Figure 2 shows the contents the of EZ-XO directory.

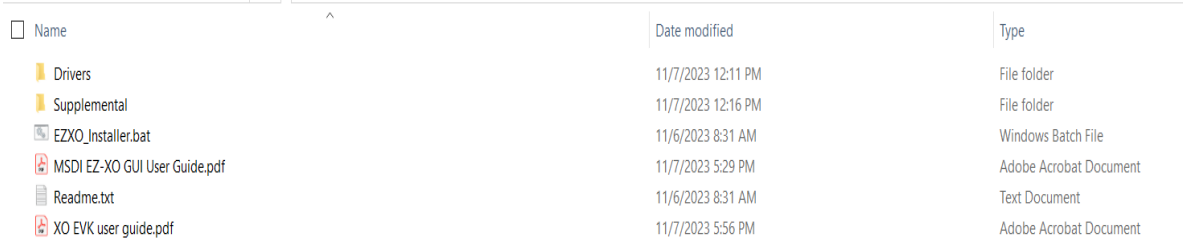


Figure 2: Contents of the EZ-XO directory.

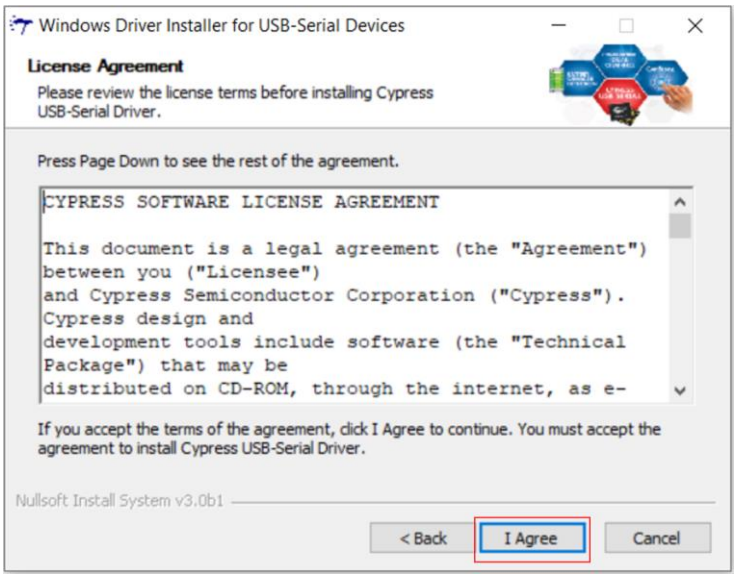
2.2 Installation

To start installation, run EZXO_Installer.bat

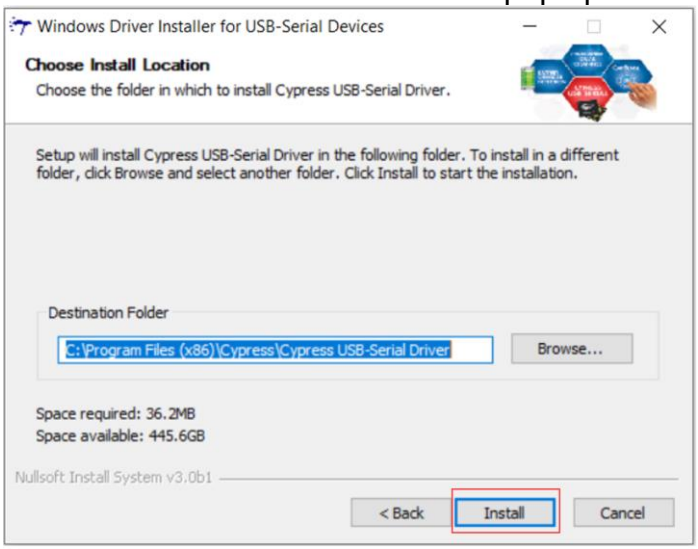
A warning window will pop up to request authorization to install Cypress USB-Serial Driver. Click Yes to continue.

Cypress USB-Serial Driver Installer window pops up. Click “Next >” button.

A License Agreement will pop up. Click “I Agree” button to continue.

