

# ADVisionSensorController Release Note

Product Information	
Name	ADVisionSensorController
Release Number	1.0.6
Release Date	June 2016
Support	<a href="https://ez.analog.com/community/embedded-vision-sensing">https://ez.analog.com/community/embedded-vision-sensing</a>

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This package contains release 1.0.6 of the ADVisionSensorController module. This is a Graphical User Interface to enable users to help install and configure the People Counter product on the ADZS-BF707-BLIP2. It's easy to use interface helps configure the imaging sensor on the BLIP platform. It also configures the People Counter features. See the product website <http://www.analog.com/bf-pplcntr> for information on the latest release. The customer should also refer to the user's Manual available in the Help button of the GUI for detailed information on how to use the GUI.

## About This Release

This is an evaluation version of the Overhead People Counter which will time out after 24 hours of continuous running on the BLIP platform. The application will output zero Entries and zero Exits after the evaluation time out. Users will have to reset the BLIP to restart the system again.

This release provides a Standalone mode, in which BLIP framework will run without any communication to the GUI running on the PC. Users need not have any cables connected from the USB and UART ports of the BLIP to the PC. The BLIP board needs to be powered independently or from the PC via the USB.

After installing and configuring the system, users can save the current settings to the Flash memory by clicking on the **“Write to Flash”** button. Thereafter run in standalone mode, once the BLIP is power cycled. Please ensure to provide an empty background of approximately 10 seconds to train after the BLIP is reset.

People Counter application sends metadata such as, Entries and Exits on three output ports, UART, SPI and WiFi.

Pressing the PB2 button will switch back from standalone mode to Installation mode and power cycling the board will switch back to Installation mode. In Installation mode the application can now connect to GUI on host PC.

Your feedback is important to us - please help us make this the best product possible. Keep in mind that we are continuing to work on the ADVisionSensorController and the product may change in the future.

## Release Highlights

- Support for running the overhead people counter analytics on BLIP platform

- Support to send Analytics metadata to the cloud using WIFI module inserted into SDIO port of BLIP platform. This feature is being provided as an example to demonstrate Cloud connectivity from BLIP.
- Support to send People Count information via SPI interface
- Support to send People Count information via UART interface in Standalone mode only. In Installation mode UART interface is used for communicating with GUI running on host PC.
- Support to write configuration parameters to flash for running in standalone mode.
- The GUI interface has been updated to give a clean look
- Support for event logging where in the events reported by the analytics algorithm are logged and displayed
- Support for users to set configuration parameters such as area of counting, direction of entry/exit and calibrate size of people.
- This release supports only the People Counter product and should not be used with other analytics application from ADI.
- Support for recording the captured video in MPEG4 AVI format

## Installation Information

The default top level installation path is *C:\Analog Devices\SoftwareModules*. Please note this will be different if an alternate installation path is chosen. Elsewhere in this document this default path is referred to as *<SWM\_ROOT>*

This package is installed into *<SWM\_ROOT>\ADVisionSensorController-PI-Rel1.0.6*

NOTE: This is installed to a location that is different to a previous version of the *ADVisionSensorController*, thus preventing any previous work being inadvertently modified and overwritten.

## Contents

The *ADVisionSensorController* module directory structure is as follows:

ReleaseNotes.pdf

This file.

Setup

This directory contains the files needed for installing the USB drivers.

GUI

This directory and its subdirectories contain the files associated with the AD Vision Sensor Controller GUI.

- Flash – This contains all the files required for loading a program into the Serial flash memory of the ADZS-BF707-BLIP2 board.
- ConfigFiles – This contains all the xml files required for configuring the various parameters of the GUI as well as the default settings for the sensors and the algorithms.

- LogFiles – This folder contains all the log files generated by the GUI while running. These files will contain information related to telemetry or the algorithm status.
- SerialPortlogs – This holds the logs generated by the GUI when any UART connectivity error event is triggered.
- RecordFiles – The GUI provides an option to record and store the sensor output. This holds the captured sensor output files.
- UserGuide.mhtml – This is a help manual which explains how to use the various features of the GUI.
- ADYUVPlayer.exe – This application can be used to play the captured sensor files in the RecordFiles folder.
- ADVisionSensorController.exe – This is the GUI application.
- USBInterfaceBlip.dll – This dll is required to interface the GUI with the USB drivers.

docs

- UserGuide.pdf – This is a help manual which explains how to use the various features of the GUI.

