Oak Sensors
Programming Instructions

Contents

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 a two version for the test adapters itself:

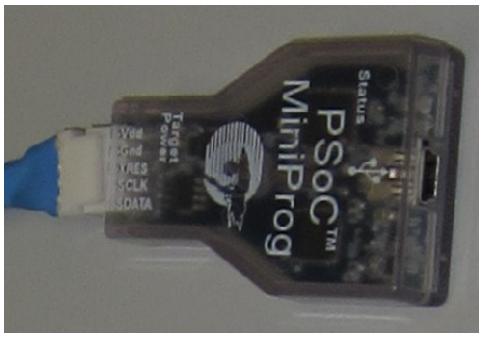
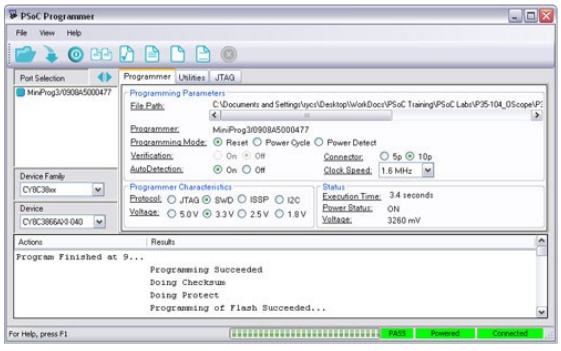
- One adapter for Oak Sensor types with the mechanical dimensions 47mm x 12mm.
- One adapter for Oak Sensor types with the mechanical dimensions 48mm x 48mm.

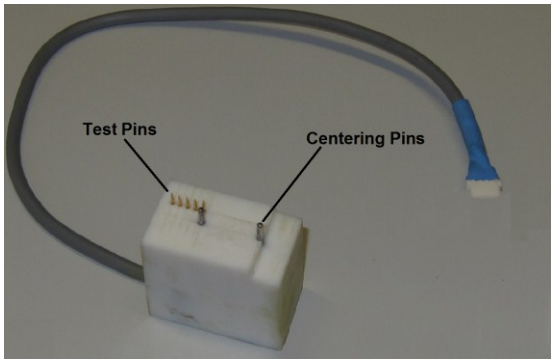
All Oak Sensors with the same mechanical dimensions have the also the test pads on the same place.

2. Material

To program Oak Sensors the following Material must be present:

2.1. Iris Test Material delivered by Toradex AG

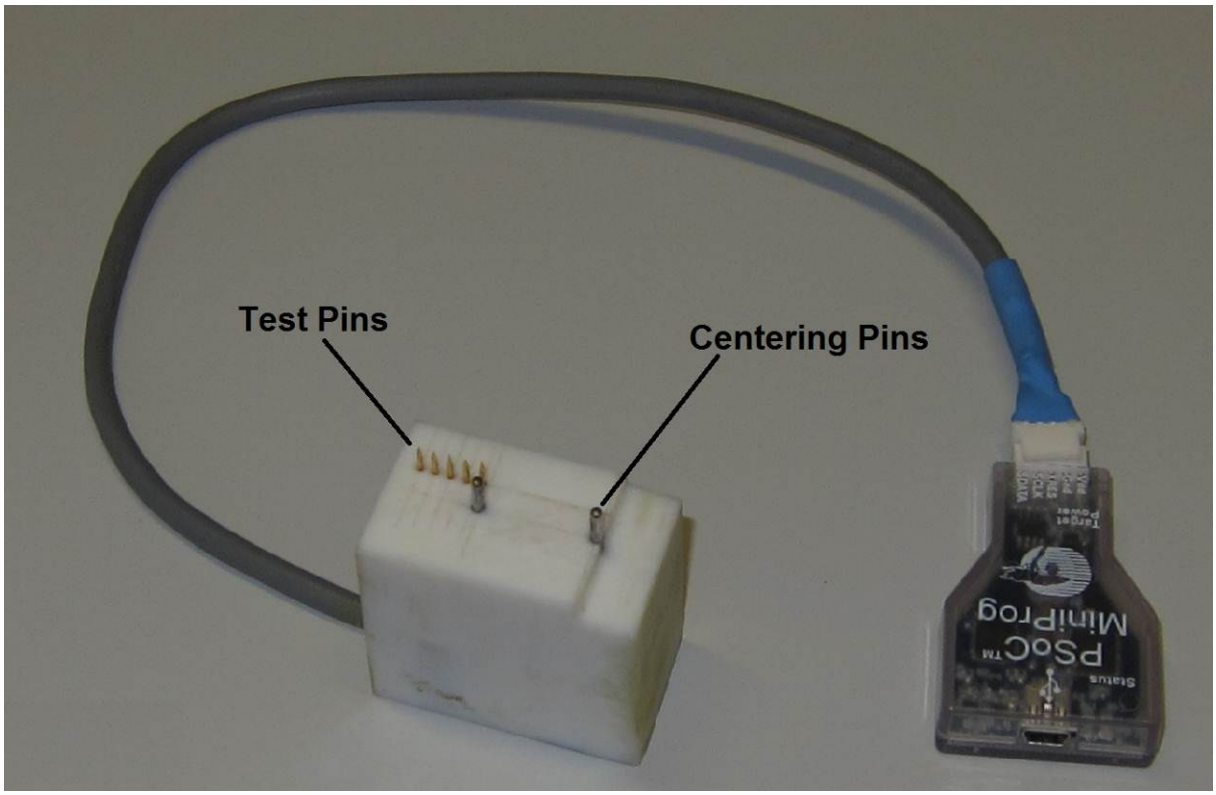
	**CY3217-MiniProg1** The kit includes the adapter with the USB cable. The kit can be ordered at CYPRESS. www.cypress.com/?rID=37459 Required quantity: 1
	**PSoC Programmer** The Programmer can be downloaded from CYPRESS. www.cypress.com/?rID=38050 Required quantity: 1

