



gan-on-Silicon Efficient mm-wave euROpean systEm iNtegration pLAtform

Newsletter / March 2019
Issue 03

Consortium

9 partners (5 countries)

Project Coordinator

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Project number: **779305**

Project website: **www.serena-h2020.eu**

Project start: **January 01, 2018**

Duration: **36 months**

Total cost: **EUR 3,910,185**

EC contribution: **EUR 3,910,185**

Message from the Coordinator

More than one year has passed since SERENA officially started and the project consortium can proudly look back at a successful first project year. We made progress in the second half of 2018 by setting up the system architecture and specifications of the planned demonstrators. Also, a public deliverable was issued at the end of the year. The first review meeting took place in Brussels and brought good results. The consortium met at Infineon in Austria to discuss the upcoming work for 2019, which will be an intense year for all technical partners.

Upcoming Conferences and Meetings

IEEE International Conference on Communications

May 20 -24, 2019 @Shanghai, China

Themed "Empowering Intelligent Communications," this conference will offer five days of original paper presentations, tutorials, workshops, keynotes, demonstrations, industry panels and social events designed to further career opportunities and the in-depth understanding of communications advancements worldwide.

(more)

IEEE International Microwave Symposium

June 02 - 07, 2019 @Boston, USA

IMS is the premier annual international meeting for technologists involved in all aspects of microwave theory and practice. It consists of a full week of events, including technical paper presentations, workshops, and tutorials, as well as numerous social events and networking opportunities. The symposium also hosts a large commercial exhibition.

(more)



Meetings



Technical Meeting

January 30 - 31, 2019 @ Villach, Austria

On January 30 and 31, the SERENA consortium met again for a general assembly and a technical meeting. This time, Infineon hosted the meeting. The partners met on January 30 for lunch.

The informal atmosphere was a great way to ease into the formal part of the gathering which started with welcome speeches from the coordinator, the host and the technical leader. Partners then watched a presentation about the technical status of the project where a summary of the main achievements and recommendations of the first review meeting were presented. After that, the work package leaders held presentations about their individual work packages covering the status of ongoing work and the planning of next steps.

Afterwards, partners actively discussed various phases of the project, each contributing their own expertise. Later in the afternoon, the consortium enjoyed a dinner together. A relaxed atmosphere marked the perfect evening to a prosperous day. The next day, the consortium met again to continue with the technical meeting. By midday, the consortium was done with the remaining presentations and technical discussions. The partners made their way back home with a lot of new motivation, as well as with a sense of a common effort to reach the objectives of the SERENA project.

Review Meeting

November 14 - 15, 2018 @ Brussels, Belgium

In November the consortium was delighted to meet the project officer at the EU premises in Brussels for the first time. On the first day, the partners gathered for a preparation meeting, and on the second, the official review meeting took place. The results and the ongoing work in SERENA were presented to the reviewers, who were satisfied with the achievements of the first months.



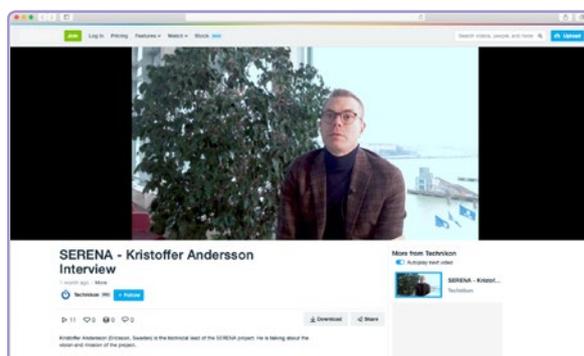


Submitted public deliverables

D1.4 Signal processing algorithms and specifications

This deliverable is a public deliverable and was due in month 12. It provides an investigation of the specific parts of the signal processing related to the hybrid digital-analog architecture of the SERENA system. The report introduces aspects of the system including the hybrid digital-analog architecture, the initial acquisition phase, and the multiuser multiple-input multiple-output precoding. It proposes solutions for these problems and shows their performance.

Noteworthy



SERENA Interview Video

The technical lead of SERENA, Kristoffer Andersson provides insights about the vision and mission of the project. Check out the video [here](#).

Past Conferences and Meetings

SERENA Preparation and Review Meeting

November 14 - 15, 2018 @Brussels, Belgium

BIMos Day -The Mathematics of Multiple

Antenna Communications

November 19, 2018 @Berlin, Germany

SERENA Technical Meeting

January 30 - 31, 2019 @Villach, Austria

IEEE International Solid State Circuits Conference (ISSCC)

February 17 - 21, 2019 @San Francisco, USA

Project Achievements and Highlights

- Delivered the system specifications
- Delivered an approach for hybrid beamforming
- GaNepi-wafers
- Tape-out of GaNF-E MMICs
- Tape-out of SiGebeamformer RFIC
- Tape-out of CMOS bias-controller
- Experiments on die-PCB embedding & passives
- Module integration concept
- Tape-out of W-band GaNMMICs

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