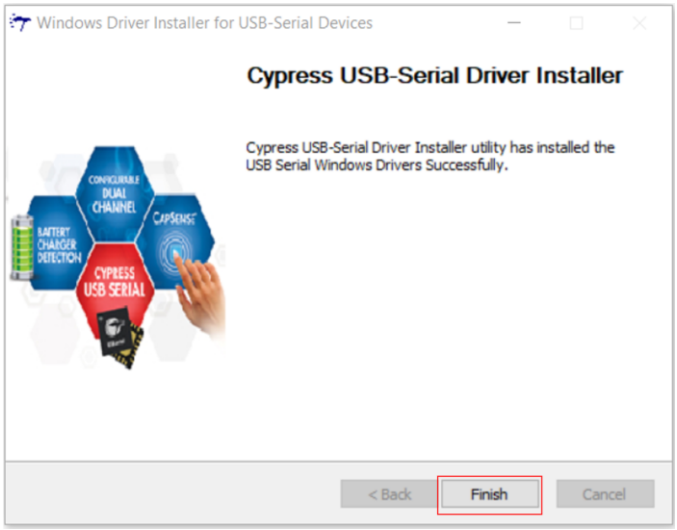


Choose Install location window will pop up. The default location will be fine.

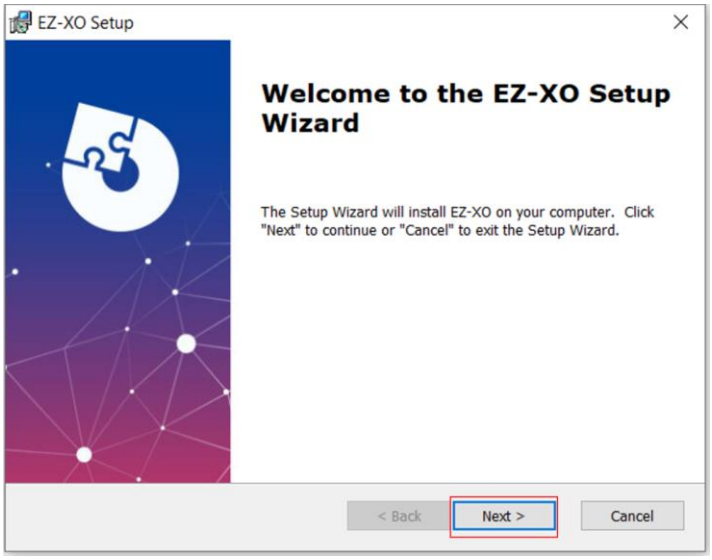


Click “Install” button.

When the installation is done, a Cypress USB-Serial Driver Installer window will pop up. Click “Finish” button to complete.

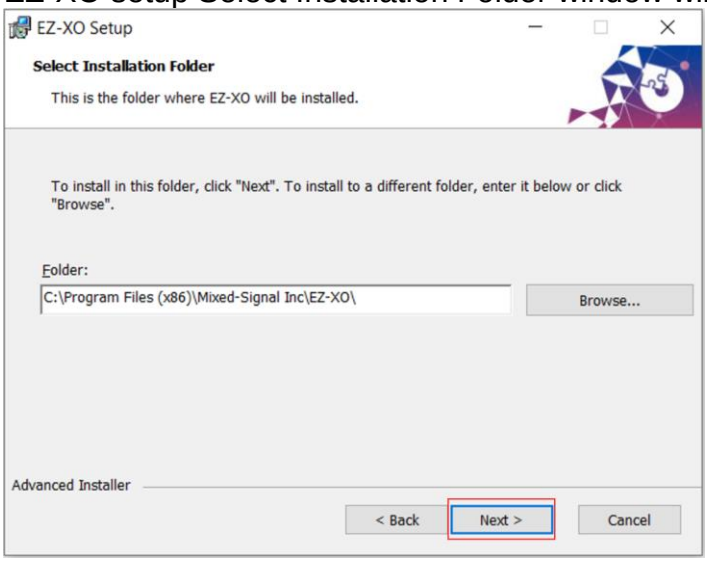


The Cypress USB-Serial Driver Installation is complete. The EZ-XO Setup Wizard will start.

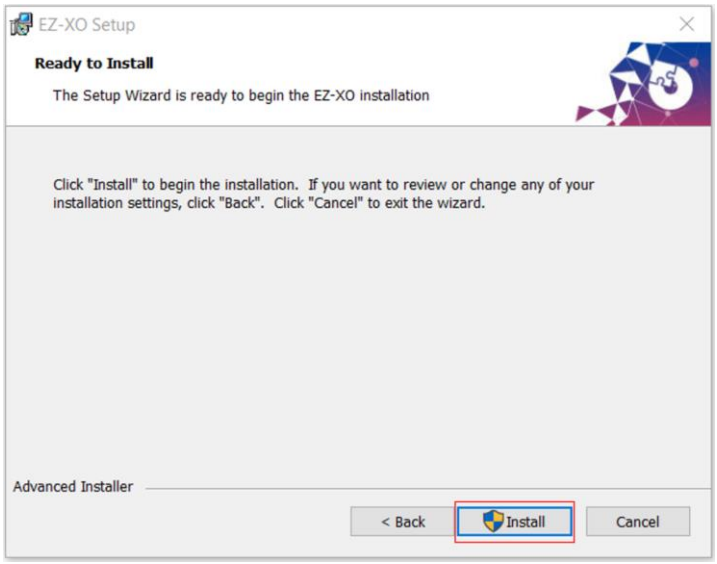


Click “Next >” button to continue.

