Embedded Environment Visualizer Library Handbook

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1 Introduction

This document explains how to use the Embedded Environment Visualizer Library (EEVL). EEVL consists of three parts: two matlab routines and a library. These parts are called:

- DataReceiver.m
- RawDataHandler.m
- MultipleFloatDataSender library

Each of these items are explained in the relevant section.

The aim of this library is to be able to collect, visualize and save data from an embedded environment, which is most of the time a trouble.

2 Matlab Routines

2.1 DataReceiver.m

This routine is the main routine that collects, saves, plots the received data on the computer.

2.1.1 Options

This routine has several options, which are:

- **EnableSaving :** This enables/disables the saving of the received data. The received data is tagged with date and hour information.
- **ProcessRawDataThresholdInBytes :** When this routine received **ProcessRawDataThresholdInBytes** bytes of data, the received data is processed plotted/saved.
- **EnablePlotting :** This enables/disables the plotting of the received data. The received data is being plotted with time axis.
- **DataSampleRate (Hz):** This variable is used for determining the time axis of the plotting. It should match the data sending rate of the DSP.
- **TheSerialChannelDevice :** The serial channel port seen by the computer is stated in this variable. The port value can be determined from the device manager. For the example given in Figure 1, TheSerialChannelDevice should be set as 'COM5'.

2.2 RawDataHandler.m

The saved data by DataReceiver.m routine can be handled using this routine.

2.3 Operation

TODO After setting the options mentioned in 2.1.1, this routine can be run in matlab.

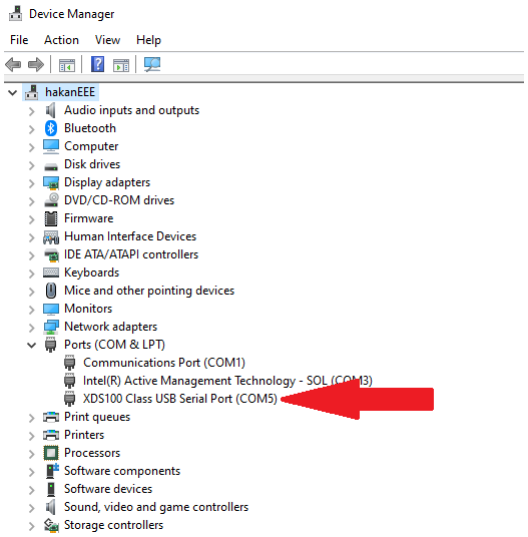

Figure 1: The serial port on the Device Manager screen

2.4 Aim

3 MultipleFloatDataSender library

This library is the critical part of the EEVL. For the embedded environment, all the necessary functions and/or variables are defined in this library.

References