	**Programing Adapters with cable** Must be build. See chapter 3 “Programming Adapter”. Required quantity: 1 for 47mm x 12mm size sensors 1 for 48mm x 48mm size sensors

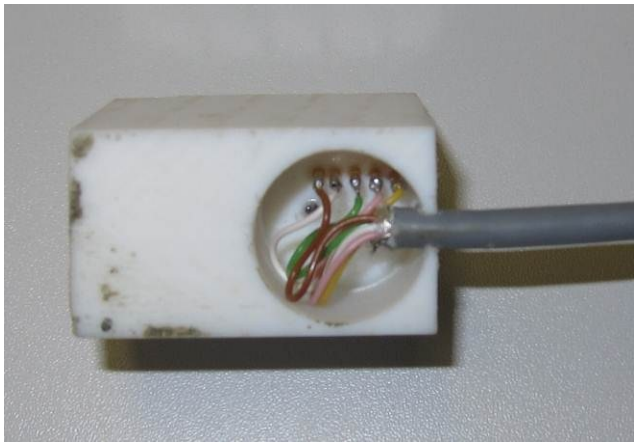
3. Programming Adapters

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).

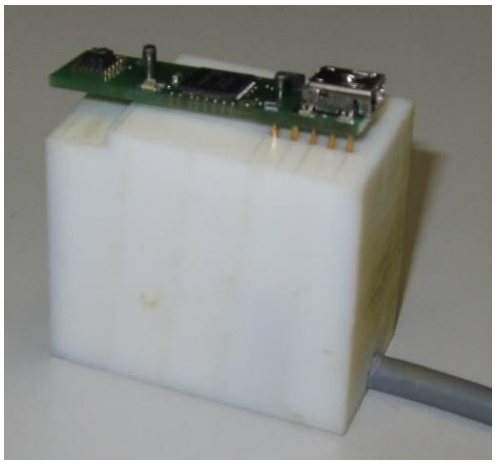
Examples of a Programing Adapter



Front side



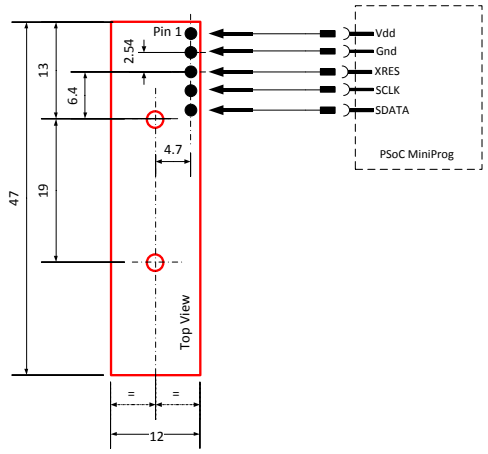
Back side



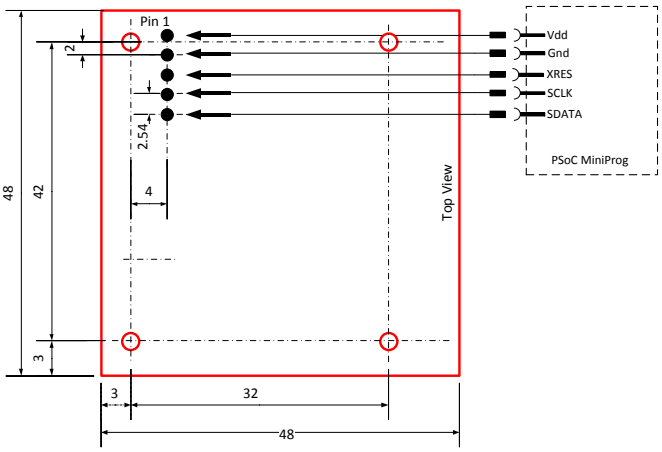
With mounted Oak Sensor.