EZ-XO setup Select Installation Folder window will pop up.

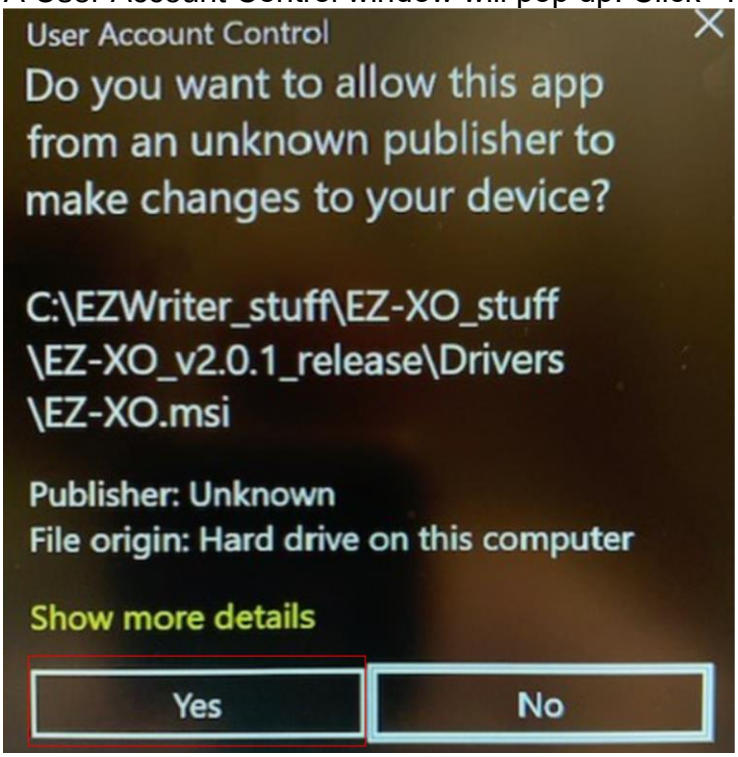


Use default or choose a new location. Click “Next>” button to continue. Ready to Install window will pop to give the user a last chance to make any change.

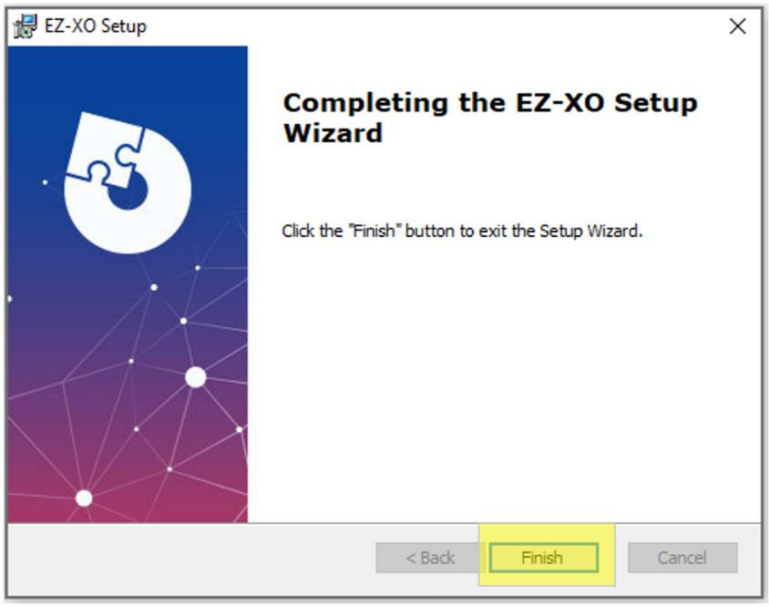


Click “Install” button to start the process.

A User Account Control window will pop up. Click “Yes” to confirm.



When the installation is done. EZ-XO Setup completed window will pop up. Click “Finish” to complete.

