STM32MP1 seminar:

Linux & AMP development on Avenger96 with the unified IDE System Workbench for Linux and STM32

Create an embedded Linux platform using Eclipse-based System Workbench for Linux and develop applications.

During this workshop, Ac6 will present their new tool System Workbench for Linux, which is an Eclipse-based GUI-driven environment

- To simplify Embedded Linux platform management
- To allow non-specialists to manage their own platform
- Can run on any standard Eclipse platform
- Support multicore asymmetric development

We are going to generate a custom embedded Linux image for the Avenger96 board, develop applications running on the Cortex-A7 under Linux and on the Cortex-M4 and then add them to the image.

Pre-requisites for Attendees of this Workshop:
- ➢ Basic Linux knowledge and familiarity with an UBUNTU based host OS
- ➢ Some experience developing embedded systems
- ➢ Familiarity with C/C++ development

Please bring your own laptop; Requirements:
- ➢ Ubuntu 16.04 or Windows OS+Ubuntu 16.04 Virtual machine – must be 64bit
- ➢ Memory – as much as possible
- ➢ 200GB of available storage space (if you'd like to keep dev environment after the session**)**

<u>Agenda</u>

09:00 Welcome

09:30 Introduction - STM32MP1 and Avenger96 board overview

10:30 System Workbench for Linux overview
Platform creation, configuration and build
Lab1: Import Avenger96's platform and build a minimal image

11:30 SW4Linux packages properties
Lab2: create a Linux application, and include it to the image

12:30 Lunch

13:30 Compile and customize the kernel
Lab3: Modify the kernel parameters and test it

14:30 Add complex packages and create new tasks
Lab4: Add a new package

15:30 Root file system and package libraries
Lab5: Create a new rootfs that includes debugging tools

16:00 Develop and debug an asymmetric multicore (AMP) application
Lab6: Create and debug simultaneously communicating applications on both Linux and
Cortex-M

16:30 Wrap-up and Demos
QT, Gstreamer, OpenCV on SW4Linux image