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

3.1. Schema of the Programing Adapter



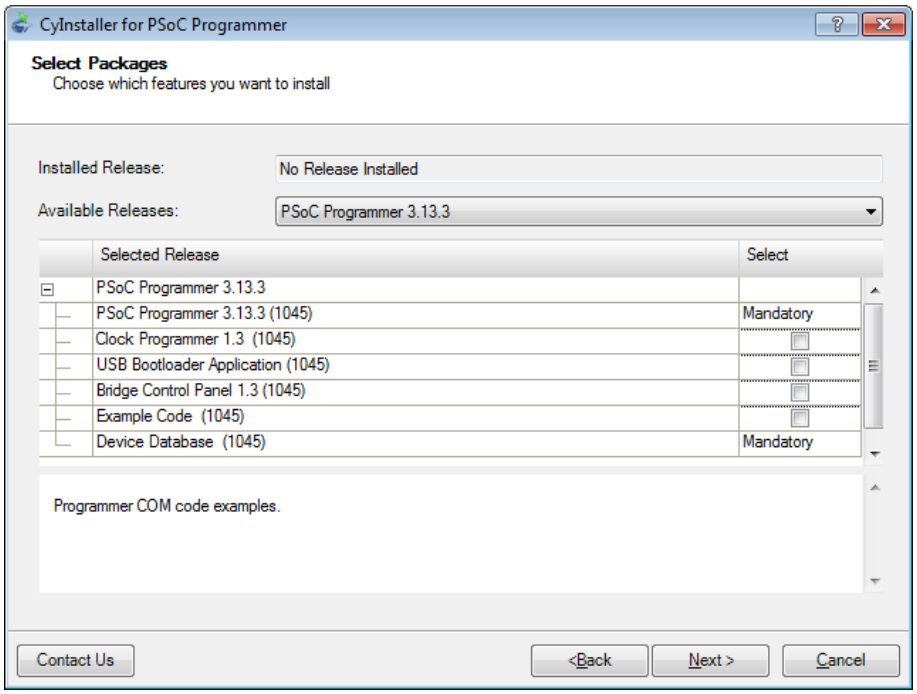
Programming Adapter for Oak Sensor size 47mmx12mm



Programming Adapter Oak Sensor size 48mm x 48mm

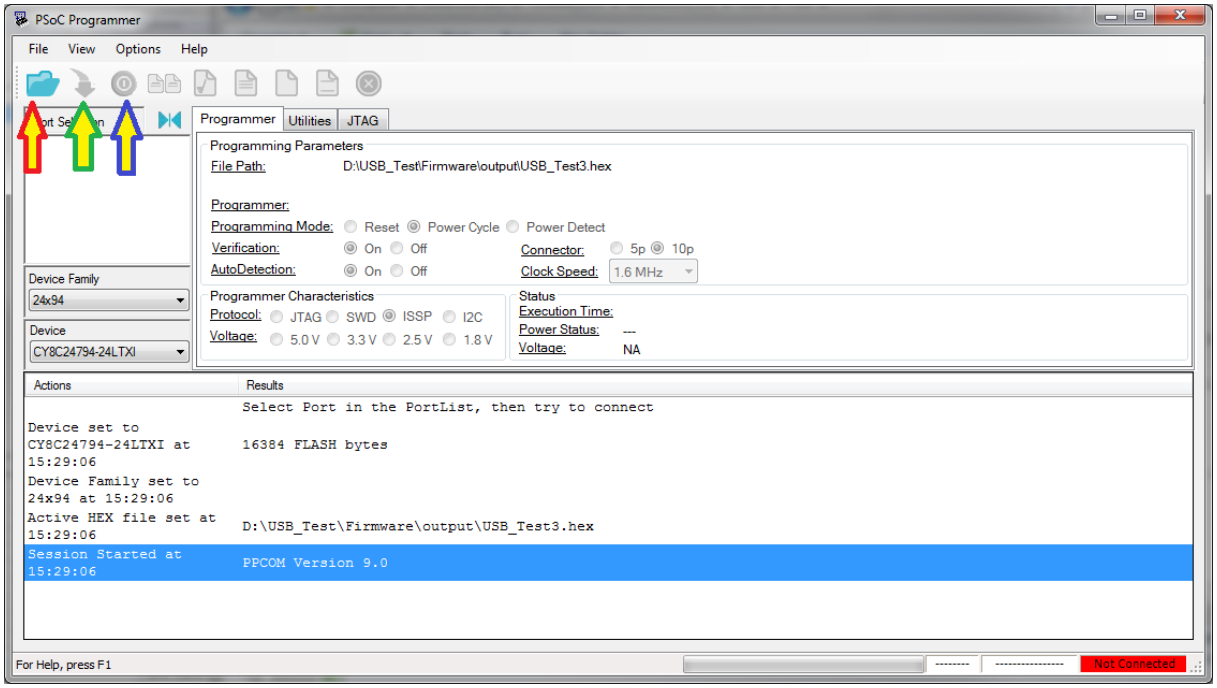
4. Installation of Programing Software

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	Fie 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