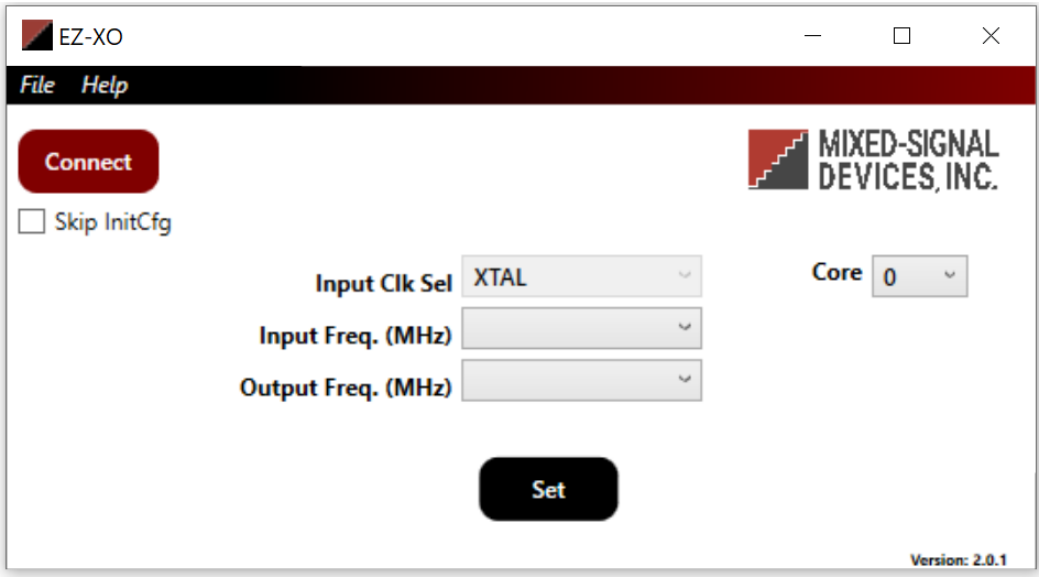


Congratulations! The installation is complete.

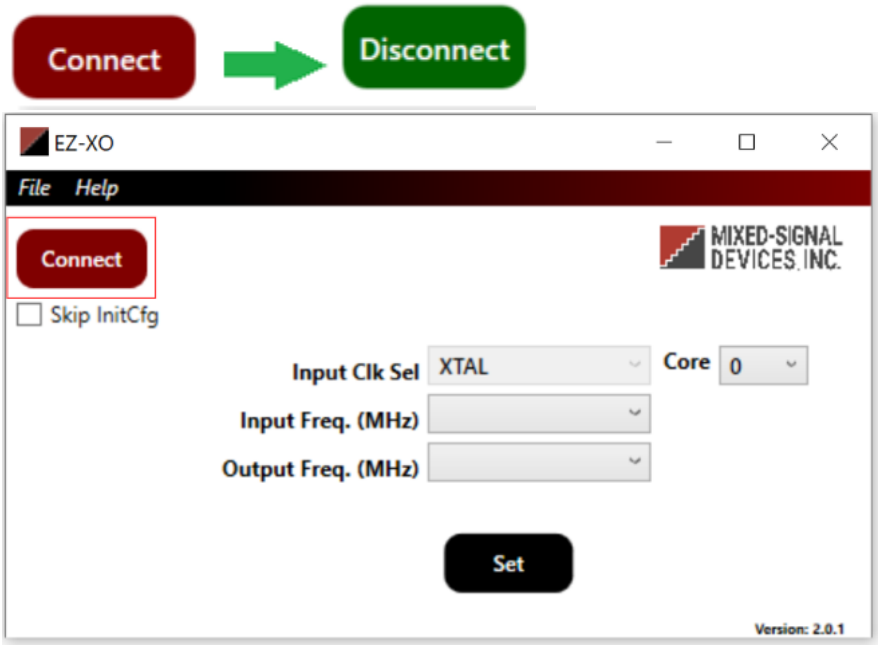
A EZ-XO Icon is added to your desktop.

3 EZ-XO GUI

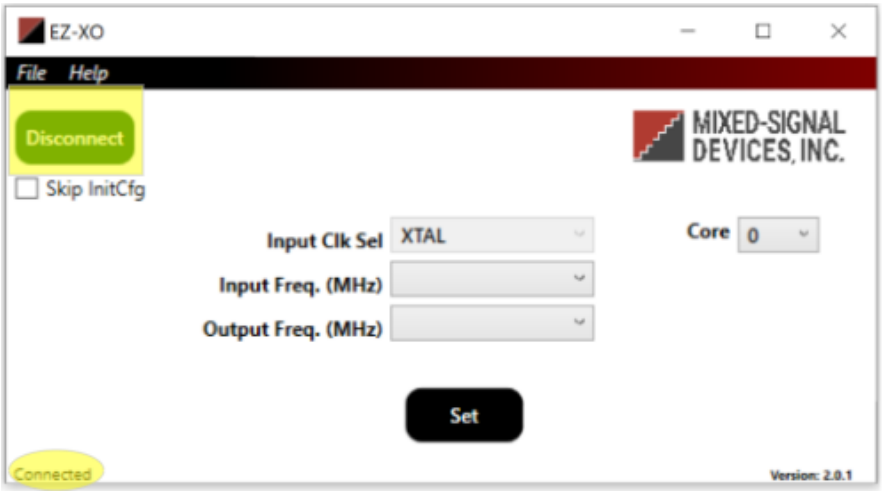
EZ-XO GUI is the MSDI proprietary tool to communicate with MSDI Ultra RMS Low Phase Noise XO EVK. Physically connect the EVK to a computer on which installation has been completed using a mini-USB cable.



