

Oak Sensors Programming Instructions

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1. Introduction

This manual describes how to program an Oak Sensors. The adapter, the schema for the test adapter and the work flow is valid for all types of Oak sensors.

There are two versions for the test adapters themselves:

- One adapter for Oak Sensor types with the mechanical dimensions 47mm x 12mm.
- One adapter for Oak Sensor types with the mechanical dimensions 48mm x 48mm.

All Oak Sensors with the same mechanical dimensions have the test pads on the same place.

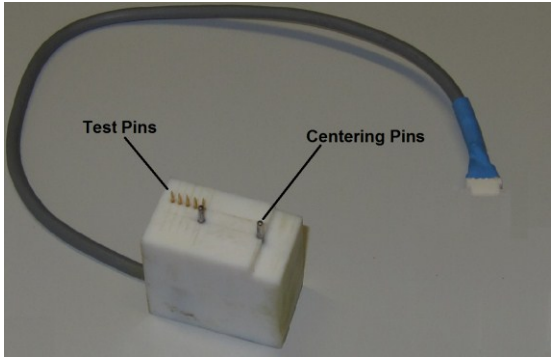
2. Material

To program Oak Sensors the following material must be present:

2.1. Iris Test Material delivered by Toradex AG

	<p>CY3217–MiniProg1</p> <p>The kit includes the adapter with the USB cable.</p> <p>The kit can be ordered at CYPRESS.</p> <p>www.cypress.com/?rID=37459</p> <p>Required quantity: 1</p>
	<p>PSoC Programmer</p> <p>The Programmer can be downloaded from CYPRESS.</p> <p>www.cypress.com/?rID=38050</p> <p>Required quantity: 1</p>

