

Services and System Integration

Mercury's Proven Subsystem Expertise Accelerates Your Time to Deployment



Access the Special Expertise You Need, When You Need It

Tough Problems – Smart Solutions

Specialized features can be key differentiators in the marketplace, but they require considerable time and expertise to implement on constrained budgets and timelines. To help you meet these demands, Mercury Computer Systems can bridge the resource gaps with our broad range of customized solutions and professional services.

Mercury has long been recognized for our industry-leading expertise in high-performance real-time systems, covering areas such as heterogeneous multiprocessing, real-time system design, switch fabric technology, and signal processing algorithms. We have added expertise in RF solutions, mixed signal design and manufacturing, single-board computers (SBCs), the revolutionary Cell Broadband Engine™ (BE) processor, FPGA and ASIC intellectual property (IP), and software integration. Mercury continues to evolve, bringing to our customers an expanding set of solutions and a deep level of application expertise.

Reducing Your Program Risk

Mercury has been solving the world's most challenging computing problems for more than 25 years. No one is more passionate about or motivated by a technological challenge. Our Services and System Integration (SSI) team provides a flexible, rapid-response capability to augment and complement your own internal resources, allowing you to focus on your core competencies and reduce your program risk.



Our large staff of technical experts encompasses a broad range of skills. They can work with you to design, develop, and/or implement the right solution for your needs without vendor bias. Some projects require integration services, which may involve taking various technology components, usually from multiple sources and vendors, and pulling them together into a cohesive solution. For other projects, as needed, we can deliver design services for hardware or software, or the system architecture level.

A Range of Basic and Extended Integration Services

Depending on the specific situation, successful technology integration can be fairly straightforward or highly complex:

- Many projects involve basic off-the-shelf board-level and sub-system integration. Most of the work involves repeating efforts from previous projects, then enhancing the solution with a special driver modification, framework development, a new algorithm, or a minor hardware variant.

For example: Delivering the first Cell BE processor-based blade system for an electronic design automation application, integrating a 100+ FPGA processor-based multicomputer for satellite communications, replacing three general-purpose boards with one FPGA-based module in an airport radar system to deliver greater application efficiency, increasing baggage scanning belt speed by a factor of 5x with Cell BE processors and a custom algorithm.

- Our team also has the expertise to deliver solutions with more extended levels of integration. These projects often involve pioneering subsystem integration, work that is either the first example of its kind, of a larger than normal scope, or focused on meeting some especially demanding requirement. Sometimes an extended integration involves inserting technology into a truly unique situation.

For example: Delivering the first multi-chassis VXS system, ruggedizing an ATCA® system for defense applications, or using special chassis materials for the deployment of PowerStream® 7000 in the Global Hawk UAV.

Mercury Offers a Full Spectrum of Integration Services

- Thermal and mechanical integration
- Subsystem ruggedization
- Multi-chassis systems
- System assembly
- Application porting
- Algorithm optimization
- Driver modification
- SBC-PMC integration

Overcome Your Program Challenges Cost-Effectively

Comprehensive Design Services

Mercury's solutions and services can help you address the design of new software, original hardware, or full systems. Our design centers can assist you with a custom board design and layout, or deliver customized and fully documented FPGA IP. Most uniquely, our systems engineers can provide architecture analysis and design for the most complex real-time systems.

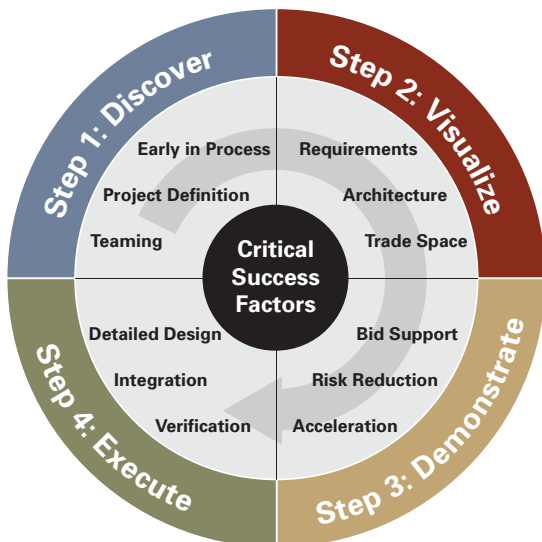
Flexible and Focused on Your Success

Our flexible, rapid-response capabilities augment and complement your internal resources. We work with you to design, develop, and/or implement the right solution for your needs without vendor bias, becoming a cost-effective, real-time extension to your team, and enabling you to maximize your resources and minimize your time to deployment. Our award-winning innovations in image and signal processing technology give you a decisive competitive advantage.

Our flexible approach is best illustrated by a recent customer situation, where we were asked about a custom board design. During the initial discussions, it became clear that the overall system architecture was not fully defined. We proposed an architecture analysis, with a board-level requirements definition as one deliverable. Our proposal was accepted, and the architecture analysis got underway. We will bid on the resulting board design, which is open to competition.

Proven Methodology for Customer Success

We help you overcome the challenges you face from tough competition, schedule constraints, and cost pressures. We provide maximum value through our proven methodology, which includes early engagement, a shared architecture vision, and proposal teaming.



Delivering Value to Your Projects

Mercury's solutions and services deliver concrete value. We can help you compress your schedule for faster time to deployment. Our incremental, specialized resources can also be applied to reduce the uncertainty and risk in a project. If you run into a unique problem that is gating the progress of a larger project, we can become an extension of your engineering team. Because our special expertise is not a permanent addition to your cost structure, you can bring us in cost-effectively on an "as needed" basis.

Comprehensive Technical Expertise

Mercury combines extensive technical expertise with a deep knowledge of defense and commercial applications, ensuring the highest quality standards and products. We customize our solutions to meet your specifications and accelerate your time to deployment.

Solutions and Services Portfolio

Capabilities and Services

- Algorithm development
- Board design
- FPGA IP development
- Hardware and software design
- Hardware and software integration
- Life-cycle management
- Middleware strategies
- On-site support and training
- Packaging analysis
- Software migration services
- System engineering
- Thermal and mechanical analysis
- Turnkey system delivery
- Validation, qualification and test

Technical Expertise

- AdvancedTCA[®]/AMC
- Cell BE Processor
- CompactPCI[®]
- Linux[®]
- MCOS/MCOE[™]
- PowerPC[®] ISA
- RapidIO[®]
- Virtex[®] FPGAs
- VME64/x
- OpenVPX[™]
- VPX-REDI (VITA 46/48)
- VXS (VITA 41)
- VxWorks[®]

**For more information on Mercury Services and System Integration,
contact your Mercury representative or call 866-627-6951.**

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2767.00E-0610-BR-ssi



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