

“Our USP is value addition to customer by enhancing product features and looking into the customer future and latent requirements”

Efftronics a knowledge-driven company recently celebrated its silver jubilee. Over the last 26 years it has become a technology leader in Data Acquisition Systems, Data Dissemination Systems, Multilingual Graphics and Engineering solutions, providing software and hardware design solutions that

Dasari Ramakrishna



enable companies to develop better electronic products faster and more cost-effectively. **Dasari Ramakrishna, CEO, Efftronics** is one of the few first generation entrepreneurs who jumped into the corporate world within a couple of years after completing education. After finishing M.TECH (Electrical engg.)

from IIT Madras in 1983, he started Efftronics in 1985 at the young age of 27. His continuous investment in R&D activities has enabled him to develop innovative processes, products and technologies. With 50 % growth rate, the company is already a force to reckon with in the global market.

You are already a technology leader in the embedded industry specially Data Acquisition Systems. How did you go about achieving this?

Developing niche products which is fully viewed from the customer perspective rather than technology or design perspectives. Customer requirements drive the choosing of necessary technology and design ingredients in a product. We have never placed technology into a product for the sake of technology. This customer centric approach made customers, mainly Indian Railways, to put their problem and pain areas continuously with us and we at Efftronics were able to solve it most of the times. This transformed in to stronger belief from Railways that Efftronics can provide right solutions for their problems. This is by stepping in to the shoes of customer with open and exploring mind-set and questioning around why this product or solution is needed at all.

Wasn't being a small city/town like Vijayawada a disadvantage?

Being in a small city, compared to other metropolitan cities has its own advantages. The cost of living is low as well as cost of infrastructure and logistics is within reason. Also located around Vijayawada are many technical and engineering colleges making availability of good manpower easy. Also now we have better connectivity for air and rail to major parts of India as it is a junction connecting South and North.

What is your USP?

Our unique selling point is value addition to customer by enhancing product features and looking into the customer future

and latent requirements. Any business can grow and sustain only with the customer focus and their value additions. Providing 24x7 customer support with service engineers all over India has always been our plus point and a big advantage over our competitors.

What about your technology expertise?

Our R&D is our strongest point. So fortunately we have everything under one roof. From domain understanding, conceptualisation, design, manufacturing, commissioning and its maintenance everything is developed within Efftronics and met by Efftronics efficient staff. Along with expertise in embedded systems, application software and product design, anything need to be learned is also learned from the basics. Domain knowledge is also acquired specific to each application.

Who are your major Technology Partners?

Currently non.

What verticals do you cater to?

Quite a few. But the major ones are Railways, Defence, Water Distribution, Power, Meteorology and Transport.

Can you highlight few of your major projects?

SCADA Systems for Water Management - SCADA stands for Supervisory Control and Data Acquisition system. The system helps to regularly monitor and enable the customer to control the entire city drinking water system from a centralized place. This system is very much helpful in present day conditions of water shortages which help to effectively utilize the existing resources



ensuring timely & equitable water distribution for achieving right quantity & quality of water to the people.

Solid State Block Proving by Axle Counter - This is Solid State System which is a safety integrity level- 4 (SIL-4) assessed

product used for controlling the coordinated movement of the train in the block section, working on Absolute Block Working Principles and built in compliance with CENELEC standards (European Rail Road Standards).

Automatic Train Charting Software - Previously Traffic Controller used to manually prepare the train movement chart which used to take long time thus not having sufficient time for planning for effective train movements'. Also the data received may not be accurate and misleading. Train charting software provides automatic charting with the event time stamped by network of data



loggers. This saves more time for controller to focus more on planning of train movements.

It provides visual representation of the movement of trains from origin to the destination stations with actual arrival and departure times at different stations of the network.

Automatic Weather Station

Earth's atmosphere is facing greatest environment challenge "Global Warming". This is resulting in Climate change which is varying the global weather patterns, resulting in uneven rains, droughts, intensified cyclones...etc. For addressing these issues we need to have better understanding of weather for accurate forecasting/predictions. To have accurate forecasting/prediction we need to measure weather parameters with high accuracy and reliability.

Automated weather Station is designed for measuring surface weather parameters with highest accuracy and reliability even at extreme weather conditions without any manual interruption. All data is measured and transmitted to central location through GSM communication which are in great need to make accurate forecasting/predictions, thus helping the society from weather calamities.

Which are your target markets?

The major ones are Railways, Road ways and Municipalities

Training is vital for any organization. How does Efftronics fulfill these needs?

Training is becoming important and challenging with present conditions of education. We mainly recruit freshers whose minds are not much conditioned and are open to change.

