

NeXtlook

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June 5, 2017

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## **Abstract**

NeXtlook is a quicklook processor for generating range-time-intensity and range-Doppler plots of NeXtRAD datasets. Multithreading is supported for pulse-compression, but Doppler-processing is currently only supported when using a single thread.

# Chapter 1

## Installation

*This chapter documents the installation process for the NeXtlook processor. Additional dependencies are required when the editing of source code is required.*

### 1.1 Prerequisites

#### 1.1.1 FFTw

Download the latest version of FFTw from their website ensuring that the version number is 3.3.6 or higher. This version introduced thread-safe planners which are vital. Extract the files in an arbitrary location and run the following commands,

```
./configure --enable-threads  
make -j  
sudo make install
```

If any problems occur I suggest using the following command to perform a clean before retrying,

```
make distclean
```

The extracted folder can now be deleted.

#### 1.1.2 Misc.

```
sudo apt install cmake  
sudo apt install git  
sudo apt install libopencv-dev  
sudo apt install libboost-all-dev
```

## 1.2 NeXtlook

At the time of writing, the NeXtlook source code is located at <https://github.com/darrynjordan/nextlook>. The source can be downloaded as a zip folder or cloned from the repo,

```
git clone https://github.com/darrynjordan/nextlook.git
```

Within the cloned folder, create a new folder to hold the built executable and run Cmake,

```
mkdir build
cd build
cmake ..
```

If no errors have occurred, the executable can be compiled and run as follows,

```
make -j
./nextlook
```