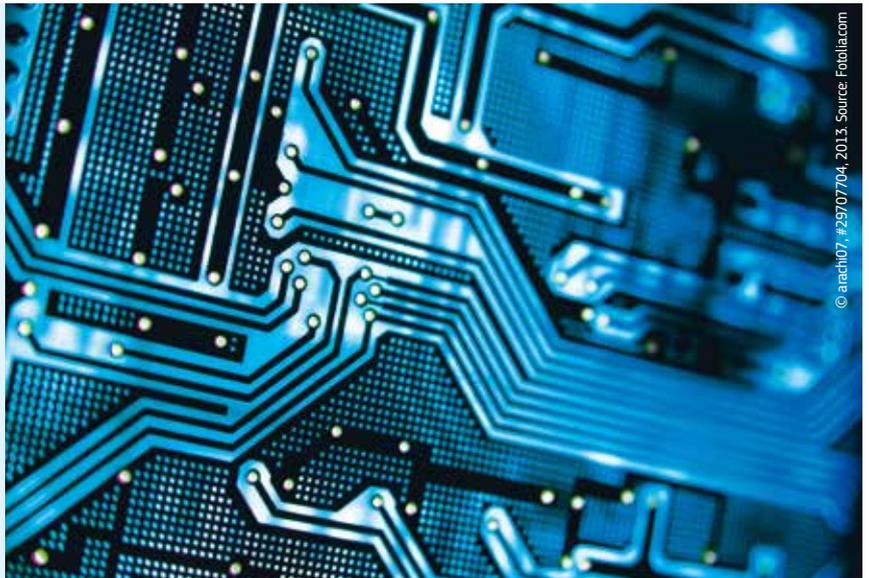


Electronic Components & Systems Initiative: boosting Europe's electronics design and manufacturing capabilities

- Underpinning next generation digital technologies;
- Improving energy efficiency of electronic components and systems;
- Underpinning European leadership in design and production;
- Making down-stream products better, greener, safer;
- Creating growth and jobs in downstream and services industries.



What is the challenge?

Electronic components and systems are essential for Europe's industrial landscape. They underpin product and productivity innovation across the whole of the economy and play a critical role in addressing societal challenges. But Europe's industries must cope with fierce global competition, high research costs and the very fast pace of technology development. The answer is to cooperate, pool resources and build on expertise at the European level to bring research faster to market and stimulate demand for European-produced electronic components and systems.

What is the Electronic Components and Systems for European Leadership (ECSEL) initiative?

The new Electronic Components and Systems for European Leadership (ECSEL) Joint Technology Initiative (JTI) is a merger of the ARTEMIS embedded systems JTI and the ENIAC nanoelectronics JTI set up in 2008. Electronic systems and components such as semiconductors and computer chips are essential to all digital products and services. They underpin innovation and competitiveness in all economic

sectors. Cars, planes, trains, medical and health equipment, home appliances, energy networks and security systems all will benefit from the advanced European capability and capacity to design and manufacture state of the art electronic components and systems.

The new ECSEL JTI is expected to start in early 2014 and to be fully operational up to 2020 followed by a running down phase to 2024. It will bring together large companies, world-class European research and technology organisations linked with higher education research labs, and SMEs providing technology and services. In particular three private industrial associations representing the actors from the areas of micro-/nanoelectronics, smart integrated systems and embedded/cyber-physical systems will be involved.

What results and benefits do we expect?

ECSEL will secure for Europe the supply of key technologies underpinning innovation in all sectors of the economy and ensure the best use of these technologies to spur economic growth. It will underpin the implementation of other EU policies particularly on environment and industrial competitiveness.

It will help overcome obstacles to effective research and innovation in this area and attract private investment and facilitate the participation for actors involved in research.

And it will create a mechanism for industry to set a long-term strategic research and innovation agenda, create the necessary critical mass, leverage private investment, facilitate knowledge sharing, reduce risks, lower costs and reduce time to market.

What will the new total budget be?

