

STERADIAN

MEDIA KIT

ABOUT

Steradian Semiconductors is a product based vertically integrated company founded in 2016 that focuses on 4D Imaging Radars.

Steradian Semiconductors has developed the world's most compact 28nm CMOS Milli-meter Wave Imaging Radar chips (SVR4410 and SVR4414) to power their 4D Sensors. The Milli-meter Wave Antenna and Radar Processing Software when combined with this Radar IC enables a complete high-performance Imaging Radar solution.

The Imaging Radar module from Steradian Semiconductors is an all-integrated unit that is used for applications like Traffic monitoring and enforcement to help save lives on the road, precision parking or smart docking in ports and airports and applications like Gesture Recognition bringing the power of Radar to consumer products as well.

Steradian Semiconductors has filed **14** patents (9 granted) covering various aspects of this product. The company has grown steadily and significantly over the last few years. With its strong team of more than 30 engineers, Steradian Semiconductors is bracing to support customers for volume production.

MARKETS



Automotive



Industrial Sensing



Road-safety



Drones



Surveillance



Precision Parking



Traffic Monitoring / Enforcement

9

PATENTS



Endiya

MAJOR INVESTOR

PRODUCTS

The product encompasses a state-of-the-art Transceiver with FMCW modulation capability in TSMC 28nm CMOS process and a proprietary radar signal processing software stack to generate readily integrable point cloud and tracked objects for sensor fusion.



Radar IC (SVR)

The state-of-the-art RF IC includes a 4x4 MIMO transceiver (76-81GHz), Fast-Chirp (multiple modulations) and Ultra Low noise Frequency Synthesizers, High-Sampling rate ADC, FFT Engines, Compression modules, MIPI Interface etc. The fully integrated 16-channel E-band MIMO band transceiver has the highest link budget of 19 dBm transmit power with precision beam steering. It has high speed vehicle detection of 8 dB noise figure receivers with integrated 100 MSPS ADC. The hardware engines are present for radar data conditioning and compression function to reduce the data transfer time and real-time application development is made possible with the 14 Gbps data interface.



Imaging Radar Unit/ module (IRU)

