Extration of csv files from voxel viewer

Version: v1.0

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The document shows step by step procedure to extract csv files from Voxel viewer.

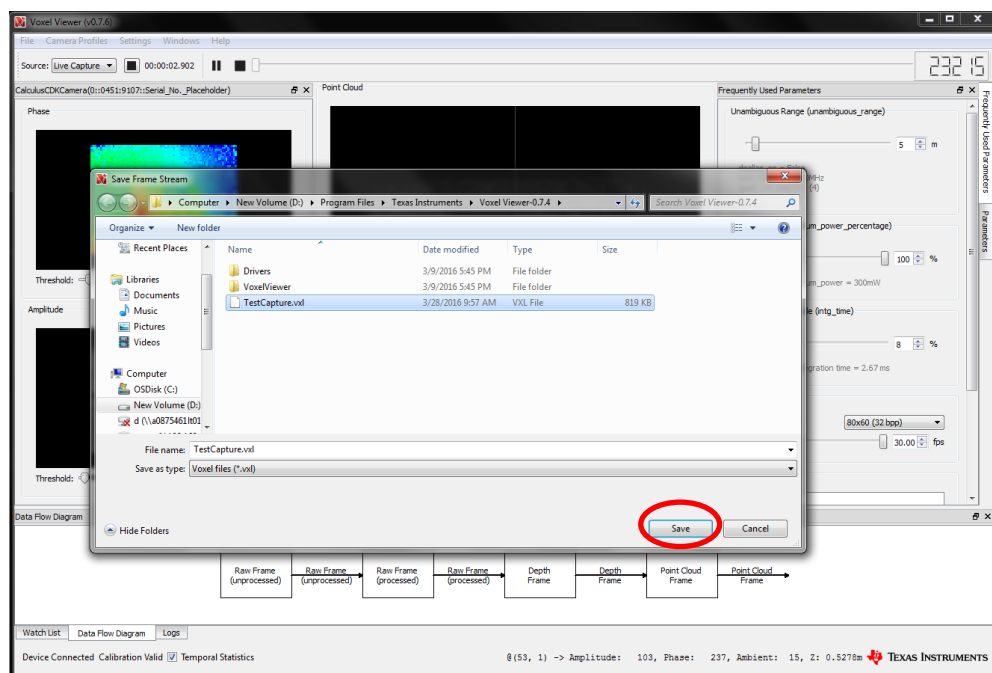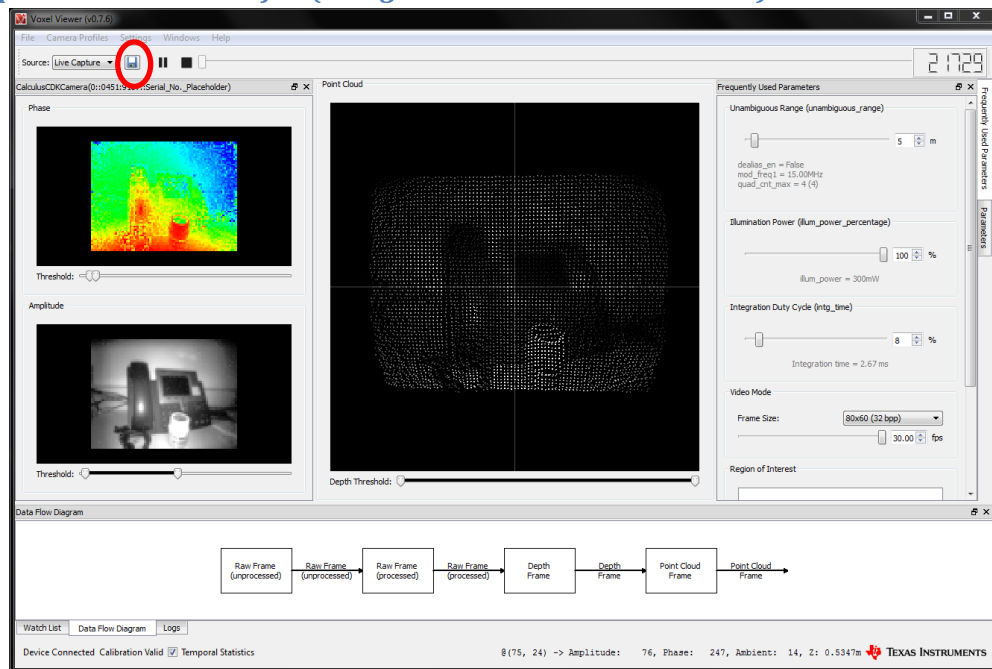# Prerequisites:

1.) TI 3D TOF CDK streaming data with Voxel Viewer (0.4.0) Document valid only with specified version of voxel viewer

2.) Python 2.x with numpy package or c/c++ compiler

or This document can be used as reference to code in own language

Step 1 Capture scene to a .vxl file (Using voxel viewer Save Function)

Step 2 Export .vxl file to required raw stream file (.bin file)

File->Raw Stream Export

Select Captured .vxl file

Select Data Type as per Table 1. Select Output file name with .bin extension.

