

---

# **loop-dhs Documentation**

***Release unknown***

**Scott Classen**

**May 24, 2021**



# CONTENTS

<b>1</b>	<b>Contents</b>	<b>3</b>
1.1	Installation . . . . .	3
1.2	loop_dhs . . . . .	4
1.3	License . . . . .	4
1.4	Contributors . . . . .	5
1.5	Changelog . . . . .	5
<b>2</b>	<b>Indices and tables</b>	<b>7</b>
	<b>Python Module Index</b>	<b>9</b>
	<b>Index</b>	<b>11</b>



This is the documentation of **loop-dhs**.

---

**Note:** This is the main page of your project's [Sphinx](#) documentation. It is formatted in [reStructuredText](#). Add additional pages by creating `rst`-files in `docs` and adding them to the [toctree](#) below. Use then [references](#) in order to link them from this page, e.g. [Contributors](#) and [Changelog](#).

It is also possible to refer to the documentation of other Python packages with the [Python domain syntax](#). By default you can reference the documentation of [Sphinx](#), [Python](#), [NumPy](#), [SciPy](#), [matplotlib](#), [Pandas](#), [Scikit-Learn](#). You can add more by extending the `intersphinx_mapping` in your Sphinx's `conf.py`.

The pretty useful extension `autodoc` is activated by default and lets you include documentation from docstrings. Docstrings can be written in [Google style](#) (recommended!), [NumPy style](#) and [classical style](#).

---



---

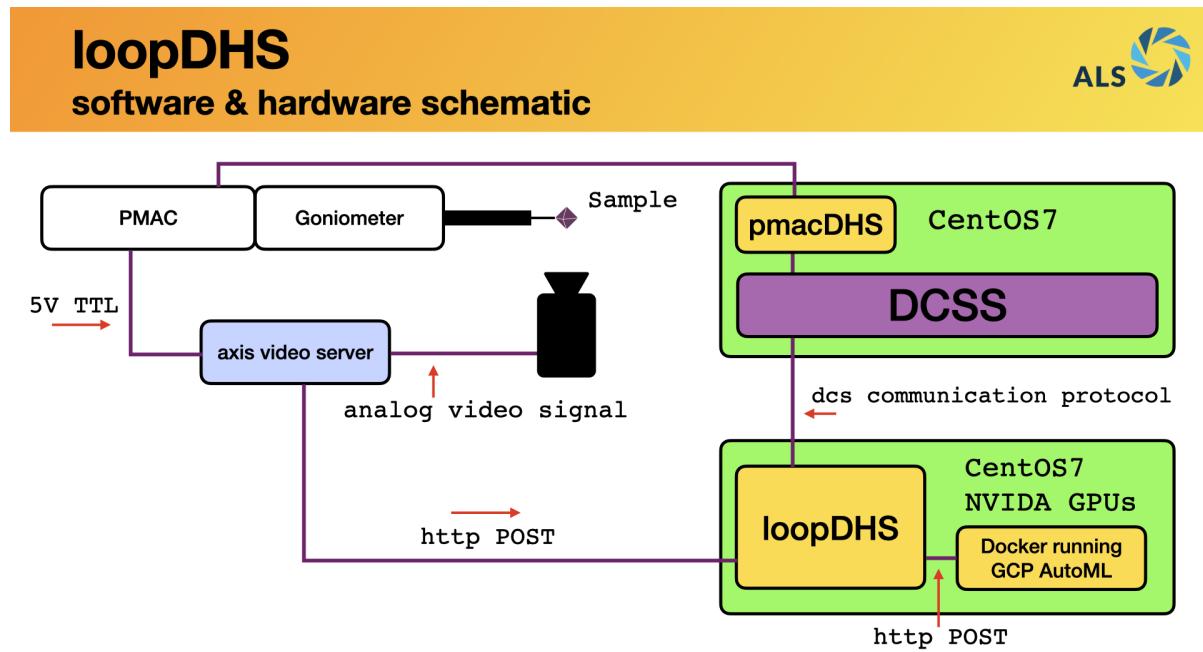
# CHAPTER ONE

---

## CONTENTS

### 1.1 Installation

loop-dhs is not a standalone software project. It is designed to work in conjunction with DCSS Control system, a properly configured AXIS Video server, and an edge-deployed Google AutoML inference model running on a local docker instance.



This shows a conceptual schematic of how the various pieces of hardware and software are configured at beamline 8.3.1 to support loopDHS.

### 1.1.1 Dependencies

- virtualenv
- python 3.8 (might work on 3.6-3.7, I haven't tested)
- pydhsfw

### 1.1.2 Install

Checkout the code from GitHub:

```
$ git clone git@github.com:dsclassen/loop-dhs.git  
$ cd loop-dhs
```

Setup and source a python virtualenv:

```
$ virtualenv -p python3.8 .env  
$ source .env/bin/activate  
$ pip install --upgrade pip
```

Install into local python environment:

```
$ pip install -e .
```

---

**Note:** I have not yet figured out how to add pydhsfw to the install dependencies in setup.cfg. You need to install pydhsfw dependency manually for now.

---

Install pydhsfw manually for now:

```
$ cd some_working_dir  
$ git clone git@github.com:tetrahedron-technologies/pydhsfw.git  
$ cd pydhsfw  
$ pip install -e .
```

## 1.2 loop\_dhs

### 1.2.1 loop\_dhs package

#### Submodules

#### loop\_dhs.loopDHS module

#### Module contents

## 1.3 License

The MIT License (MIT)

Copyright (c) 2021 Scott Classen

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## 1.4 Contributors

- Scott Classen <[sclassen@lbl.gov](mailto:sclassen@lbl.gov)>

## 1.5 Changelog

### 1.5.1 Version 0.1

- Feature A added
- FIX: nasty bug #1729 fixed
- add your changes here!



---

**CHAPTER  
TWO**

---

**INDICES AND TABLES**

- genindex
- modindex
- search



## PYTHON MODULE INDEX

|

loop\_dhs, [4](#)



## INDEX

### L

loop\_dhs  
    module, 4

### M

module  
    loop\_dhs, 4