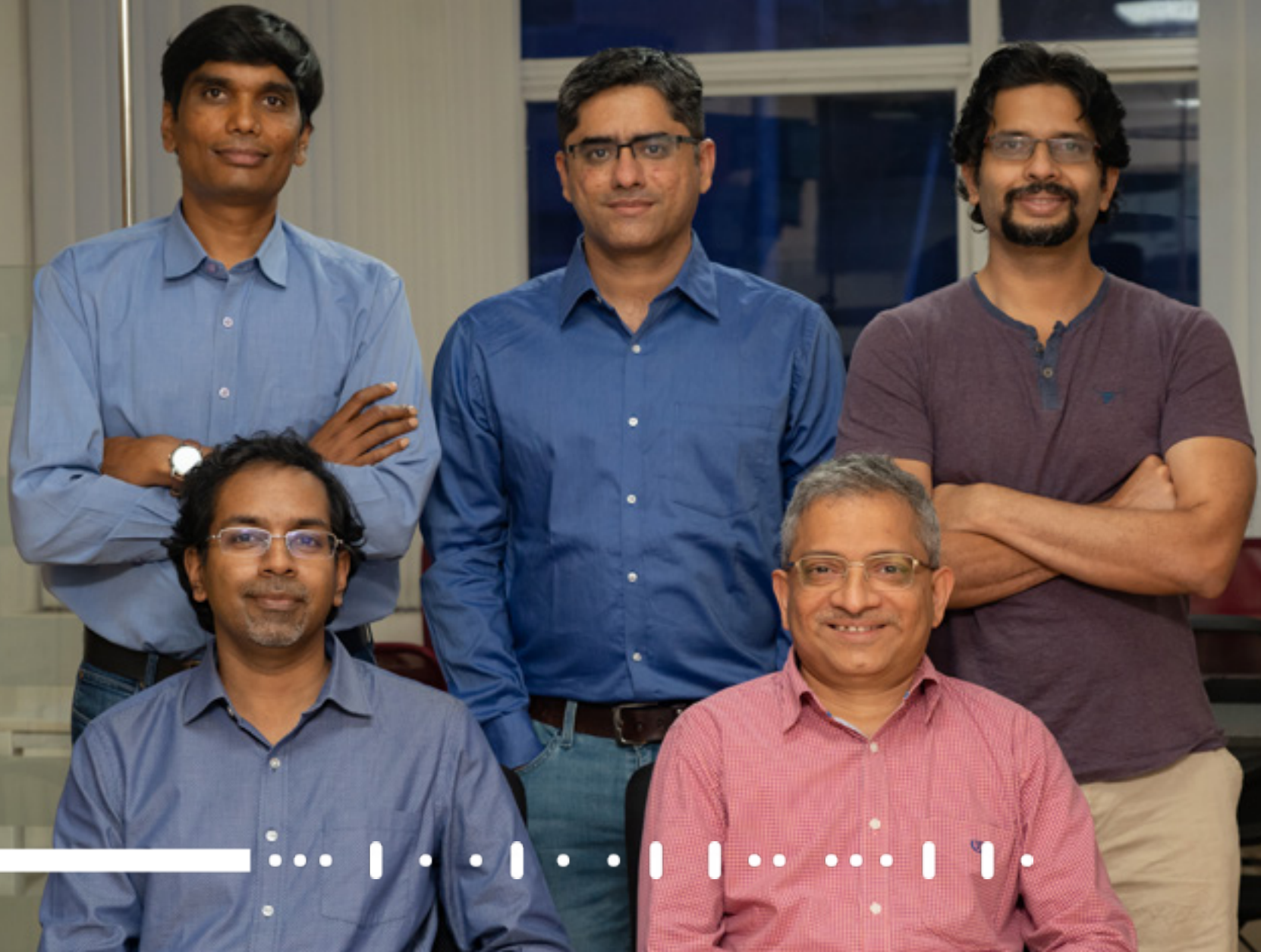
The radar module offers 4D imaging with the help of an antenna array which provides 1.2° for azimuth and 6.5° elevation beam width. The unit provides multimode support with a wide-angle view of 120° in azimuth and 30° in elevation. The GUI for data collection and FoM testing enables quick evaluation. The unit can be used real-time with 15fps refresh rate through a standard ethernet interface. With its high fidelity and near-zero false alarm rates, the Imaging Radar solution is suitable for sensor fusion suites required for higher levels of autonomy. The high-density point cloud provides an easy handle for full-stack players to enhance the sensor fusion outputs with an all-weather reliable sensor.



4D Imaging Radar Software

The radar signal processing software stack is architected to make use of the available compute platform in the best possible manner, in terms of frames-per-second (fps) and power consumption. The proprietary radar signal processing software stack generates readily integrable point clouds and tracks objects for sensor fusion. The high elevation resolution allows detection of bridges, vehicle-under-the-bridge scenarios and manholes that is not possible with a conventional radar. The high dynamic range of the Radar Front-end and the software stack allows detection of VRU by-the-side of heavy metallic objects (like trucks, fences, and grills) and urban driving scenarios resolving commonly faced issues like metal poles on the road swamping the entire scene

Our Team

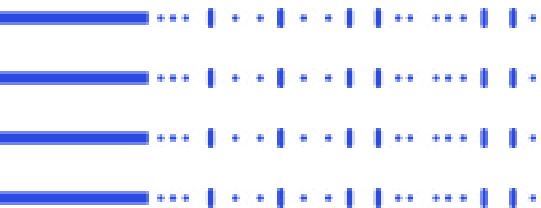


OUR TEAM



Gireesh Rajendran **Chief Executive Officer**

Gireesh Rajendran is one of the world's most accomplished Radio Product Architects. A winner of the prestigious MIT TR35, he has developed Radio Products from GPS to LTE over the course of the last 20 years. He has defined and executed products which have sold over a billion units. Gireesh holds 40+ patents related to the products he developed for Texas Instruments & Qualcomm where he previously worked.



