ATI ACCURATE TECHNOLOGIES

Accurate Technologies' (ATI's) **VISION**™ and **DLX** help to accelerate student race team's progress

Formula Student competitions, in which teams from many of the world's universities design and build single-seater racing cars to a strictly controlled formula, have become massively popular and intensely fought. They are seen by the students as a means of showcasing their talents to any potential future employer while, for the industry, they improve the quality of engineering graduates by adding a measure of practical and interpersonal skills to their academic training.

Formula Bharat, a national competition in India, based on the regulations of Formula Student Germany, and SUPRA SAEINDIA, run to the standards of the Society of Automotive Engineers. One team rapidly climbing through the ranks is Shaurya Racing, an official team of VIT University, Chennai, India, which is using products from Accurate Technologies Inc. to streamline its data acquisition and thus speed up development of the car.

Despite being in only its third year of competition and up against teams with 10-15 years' experience, out of 70 teams entered for Formula Bharat 2017, Shaurya Racing came 16th overall and 9th in Design. Expectation is high that the team will improve further on this in the 2018 event, held at Kari Motor Speedway in Coimbatore in January.

(continued over)

"The combination of ATI VISION and DLX is a revelation in data acquisition; it provides almost 'plug and play' functionality, eliminating many hours of coding, improving data accuracy and simplifying communication between devices," explains Rishabh Yadav, the Electrical and Electronics Engineering student leading the implementation of ATI products within the Shaurya Racing team. "With no necessity to develop and code data logging software, we can spend more time on activities that directly improve our performance, such as ECU tuning."

In addition to the improvements in data logging, there are other benefits from the use of VISION that will provide longer term advantages for the team, according to Yadav. "VISION also provides a highly user-friendly and flexible capability for on-line and off-line calibration of the ECU, including the rapid prototyping of software," he says. "In the future, we hope to be able to take advantage of these features to better optimise our ECU calibration."

ATI's VISION software provides a single, comprehensive, calibration, data-acquisition and rapid-prototyping solution with extensive inherent flexibility. It can satisfy a range of requirements: multiple ECU support; real-time calibration and modification of closed loop control systems; time alignment and analysis of all data acquisition; calibration data change management and ECU reprogramming, all within one application.

The DLX Datalogger offers a unique combination of functions that provide the features of a CAN interface, data acquisition module, and data logger all in one compact package. Communication channels include CAN, K-line, and LIN that interface to ECUs or communicate with ATI data acquisition hardware.

What attracts an international company like ATI, a leader in its field, to support these student competitions? According to Vikram Krishnamurthy, Technical Manager of ATI India, it is because the benefits flow in both directions. "By using our products, the students develop a better understanding of industry's requirements and begin to assimilate the practical skills required to support those needs. We benefit in return because their knowledge of ATI's capabilities can also make the students powerful ambassadors for our products, later in their careers when they may hold influential positions," he says.

The pressure on student teams to succeed creates a parallel with the demands that will be made upon them subsequently during their careers, when the ability to select, and use, the best methods and tools for the job could mean the difference between success and failure. Yadav is quick to recognise this. "In Formula Student competition, just as in the real world of automotive engineering, there are massive time pressures," he says. "ATI VISION and DLX are helping us to spend our time more productively. I'm sure more teams would benefit from using these products."

Contact ATI Sales at : sales@accuratetechnologies.com
US +1 248 848 9200 **/ China** +86 138 1023 6357 **/ France** +33 (0) 1 72 76 26 10 **/ Germany** +49 (0) 89 9700 7121
India +91 80 41 69 42 18 **/ Japan** +81 3 53 25 62 22 **/ Sweden** +46 (0) 31 773 7140 **/ UK** +44 (0) 1767 652 340