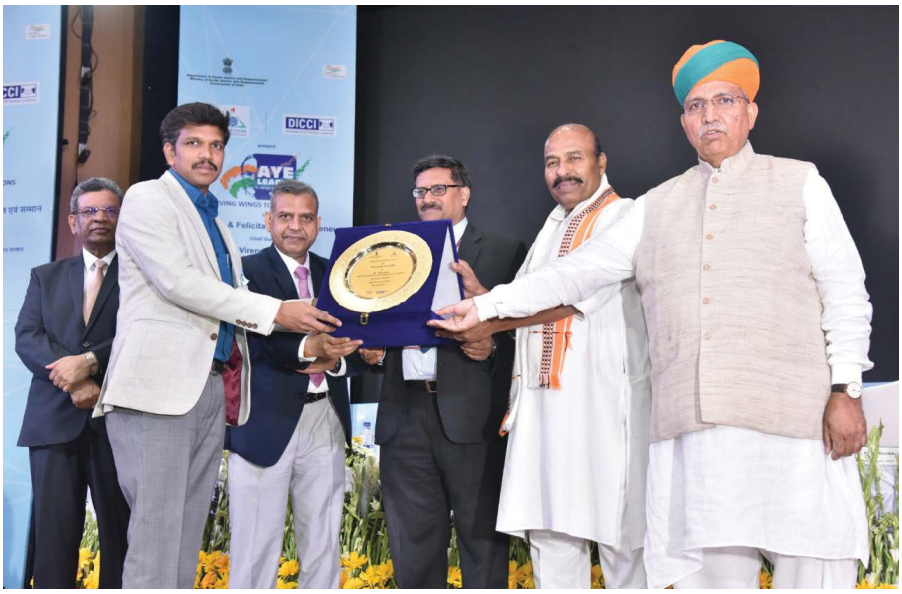
Creating Intelligent Products of the Future

Suneel Kumar
Founder & CEO, Eldaas Technologies



Since its inception, Eldaas Technologies has been serving defence and aerospace sectors. Industry 4.0, Digital disruption, and the pandemic have made technology more important than ever before. Eldaas and its entire team is committed to be a significant contributor to the exciting future, with its innovative solutions. The world in the coming decades of 21st century will be a world with intelligent products which can make decisions like human beings. Eldaas' vision is to contribute significantly to the creation of this new way of life. The company's offerings are innovated to create decision making machines, products, and solutions. In an interview with Advantage Karnataka, Suneel Kumar, Founder and CEO, Eldaas Technologies, talks about the company's business operations.

Artificial Intelligence, AIoT and ML are among the main focus areas of Eldaas Technologies. Could you elaborate?

Everyone is aware that entire world is moving towards AI, trying to become smarter and automatic. Name any product or gadget, people are trying to improvise it with in-built intelligence. To utilize this as an opportunity, Eldaas has partnered with Xilinx (now AMD) and MediaTek to design and develop AI enabled System on Modules. We have already come out with successful modules, elSoM-i500 and elSoM-5EV with numerous memory and interface variants. They have powerful edge AI processing capabilities. elSoM-i500 can also support AI/ML/DL platforms like TensorFlow, caffe and ONMX. These are targeted for various consumer and defence applications. We have already started to export these products.

Defence & Aerospace is another sector in which the company has deep involvement. Similarly, Eldaas Technologies has a presence in the security & surveillance domain. What are the major products and services offered?

Since the inception of the Eldaas, we have been serving defence and aerospace sectors. We have supported prestigious projects like K9 Vajra tanks through L&T and many similar defence programs and weaponry. Till date, we have contributed for such programs with our Embedded, PCB and RF design and development services. We intend to continue with design and product engineering services for the defence sector. As mentioned earlier, we are now ready with our 'plug and play', system on modules which are indigenously developed and are an import substitute for most of the processing modules in defence and aerospace applications.

Coming to security and surveillance segment, we are now on the verge of developing the first of its kind, Ground surveillance RADAR with innovative technologies. This ground surveillance radar is designed with inbuilt Artificial Intelligence technology for auto classification of objects. This will replace the 20-year-old legacy surveillance systems in the defence sector. It is going to be one of the best short-range radar in the world with MIMO and Digital Beam Forming. With this technology, transmitting is made possible with a fraction of power. Due to this, the probability of intercept will be almost zero. Existing Radars have mechanical rotation systems for scanning where as our elGSR-2KM will scan objects electronically. This is not only useful for defence, but also for airports, shopping malls and sensitive areas like defence labs and high-net-worth properties of

individuals. The resolution of this RADAR is the best of all those available in the market.

Eldaas Technologies offers products and services in consumer electronics and healthcare also. Could you explain the major projects?

Eldaas has partnered with MediaTek to develop edge AI enabled system on modules. These modules can be used in consumer and health care application where artificial intelligence is required. Just like for security and surveillance systems for defence and aerospace sectors, SoM is experiencing an increasing demand for safety systems, infotainment systems, health monitoring and other consumer applications. The growing integration of electronic equipment into smart products to allow continuous communication and wireless networking across vehicle systems and remote patient monitoring has been supporting for the market expansion of SoM. Some of our existing customers have deployed these SoMs for AI enabled attendance system, and are using for AI enabled TV to teach Yoga and for programming robots which are used for assisting the elderly.

Recently, there were reports of a global semiconductor shortage affecting various industries. As a firm dealing with semiconductors, could you explain the current situation in this domain at Eldaas Technologies?

The semiconductor shortage has not impacted Eldaas much. As we are a design house, we utilized our competence for developing designs with available components. As a fact in general, cost of the components has increased and lead time of the deliveries increased. I would say, Eldaas has indeed leveraged this semicon shortage scenario to develop products. Because products worldwide are trying to overcome this shortage, our modules can evidently lessen resource requirement and thus the development cycle can be shortened. The total cost of the product or the PCB also proportionately drops down because SoM successfully isolates complex, high-layer boards from the rest of the system.

The company has presently set up a state-of-the-art facility in Bengaluru. Against this background, could you tell us about the experience of functioning in Karnataka?

Karnataka, especially Bangalore is the hub of the electronic multinational companies in India because of the enviable infrastructure provided by the Government. We are fortunate to have our head office set up in Hi-tech Defence and Aerospace Park near Bangalore international airport. It is truly said that MSMEs can become the bulwark of growth of Indian Electronics Products and Indian Brands. MSMEs have a huge opportunity in both creating innovative products with upgrade features and also create businesses which can take-up upgrade in an organized way. The present industry policies are very much MSME friendly. It is a great eco system that we have around us. We have established our state-of-the-art facility here.

Being a firm dealing with cutting-edge technologies, what are the future plans of Eldaas Technologies?

As part of the PM's clarion call for Atmanirbhar Bharat, there is a huge demand of indigenous sub modules like processing boards, data acquisition boards, control boards and application boards etc. ELDAAS is having an encouraging road map with system on modules which are proven for lessening lead time. These SoMs are immediate solutions and import substitutes. Also, we are in to developing multiple range ground surveillance systems and with pride, I mention that we are one of the first company to design and develop them. The huge surveillance system requirement across the borders of any country and other highly sensitive areas, radars and other intelligent equipment shows how our products can apparently sweep the market within the country and abroad. So, we would like to export these modules to other parts of the world.