MIT TR35 (India) Winner – 2010

Lead multiple products from definition/ concept to high volume production: Qualcomm, Texas Instruments

35 US Patents, 3 IEEE/ ISSCC Papers

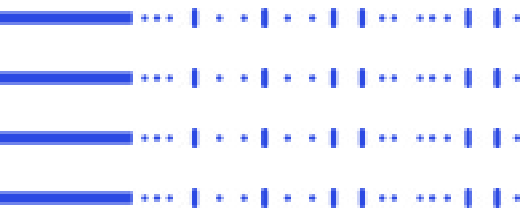
21 Years in the Industry

Our Team



Rakesh Kumar
Chief Products Officer

Rakesh Kumar is an alumnus of Delhi College of Engineering and has a proven track record of building lowest area RFIC. Rakesh led the WLAN RF for two generations in Texas Instruments. He was the Receiver lead for Snapdragon 65x RFIC of Qualcomm. He has wide experience in developing complete solutions including Firmware & Systems. He has co-authored 2 IEEE papers and holds 8 issued US patents.



Co-founder: Aquabrim – wireless sensor startup

7 US Patents & 2 IEEE/ ISSCC Papers

20 Years in the Industry

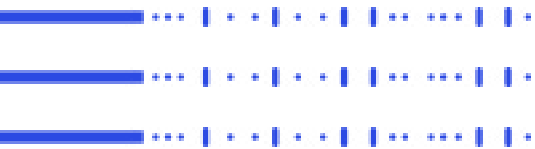
RF Design LTE-A,WiFi, GPS, DTV: Qualcomm, Texas Instruments

OUR TEAM



Ashish Lachhwani **Chief of Business Development**

Ashish Lachhwani is a 2004 Institute Silver Medallist from IIT, Madras. He joined Texas Instruments (TI), Wireless Group in 2004 and was instrumental in developing 2 generations of TI low power Bluetooth Radio solutions called SimpleLink. He is a co-author for the book on Ultra-Low-Power Radios published by Springer. Ashish was the Frequency Synthesizer architect of Qualcomm Snapdragon 65x RFIC. He holds 8 issued patents.



10 US Patents, 2 IEEE/ ISSCC Papers

17 Years in the Industry

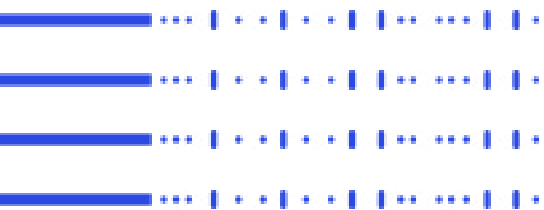
IIT Madras graduate

OUR TEAM



Apu Sivadas
Chief Technical Officer

Apu Sivadas holds a Phd. in milli-meter wave Engineering from Indian Institute of Technology, Kanpur. He has 25 years of experience in Engineering Management spanning various domains from Space Hardware to RF Integrated Circuits. Prior to founding Steradian, he managed RF Design in Texas Instruments. He was also the founding director of RFIC in Qualcomm India. He holds 20+ patents in RFIC & Systems.



Director RFIC: Qualcomm, Texas Instruments

Built a team of 40 (RF, DIG, Verification) for QCOM RFIC (India)

13 US Patents & 5 IEEE/ ISSCC Papers

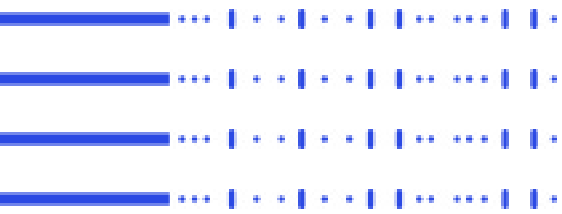
23 Years in the Industry

OUR TEAM



Alok Joshi
VP, Engineering

Alok Joshi graduated from IIT Kharagpur in 2006. He was the Architect for Texas Instruments CC3100 low power WIFI transmit solution for the IoT market. Between 2013-2016, Alok worked for Qualcomm wherein he led the development of up-link Carrier Aggregation. Alok holds 12 issued US patents. His expertise covers end to end solutions starting from Antennas through Board, Package and RFIC.



12 US Patents

15 Years in the Industry

RF Design LTE-A, WiFi, Bluetooth: Qualcomm, Texas Instruments

M.S IIT Kharagpur

ACCOMPLISHMENTS



Awarded the “Most Exciting Start-up Gold Award” in 2021 by AutoSens



Winner of Qualcomm Design Challenge in 2017



Start-up tie up with Integrated Device Technology (IDT)



Among the league of 10 in NASSCOM Emerge 50 2021



Finalist in the Innovation Program for Morris Garages (MG)



List of 50 hot start-ups to watch out for in 2018 by The Economic Times





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THANK YOU

