Truly Sustainable Printed Electronics-based IoT Combining Optical and Radio Wireless Technologies

Fact Sheet

Project Information

SUPERIOT
Grant agreement ID: 101096021

DOI
10.3030/101096021

EC signature date
21 November 2022

Funded under
Digital, Industry and Space

Total cost
€ 4 848 952,00

EU contribution
€ 4 757 739,50

Coordinated by
OULUN YLIOPISTO
Finland

Start date
1 January 2023

End date
31 December 2025

Project description

A truly sustainable and highly flexible IoT system

The sustainability of Internet of Things (IoT) technologies is essential and must be considered at the design and implementation phase. With this in mind, the EU-funded SUPERIOT project will develop a truly sustainable and highly flexible IoT system based on optical and radio communication and the exploitation of printed electronics technology to implement sustainable IoT nodes. The dual-mode optical-radio approach provides unique characteristics to the IoT system reconfigured to use optical, radio or both connectivity approaches. This hybrid system will combine the advantages of both wireless communication methods. The energy-autonomous
nodes will harvest energy from both sources and have essential IoT functionalities such as sensing, actuating and computational capabilities. The project will also identify, develop and demonstrate applications for the proposed concept.

Fields of science

natural sciences > computer and information sciences > internet > internet of things

engineering and technology, > electrical engineering, electronic engineering, information engineering > information engineering > telecommunications > radio technology

Keywords

Sustainable IoT, printed electronics, optical communications, radio communications

Programme(s)

HORIZON.2.4 - Digital, Industry and Space

Topic(s)

HORIZON-JU-SNS-2022-STREAM-B-01-03 - Communication Infrastructure Technologies and Devices

Call for proposal

HORIZON-JU-SNS-2022

See other projects for this call

Funding Scheme

HORIZON-JU-RIA - HORIZON JU Research and Innovation Actions

Coordinator
OULUN YLIOPISTO

Net EU contribution
€ 883 625,00

Address
Penti kaiteran katu 1
90014 Oulu
Finland

Region
Manner-Suomi > Pohjois- ja Itä-Suomi > Pohjois-Pohjanmaa

Activity type
Higher or Secondary Education Establishments

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

Other funding
€ 0,00

Participants (9)

INESC TEC - INSTITUTO DE ENGENHARIADE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIENCIA

Portugal

Net EU contribution
€ 560 625,00

Address
Rua dr roberto frias campus da feup
4200 465 Porto

Region
Continente > Norte > Área Metropolitana do Porto

Activity type
Research Organisations

Links
Contact the organisation  Website  Participation in EU R&I programmes
TEKNOLOGIAN TUTKIMUSKESKUS VTT OY

Finland

Net EU contribution
€ 817 417,00

Address
Tekniikantie 21
02150 Espoo

Region
Manner-Suomi > Helsinki-Uusimaa > Helsinki-Uusimaa

Activity type
Research Organisations

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

Other funding
€ 0,00

NOVA ID FCT - ASSOCIACAO PARA A INOVACAO E DESENVOLVIMENTO DA FCT

Portugal

Net EU contribution
€ 691 205,00

Address
Campus de caparica faculdade de ciencias e tecnologia da universidade nova de lisboa
2829 516 Caparica

Region
Continente > Área Metropolitana de Lisboa > Área Metropolitana de Lisboa

Activity type
Research Organisations
STICHTING IMEC NEDERLAND
Netherlands
Net EU contribution
€ 461 455,00
Address
High tech campus 31
5656 AE Eindhoven
Region
Zuid-Nederland > Noord-Brabant > Zuidoost-Noord-Brabant
Activity type
Research Organisations
Links
Contact the organisation  Contact the organisation  Website
Participation in EU R&I programmes  Participation in EU R&I programmes
HORIZON collaboration network  HORIZON collaboration network
Other funding
€ 0,00

LIGHTBEE SL
Spain
Net EU contribution
€ 212 400,00
Address
Parque científico tecnologico de ulpgc edificio polivalente ii oficina 8
35017 Las palmas de grand canaria
SME  Yes
Yes
Canarias > Canarias > Gran Canaria

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

Other funding
€ 23 600,00

MPICOSYS - EMBEDDED PICO SYSTEMS SPZOO

Poland
Net EU contribution
€ 252 000,00

Address
Ul. al zwyciestwa 96 98  
81 451 Gdynia

SME
Yes

Region
Makroregion północny > Pomorskie > Trójmiejski

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

Other funding
€ 28 000,00

KATHOLIEKE UNIVERSITEIT LEUVEN

Belgium
Net EU contribution
VIVID COMPONENTS GERMANY UG

Germany

Net EU contribution

€ 219 825,00

Address

Dr rorig damm 22
33102 Paderborn

SME

Yes

Region

Nordrhein-Westfalen > Detmold > Paderborn

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

Other funding

€ 24 425,00
WAVECOM SOLUCOES RADIO SA

Portugal

Net EU contribution

€ 136,687,50

Address

Rua das cardadeiras 107 lugar de agra de cima
3800 125 Aveiro

SME

Yes

Region

Continente > Centro (PT) > Região de Aveiro

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

Other funding

€ 15,187,50

Partners (1)

UNIVERSITY OF BRISTOL

United Kingdom

Net EU contribution

€ 0,00

Address

Beacon house queens road
BS8 1QU Bristol

Region

South West (England) > Gloucestershire, Wiltshire and Bristol/Bath area > Bristol, City of

Activity type

Higher or Secondary Education Establishments
Other funding

No data

Last update: 25 November 2022

Permalink: https://cordis.europa.eu/project/id/101096021

European Union, 2024