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STMicroelectronics and eYs3D Microelectronics to showcase collaboration on high-quality 3D stereo-vision camera for machine vision and robotics at CES 2023

- *Companies will demonstrate 3D depth vision through stereo cameras fusion for fast-motion object tracking in AIoT and autonomous guided robots and industrial devices*
- *Reference designs leverage ST's high-performance, near-infrared, global-shutter image sensors to ensure best quality depth sensing and point-cloud creation*

Geneva, Switzerland, and Taipei, Taiwan, January 2, 2023 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, and eYs3D Microelectronics, a fabless semiconductor design house that focuses on end-to-end hardware and software systems for computer vision, including advanced vision-processing System-on-Chip (SoC) devices, will reveal the results of their collaboration on high-quality machine vision at CES 2023 in Las Vegas on January 5-8. Using live demonstrations, the companies will show how stereo video and depth camera made from advanced active-coded infrared technology can enhance capabilities like feature recognition and autonomous guidance at mid-to-long working range.

"STMicroelectronics' advanced image sensors, using proprietary process technologies, offer class-leading pixel size while offering both high sensitivity and low crosstalk," said James Wang, Chief Strategy & Sales Officer, eYs3D Microelectronics. *"Such high-performance image sensors at a competitive price point enable us to achieve extremely compact system size while ensuring outstanding machine-vision performance. The strong connection we have established with ST increases our confidence to develop new products that will lead the machine vision market."*

"*The collaboration with eYs3D Microelectronics, through their expertise in capture, perception understanding, and 3D-fusion, offers ST additional business opportunities, use cases, and ecosystems addressing demands for stereo vision in applications such as robots, home-automation, home appliances, and many others,*" said David Maucotel, Business Line Manager at ST's Imaging Sub-Group. *"While the reference designs showcased at CES are using monochromatic sensors, we can already foresee exciting enhancements and further use-cases using the RGB and RGB-IR versions of our sensors."*

The CES demonstrations highlight two jointly developed reference designs, the Ref-B6 and Ref-B3 ASV (Active Stereo Vision) video and depth cameras. Both combine the eYs3D CV processor and eSP876 stereo 3D Depth-Map chipset with ST's global shutter image sensors that provide enhanced near-infrared (NIR) sensitivity. The embedded eYs3D chipset enhances object edge detection, optimizes depth de-noising, and outputs HD-quality 3D depth data up to

60 fps frame rate. ST's image sensors enable the cameras to output data streams in various combinations of video/depth resolution and frame rate for the best quality depth sensing and point-cloud creation.

In addition, optimized lenses, filters and a VCSEL active-IR projector source optimize the infrared optical path and maximize immunity to ambient light noise. A specially developed control algorithm turns the IR projector on and off alternately to permit capturing artifact-free gray scale images. Leveraging this advanced hardware design, the Ref-B6 stereo-video camera achieves a 6-centimeter baseline and 85deg(H) x 70deg(V) depth field of view.

Both eYs3D reference designs include the SDK (Software Development Kit) supporting Windows®, Linux and Android OS environments with multiple different programming languages and wrapper APIs.

eYs3D will showcase the joint development Ref-B6 Depth Camera at two booth locations:

LVCC, Booth #15769, Central Hall and Venetian, Eureka Park, Booth #62500, AT1, Hall G.

Please contact your local sale representatives or sales@eys3d.com to arrange appointments and customer presentations.

Note to Editors:

Artificial Intelligence of Things (AIoT) is the combination of artificial intelligence (AI) technologies and the Internet of Things (IoT) infrastructure.

A **point cloud** is a discrete set of data points in space. The points may represent a 3D shape or object.

About STMicroelectronics
At ST, we are 48,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and connectivity. ST is committed to becoming carbon neutral by 2027. Further information can be found at www.st.com.

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About eYs3D Microelectronics
eYs3D Microelectronics Corp. pioneers in 3D sensing technologies, and aims to develop semiconductor oriented technologies and products related to 3D vision-simulating computer vision technologies integrated with computer intelligence. With its strong foundations and experiences in memory design and computer vision, as well as close co-operations with its parent company- Etron Technology, Inc., and ARM Holdings Plc. The company focuses on computer vision processors and specializes in 3D stereo vision solutions. As one of the earliest ventures in 3D technology, eYs3D was designed-in with multiple tier-one brands in VR, robotics and IoT devices. eYs3D's state-of-the-art stereo vision depth IC and module offer customers

more integrated value in bringing 3d sensing into real applications, realizing computer vision with human perception incorporated with A.I.

For further information visit www.eys3d.com

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