

Getting started with the OAK-D camera in Touchdesigner

The OAK-D Pro camera is an IR depth camera compatible with both Mac and Windows, making it a great alternative to the Kinect. This guide will show you how to set it up in TouchDesigner.

Connect the camera to your laptop and launch Touchdesigner. From the Operators panel find the **OAK Device CHOP** and *Activate* the chop, refresh the sensor list to find your camera. Click *Initialize* and wait for it to mark "Ready" (1) then press *Start*. This CHOP runs the code in **Text DAT** to capture RGB data from the camera, using the DepthAI library. To display this data, from the Operators panel find the **OAK Select TOP**. Open its parameter window, drag and drop **your CHOP** into the OAK Select TOP parameter 'OAK Device CHOP', then click on the arrow next to the *Stream* parameter and select 'rgb'. Your camera should now be running!

```
import depthai as dai

def onInitialize(oakDeviceOp, callCount):
    return 0

def onInitializeFail(oakDeviceOp):
    parent().addScriptError(oakDeviceOp.scriptErrors())
    return

def onReady(oakDeviceOp):
    return
    []

def onStart(oakDeviceOp):
    return

def whileRunning(oakDeviceOp):
    return

def onDone(oakDeviceOp):
    return

def createPipeline(oakDeviceOp):
    # Create pipeline
    pipeline = dai.Pipeline()
```

```
# Define sources and outputs
monoLeft = pipeline.create(dai.node.MonoCamera)
monoRight = pipeline.create(dai.node.MonoCamera)
depth = pipeline.create(dai.node.StereoDepth)
xout = pipeline.create(dai.node.XLinkOut)

# Set stream name
xout.setStreamName("disparity")

# Properties
# Set the resolution for the mono cameras to 1280x800 (800P)
monoLeft.setResolution(dai.MonoCameraProperties.SensorResolution.THE_800_P)
monoLeft.setBoardSocket(dai.CameraBoardSocket.LEFT)
monoRight.setResolution(dai.MonoCameraProperties.SensorResolution.THE_800_P)
monoRight.setBoardSocket(dai.CameraBoardSocket.RIGHT)

# Configure depth node
depth.setDefaultProfilePreset(dai.node.StereoDepth.PresetMode.HIGH_DENSITY)
depth.initialConfig.setMedianFilter(dai.MedianFilter.KERNEL_7x7)
depth.initialConfig.setConfidenceThreshold(240)
depth.setLeftRightCheck(True)
depth.setExtendedDisparity(False)
depth.setSubpixel(False)

# Linking
monoLeft.out.link(depth.left)
monoRight.out.link(depth.right)
depth.disparity.link(xout.input)

return pipeline
```

Revision #5

Created 10 June 2024 11:42:30 by Marta Ilacqua

Updated 30 September 2024 14:37:19 by Marta Ilacqua