

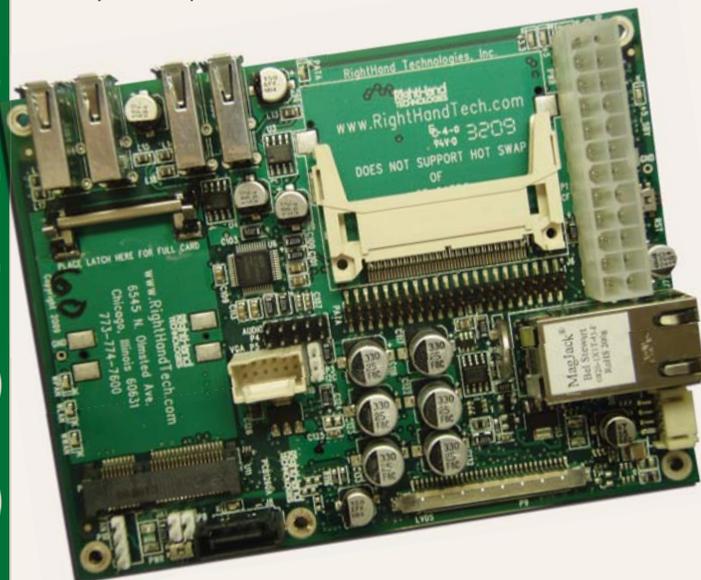
# COM Express improves time-to-market for embedded computing

By Steve Valentor,  
President



Product engineering is expensive. While creating exciting new products is critical to moving your business forward and staying ahead of the competition, the decision to invest in a new development is often difficult. Add in the fact that technology improvements will make your design obsolete in a few years, and the decision becomes daunting.

Now consider the advantages of design using the COM (Computer-On-Module) Express standard architecture, enabling a highly integrated embedded PC with an industry standard interface. By developing a custom COM Express carrier board to complement a processor module, product engineers can create application-specific hardware with a flexible, modular design to support graphics, signal processing, video, networking, USB, storage, audio, various other I/O functions and a variety of other expansion interfaces. Perhaps most importantly, the design of the high-speed, compact, difficult-to-layout, highly timing-sensitive CPU-memory subsystem is independent from the design of the carrier. The unique set of peripherals needed for your specific application resides on the carrier board. Where it may take a full year to design a CPU module, a custom carrier can be completed in weeks. COM Express ensures that the BIOS, operating system, tools, and basic utilities are available and work. Device drivers and applications can easily be adapted to the custom carrier.



COM Express builds in flexibility. If your application needs the newest, highest-performance CPU, the COM module can be exchanged for a newer, more powerful alternative. If the entire system needs a new or different peripheral, the carrier can be modified without having to achieve timing closure on the CPU-memory subsystem. COM Express may be the fastest and most flexible way to bring your products to market and keep your company ahead of the competition.

While much quicker to design than a multi-GHz processor module, a custom carrier board for military/aerospace applications is not a trivial design task. To take advantage of the flexibility of the design element reuse that COM Express enables, an engineering team must understand the standards and have the experience to design for difficult-to-achieve agency approvals. RightHand Technologies has just such a team and the experience for these demanding markets.

With more than 25 custom carrier projects to its credit – many having been done with RadiSys' COM Express modules – RightHand Technologies has the expertise to provide a full spectrum of embedded design services in the engineering disciplines of electronics, software and mechanical, as well as program management, system integration, formal verification, testing, qualification, certification, manufacturing, supply chain and life cycle management.

RightHand Technologies also can support a quick start of your development efforts with its newly released RCB-122B development board. The RCB-122B serves as both a development platform and reference design for developing your custom I/O subsystem. The RCB-122B, which can be a proof-of-concept vehicle or a full production platform, is available today and can be ordered at [www.righthandtech.com/com-express-carrier-board.php](http://www.righthandtech.com/com-express-carrier-board.php).

RightHand Technologies can guide you from the RCB-122B standard product platform to a custom carrier project by helping to evaluate your requirements, drafting specifications, generating schematics and layouts, coding custom FPGA logic, designing custom software, building prototypes, integrating electro-mechanical functions, facilitating agency approvals and manufacturing to exacting standards – all under the watchful eye of an experienced program manager who will report to you each week with a fully transparent status of milestones and deliverables.

RightHand Technologies provides innovative design, specialized manufacturing, and sophisticated functional testing for embedded computing applications for aerospace, defense and other markets. For further information please email [info@righthandtech.com](mailto:info@righthandtech.com).

*Steve Valentor joined RightHand Technologies in 2008 as president.*



[www.righthandtech.com](http://www.righthandtech.com)