FAAM: on the usage of open source software for smarter batteries for traction control

FAAM Spa announces today its support for the open source royalty-free project ERIKA Enterprise (http://erika.tuxfamily.org). In particular, FAAM will adopt the open source RTOS ERIKA Enterprise for the next generation high-performance battery pack controllers.

ERIKA Enterprise, initially developed by Evidence Srl and by the ReTiS Lab of the Scuola Superiore S. Anna, is an Open Source Real Time Operating system specially tailored for automotive systems and implementing an API similar to the OSEK/VDX specification. The OSEK/VDX Specification is the hearth of the Operating System of most Automotive electronic devices, and it is gaining more and more usage inside the motorbike controller area.

FAAM Spa, founded in 1974, has developed a strong research culture with continuous and significant investments in people and in the design and testing of ground-breaking logistics technology. Since 2000 FAAM has been working on Fuel Cell technology applications, both for transport and for stationary use, achieving major breakthroughs in the creation of hydrogen-powered vehicles, such as the Smile Fuel Cell - used in Beijing Olympics. In 2008 FAAM has created an innovative system, Energy Saving FAAM Battery-Envirotech System, which is based on the promotion of high-efficiency FAAM traction batteries combined with a high efficiency battery charger. The system, created and patented by FAAM, was tested by the Universita' Politecnica delle Marche, generating 27% energy savings as compared to its main competitors.

Using the know-how acquired from 20 years’ experience in producing electric traction vehicles and in partnership with the University of Camerino, FAAM has created BMS, Battery Management Systems for lithium batteries, which in addition to battery reliability, ensures maximum performance with high safety standards. In 2009 this development led to the agreement with Magneti Marelli, which involves joint product development and marketing. The agreement is aimed at providing competitive offers in a high-tech sector which is of primary strategic importance to sustainable mobility in the future and in hybrid and electric propulsion.

Evidence Srl, based in Italy, was established at the end of 2002 as a spin-off of the ReTiS Lab of the Scuola Superiore Sant'Anna (Pisa, Italy) by a group of researchers expert in real-time scheduling analysis, operating systems, control systems, and multiprocessor scheduling techniques. Evidence operates in the field of software for embedded real-time systems and provides innovative software solutions for the design and development of real-time embedded systems, with a special focus on multi-core hardware platforms. Today, Evidence is a dynamic company having collaborations in the field of electronics, telecommunications, automotives, and industrial automation markets. Evidence has developed Open-Source Real-Time Operating Systems (RTOSs) for small microcontrollers (It is leading the development of the ERIKA Enterprise RTOS) and other operating systems (Embedded Linux) for embedded devices.

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