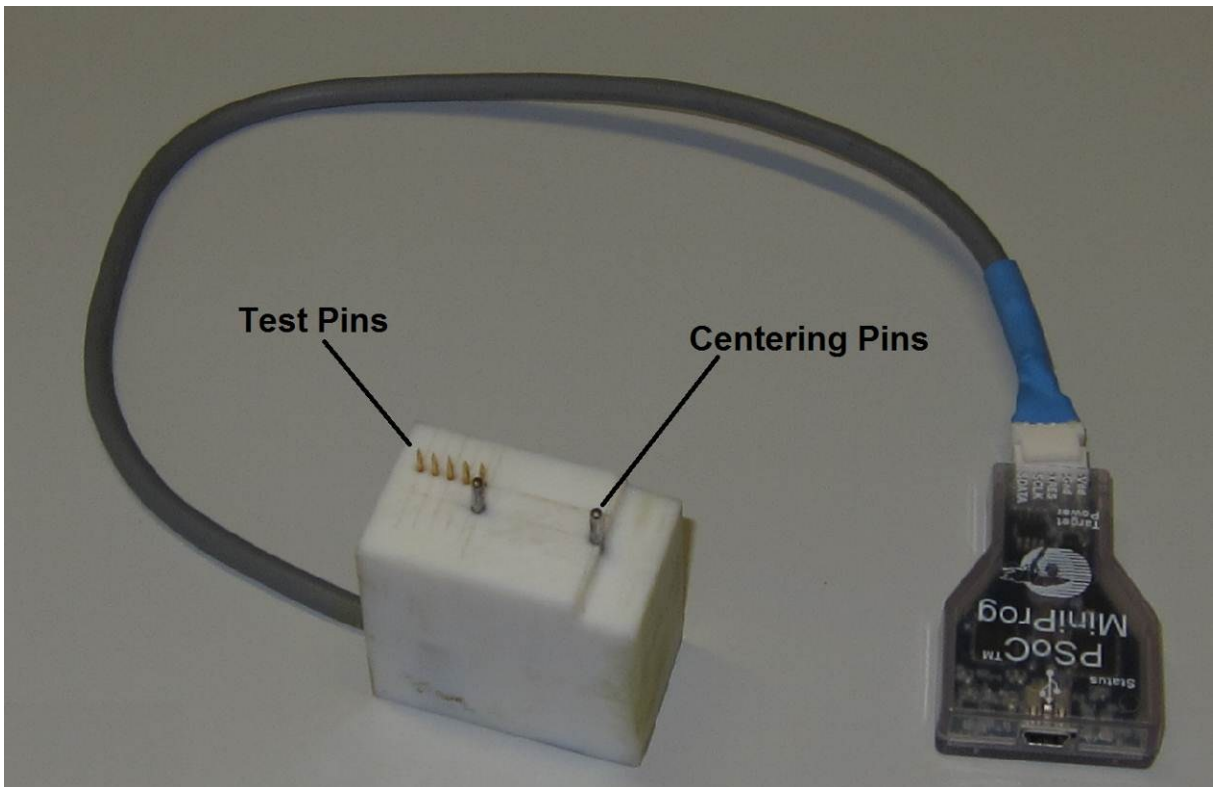


	<p>Programing Adapters with cable</p> <p>Must be build.</p> <p>See chapter 3 "Programming Adapter".</p> <p>Required quantity:</p> <ul style="list-style-type: none">1 for 47mm x 12mm size sensors1 for 48mm x 48mm size sensors
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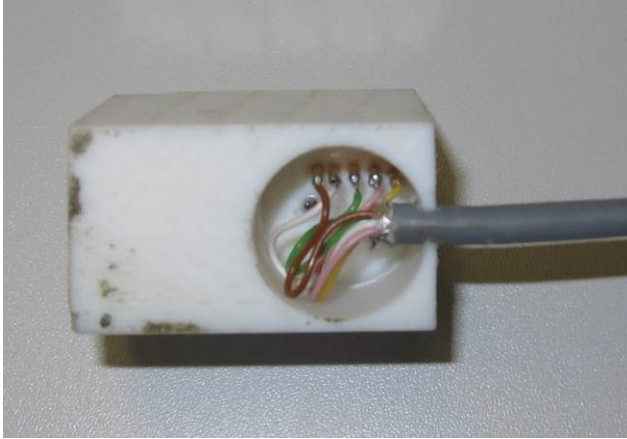
3. Programming Adapters

The shown example is not very accurate for a large amount of sensor to program. Maybe, there there is a better solution for connecting the "PsOC MiniProg" and fix the Oak Sensor during the program cycle time (~20s).

