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

Fact Sheet

Project Information

VIZTA
Grant agreement ID: 826600

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

DOI
10.3030/826600

Total cost
€ 86 765 712,88

EU contribution
€ 21 144 567,80

Start date
1 May 2019
End date
31 October 2022

Coordinated by
STMICROELECTRONICS CROLLES 2 SAS
France

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,
Objective

VIZTA project, coordinated by ST Microelectronics, 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 industry 4.0. 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 industry 4.0 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)  MAIN PROGRAMME

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

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Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère
Participants (27)

STMICROELECTRONICS GRENOBLE 2 SAS
France
Net EU contribution
€ 908 791,50
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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
Non-EU contribution
€ 3 635 166,00

THIRD-PARTY
STMICROELECTRONICS (ALPS) SAS
France
Net EU contribution
€ 366 147,74
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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
€ 1 464 590,97

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
France
Net EU contribution
€ 7 844 421,38
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Activity type
Research Organisations
Links
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HORIZON collaboration network
Non-EU contribution
€ 14 568 211,12

III-V LAB
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Net EU contribution
€ 512 644,70
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Region
Ile-de-France > Ile-de-France > Essonne

Activity type
Other

Links
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Participation in EU R&I programmes  
HORIZON collaboration network

Non-EU contribution
€ 2 050 579,05

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VEONEER SWEDEN AB
Sweden

Net EU contribution
€ 160 859,75

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Wallentinsvagen 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

Non-EU contribution
€ 643 439,00

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ISD LYSEIS OLOKRIROMENON SYSTMATONANONYMOS ETAIREIA
Greece

Net EU contribution
€ 125 000,00
€ 125 000,00

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Kifissias Avenue 32 Ktipio B Atrina Center
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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

Non-EU contribution
€ 375 000,00

BEAMAGINE S.L
Spain
Net EU contribution
€ 165 406,97

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Carre Bellesguard 16
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SME  

Yes

Region
Este > Cataluña > Barcelona

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

Links
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Non-EU contribution
€ 496 220,92
IDEMIA IDENTITY & SECURITY FRANCE

Net EU contribution
€ 212 082,50

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2, Place Samuel De Champlain
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Ile-de-France > Ile-de-France > Hauts-de-Seine

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

Links
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Non-EU contribution
€ 848 330,00

STMICROELECTRONICS SA

Net EU contribution
€ 477 218,00

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

Links
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Non-EU contribution
€ 1 908 872,00
STMICROELECTRONICS (RESEARCH & DEVELOPMENT) LTD

Net EU contribution
€ 247 638.75

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South East (England) > Berkshire, Buckinghamshire and Oxfordshire > Buckinghamshire

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

IBEO AUTOMOTIVE SYSTEMS GMBH

Net EU contribution
€ 100 613.51

Address
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22143 Hamburg

SME
Yes

Region
Hamburg > Hamburg > Hamburg

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
IEE INTERNATIONAL ELECTRONICS & ENGINEERING SA

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Net EU contribution
€ 755 470,00

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Rue Pierre Richardot 12
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Region
Luxembourg > Luxembourg > Luxembourg

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

Links
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HORIZON collaboration network

Non-EU contribution
€ 3 021 880,00

LUMIBIRD

France

Net EU contribution
€ 24 886,96

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2 Rue Paul Sabatier
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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
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Latvija > Latvija > Riga
Activity type
Research Organisations
Links
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Participation in EU R&I programmes  HORIZON collaboration network
Non-EU contribution
€ 209 950,00

DEUTSCHES FORSCHUNGSZENTRUM FUR KUNSTLICHE INTELLIGENZ GMBH
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Rheinland-Pfalz > Rheinhessen-Pfalz > Kaiserslautern, Kreisfreie Stadt
Activity type
Research Organisations

Links

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

Non-EU contribution

€ 1 458 031,25

SEMILAB FELVEZETO FIZIKAI LABORATORIUM ZARTKORUEN MUKODO RESZVENYTARSASAG

Hungary

Net EU contribution

€ 375 000,00

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Közép-Magyarország > Budapest > Budapest

Activity type

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

Links

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Non-EU contribution

€ 1 500 000,00

APPLIED MATERIALS FRANCE

France

Net EU contribution

€ 27 671,50

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38190 Bernin

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TRUMPF PHOTONIC COMPONENTS GMBH

Germany

Net EU contribution
€ 1 139 750,00

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Baden-Württemberg > Tübingen > Ulm, Stadtkreis

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

Links
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Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 4 726 278,05

UNIVERSITAT POLITECNICA DE CATALUNYA

Spain

Net EU contribution
€ 483 217,74

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Calle Jordi Girona 31
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Activity type
Higher or Secondary Education Establishments

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Non-EU contribution
€ 897 404,37

FUNDACIO EURECAT

Spain
Net EU contribution
€ 402 500,00

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Avenida Universitat Autonoma 23
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Activity type
Research Organisations

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Non-EU contribution
€ 747 500,00

FICOMIRRORS SA

Spain
Net EU contribution
€ 4 562,35

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ALTER TECHNOLOGY TUV NORD SA

Spain

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€ 122 750,00

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Andalucía > Sevilla

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

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Non-EU contribution
€ 491 000,00

BCB Informatica y Control S.L.

Spain

Net EU contribution
€ 75 156,25

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SME
Yes

Region
Comunidad de Madrid > Comunidad de Madrid > Madrid

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

Links
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Non-EU contribution
€ 225 468,75

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KEOPSYS INDUSTRIES

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Net EU contribution
€ 63 187,75

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Bretagne > Bretagne > Côtes-d’Armor

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

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Non-EU contribution
€ 252 751,00

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ADVANCED AUTOMOTIVE ANTENNAS S.L
Spain

Net EU contribution
€ 20 259,14

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

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Non-EU contribution
€ 81 036,54

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QUANTEL TECHNOLOGIES

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Net EU contribution
€ 64 375,80

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

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Non-EU contribution
€ 257 503,18
IDNEO TECHNOLOGIES SAU

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Net EU contribution

€ 84 798,51

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Non-EU contribution

€ 339 194,05

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