# ToF Ethernet Access Python software

## Requirements:

* Python 2.7+
* The Python hexfile library ( <https://pypi.org/project/hexfile/> ) for programming
* Computer on the same network as the FPGA
* DHCP, or a static IP that can be assigned to the FPGA. DHCP is a lot easier.

## Basic Usage:

import tofproto

dev = tofproto.TOFProto()

## Reprogramming FPGA

The FPGA can be reprogrammed by loading the SPI flash via Ethernet, and then issuing an IPROG command through the ICAP interface. There is a simple wrapper for this:

dev.reprogram(“eth\_test\_v2\_top.mcs”)

where here “eth\_test\_v2\_top.mcs” is the file to reprogram.

Note that the MCS file can be created from the Tcl console as

write\_cfgmem –format mcs –interface spix4 –loadbit “up 0x0 eth\_test\_v2\_top.bit” –file eth\_test\_v2\_top.mcs

from the directory containing the .bit file.