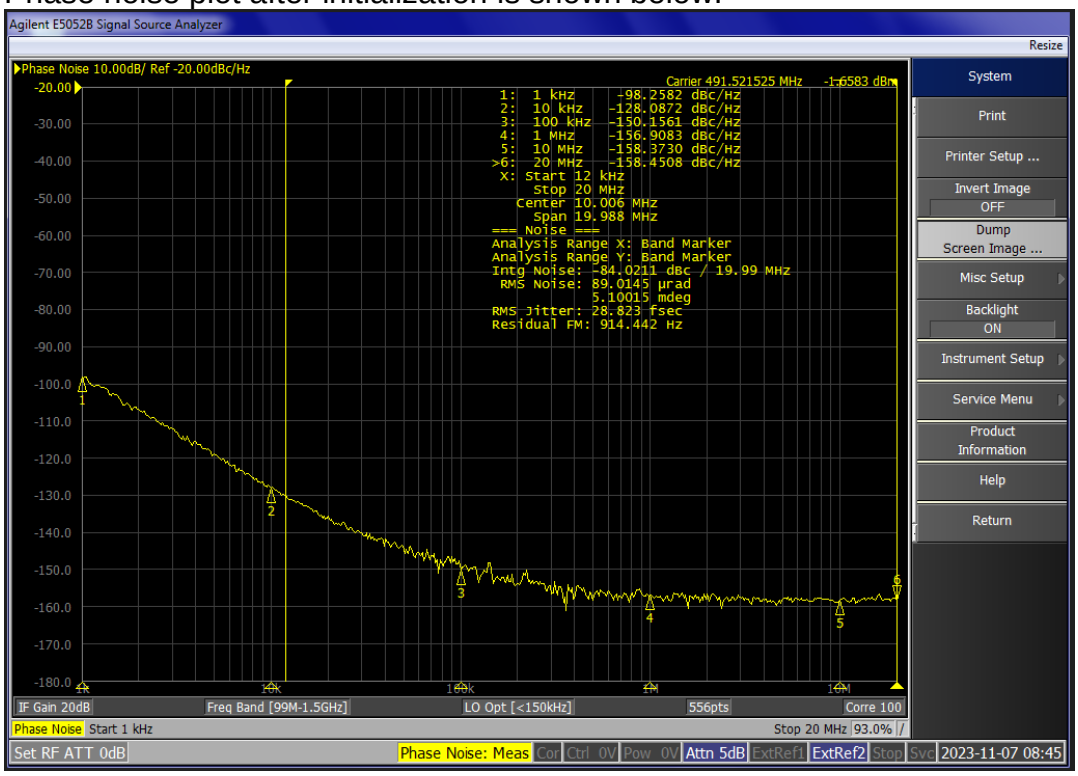
(1) **Connect (button):** Click Connect button



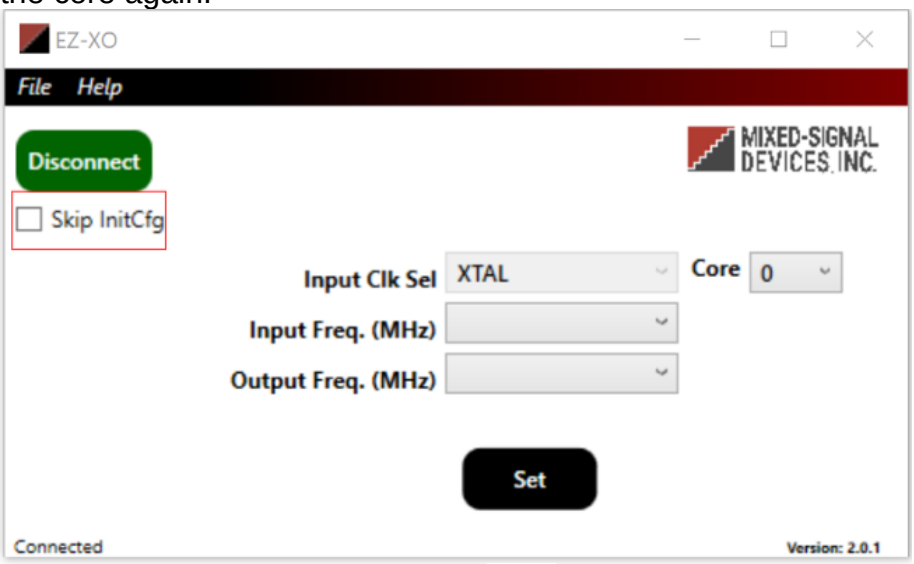
a. set up the communication link between GUI and EVK.
b. Initialize the EVK.
c. After the communication link is set, “Connect” button will change to “Disconnect” and bottom left corner will show connected.



