VIZTA sounds for Vision, Identification, with Z-sensing Technologies and key Applications.

Fact Sheet

Project Information

VIZTA
Grant agreement ID: 826600

DOI
10.3030/826600

Closed project

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

Total cost
€ 86 765 712,88

EU contribution
€ 21 144 567,80

Coordinated by
STMICROELECTRONICS
CROLLES 2 SAS
France

Start date
1 May 2019

End date
31 October 2022

Project description

Innovative image sensors to drive 3D imaging forward

3D imaging has become important in industrial and consumer applications, allowing more accurate inspection of components at manufacturing sites and greater image depth for media, respectively. The EU-funded VIZTA project is developing advanced new optical sensors and laser sources for short- and long-range 3D imaging. Innovations include, amongst others, advanced time-of-flight solutions leveraging single-photon avalanche diodes, cost-effective near-infrared and RGB on-chip filters,
complex RGB pixels for multimodal imaging, advanced Optical Phase Array and laser sources for LiDAR systems. Bringing together industry and academia, VIZTA will develop six demonstrators that will find applications in diverse fields including the automotive, security, smart buildings, mobile robotics for smart cities, and industry 4.0.

**Objective**

VIZTA project, coordinated by ST Micreelectronics, aims at developing innovative technologies in the field of optical sensors and laser sources for short to long-range 3D-imaging and to demonstrate their value in several key applications including automotive, security, smart buildings, mobile robotics for smart cities, and industry4.0. The key differentiating 12-inch Silicon sensing technologies developed during VIZTA are:

- Innovative SPAD and lock-in pixel for Time of Flight architecture sensors
- Unprecedented and cost-effective NIR and RGB-Z filters on-chip solutions
- complex RGB+Z pixel architectures for multimodal 2D/3D imaging

For short-range sensors: advanced VCSEL sources including wafer-level GaAs optics and associated high speed driver

These developed differentiating technologies allows the development and validation of innovative 3D imaging sensors products with the following highly integrated prototypes demonstrators:

- High resolution (>77,000 points) time-of-flight ranging sensor module with integrated VCSEL, drivers, filters and optics.
- Very High resolution (VGA min) depth camera sensor with integrated filters and optics.

For Medium and Long range sensing, VIZTA also addresses new LiDAR systems with dedicated sources, optics and sensors

Technology developments of sensors and emitters are carried out by leading semiconductor product suppliers (ST Microelectronics, Philips, III-V Lab) with the support of equipment suppliers (Amat, Semilab) and CEA Leti RTO.

VIZTA project also include the development of 6 demonstrators for key applications including automotive, security, smart buildings, mobile robotics for smart cities, and industry4.0 with a good mix of industrial and academic partners (Ibeo, Veoneer, Ficosa, Beamagine, IEE, DFKI, UPC, Idemia, CEA-List, ISD, BCB, IDE, Eurecat). VIZTA consortium brings together 23 partners from 9 countries in Europe: France, Germany, Spain, Greece, Luxembourg, Latvia, Sweden, Hungary, and United Kingdom.

**Fields of science**

- engineering and technology > civil engineering > urban engineering > smart cities
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-2018-1-IA - ECSEL-2018-1-IA

Call for proposal

H2020-ECSEL-2018-1-IA-two-stage

See other projects for this call

Funding Scheme

ECSEL-IA - ECSEL Innovation Action

Coordinator

STMICROELECTRONICS CROLLES 2 SAS
Net EU contribution
€ 5 482 013,25

Address
Rue Jean Monnet 850
38920 Crolles
France

Region
Auvergne-Rhône-Alpes > Rhône-Alpes > Isère
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

€ 23 801 246,56

Participants (27)

STMICROELECTRONICS GRENOBLE 2 SAS

France

Net EU contribution

€ 908 791,50

Address

Rue Jules Horowitz 12
38000 Grenoble

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

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

€ 3 635 166,00

THIRD-PARTY

STMICROELECTRONICS (ALPS) SAS

France

Net EU contribution

€ 366 147,74

Address

Rue Jules Horowitz 12
38000 Grenoble
Rue Jules Horowitz 12
38000 Grenoble

Region
Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

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
€ 1 464 590,97

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

France

Net EU contribution
€ 7 844 421,38

Address
Rue Leblanc 25
75015 Paris 15

Region
Ile-de-France > Ile-de-France > Paris

Activity type
Research Organisations

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

Other funding
€ 14 568 211,12

III-V LAB

France

Net EU contribution
€ 512 644,70

5 of 18
Address
1 Avenue Augustin Fresnel Campus Polytechnique
91767 Palaiseau Cedex

Region
Ile-de-France > Ile-de-France > Essonne

Activity type
Other

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

Other funding
€ 2 050 579,05

VEONEER SWEDEN AB

Sweden

Net EU contribution
€ 160 859,75

Address
Wallentinsvägen 22
447 37 Vargarda

Region
Södra Sverige > Västsverige > Västra Götalands län

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
€ 643 439,00

ISD LYSEIS OLOKRIROMENON SYSTIMATONANONYMOS ETAIREIA

Greece

Net EU contribution
€ 125 000,00
Address
Kifissias Avenue 32 Ktipio B Atrina Center
151 25 Maroussi

SME
Yes

Region
Βόρειος Τομέας Αθηνών > Αττική > Αττική

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
€ 375 000,00

---

BEAMAGINE S.L

Spain

Net EU contribution
€ 165 406,97

Address
Carre Bellesguard 16
08755 Barcelona

SME
Yes

Region
Este > Cataluña > Barcelona

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
€ 496 220,92
IDEMIA IDENTITY & SECURITY FRANCE

