



HORIZON
2020

Highly efficient and trustworthy electronics, components and systems for the next generation energy supply infrastructure

Fact Sheet

Project information

PROGRESSUS

Grant agreement ID: 876868

Status

Ongoing project

Start date
1 April 2020

End date
31 March 2023

Funded under:
H2020-EU.2.1.1.7.

Overall budget:
€ 19 575 959,75

EU contribution
€ 5 785 389,68

Coordinated by:
INFINEON TECHNOLOGIES AG
 Germany

Objective

Progressus supports the European climate targets for 2030 by proposing a next generation smart grid, demonstrated by the application example "smart charging infrastructure" that integrates seamlessly into the already existing concepts of smart-grid architectures keeping additional investments minimal. The expected high-power requirements for ultra fast charging stations lead to special challenges for designing and establishing an intelligent charge-infrastructure. As emission free traffic concepts are a nascent economic topic also the efficient use of charging infrastructure is still in its infancy. Thus, novel sensor types, hardware security modules, inexpensive high bandwidth technologies and block-chain technology as part of an independent, extendable charging energy-management and customer platform are researched for a charging-station energy-microgrid. Research of new efficient high-power voltage converters, which support bidirectional power flow and provide a new type of highly economical charging stations with connected storage and metering platform to locally monitor the grid state complements the activities. The stations are intended to exploit the grid infrastructure via broadband power-line as communication medium, removing the need for costly civil engineering activities and supplying information to the energy management solutions for utilization optimization. Smart-Contracts via block-chain offer a distributed framework for the proposed energy management and services platform. Furthermore hardware security

hardens the concept against direct physical attacks such as infiltration of the network by gaining access to the encryption key material even when a charging station is compromised. Progressus solutions are estimated to enable a carbon dioxide saving of 800.000 tons per year for only Germany, will secure the competitiveness of European industry and research by extending the system know how and will thus safeguard employment and production in Europe.

Programme(s)

[H2020-EU.2.1.1.7. - ECSEL](#)

Topic(s)

[ECSEL-2019-2-RIA - ECSEL-2019-2-RIA](#)

Call for proposal

H2020-ECSEL-2019-2-RIA

[See other projects for this call](#)

Funding Scheme


ECSEL-RIA - ECSEL Research and Innovation Action

Coordinator



INFINEON TECHNOLOGIES AG

Address

**Am Campeon 1-15
85579 Neubiberg
 Germany**

Activity type

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

EU Contribution

€ 1 012 269

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Participants (21)



DEVOLO AG

Germany

EU Contribution

€ 261 668,13

Address

**Charlottenburger Allee 67
52068 Aachen**

Activity type

**Private for-profit entities
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MIXED MODE GMBH

Germany

EU Contribution

€ 244 125

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Activity type

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CEUS UG

Germany

EU Contribution

€ 75 000

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**Henkestrasse 91
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**FRIEDRICH-ALEXANDER-UNIVERSITAET ERLANGEN-
NUERNBERG**

Germany

EU Contribution

€ 225 312,50

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TECHNISCHE HOCHSCHULE KOLN

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EU Contribution

€ 223 082,56

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STICHTING ELAADNL

Netherlands

EU Contribution

€ 72 500

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HELIOX BV

Netherlands

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€ 731 705,25

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GREENFLUX ASSETS BV

Netherlands

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€ 531 750

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**TECHNISCHE UNIVERSITEIT EINDHOVEN** **Netherlands**

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€ 213 517,06

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€ 305 711,88

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€ 157 500

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08006 Barcelona**

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EU Contribution

€ 152 713,80

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CENTRE TECNOLOGIC DE TELECOMUNICACIONS DE CATALUNYA

Spain

EU Contribution

€ 150 500

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€ 72 892,31

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STMICROELECTRONICS SRL

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€ 256 431,25

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Activity type

Private for-profit entities
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ENEL X SRL

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€ 229 035,94

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POLITECNICO DI BARI

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70126 Bari

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CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LA NANOELETTRONICA

Italy

EU Contribution

€ 426 580

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40125 Bologna

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UNIVERSITA DEGLI STUDI DI MESSINA

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€ 74 025

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98122 Messina

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SLOVENSKA TECHNICKA UNIVERZITA V BRATISLAVE

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€ 101 500

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€ 107 812,50

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