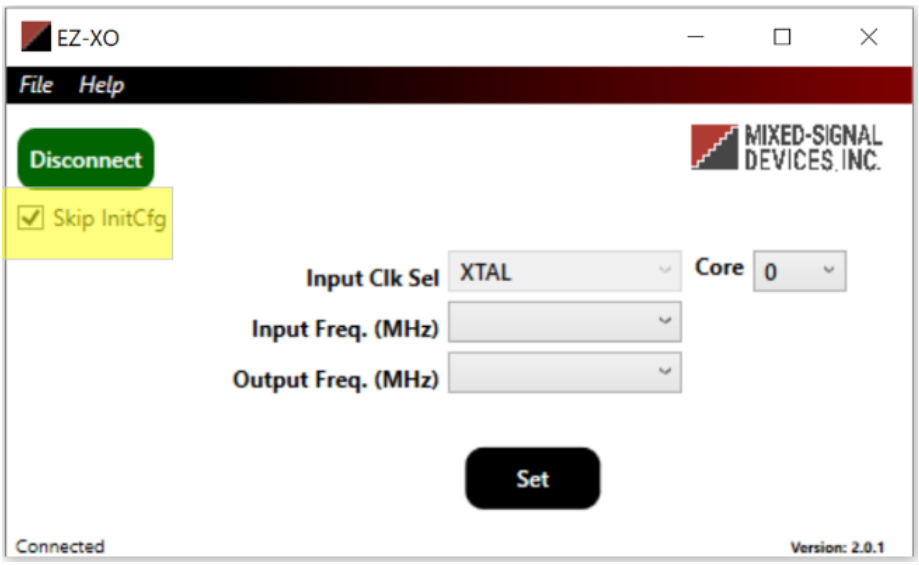
Phase noise plot after initialization is shown below.



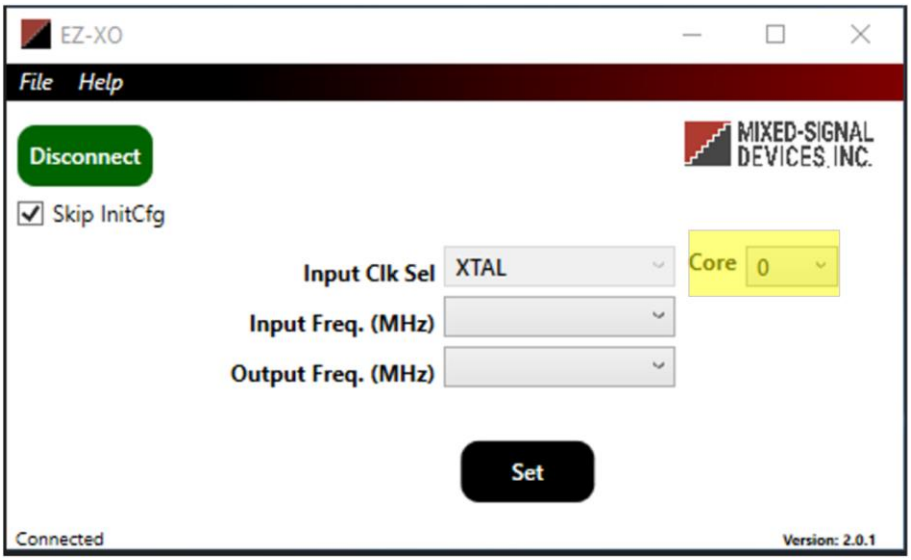
(2) **Skip InitCfg (button)**: Set this button to prevent the software initializing the core again.



