Blink Overdrive Plus Software Development Kit (SDK)

Documentation for the SDK can be found in the user manual at:
C:\Program Files\Blink Overdrive Plus\PCIe User Manual.pdf

Files to Link to:

Blink_C_wrapper (.dll, .h, and .lib) is used as a wrapper class to reformat C++ functions to be compatible with Matlab, LabVIEW, and Python
Blink_SDK (.dll, .h, and .lib) is the C++ code that interfaces to the SLM hardware
ImageGen (.dll, .h, and .lib) provides image generation capabilities as documented in the user manual

Example Programs:

BNS_SDK_example (.m, .py, .cpp, and .vi) is a simple program that loads a series of images to the SLM through Matlab, Python, C++, and LabVIEW respectively. This example is relevant for the 512x512 or 1920x1152 pixel SLM. These examples write slowly varying gradient patterns to the SLM that are easily visible to the eye when looking at the SLM with room light through a polarizer aligned at 45 degrees to the SLM.

BNS_SDK_example_ODP (.m, .py, .cpp, and .vi) is a simple example illustrating how to use Overdrive with the small 512x512 SLM. This example is NOT relevant to the 1920x1152 pixel SLM. These examples write slowly varying gradient patterns to the SLM that are easily visible to the eye when looking at the SLM with room light through a polarizer aligned at 45 degrees to the SLM.

PCIeDiffractiveTest (.m, .cpp, and .vi) is an example program illustrating how to generate the measurements required for a custom LUT calibration. The example can generate either a regional or global calibration of applied voltage to output phase for “n” waves of phase delay. The program illustrates how to: initialize the SLM, generate and load the diffractive images required by the calibration routines, and how to format the output file with the measurement data. The end user must fill in code to read from their specific analog input board. More details on the calibration optical setup, measurements, and how to use the post processing software can be found in the user manual.

DiffractiveLUT.exe is the program use to post process the measurements generated by PCIeDiffractiveTest to generate either a global or regional calibration. More information can be found in the user manual.

This folder also contains miscellaneous supporting C++ files, image files, DLL’s for the device driver, and generic calibrations. If you have a specific question about the additional supporting files please contact slmsupport@meadowlark.com