Research Practice

Functional Chain on Aurix TC3x Boards Implementation - Optical Flow Detection

Project Description

The Aurix TC3x boards are used as ECUs emulators in a Car for in-vehicle network communication. These boards are used to represent this communication behavior, which will work as a benchmark for other network traffic monitors and fault detection modules.

To showcase the Aurix board’s functional chain, an Optical Flow Detection algorithm is proposed, where the input is real-time video (Camera). At the same time, the output will be the processed video displayed on a screen or Aurix LCD.

The functional chain should be divided into 3 sub-functions (F1-F2-F3) that will represent the algorithm in which each Aurix board should implement a single function. The data transfer from one board to another uses an Ethernet switch, where the standard Ethernet protocols should be used for communication.

Prerequisites

To successfully complete this project, you should already have the following skills and experiences.

- Good knowledge of C programming
- A solid understanding of System-on-Chip and the modules of general microcontroller

Interested? Questions? Don't hesitate to contact me!

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