

Advanced design kit supports first-time-right designs in analog 180nm CMOS technology

ams' new "hitkit" design environment offers high-density libraries and improved set of transistors, boosting the analog performance of complex ICs

Premstaetten/Austria, (20 July, 2016) -- ams AG (SIX: AMS), a leading provider of high performance sensors and analog ICs, today announced the release of a new version of its industry benchmark process design kit (PDK). This PDK features ams' 180nm CMOS specialty technology, which is now to be manufactured in ams' 200mm fabrication facility in Austria. The new PDK provides product developers with a plug-and-play tool set with improved analog features and device performance as well as highly accurate simulation models. It facilitates first-time-right designs, which is a mission-critical capability in an industry with continuously shortening development schedules.

ams' "hitkit" design environment comes with 1.8V and 5.0V NMOS and PMOS devices (substrate based, floating, low leakage and high threshold voltage options) and fully characterized passives including various capacitors. Area-optimized high-density and low-power digital libraries with gate densities up to 152kGates/mm², updated digital and analog I/O libraries with up to 6 metal layers as well as ESD protection cells with up to 8kV HBM level are included. One-Time Programmable memories (OTP), online memory generation service for RAMs and ROMs as well as a Zero-Mask-Level-Adder EEPROM IP block (up to 8kbit) complete the offering.

Based on Virtuoso® Custom IC technology 6.1.6 from Cadence®, the new hitkit helps design teams to significantly reduce time-to-market for highly competitive products in the analog-intensive mixed-signal arena. Offering highly accurate simulation models, extraction and verification run sets for both Calibre and Assura and flexible SKILL-based PCells, the new hitkit provides a comprehensive design environment and a proven route to silicon. The 180nm CMOS specialty process ("aC18") is manufactured in ams' state of the art 200mm fabrication facility in Austria ensuring very low defect densities and high yields.

"It's a milestone for us to bring our aC18 technology online in our Austrian fab", says Markus Wuchse, General Manager for the Full Service Foundry division at ams. "The release of the new hitkit enables ams to offer foundry users a combination of rapid prototyping and high-quality volume production of complex analog semiconductors on our 180nm process, just as we have done in the past for our 350nm process family."

The ams aC18 specialty process is ideally suited for sensors and sensor interface devices in a wide variety of applications such as wearables, healthcare, home automation, smart cars and industry



4.0. It allows the development of innovative solutions for consumer electronics and industrial devices for the internet of things (IoT) and smart cities. Prototyping runs can be started immediately. Volume production release is scheduled for July 2016.

Availability

The new hitkit v4.14 is available now on our foundry support server at <http://asic.ams.com/hk414>.

About the Full Service Foundry division of ams

The Full Service Foundry division of ams has successfully positioned itself in the analog/mixed-signal foundry market. Its process technology portfolio includes 180nm and 350nm specialty technologies based on ams' analog, mixed-signal, High-Voltage and RF processes. With its 'More than Silicon' initiative, ams offers a comprehensive service and technology package that goes beyond industry-standard foundry services. It includes leading-edge technology extensions such as 3D integration using Through Silicon Vias, optical filters, back end process customization, 3D-WLCSP and many more. Superior support during the design phase, high-end tools and experienced engineers, silicon-proven high-performance analog IP blocks, assembly and test services for turnkey solutions complete the Full Service Foundry package.

About ams

ams is a global leader in the design and manufacture of advanced sensor solutions and analog ICs. Our mission is to shape the world with sensor solutions by providing a seamless interface between humans and technology. ams' high-performance analog products drive applications requiring extreme precision, dynamic range, sensitivity, and ultra-low power consumption. Products include sensors, sensor interfaces, power management and wireless ICs for consumer, communications, industrial, medical, and automotive markets.

With headquarters in Austria, ams employs over 2,100 people globally and serves more than 8,000 customers worldwide. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com.

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