## Prerequisites

In general, the board revision is silk screened on the hardware board and the BOM revision is a label on the back. Where applicable the silicon revision is printed on the processor on the board. Alternatively, view the Revision ID Register via the IDDE's support to view a processor's registers.

Although we expect that all applications will run on future revisions of the listed hardware please note that the stated revision was the one used in testing for this release.

### Minimum Prerequisites for Using the ADVisionSensorController GUI

1. Windows 7 (32 bit or 64 bit).
2. Internet connection to detect and install UART to USB drivers.

### Prerequisites for Using the ADVisionSensorController GUI

1. BLIP2 (Blackfin Low Power Imaging Platform)

Supported Hardware	Board Rev	BOM Rev	Silicon Rev
ADZS-BF707-BLIP2	2.0	2.2	1.0

2. SDIO WiFi Adapter Board from Gainspan (Only if Cloud connectivity on WiFi is required)

Supported Hardware	Board Rev	BOM Rev	Silicon Rev
SD-GW-GS2100MIP	1.1	-	3.2

[http://www.gainspan.com/products/wab\\_gs2100](http://www.gainspan.com/products/wab_gs2100) (Link to procure)

### Prerequisites for viewing the UART output on the PC in standalone mode

PuTTY/TeraTerm (Download such a console for your PC if not available on your PC already), select "Serial" communication and configure it with the settings in Table 1.

The appropriate COM port number can be found in the Windows Device Manager under the Ports (COM & LPT) node.

Table 1: COM Settings	
Configuration	Value
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow Control	None

**Table 1: COM port settings**

## Getting Started

The module is supplied as a GUI to demonstrate and evaluate the features of Traffic Analytics module as well as evaluate the imaging sensors on the ADZS-BF707-BLIP2 board. Detailed information on how to run this application is provided in the included Users Guide that can be accessed from the GUI by clicking on Help tab and then selecting GUI User's Guide.

After the ADVisionSensorController module is successfully installed, the developer should launch the executable ADVisionSensorController.exe in the folder `<SWM_ROOT>\ADVisionSensorController-PI-Rel11.0.6\GUI\` and then click on the Help Tab to launch the User's Manual and follow instructions there in to setup the BLIP board and run.

## Resolved Issues in this Release

- When GUI window is scaled or minimized then the pages and tables on the GUI are being mis-aligned or not seen.
- Previous entry and exit details are displayed for fraction of a second, once the changes in configuration are done and VA is enabled.
- The out box can display only three digits.

## Known Issues and Limitations

### Known Issues in GUI

- A noticeable lag might be seen for the video display on the GUI when there are other tasks running on the PC. Make sure that the host PC is not running any other CPU intensive tasks as the USB latency is heavily dependent on the host CPU load and simultaneous disk access by other processes.
- The url for cloud mashup on ThingWorx Cloud platform shouldn't exceed 256 characters.
- The ThingWorx server address must be specified as an IP address and not url to the GUI.
- USB cables with repeaters must be used for connecting to the BLIP sensor over longer distances, when the BLIP is mounted on the ceiling.

### Known Issues in BLIP framework

- The Analytics module is being provided with classifiers for heights of 9-12 ft.
- The Analytics module sometimes does not detect children below height of 4 ft.
- People shouldn't loiter or aggregate in the Field of View of the sensor. The sensor should be installed in an area where people are crossing the area under the sensor.
- People who are not completely in the field of view of may not be counted. The sensor must be mounted at a height and with an appropriate lens such that the complete region of crossing is covered in the Field of View.
- When the People counter application is running with WiFi connectivity to Cloud, there is a possibility of disconnection to the WiFi network. In such a scenario the application goes to connection mode where in the people counter analytics is bypassed and the application tries re-establishing connectivity. This is indicated by short blinking of the LED on Blip. If connectivity cannot be established then the application enters Provisioning mode, indicated by long blinking of the LED on Blip. In this phase the GUI freezes. The users have to reconfigure a new network, or the same network to resume the application.

### *Technical Support:*

<https://ez.analog.com/community/embedded-vision-sensing>

[www.analog.com/support](http://www.analog.com/support) (Tools and Processor support)

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