



## Scaleo chip announces OLEA samples availability

**Sophia Antipolis, March 10<sup>th</sup>, 2014.** Scaleo chip, the leading fabless semiconductor company in automotive electronics for powertrain, body control and driver-information, announced today the availability of [OLEA](#) first silicon samples of.

OLEA is Scaleo chip's new family of microcontrollers optimized for Automotive powertrain applications. OLEA provides breakthrough solutions for advanced internal combustion engine vehicles (ICEV), hybrid electric vehicles (HEV) and electric vehicles (EV). OLEA is designed to face the most stringent emission and fuel economy regulations such as the Euro 6/7 and CAFE standards. OLEA microcontrollers enable leading edge powertrain architecture with centralized engine and transmission control or combined electric motor control and powertrain supervision.

### Real-time, Flexible and Safe

OLEA is a real-time multi-core, hardware flexible, safe and secure microcontroller family featuring unique patented technologies that surpass any competitive solutions, available and upcoming:

The **AMEC**<sup>®</sup> (Advanced Motor Events Control) technology is an advanced hard real-time, determinist and parallel signal processing unit directly controlling and interfacing actuators and sensors. Its core technology relies on the unique combination of a Flexible Logic Unit (FLU) and Powertrain-ready Peripherals set (PrP).

The **SILant**<sup>®</sup> (Safety Integrity Level agent) technology is a set of safety features to ensure the highest system integrity at both hardware and software level. Built around a multi-core architecture, SILant<sup>®</sup> incorporates highly efficient hardware safety mechanisms, achieving ASIL-D ISO 26262 compliancy with no compromise on performance.

### Standard ARM<sup>®</sup> cores

The future is to open non-proprietary core usage. OLEA is based on a multicore architecture embedding standard CPU cores. Two 32-bit Cortex-R5F, one in lock-step configuration, are running at 300MHz and are optimized for real-time, safe and compute intensive tasks. A 32-bit Cortex-M0 enhances I/O processing operations. OLEA is the first powertrain "future-proof" solution that takes benefits of the largest ecosystem of software partners and tools providers supporting ARM<sup>®</sup>.

### Complete solution

The device features all the required memories and interfaces to manage and interact with the most advanced powertrain environments: 8 MBytes of Flash, 512 KBytes of system memory; two ADC to sample all type of analog inputs: a 64 channels SAR ADC with 2 MSamples/sec and a 6 channels Sigma-Delta ADC sampling up to 300KHz; serial interfaces including SPI ports, PSI-5 and SENT channels; communications ports including USART, LIN, CAN, TT-CAN, FlexRay and Ethernet.

For debug, test and calibration, OLEA integrates a high-frequency JTAG port and an ARM<sup>®</sup> Serial Wire Debug compatible with automotive world class tool vendors. For on-chip events traces and data measurements, OLEA offers within its Emulation Device an extend trace memory together with an AURORA Gigabit and an ARM ETM

trace port. This solution enables real-time measurements, diagnostics and MCU timing extraction, essentials for multi-core based applications design.

OLEA also incorporates an ASM (Access Security Module) which offers a high-degree of application protection against malicious hardware and software attack due to tampering, theft and fraud.

### **Scalable**

OLEA is soon to be offered as a family of microcontrollers built over a set of scalable features: from 2 to 8 MBytes of embedded flash, from 64-ch up to 256 powertrain events channels, from CABGA 516 down to PQFP 176.

### **Evaluation kit**

OLEA is available for evaluation with OLEA Starter Kit boards. OLEA Starter Kit is a fully featured electronic board enabling performance evaluation as well as application development start. OLEA Starter Kit includes a full package of software and tools enabling the development of software on the embedded CPU and the configuration and programming of AMEC®.

### **Automotive qualified**

OLEA is AEC-Q100 Grade 1 qualified for operation between -40°C to 125°C ambient temperatures. The first qualified product ready for production in volume will be available in Q1 2015.

ISO 26262 SEooC (Safety Element out of Context) safety work products are available to enable customer safety design assessments.

More information on OLEA and OLEA Starter Kit can be found on Scaleo chip's website.

### **About Scaleo chip:**

Scaleo chip is a fabless semiconductor company that designs, develops and sells complete and high value solutions, combining System-on-Chip (SoC) and embedded software for the future of automotive electronics industry. Scaleo chip product offering includes standard automotive microcontrollers addressing powertrain, body control, driver information and infotainment applications. The company leverages its technology and know-how by offering additionally custom products development and manufacturing for real-time critical applications as in defense, aeronautic or industrial markets. Scaleo chip is headquartered in Sophia-Antipolis, France. For more information, visit: [www.scaleochip.com](http://www.scaleochip.com).

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