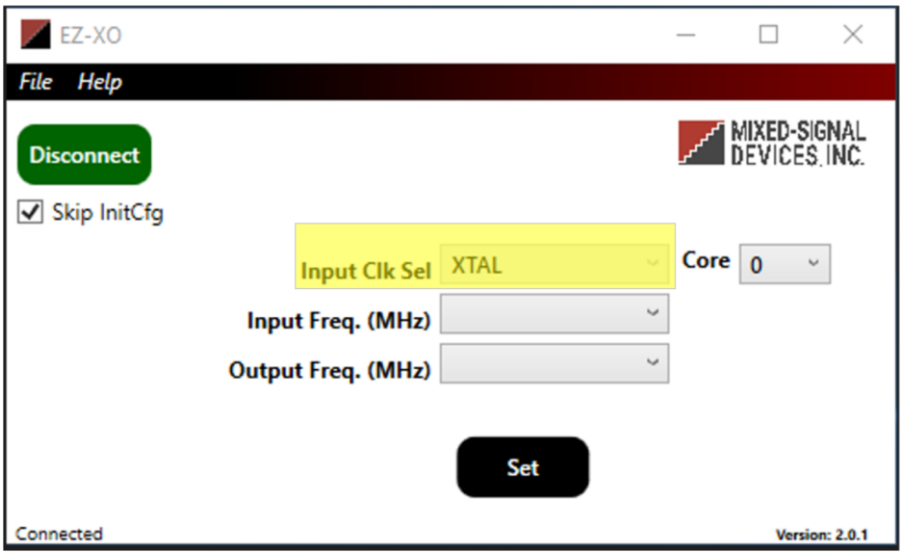
After Click the Skip InitCfg button, ☑ will show up:



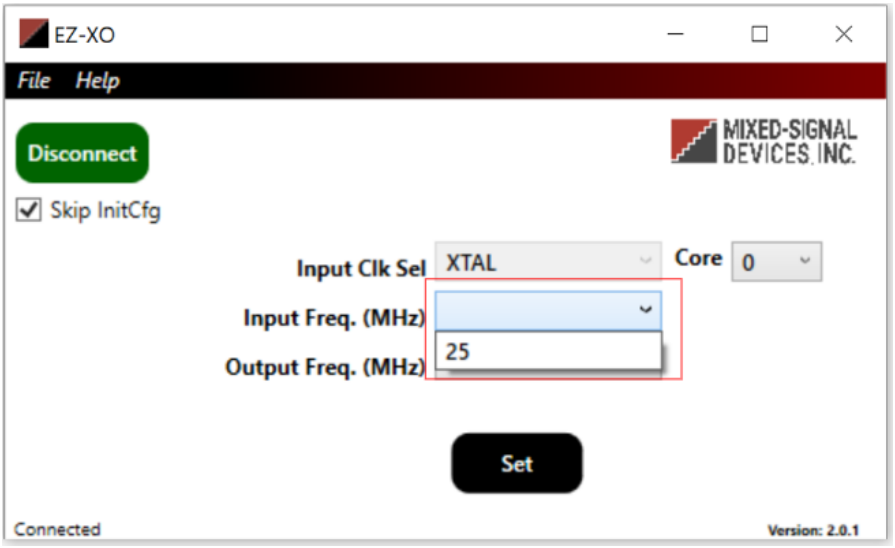
(3) **Core (menu):** show which core is available.



(4) **Input Clk Sel (menu box)**: XTAL input only.



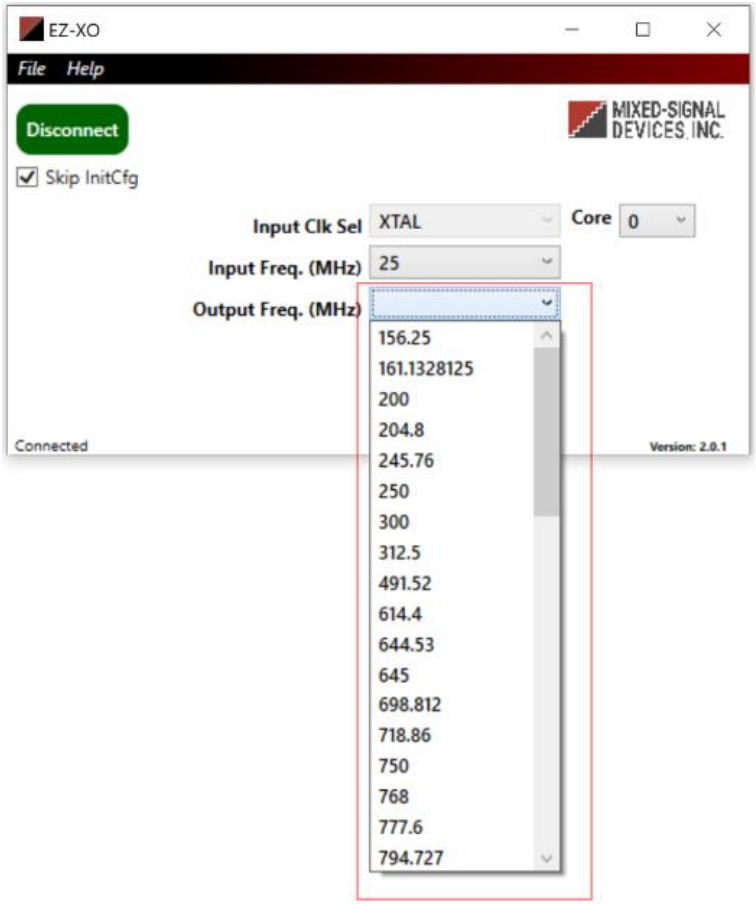
(5) Input Freq. (MHz): drop down menu-> select 25.0 (MHz)



