

# EIDA Special Judges' Award To Go To DTI Electronics Design Participant

## **Help from the Electronics Design Programme enables AMC to develop modular, multi-function control and communications device**

In the second Electronics Industry Design Awards to be held next month, a UK SME will be awarded the Special Judges Award for its new modular communications system that is targeted at applications requiring remote monitoring and control features. Brought to market with the help of the DTI's Electronics Design Programme, the project immediately attracted a new customer, generating over a quarter of a million pounds in new business.

Advanced Modular Computers (AMC) Ltd., based in Langley, Berkshire, successfully applied for TCS (formerly Teaching Company Scheme) funding to develop the flexible Sysmon communications system, following an approach to the Electronics Design Support Centre based at the University of Kent. AMC's aim was to increase the design content of its systems, thereby leading to new and longer business relationships, improving margins and differentiating its products in the market.

The ED Support Centre arranged for a suitable graduate to work on the project as a TCS Associate, who is now responsible for production of the Sysmon system. During the TCS programme, the Centre also provided significant support, including the use of its small volume SMT prototyping facilities, advice in PCB design for manufacture, expertise in FPGA and microcontroller technology and tailored training. Collaboration between the Centre and AMC has continued following the conclusion of the program.

The Sysmon communications and control device is beneficial in any computer system that requires additional monitoring and control features. In a typical application, the Sysmon is installed in a 19" rack-mount chassis. From there it could provide monitoring and control functions for the system in which it is installed, plus monitoring of the external rack in which the system is mounted. The sphere of control could even be extended even further to the room that contains the chassis. In this case, it could measure temperature, air-conditioning, air pressure and humidity from either inside or outside the host chassis. The product also has direct application in general Internet monitoring and control outside of the rack-mount computer market.

The Sysmon can be accessed via a standard browser interface over internal networks or the Internet. When connected to the Sysmon, data can be displayed using standard HTML, or java applets can be employed to provide higher functionality. Mobile communications are also possible with the Sysmon by connecting an additional GSM module. This enables the system to provide Short Messaging Service (SMS) text messages when an alarm event has occurred. There is also an optional GPS interface.

The system is available as both a short-form factor PCI card and a stand-alone module. There are two main subsystems. The communications subsystem is based on a 32-bit ARM7 processor and can communicate via an integrated 10/100 Ethernet interface, a PCI back-plane or through custom modules such as GSM. The I/O subsystem uses a separate micro-controller running a second real-time task scheduler to control a large set of user configurable I/Os for monitoring real-world parameters.

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AMC's modular approach to configuration and design has enabled it to offer solutions that meet precise customer requirements. Compared to using off-the-shelf discrete cards, the product will greatly shorten development time, lower costs and reduce time to market.

Commenting on the award, AMC Managing Director, Jim Gilbey said: "The ED Centre was very supportive throughout and in the initial stages of the project provided a useful "sounding board" for ideas. They were also very receptive when we needed to discuss difficult technical problems at short notice.

"Their contribution significantly increased our skills in areas such as electrical noise reduction and PCB layout and design. The Centre was also able to provide practical technical assistance in the production of the initial prototypes of our designs. This gave us valuable insight into designing for manufacture."

The Special Judges' Award is designated this year for the company that has made most effective use of DTI's Electronics Design scheme. Entries for the award were submitted by Electronics Design Support Centres and were judged by the DTI and its independent Programme Advisory Panel. The Programme is a joint organiser and sponsor of the EIDA event.

The Electronics Design Programme, established in 1999, provides free, independent and expert advice to UK electronics companies, plus access to training and project management. The programme is due to wind up at the end of this year.

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Notes for editors:

1. More information on the DTI's Electronics Design Programme is available at: [www.e-design.org.uk](http://www.e-design.org.uk)
2. Contact information for AMC Limited: Jim Gilbey, Managing Director, Telephone +44 (0) 1753 580 660. Website: [www.amcuk.com](http://www.amcuk.com)
3. Contact information for Southeast Support Centre, Electronics Design Programme: Peter Lee, Support Centre Manager, telephone 01227 823251
4. Photos available from: [www.e-design.org.uk/newweb/press.htm](http://www.e-design.org.uk/newweb/press.htm)



Jim Gilbey, Managing Director of AMC Ltd. Together with Dale Lurcock who joined the company as a TCS Associate.



AMC Board