

## **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.

## Agenda

**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

### **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