Ultra-Low PoweR technologies and MEmory architectures for IoT

Fact Sheet

Project Information

PRIME
Grant agreement ID: 692519
DOI
10.3030/692519
Closed project

Funded under
INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Total cost
€ 38 296 264

EU contribution
€ 12 038 776,58

Coordinated by
INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM
Belgium

Start date
1 December 2015
End date
30 September 2019

Objective

The goal of the PRIME project is to establish an open Ultra Low Power (ULP) Technology Platform containing all necessary design and architecture blocks and components which could enable the European industry to increase and strengthen their competitive and leading eco-system and benefit from market opportunities created by the Internet of Things (IoT) revolution.

Over 3 years the project will develop and demonstrate the key building blocks of IoT ULP systems driven by the applications in the medical, agricultural, domestics and security domains. This will include development of high performance, energy efficient and cost effective technology platform, flexible design ecosystem (including IP and design flow), changes in architectural and power management to reduced energy
consumption, security blocks based on PUF and finally the System of Chip and System in Package memory banks and processing implementations for IoT sensor node systems.

Developed advanced as 22nm FDSOI low power technologies with logic, analog, RF and embedded new memory components (STT RAM and RRAM) together with innovative design and system architecture solutions will be used to build macros and demonstrate functionality and power reduction advantage of the new IoT device components.

The PRIME project will realize several demonstrators of IoT system building blocks to show the proposed low power wireless solutions, functionality and performance of delivered design and technology blocks.

The consortium semiconductor ecosystem (IDMs, design houses, R&D, tools & wafer suppliers, foundries, system/product providers) covers complementarily all desired areas of expertise to achieve the project goals.

The project will enable an increase in Europe’s innovation capability in the area of ULP Technology, design and applications, creation of a competitive European ecosystem and help to identify market leadership opportunities in security, mobility, healthcare and smart cost competitive manufacturing.

Fields of science

- natural sciences
- computer and information sciences
- internet
- internet of things
- social sciences
- political sciences
- political transitions
- revolutions
- engineering and technology
- electrical engineering, electronic engineering, information engineering
- electronic engineering
- sensors
- natural sciences
- biological sciences
- ecology
- ecosystems
- natural sciences
- mathematics
- pure mathematics
- arithmetics
- prime numbers

Programme(s)

H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

H2020-EU.2.1.1.7. - ECSEL

Topic(s)

ECSEL-06-2015 - Semiconductor Process, Equipment and Materials

Call for proposal
H2020-ECSEL-2015-1-RIA-two-stage-Master

See other projects for this call

Sub call

H2020-ECSEL-2015-1-RIA-two-stage

Funding Scheme

ECSEL-RIA - ECSEL Research and Innovation Action

Coordinator

INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM

Net EU contribution

€ 3 116 585,00

Address

Kapeldreef 75
3001 Leuven
Belgium

Region

Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Leuven

Activity type

Research Organisations

Links

Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution

€ 4 674 877,50

Participants (16)

GLOBALFOUNDRIES Dresden Module One LLC & Co. KG

Germany
Germany

Net EU contribution
€ 2,936,049.75

Address
Wilschdorfer Landstrasse 101
01109 Dresden

Region
Sachsen > Dresden > Dresden, Kreisfreie Stadt

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 8,808,149.25


FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

Germany

Net EU contribution
€ 1,013,123.50

Address
Hansastrasse 27c
80686 Munich

Region
Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type
Research Organisations

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 1,519,685.25
STMICROELECTRONICS SA

Net EU contribution
€ 320 795,94

Address
Boulevard Romain Rolland 29
92120 Montrouge

Region
Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 962 387,81

STICHTING IMEC NEDERLAND

Net EU contribution
€ 688 361,00

Address
High Tech Campus 31
5656 AE Eindhoven

Region
Noord-Brabant > Zuidoost-Noord-Brabant

Activity type
Research Organisations

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 1 313 701,50
TECHNISCHE UNIVERSITAET DRESDEN

Germany

Net EU contribution

€ 977 842,00

Address
Helmholtzstrasse 10
01069 Dresden

Region
Sachsen > Dresden > Dresden, Kreisfreie Stadt

Activity type
Higher or Secondary Education Establishments

Links
Contact the organisation Website
Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution
€ 1 466 763,00

IDT EUROPE GMBH

Germany

Net EU contribution

€ 560 248,13

Address
Grenzstrasse 28
01109 Dresden

Region
Sachsen > Dresden > Dresden, Kreisfreie Stadt

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Website
Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution
€ 1 680 744,37
CEZAMAT PW SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA

Poland

Net EU contribution

€ 450 000,00

Address

Ul. Poleczki 19
00-644 Warszawa

Region

Makroregion województwo mazowieckie > Warszawski stoleczny > Miasto Warszawa

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution

€ 675 000,00

SURECORE LTD

United Kingdom

Net EU contribution

€ 425 437,50

Address

Floor 5, 2 Wellington Place
LS1 4AP Leeds

SME

Yes

Region

Yorkshire and the Humber > West Yorkshire > Leeds

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Non-EU contribution
€ 992 687,50

TECHNOLUTION BV
Netherlands
Net EU contribution
€ 125 865,00
Address
Burgermeester Jamessingel 1
2803 WV Gouda
SME Yes
Region
West-Nederland > Zuid-Holland > Oost-Zuid-Holland
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Non-EU contribution
€ 293 685,00

INTRANSC ID BV
Netherlands
Net EU contribution
€ 140 400,00
Address
High Tech Campus 83
5656 AG Eindhoven
SME Yes
Region
Noord-Brabant > Zuidoost-Noord-Brabant
Private for-profit entities (excluding Higher or Secondary Education Establishments)

SOITEC SA

France

Net EU contribution

€ 210 625,00

Address

Chemin Des Franques - Parc Technologique Des Fontaines
38190 Bernin

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Non-EU contribution

€ 327 600,00

DREAM CHIP TECHNOLOGIES GMBH

Germany

Net EU contribution

€ 335 625,00

Address

Steinriede 10
30827 Garbsen

Non-EU contribution

€ 631 875,00
Yes

Region
Niedersachsen > Hannover > Region Hannover

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution
€ 783,125,00

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Singulus Technologies AG

Germany

Net EU contribution
€ 27,500,00

Address
Hanauer Landstrasse 103
63796 Kahl Am Main

Region
Bayern > Unterfranken > Aschaffenburg, Landkreis

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution
€ 82,500,00

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INTELLIGENT FLUIDS GMBH

Germany

Net EU contribution
€ 129,375,00

Address
SYNOPSYS NETHERLANDS BV
Netherlands
Net EU contribution
€ 379 609,38
Address
High Tech Campus 41
5656 AE Eindhoven
Region
Noord-Brabant > Zuidoost-Noord-Brabant
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network
Non-EU contribution
€ 1 138 828,12

STMICROELECTRONICS ROUSSET SAS

Non-EU contribution
€ 301 875,00
France
Net EU contribution
€ 201 334,38

Address
Avenue Coq Zi Peynier Rousset
13790 Rousset

Region
Provence-Alpes-Côte d'Azur > Provence-Alpes-Côte d'Azur > Bouches-du-Rhône

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Non-EU contribution
€ 604 003,12

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Last update: 18 August 2022
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