Run Export

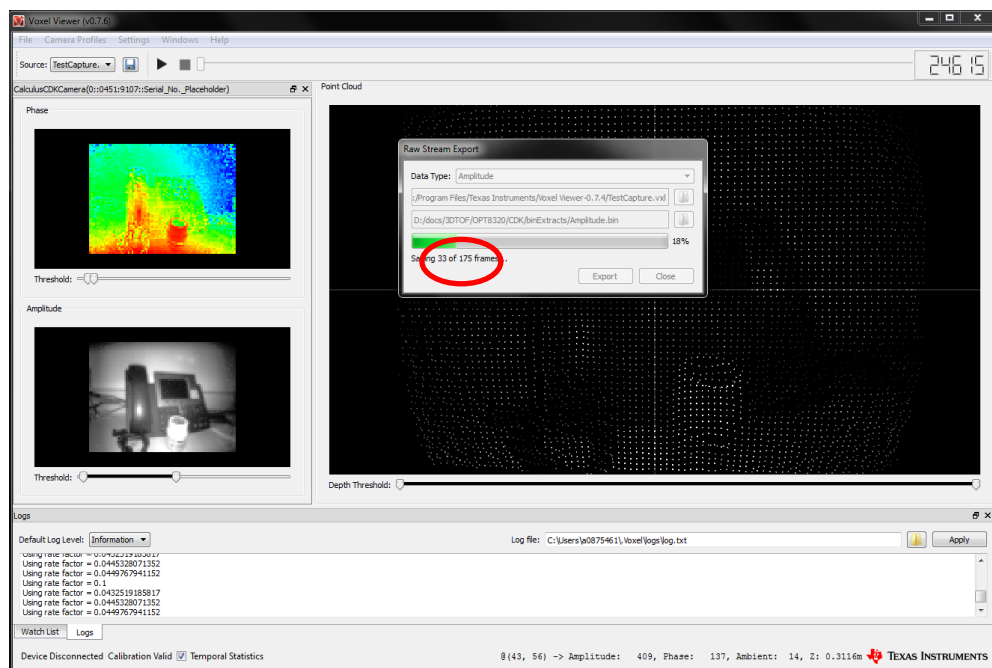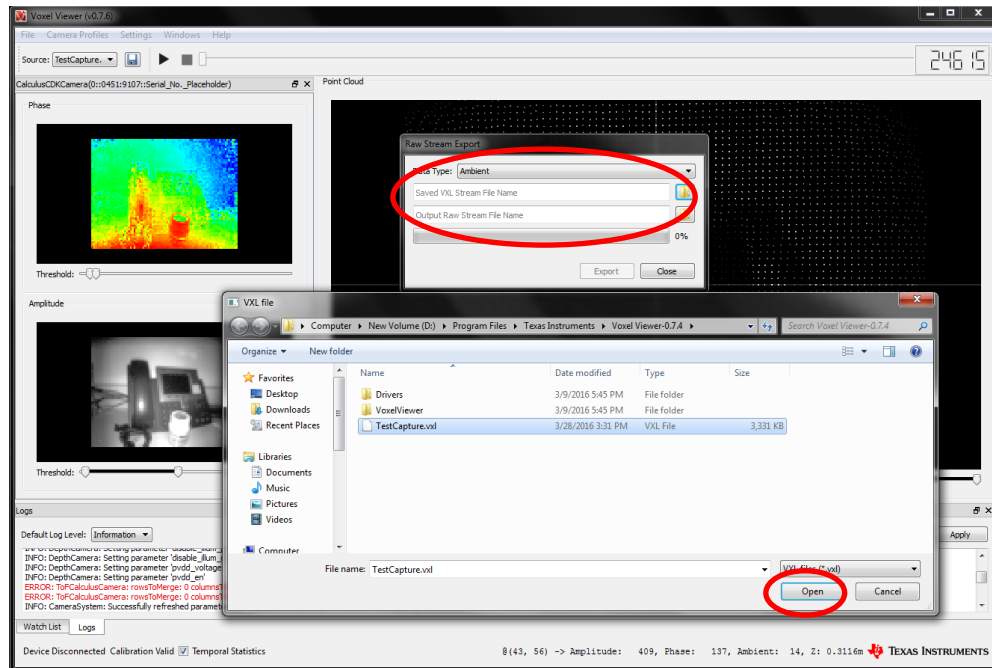Note the number of Frames in the .vxl file as highlighted in picture

Table 1 Raw Stream Table

Raw Stream	C/C++ Data Type	Numpy/Python data type	Number of Bytes per quantity	Number of Quantities	Description of Quantities
Ambient	char	uint8	1	1	4 bit Ambient data
Amplitude	unsigned short int	uint16	2	1	12 bit Amplitude data
Amplitude Avg	unsigned short int	uint16	2	1	12 bit Amplitude Average data
Amplitude Std	unsigned short int	uint16	2	1	12 bit Amplitude Standard deviation data
Depth (Z)	float	float32	4	1	Depth (Z) data in Cartesian coordinates
Depth Avg	float	float32	4	1	Depth (Z) Average data in Cartesian coordinates
Depth Std	float	float32	4	1	Depth (Z) Standard Deviation data in Cartesian coordinates
Distance	float	float32	4	1	Distance data in polar coordinates
Phase	unsigned short int	uint16	2	1	12 bit Phase data
Phase Avg	unsigned short int	uint16	2	1	12 bit Phase Average data
Phase Std	unsigned short int	uint16	2	1	12 bit Phase Standard deviation data
Point Cloud	float	float32	4	4	X : Cartesian coordinates position Y: Cartesian coordinates position Z: Cartesian coordinates position I: Intensity (graded by Amplitude)

Step 3 Extract csv file from .bin file using either C/C++ or python using example source code given below

Python: Refer to attached python code vxnBin2CSVExtractor.py

C/C++: Refer to attached C code vxnBin2CSVExtractor.c