**This handoff contains the following folders**:

* Src – folder containing the source code for the ODS People Counting Project. This includes .projectspec files so that the code can easily be imported and compiled with code composer studio.
* GUIA – this contains the standard people counting gui with minor changes to accept the ODS output. Its use is detailed in the user’s guide. This will be referred to as GUI A.
* GUIB\_filtering – this contains the gui used to demonstrate stance detection. The gui has its own level of filtering, and detects if a target is standing or sitting. This will be referred to as GUI B.
* docs – contains the user’s guide. This guide describes flashing the device, importing the software, and running the demo with the base gui.
* mmwave\_sdk\_IWR6843TC\_01\_00\_00\_01 – SDK required to compile both the demo and the gtrack library. Place this in C:/ti
* Pre-compiled Binary – contains the pre-compiled binary for the device

**Expected performance of the Demo**:

* The device will reliably detect and track moving humans within 3.5 meters radially of the device.
* The device can track up to 3 people at a time reliably. There is capability to track more, but people count will be unreliable.
* GUI B will detect if People are standing or sitting accurately when they are within 2 meters radially of the device. Outside of this radius, stance cannot be determined accurately with the method used.
* GUI B will mark the location of static People who are no longer detected by the device. Upon receiving a new track from the device that is near a static person’s location, the GUI will associate this new track with the static person.

**Quickstart**:

Please see docs/ODS\_users\_guide.pdf to get started with getting firmware on your device and GUI A.

**Working with GUI B**:

GUI B is the GUI used to present this demo. It does not display the point cloud – this will display tracks from the device in various states. GUI B has a layer of filtering logic built in, which is intended to remove false detection and provide detection of static people.

Configuration: GUI B reads from “mmw\_pplcount\_demo\_default.cfg” and “guiCfg.txt”. The .cfg file is used to configure the chirp. I recommend leaving this as is. The .txt file allows you to modify the following:

|  |  |
| --- | --- |
| Line 1 | Prgm\_2box – automatic setup. GUI\_setup – setup window as in GUI A |
| Line 2 | UART Com Port (sends config) |
| Line 3 | DATA Com Port (receives data from device) |
| Line 4 | Set zone where tracks can become static (GUI will maintain position even if track is no longer reported.) Data is left wall, right wall, top wall, bottom wall |
| Line 5 | Enable debug mode. Tracks considered false detections are still displayed in debug mode. This feature is mostly deprecated |
| Line 6 | Enable stance detection. 1 here will display a discrete stance in line with the legend. 0 here will display height represented as a color from a spectrum, where darker colors are shorter tracks |

**Quick notes on GUI B**:

* The People Count Number actually displays the number of tracks returned from GTrack, not the number of people being displayed. This is used for debug.
* The left section has a legend tab that explains the various states a track can be in.

**Compiling GTrack**:

Requirements: Code Composer Studio (CCS) Install

1. Place GTrack in mmwave\_sdk\_IWR6843TC\_01\_00\_00\_01/packages/ti/alg
2. Enter the gtrack folder and open a command prompt
3. Run “setenv.bat”
4. Enter Command “gmake gtracklib3d”
5. Find the library in mmwave\_sdk\_IWR6843TC\_01\_00\_00\_01/packages/ti/alg/gtrack/lib

Note – Gtrack has been placed in both the SDK and the src folder. The demo references the src folder gtrack by default, but this can be changed in CCS.