

January 4, 2022



# Arbe Introduces Radar Based Free Space Mapping as Part of Its Perception Imaging Radar, at CES 2022

## An Industry First Solution, Critical for the Future of Autonomous Driving

LAS VEGAS, Jan. 4, 2022 /PRNewswire/ --[Arbe Robotics](#) Ltd., ("Arbe") (Nasdaq: ARBE), a global leader in next-generation Imaging Radar solutions, introduces the addition of Free Space Mapping to its revolutionary Imaging Radar perception stack at [CES 2022](#). Arbe has radically enhanced its solution with an algorithm that identifies the drivable sections in the environment surrounding the vehicle, while aggregating a map of the environment, and localizing the vehicle within this map.



This is the first time an automotive radar is able to contribute to free space mapping, a critical function of autonomous driving that requires great accuracy and redundancy. The Imaging Radar complements camera sensors with its ability to sense Doppler - the direction and velocity of moving objects, at long range and wide field of view, sensing the environment in all weather, lighting, and visibility conditions.

The inability of traditional automotive radars to perform Free Space Mapping posed a significant problem to OEM's perception teams, who had to rely solely on camera algorithms. Arbe's perception Imaging radar is providing true sensor fusion that leverages the advantages of each of the individual sensors, making it an imperative component in any perception stack.

The Free Space Mapping feature of Arbe's perception imaging radar, senses the unobstructed space in the environment around the vehicle. To yield the representation of the drivable space, Arbe's radar analyzes ultra high-resolution data in all dimensions, that stems from all the targets in the field of view -- pedestrians, vehicles, buildings, trees, and more.

"The ability to generate a free space map and enhance perception algorithms is truly game changing for the future of autonomous driving," noted Chief Executive Officer, Kobi Marenko. "With our perception imaging radar, we're far ahead of the industry with an exceptional and cost-effective solution that offers true redundancy and safety for OEM's perception algorithms. Our breakthrough technology has transformed radar as a sensor for ADAS (advanced driver assistance systems) and autonomous vehicles. Now, with the addition of free space mapping, we're enabling greater safety than ever before for drivers, pedestrians, bicyclists, and anyone sharing the road with autonomous vehicles."

CES has selected Arbe as a 2022 Innovation Awards honoree in the Vehicle Intelligence & Transportation product category. Perception Imaging Radar was recognized for revolutionizing autonomous vehicle sensing to support advanced perception capabilities at an affordable cost for the mass market. Arbe recently became the first automotive imaging radar company to be publicly traded in the U.S.

Arbe's Perception Imaging Radar offering significant benefits beyond the Free Space Mapping in comparison to traditional radars, such as the ability to provide ultra-high resolution and full spatial sensing—including elevation—in greater detail than any other automotive radar on the market; distinguish stationary objects from dynamic ones; eliminating false alarms, an ongoing problem with radar systems, and resolve doppler ambiguities.


### **About Arbe Robotics, Ltd.**

Arbe (Nasdaq: ARBE), a global leader in next-generation Perception Imaging Radar Chipset Solutions, is spearheading a radar revolution, enabling truly safe driver-assist systems today while paving the way to full autonomous-driving. Arbe's imaging radar is 100 times more detailed than any other radar on the market and is a mandatory sensor for L2+ and higher autonomy. The company is empowering automakers, tier-1 suppliers, autonomous ground vehicles, commercial and industrial vehicles, and a wide array of safety applications with advanced sensing and paradigm-changing perception. Arbe is a leader in the fast-growing automotive radar market that has an estimated projected total addressable market of \$11 billion in 2025. Arbe is based in Tel Aviv, Israel, and has an office in the United States.

### **Cautionary Note Regarding Forward-Looking Statements**

This press release contains certain "forward-looking statements" within the meaning of the Securities Act of 1933 and the Securities Exchange Act of 1934, both as amended by the Private Securities Litigation Reform Act of 1995. The words "expect," "believe," "estimate,"

"intend," "plan," "anticipate," "project," "may," "should," "strategy," "future," "will," "project," "potential" and similar expressions indicate forward-looking statements. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Statements that are not historical facts, including statements relating to the status of the development of and market for Arbe's free space mapping and its perception imaging radar, are forward-looking statements. Such statements include, but are not limited to, the market for this product, Arbe's ability to develop and deliver radar systems with these functions in a timely manner and at a reasonable cost, the development of competing products, Arbe's ability to have access to and to use the latest technological developments on an on-going basis, the timing of full production, Arbe's supplier's ability to purchase required semiconductors at a reasonable price and in a timely manner, particularly in view of the worldwide shortage of semiconductors, Arbe's ability to enter into supply contracts with OEMs and Tier 1 suppliers, Arbe's supplier's ability to purchase required semiconductors at a reasonable price and in a timely manner, particularly in view of the worldwide shortage of semiconductors, Arbe's ability to enter into supply contracts with OEMs and Tier 1 suppliers, the extent to which automobiles with Arbe's free space mapping and perception imaging radar functions perform in tests of the product by OEMs and Tier I suppliers, and the ability of Arbe to have the products manufactured by a third party supplier at a reasonable price and in accordance with Arbe's and its customers' schedules; as well as the risk factors and uncertainties described in "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Cautionary Note Regarding Forward-Looking Statements" and the additional risks described in Arbe's prospectus dated November 2, 2021, which was filed by Arbe with the Securities and Exchange Commission on November 4, 2021, as well as the other documents filed by Arbe with the SEC. Accordingly, you are cautioned not to place undue reliance on these forward-looking statements. Forward-looking statements relate only to the date they were made, and Arbe does not undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made except as required by law or applicable regulation.

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