LAB Driver Vital Signs – Release Notes

Overview

This lab demonstrates the use of mmWave technology to accurately measure driver vital signs such as heart rate and breathing rate.

Features

- Supports mmWave SDK 2.0.0.4
- Supports AWR1642BOOST EVM ES 2.0
- mmWave sensor can be placed in front or in the back of driver seat

New and Updated Features

- Added **Auto-Detect COM ports** check box
- Added **Enable Heart-rate tracking** check box
- Removed many of the intermediate files that were in the GUI folder
- The vitalSignsOutput structure that is sent data through the UART has been standardized and is the same for both the IWR1443 and AWR1642 versions of the vital signs demo.
- The decision if a person is Breathing or not has been slightly modified. In addition to using the energy of the waveform it also uses the peak in the breathing spectrum

Resolved Incident Reports

Table 1 provides information on IR resolutions incorporated into this release.

Table 1 Resolved IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description
n/a	n/a	n/a

Known Issues

Table 2 provides information on IRs that are known issues for this release.

Table 2 Known Issue IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description
n/a	n/a	n/a

Work Arounds for Major Known Issues

Following are workarounds for each known issue with a major severity that exists in this release.

- n/a

Limitations

The following is a list of known limitations for this release that were known at the time of release.

- The user has to be relatively still for at least 10-15 seconds for the demo to effectively work
- The breathing signal from the back might be very weak for some people.
- The heart-rate value might jump during measurements. This can be due to several reasons (e.g. noise, alignment issues, interference from other objects, breathing harmonics overlapping with the heart rate frequency etc.). If the subject stays stationary, the heart-rate values ultimately should converge to the correct value
- One reason the heart rate might display a wrong value is the presence of breathing harmonic overlapping the heart-rate spectrum region i.e. [0.8 – 2.0] Hz. In the current demo the 2nd breathing harmonic is cancelled. For example if the person has a breathing rate of 26 bpm and the heart rate happens to be ~ 52 bpm it will be discarded as the algorithm will interpret this as a breathing harmonic rather than a correct heart-rate

Installation Instructions

- Refer to Getting Started Guide