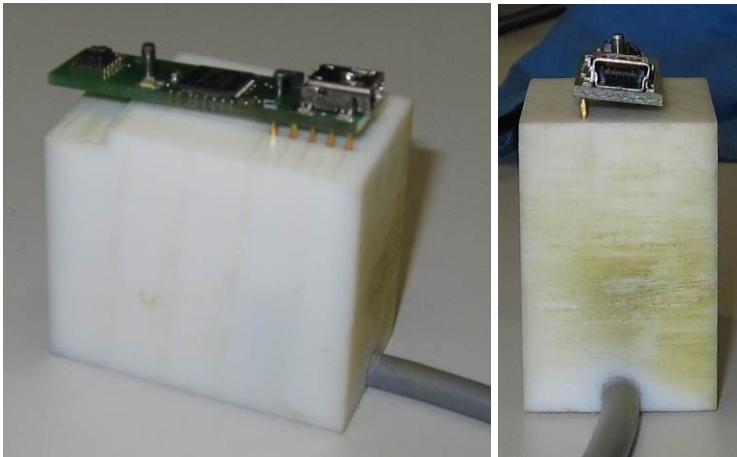
Examples of a Programing Adapter



Front side



Back side

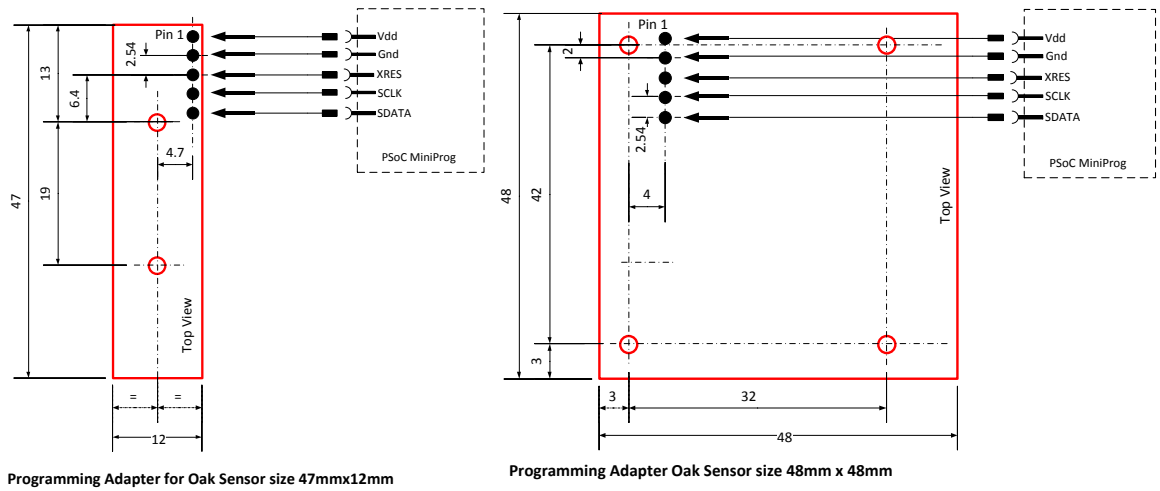


With mounted Oak Sensor.

Because the holes for the center pins are a little bigger and the pogo pins, the Oak Sensor blocks, and it can be programmed without holding it.