Enthusiasms of discovery and curiosity in real learning are key for any innovative product development. Learning environment is created right from training in the organisation. The training contents and methodologies are chosen such that it strengthens the fundamentals and gives problem solving skills rather scout for readymade solution.

We provide induction training that helps to induce the new employee into organisation culture and inception training makes the new employees to perform the minimum activities of the job role. We provide inception training for R&D -6 months, for Customer Support -2 months, for Production -20 days etc. In the industry this has branded Efftronics as "Join in Efftronics to have basics, learning and conquering skills".

What is the main reason for participating at global events?

There are three main reasons -

- To Know about international customer requirements
- To understand the International market domains
- To understand the latest and future technologies and processes

How has the experience been so far?

Though we have never thought of using these platforms to generate business we have gained a lot of confidence to cater to the International Market and meet our customer acceptance criteria. Exposure of the technologies available world wide has been



observed. Not only competitors but also the raw material advancements are observed.

What are your marketing strategies?

We develop Niche products which cater the problem/requirement; Value addition to Customer through requirement analysis beyond the ones he has specifies; Continuous Customer value addition by enhancing product features and looking into the customer future requirements and in addition to all this we provide 24x7 customer support service.

How do you view competition? What steps do you take to counter it?

We see competition is an opportunity to identify the draw backs

in our products and systems.

We can strongly counter our competitors by focusing on development of niche products and niche market and continuous customer value addition by enhancing product features and looking into the customer future requirements.

You are also offering a two-year M.Sc course jointly with Krishna University. What made you go into the field of education?

There is a lack of availability of quality instrumentation engineers who can do Research and Development activities. Anticipated future demand for instrumentation engineers is high. The



present academic model emphasises standard examinations which encourages mugging up to present oneself to its pattern rather problem solving.

Industry requirements and culture are very different from academic output and creating ever-increasing gap between them. Real time and practical approach is missing thus resulting in only theoretical knowledge, which is not sufficient for performing any job. Availability of faculty with industrial exposure who can teach with practical approaches is also very thin. Due to above reasons, we in collaboration with Krishna University are offering M.Sc Electronics and Instrumentation course to provide better education through practical way of learning.

What are the challenges faced by the embedded industry?

Embedded system development requires human resources who need to be good at hardware as well as software along with external interfaces with which the system that is working. Overall system thinking is crucial. But majority of them want to confine to software, that too coding only. This is one of the major problems and talent pool to fulfill the above is always a challenge.

Product development requires various inputs from many supporting industries like semiconductor vendors, PCBs, prototyping, mechanical enclosures - structures etc.,. Because of their inadequate performance in various parameters the challenges are more. No Government policies neither boost nor support this sector. It takes slightly longer time to make any industrial product or even more for products with fail-safety. However, the micro-processors and controllers are driven towards consumer products and the obsolescence of semiconductors is one of the issues.

Main products and offerings from Efftronics

Data loggers for Railway Signalling

A microprocessor based system that acts as a black box to monitor signalling activities which transfers real time data to Central Control room for predictive maintenance and real time station yard monitoring. This system is being used for incident analysis which provides insight for them to take various operations, maintenance and design decisions.

Information Displays:

LED Display systems are used to transfer visual information for Mass Communication Information like Flash News, ONLINE Production status, Arrivals & Departures, Graphical Presentation, Animated messages and Pictures can be displayed for effective/immediate understanding.

General information displays suitable for indoor and outdoor purposes for day/night visible are developed using single & multi-color LEDs.

Efftronics have developed Information displays exclusively for Indian Railways. Passengers used to get different information on trains from various sources i.e. display systems, TV displays and announcers etc. which may lead to confusion. This is as each source used to maintain separate computers individually.

Efftronics have provided an integrated information system that provides online train information to passengers on LED display systems with digitized platform announcement operating from a single computer ensuring synchronized information.

This System is acting as a guide to the railway passengers starting from station entrance to the respective platform for boarding trains without any confusion.

Digital Clocks

GPS based master slave digital clocks for displaying precise and accurate time on all digital clocks placed throughout any organization or commercial places. It eliminates the need for manual setting of time.

LED lighting for consumers: Energy Savings can be achieved by replacement of conventional lighting with LED Lighting through which considerable reduction in power bills is possible.

In addition to the above, it also saves the Air conditioning power bill indirectly by releasing less heat, thereby less burden on AC.

Using LED lights, the following can be achieved, Minimal Maintenance cost with Life time of 10 years; No light pollution; Lower CO2 Emissions; Uniform Light distribution and Glare Free LED Signal Lamps for Railways: A Safety integrated level-4 (SIL-4) product built on the CENELEC standards. A very good replacement for the conventional Signal Lamps with low power Consumption and less maintenance.