

3rd CERN System-on-Chip Workshop

2-6 October 2023

WELCOME!

<https://indico.cern.ch/event/1253805>

System-on-Chip Workshop

This workshop is a follow-up from the 2nd workshop held in June 2021 using zoom only

Motivation for this workshop:

- **Provide an overview of what SoC devices and modules are available**
- **Report on progress of the various SoC projects in the experiments, the accelerator sector, and in radio protection**
- **Review common tools and solutions available**
- **Provide discussion on any open issues and prepare future steps**

For previous workshops and interest group meetings see:

<https://indico.cern.ch/category/11883>

For the interest group use: system-on-chip@cern.ch

Organising Committee

- Hamza Boukabache, CERN-HSE Radio Protection
- Adrian Byszuk, CERN-SY Electrical Power Converters
- Marc Dobson, CMS TDAQ SysAdmin
- Sarath Kundumattathil Mohanan, CERN-HSE Radio Protection
- Frans Meijers, CMS DAQ
- Diana Scannicchio, ATLAS TDAQ SysAdmin
- Ralf Spiwoks, CERN-EP Electronics System for Experiments and ATLAS L1CT
- **We wish you a warm WELCOME!**
- If you have a question on the organisation of the workshop or on your presentation, please contact any of us or send an email to the organizers: SoC-Workshop-Organisers@cern.ch
- If your question is of general interest, please use the [Mattermost channel “SystemOnChip/Town Square”](#) set up for this conference

Mode of the Workshop

- **The meeting will be held in “hybrid mode”, i.e. in presence and using zoom**
- **Most of the meetings will take place in 13/2-005 and use the “SoC Workshop-Plenary” zoom;**
Exceptions for the room are the vendor exhibits (500/1-201 “Mezzanine”), Tuesday morning session (14/5-022), and the Tutorials (40/S-A01 “Salle Anderson”)
- **We will not take minutes of the presentations, but all presentations will be recorded, and the recordings will be published in indico**

Program of the Workshop (1)

The workshop takes place on five days – schematic overview:

MON, October 2	TUE, October 3	WED, October 4	THU, October 5	FRI, October 6
Vendor	Vendor		Tutorial	
Vendor Exhibition	Vendor Exhibition		Tutorial	Tutorial
Vendor	Vendor	Vendor	Project	System
Vendor	Project	Project	Project	System
Vendor	Project	Project	Project	System
Vendor	Project	Project	Project	System

- **Vendor Presentations and Exhibitions:**

- Avnet Silica, Enclustra, Microchip, NanoXplore, Nvidia, Topic, Trenc
- Exhibitions on MON & TUE 10.30 – 12.30 in the “Mezzanine” (500/1-201)

- **Project Reports:**

- 19 different project/use cases of SoC from ATLAS, ATS, CMS, Radio Protection, and others

- For details, please check the agenda at <https://indico.cern.ch/event/1253805>

Program of the Workshop (2)

The workshop takes place on five days – schematic overview:

MON, October 2	TUE, October 3	WED, October 4	THU, October 5	FRI, October 6
Vendor	Vendor		Tutorial	
Vendor Exhibition	Vendor Exhibition		Tutorial	Tutorial
Vendor	Vendor	Vendor	Project	System
Vendor	Project	Project	Project	System
Vendor	Project	Project	Project	System
Vendor	Project	Project	Project	System

- **Tutorials:**

- Building Linux Boot Files Using Templates for Multiple SoC Projects
- Using GitlabCI Parallel Builds for Mutlti-board PetaLinux Projects
- Automating SoC/FPGA Firmware Testing using Kubernetes/Container-based Infrastructure

- **System Issues:**

- Support for SoC CI/CD, support for Linux OS, aspects of system administration

- For details, please check the agenda at <https://indico.cern.ch/event/1253805>

Have a good workshop!