Address
2, Place Samuel De Champlain
92400 Courbevoie

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

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

Other funding
€ 848 330,00

STMICROELECTRONICS SA

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)

Other funding
€ 1 908 872,00
STMICROELECTRONICS (RESEARCH & DEVELOPMENT) LTD
United Kingdom
Net EU contribution
€ 247 638,75
Address
Third Avenue Atlas House Globe Park
SL7 1EY Marlow
Region
South East (England) > Berkshire, Buckinghamshire and Oxfordshire > Buckinghamshire
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
€ 990 555,00

IBEO AUTOMOTIVE SYSTEMS GMBH
Germany
Net EU contribution
€ 100 613,51
Address
Merkurring 60-62
22143 Hamburg
SME
Yes
Region
Hamburg > Hamburg > Hamburg
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation  
Website
IEE INTERNATIONAL ELECTRONICS & ENGINEERING SA

Luxembourg

Net EU contribution

€ 755 470,00

Address

Rue Pierre Richardot 12
6468 Echternach

Region

Luxembourg > Luxembourg > Luxembourg

Activity type

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

Other funding

€ 402 454,04

LUMIBIRD

France

Net EU contribution

€ 24 886,96

Address

2 Rue Paul Sabatier
22300 Lannion

Region

Bretagne > Bretagne > Côtes-d’Armor

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)
ELEKTRONIKAS UN DATORZINATNU INSTITUTS

Latvia

Net EU contribution
€ 113 050,00

Address
Dzerbenes iela 14
1006 Riga

Region
Latvija > Latvija > Riga

Activity type
Research Organisations

DEUTSCHES FORSCHUNGSZENTRUM FUR KUNSTLICHE INTELLIGENZ GMBH

Germany

Net EU contribution
€ 785 093,75

Address
Trippstadter Strasse 122
67663 Kaiserslautern

Region
Rheinland-Pfalz > Rheinhessen-Pfalz > Kaiserslautern, Kreisfreie Stadt
Research Organisations

Semilab Felvezeto Fizikai Laboratorium Zartkoruen Mukodo Reszvenytarsasag

Hungary

Net EU contribution
€ 375 000,00

Address
Prielle Kornelia Utca 4/a.
1117 Budapest

Region
Közép-Magyarország > Budapest > Budapest

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

Other funding
€ 1 458 031,25

Applied Materials France

France

Net EU contribution
€ 27 671,50

Address
864 Chemin Des Fontaines
38190 Bernin

Region

Other funding
€ 1 500 000,00
Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

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
€ 110 686,00

---

TRUMPF PHOTONIC COMPONENTS GMBH

Germany
Net EU contribution
€ 1 139 750,00

Address
Lise-meitner-strasse 13
89081 Ulm

Region
Baden-Württemberg > Tübingen > Ulm, Stadtkreis

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
€ 4 726 278,05

---

UNIVERSITAT POLITECNICA DE CATALUNYA

Spain
Net EU contribution
€ 483 217,74

Address
Calle Jordi Girona 31
08034 Barcelona
Higher or Secondary Education Establishments

FUNDACIO EURECAT

Spain

Net EU contribution

€ 402 500,00

Address

Avenida Universitat Autonoma 23
08290 Cerdanyola Del Valles (Barcelona)

Other funding

€ 747 500,00

Research Organisations

FICOMIRRORS SA

Spain

Net EU contribution

€ 4 562,35

Address

Gran Via De Carles Iii 98
08028 Barcelona
Region
Este > Cataluña > Barcelona

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
€ 18 249,41

---

ALTER TECHNOLOGY TUV NORD SA
Spain
Net EU contribution
€ 122 750,00

Address
Calle Tomas Alba Edison 4 Isla De La Cartuja
41092 Sevilla

Region
Andalucía > Sevilla

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
€ 491 000,00

---

BCB Informatica y Control S.L.
Spain
Net EU contribution
€ 75 156,25

Address
Calle Fernando El Catolico 11/2b Dcha
28015 Madrid

SME: Yes

Region: Comunidad de Madrid > Comunidad de Madrid > Madrid

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: € 225,468.75

---

KEOPSYS INDUSTRIES

France

Net EU contribution: € 63,187.75

Address:
2 Rue Paul Sabatier
22300 Lannion

Region: Bretagne > Bretagne > Côtes-d’Armor

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: € 252,751.00

---

ADVANCED AUTOMOTIVE ANTENNAS S.L

Spain

Other funding: € 252,751.00
**Spain**

Net EU contribution
€ 20 259,14

Address
Gran Via Carlos lll 98 Planta 08028 Barcelona

Region
Este > Cataluña > Barcelona

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
€ 81 036,54

---

**QUANTEL TECHNOLOGIES**

France

Net EU contribution
€ 64 375,80

Address
Za Courtaboeuf 2 Bis Avenue Du Pacifique 91940 Les Ulis

Region
Ile-de-France > Ile-de-France > Essonne

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
€ 257 503,18
IDNEO TECHNOLOGIES SAU

Spain

Net EU contribution

€ 84 798,51

Address

Cl Del Rec De Dalt 3 Pol.ind.can Magarola
08100 Mollet Del Valles

Region

Este > Cataluña > Barcelona

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

€ 339 194,05

EC signature date: 10 May 2019
Last update: 10 September 2022
Record number: 223292

Permalink: https://cordis.europa.eu/project/id/826600

© European Union, 2022