(6) Output Freq (MHz) (Menu box):

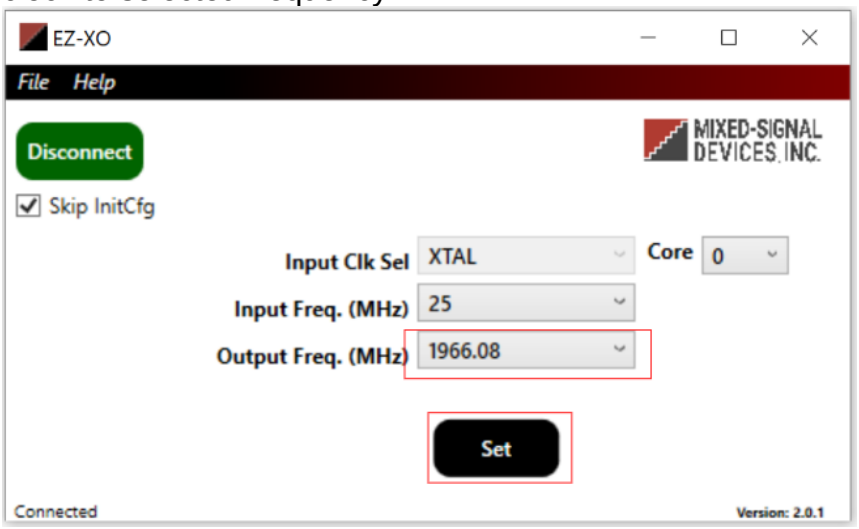
a. It is a menu box with preprogrammed frequencies. Select the frequency in the drop-down menu. Users select the frequency (MHz) in the drop-down menu. (e.g. 491.52, 983.04, 1474.56, 1966.08, …)

b. Accuracy of output clock is dependent on the accuracy of the XTAL reference frequency and on the accuracy of the test equipment. Using an external GPS 10MHz reference or equivalent is highly recommended for getting accurate measurements.



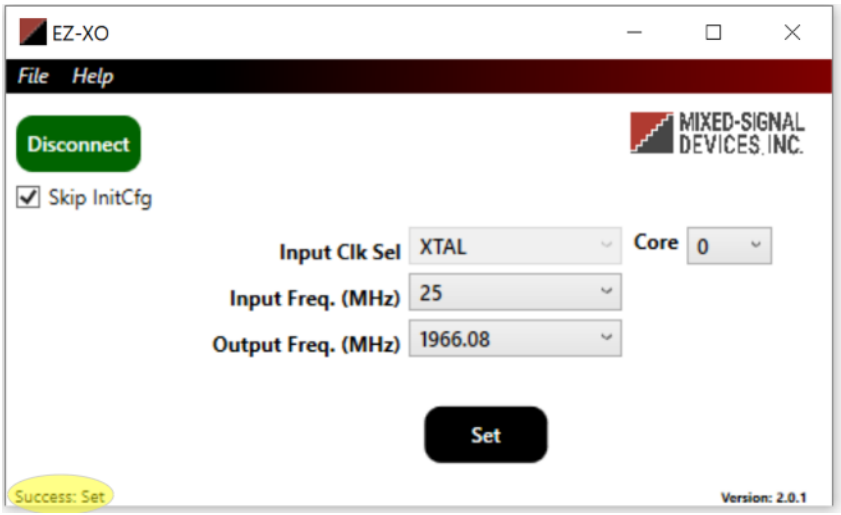
(7) Set (button):

Click “Set” button after making all required fields to set the output clock to selected frequency.



In the above example, Input Clk = XTAL; Input Freq. = 25MHz and Output Freq. = 1966.08MHz

After the Set button is clicked, Success Set (bottom left corner) indicates successful execution.



1966.08MHz phase noise plot is shown below after the Set is clicked.