

CDCE(L)9xx/CDCEx06 Programming Guide Using the Programming Evaluation Module



1. GENERAL

1.1. PURPOSE

To provide detailed instructions for programming CDCE706/906 and CDCE(L)9xx devices

1.2. SCOPE

Covers complete instructions for programming CDCE706/906 and CDCE(L)9xx devices

2. EQUIPMENT AND OTHER REQUIRED ITEMS

2.1. CDCE(L)9XX/CDCEx06 Programming Evaluation Module (EVM)

2.2. WINDOWS PC

2.3. USB 2.0 Cable – A Male to B Male

2.4. Software – ClockPro (Download instructions in Appendix)

2.5. Un-programmed IC samples (available from TI.com): CDCE706, CDCE906, or CDCE(L)9xx

2.6. Device setup file (.isf file – preferred, or .txt file) exported from respective software GUI:

2.6.1. **CDCE906/CDCE706.** TI Pro-Clock (Labview-based): <http://www.ti.com/lit/zip/scac073>

2.6.2. **CDCE(L)9xx.** TI ClockPro: <http://www.ti.com/tool/clockpro>

2.6.3. Contact TI Applications for help with Device Setup files (.isf): clock_support@list.ti.com

3. SETUP

3.1. Connect the Programming EVM to a Windows PC using the USB 2.0 Cable

3.2. Configure initial jumper settings. **NOTE: J1 is used to factory program the components on the board. Do not use this jumper**

3.2.1. Tie J2 to pins 1-2 to select the voltage supply of 3.3 V.

3.2.2. Tie J3 to pins 1-2 to apply the voltage to VDDOUT.

3.2.3. Tie J4 to pins 1-2 to apply 3.3V to VDDOUT.

3.2.4. Tie J5 to select device family to be programmed as follows:

- Tie pins 1-2 (upper pins) for CDCE(L)9xx family
- Tie pins 2-3 (lower pins) for CDCEx06 family

NOTE: Old versions of the board have an incorrect silkscreen placement. For CDCE(L)9xx devices, the jumper is tied to the upper two pins. For CDCEx06 devices, the jumper is tied to the lower two pins.

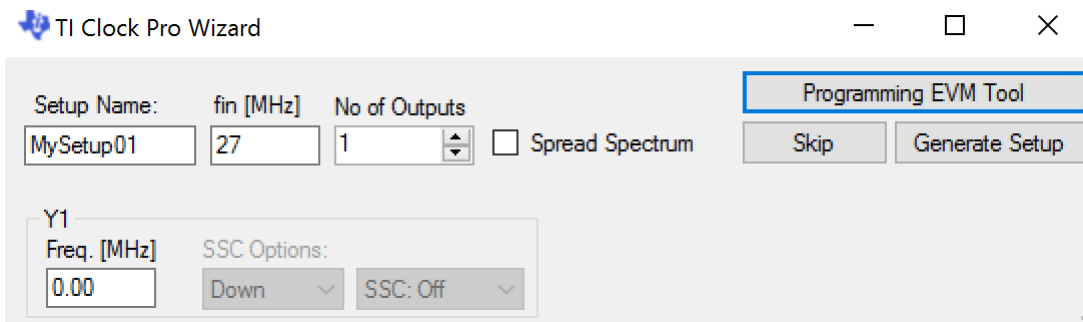
4. PROCEDURE

4.1. Windows will not recognize the USB Cable due to driver signature enforcement. To disable this, reboot the Windows PC in advanced startup.

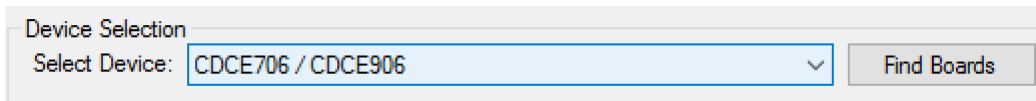
4.1.1. Getting to advanced startup of the PC is different depending on the version of Windows the PC is using. To find out how to disable the signed driver enforcement, type in “Disable Signed Driver Enforcement for Windows[Version #]” in Google and follow the instructions.

4.2. Launch ClockPro

4.3. Click “Programming EVM Tool”

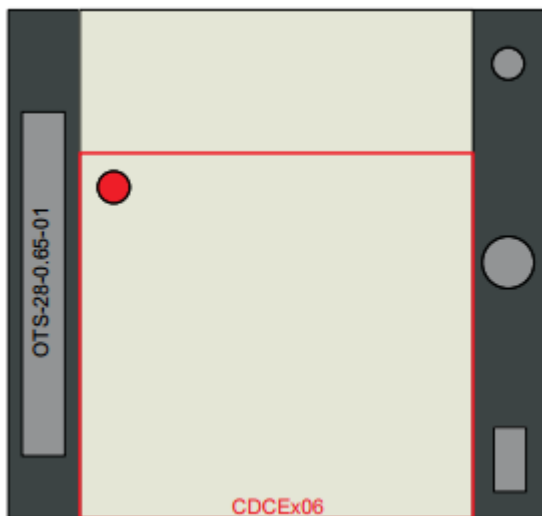


4.4. Under “Select Device”, select the target device. **CDCE706/906** will be used as an example in this programming guide.

