

*Accelerating time to market while enhancing design quality*

## Altera Professional Services

Having the right expertise when you need it can mean the difference between finishing a project on time and missing a potentially lucrative market opportunity. Altera® Professional Services can help you stay on schedule, lower your design risks, and keep design quality levels high.

Altera Professional Services aren't design services. Altera has a robust ecosystem of partners who are ready to help in design development. Altera Professional Services are fee-based expert consulting and proactive design-in support services to assist you through your design cycle, from design planning and development to board integration and verification. The goal is to give you access to Altera experts with expertise in our methodology, our products, and modifying and enhancing Altera's intellectual property, reference designs, or training. In essence, Altera Professional Services comprise the services that only Altera can perform.

### Professional Services reduce risks and costs

Altera Professional Services can be customized to your requirements and timelines. By engaging early and directly with our experts, you can overcome your design challenges.

We've compiled a broad range of service offerings that can be tailored to your unique needs so that you can be more productive, accelerate your design cycle, and minimize your design risk. In-depth design reviews with analysis of fitting and timing issues ensure quality and reliability. Support is available for each stage of your design cycle.

You can select the assistance you'll need to complete your design from the menu of service offerings shown in Table 1.

#### Altera Professional Services offerings

Design stage	Services
Design planning	<ul style="list-style-type: none"> <li>Custom training development and delivery</li> <li>Methodology guidance and training</li> <li>Consulting on design architecture and hierarchy</li> <li>Custom device characterization</li> </ul>
Development	<ul style="list-style-type: none"> <li>Custom design examples</li> <li>Consulting on synthesis and timing constraints, analysis, and closure</li> <li>Embedded system consultation</li> <li>Consulting on power estimation and management</li> </ul>
Board integration	<ul style="list-style-type: none"> <li>Schematic and pin-out reviews</li> <li>Custom FPGA configuration architecture</li> </ul>
Verification	<ul style="list-style-type: none"> <li>Consulting on in-system debug</li> </ul>

### Areas of expertise

Our experts can address a variety of technology-specific areas.

- Board integration services—Altera applications engineers have reviewed hundreds of customer schematic and FPGA pin-outs to verify compliance to Altera design guidelines for configuration, voltages, decoupling schemes, memory interfaces, transceiver configurations and interfaces, and termination schemes. Aggressive schedules and time pressures can result in costly mistakes, and Altera specialists use a comprehensive and detailed methodology to ensure that your schematic design does not violate design rules. You'll have more confidence in your design and reduce the risk of re-spins.
- Embedded system consultation—Leverage the expertise of Altera embedded system specialists to cut development costs and accelerate time to market. Early in your design cycle, our systems specialists can help you get started by holding design reviews to recommend the right device, development platform, and system

architecture that best suit your application. In the project's concept phase, our specialists can help you port design examples or reference designs to new devices or development boards and modify board support packages (BSPs). In the development phase, our specialists can provide point solutions, such as system architecture or embedded intellectual property (IP) customization, software device driver development, performance evaluation, and optimization. Our goal is to provide you with support services that address your basic design needs so you can spend time differentiating your product from the competition.

- Custom characterization—Altera devices can often meet more standards than claimed on the data sheet. Altera engineers can perform tests and characterize devices for new or customer-specific standards and interfaces. In addition to a detailed report, including test data, to show you how Altera devices perform under your specified operating requirements, Altera engineers also provide you with example designs to show you how to implement emerging or proprietary standards in Altera software and IP.
- Transceiver-based applications—Altera high-speed specialists can provide implementation and verification services to help you use numerous protocols supported by Altera's Arria® and Stratix® IV families of transceiver-based products, including PCI Express, and Ethernet.
- Digital signal processing (DSP), memory, and protocols—Altera DSP specialists can guide you on DSP design methodology best practices and customize reference designs to meet your specific requirements.

## Custom Altera Technical Training

Altera's technical training consists of no-cost online classes and paid instructor-led training that help you use Altera devices and tools more effectively, improve productivity and hardware implementation quality, and stay current on new device and tool features. Altera's training courses are developed by experts in programmable logic design, delivered by Altera-qualified trainers, and offered at all skill levels. The training curricula helps you decide which courses best fit your needs and in what order they should be taken. See [www.altera.com/training](http://www.altera.com/training) for more information. If more specialized training is required, Altera-qualified trainers can develop custom training as part of Altera Professional Services.

## Fast Track Services

A few services require Altera expert product knowledge but are performed frequently enough to have defined processes and deliverables, including board schematic reviews and characterization for the emerging PCI Express Gen3 protocol. We've packaged these offerings with standard terms and conditions and set fees for faster turn-around and predictable fulfillment times.

## Embedded Getting Started Package

To accelerate your learning curve for Altera embedded products, we offer an Embedded Getting Started Package that includes training credits, embedded IP licenses, an Altera development kit, and Altera Professional Services consultation services. Altera embedded specialists can guide you on system architecture and topology management, configuration, boot, board bring-up strategies, and third-party operating system vendors, tools, and debuggers, and IP vendors.

## Ready to learn more?

For pricing and other information about Altera Professional Services offerings, please contact your local sales representative.

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