3.1. Schema of the Programming Adapter

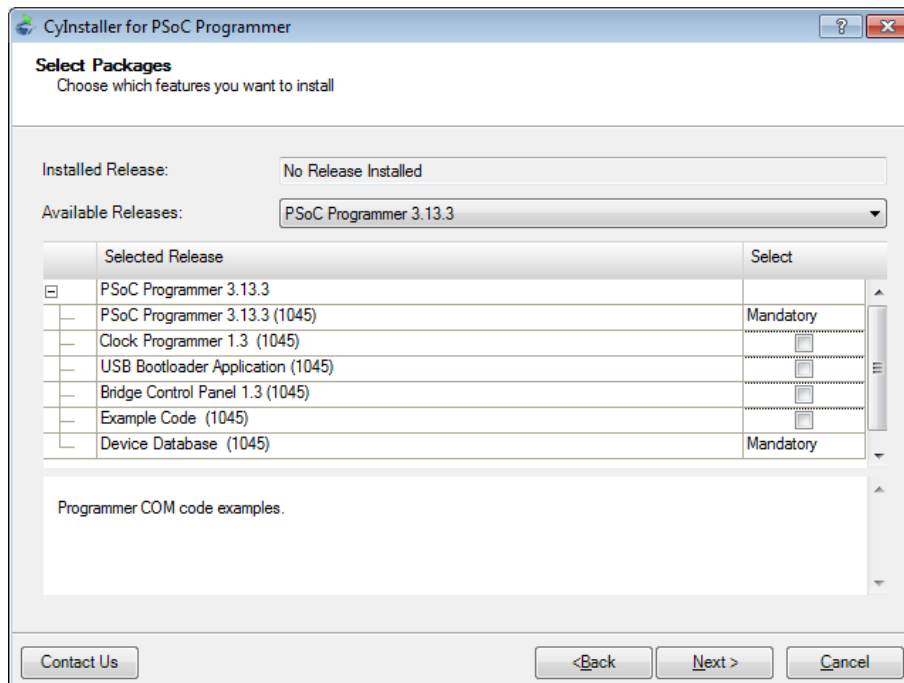


4. Installation of Programming Software

Download the test program „PSoC Pogrammer“ from the CYPRESS home page

<http://www.cypress.com/?rID=38050>

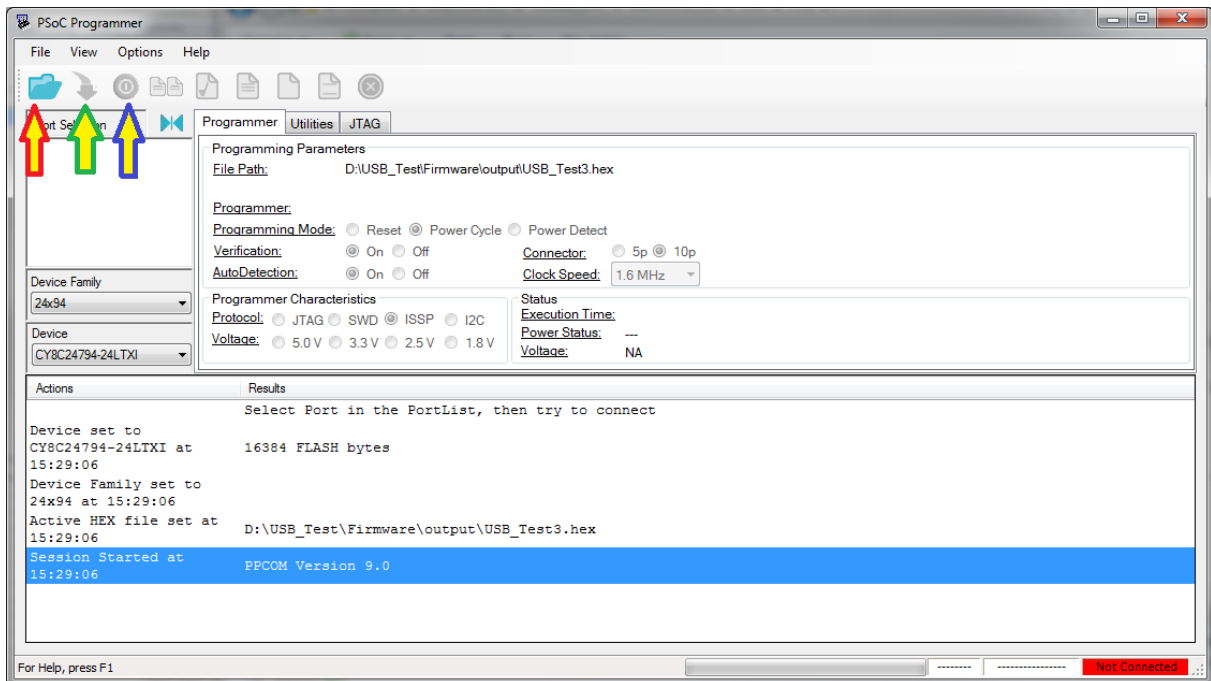
and start the setup with no additional option (see below).





5. Program the flash of an Oak Sensor

Start the program “PSoC Programmer 3.xx.x” (see below)



After the start these settings must be done once:

- Set the “Device Family” to: **24x94**
- Set the “Device” to: **CY8C24794-24LTXI**
- Control the rest of the settings according to screen shot above
- Load the Hex-File “Oak_x..x_Firmware_Rnnn.hex” (see red/yellow arrow)
x...x is the Oak type (e.g. “P”, “10V”, “Orient” etc.)
Rnnn Revision number

Programming Cycle for every Oak Sensor

- Put the Oak sensor in the programming adapter
- Turn on the power (see blue/ yellow arrow)
- Start the programing cycle (see green /yellow arrow)
- After the programing cycle is finished the program put the power of the sensor off.
- Replace the Oak-Sensor and redo the programing cycle with the new one.



Revision History

Date	File Name	Initial	Changes
2011-11-28	Oak_Programming_R1_0.pdf	ub	Initial release
2011-12-06	Oak_Programming_R1_0_20111206.doc	ub	Correct some spellings
2011-12-12	Oak_Sensors_Programming_Instruction_2011-12-12	ub	Rename file, correct some spellings
2011-12-14	Oak_Sensors_Programming_Instruction_2011-12-14	ub	Correct some spellings

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