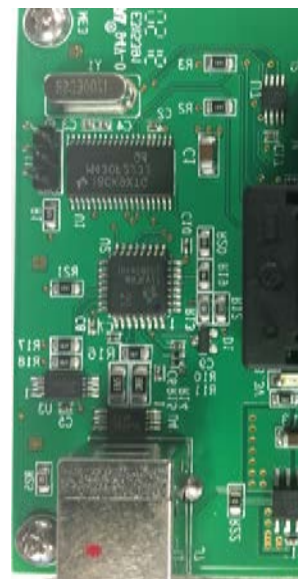


4.5. Place an un-programmed IC sample in the test socket as follows:

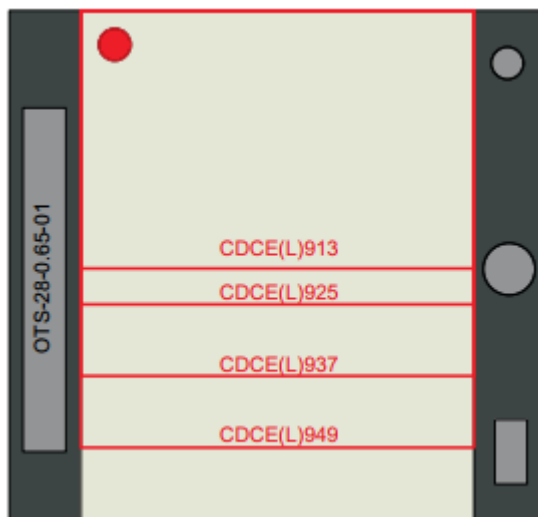
4.5.1. **CDCE706/906:** Position CDCEX06 chip on the **lower edge** of the socket with DUT pin 1 toward the pin 1 marking of the socket.



CDCEX06 Device Location in Socket



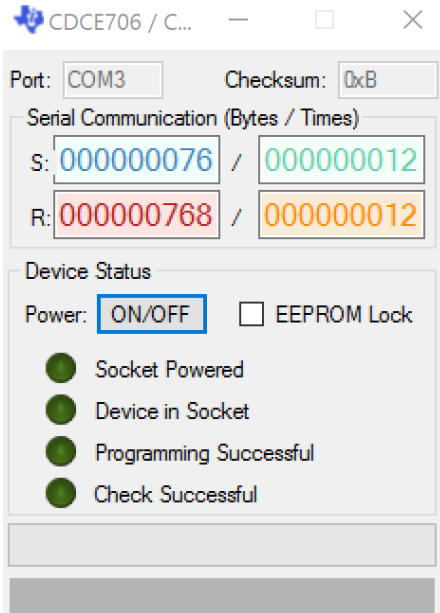
4.5.2. **CDCE(L)9xx:** Position CDCE(L)9xx on the **upper edge** of the socket with DUT pin 1 toward the pin 1 marking of the socket.



CDCE(L)9xx Device Location in Socket

NOTE: Power to the DUT socket pins will be automatically enabled and disabled during programming in Step 4.7, so the operator does not need to manage this in this procedure.

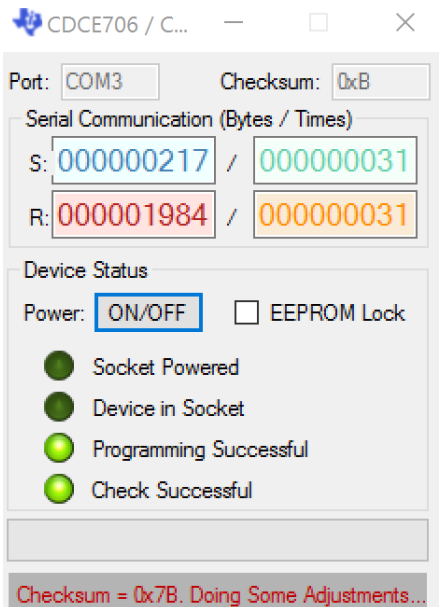
4.6. Click “Find Boards” – A second window should appear:



4.7. Click File → Load File – Pick .isf or .txt file to be programmed onto chip → Program Devices

4.7.1. DUT socket will be powered on & off automatically before & after programming.

4.8. After programming, the “Programming Successful” light and “Check Successful” Light should both be on to confirm that the programming was successful and matches the .isf/.txt file



- 4.9.** Programming done. Remove IC sample from the socket and place in an ESD safe tube.
- 4.10.** To program another un-programmed IC sample, loop back to Step 4.3 and repeat procedure.

5. **APPENDIX**

5.1. Instructions to Download and install ClockPro (One Time Step)

- 5.1.1. Go to www.ti.com/tool/clockpro
- 5.1.2. Download the software under the Software section
- 5.1.3. Extract the .zip file and run the .exe file
- 5.1.4. Follow the instructions in the launcher to install