The estimated budget of the ECSEL JTI is expected to reach €4.815 billion. The EU will contribute up to €1.215 billion and the participating Member States €1.2 billion. The industrial partners will contribute at least half of the total costs of around €2.4 billion in kind.

How will it be managed?

ECSEL will be managed by a dedicated Joint Undertaking whose Governing Board comprising private members (ARTEMISIA, AENEAS and EPoSS), Member States and the Commission, will take strategic decisions. A Public Authorities Board consisting of representatives of the participating Member States and the European Commission will take funding decisions.

Open calls for proposals will be used to implement the work plans of the Joint Undertaking with co-funding by the EU and the participating Member States based on an independent evaluation and synergies with national priorities.

What has the current JTI achieved so far?

The current ENIAC and ARTEMIS JTIs provided a major opportunity to cooperate across Europe, create critical mass and leverage investments. This capability has been convincingly demonstrated in 2012 by the ENIAC JU's success in jump-starting the implementation of the Key Enabling Technologies recommendations in nanoelectronics with five manufacturing pilot lines worth €730 million, and by the ARTEMIS JU's first launch of two large-scale innovation pilot projects worth €150 million. In the period 2008-2012, the two JTIs supported altogether more than 100 projects for

Efficient and green production of electronics

The largest project in the ARTEMIS portfolio is CESAR - Cost-Efficient methods and processes for SAFETY Relevant embedded systems - and it has made a significant impact on the European industry of embedded systems, especially with regard to safety aspects. It focuses on the key transportation domains: automotive, aerospace and rail. It develops ultra-reliable embedded systems in order to meet societal demands for increased mobility and ensure safety in a highly competitive global market.

For ENIAC a clear success is the E3Car, which overcame the main challenges regarding the electrical vehicle using advanced semiconductor components. An increase in energy efficiency of 35% has been achieved in certain components. The new technology can also be used in the power trains.

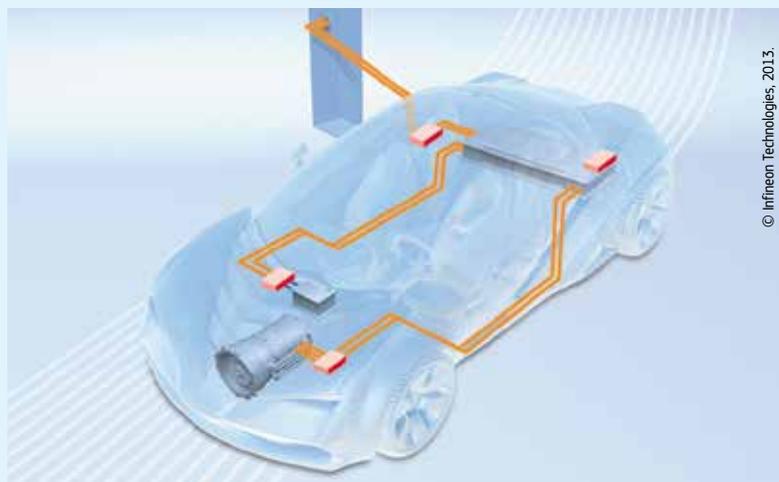
More information:

ENIAC: www.eniac.eu

ARTEMIS: www.artemis-ia.eu/news/frontpage/news/71/

CESAR: www.eejournal.com/archives/articles/20121205-artemis/

E3Car project: www.e3car.eu



E3Car project has increased efficiency of electric vehicles.

a total cost in excess of €2.8 billion with public funding of €1.126 billion (EU + Member States), involving more than 2000 organisations (1260 unique participations) of which around 28% are SMEs, 39% large enterprises and 33% research and higher education organisations.

Useful links

Electronics: www.eniac.eu, www.aeneas-office.eu

Embedded systems: www.artemis-ju.eu, www.artemis-ia.eu

Smart integrated systems:

www.smart-systems-integration.org

Electronics:

ec.europa.eu/digital-agenda/en/electronics-strategy-europe