



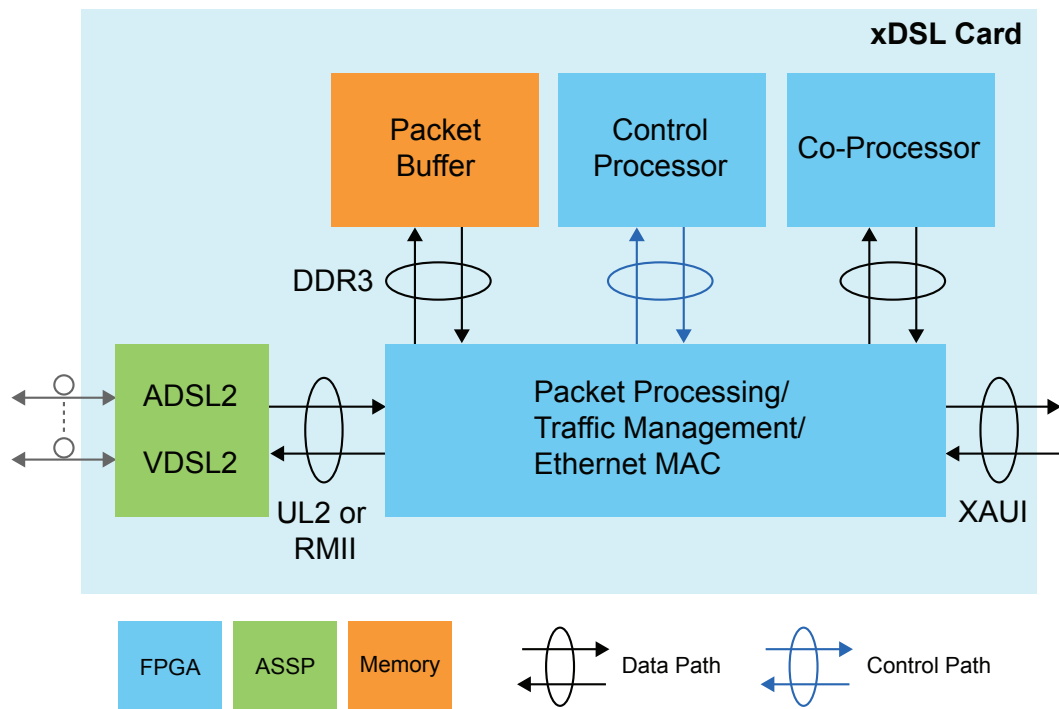
Upgrade Your DSL Platforms with Altera's Cost-Effective Solutions

## DSL Solutions from Altera

Multimedia application streaming demands increasing bandwidth. To meet this need, service providers require advanced upgrades to existing Digital Subscriber Line (DSL) platforms, while keeping the overall cost low for this broadband access technology to remain competitive.

New techniques, such as vectoring, increase bandwidth in DSL platforms, but have high performance and resource requirements. Altera's Stratix® V FPGA family has an abundance of memory and digital signal processing (DSP) resources that meet these requirements, while enabling you to differentiate your proprietary vectoring DSP algorithms. In addition, the Stratix V FPGA family supports the sophisticated packet processing and traffic management capabilities needed by the DSL line cards as the service diversity and bandwidth increase. When you're ready for high-volume production, you can easily migrate your design to Altera's HardCopy® ASICs, lowering cost and power.

### Sample DSL Card Application



## Robust, Scalable, and Budget Friendly

In addition to high-performance Stratix V FPGAs, Altera also offers a wide device portfolio of other cost-effective, reconfigurable, and scalable devices. Depending on your performance requirements, the Cyclone® series of low-cost, low-power FPGAs and the Arria® series of cost- and power-optimized mid-range FPGAs provide a flexible solution for your DSL platform.

Altera's Quartus® II design software delivers a faster and simpler design process for all Altera® devices. We also provide an array of reusable intellectual property (IP) cores and reference designs to complement our programmable devices:

- Ethernet media access control (MAC)
- Interlaken
- PCI Express®
- Nios® II soft processor for control path and packet processing
- DDR/DDR2/DDR3 memory controllers
- Traffic management

## Simplifying the Design Process

DSL Application	Altera® Solution	Partner Solution
Packet processing	<ul style="list-style-type: none"> <li>• Modules and framework</li> <li>• Classification, search, and content-addressable memory (CAM) replacement</li> <li>• Traffic policing IP cores</li> </ul>	<ul style="list-style-type: none"> <li>• Network processing unit (NPU) solution from Ethernity Networks</li> </ul>
Channel bonding	—	<ul style="list-style-type: none"> <li>• Custom-built solution from AimCom</li> </ul>
Ethernet MAC	<ul style="list-style-type: none"> <li>• 10/100/1000, 10G, 40G, and 100G Ethernet MAC</li> </ul>	<ul style="list-style-type: none"> <li>• 10/100/1000, 10G, 40G, and 100G Ethernet MAC from MorethanIP</li> </ul>
Traffic management	<ul style="list-style-type: none"> <li>• Scalable traffic management reference design</li> </ul>	<ul style="list-style-type: none"> <li>• Customizable traffic management reference design from Modelware</li> </ul>

With Altera's IP portfolio and sustained device roadmap, you won't have to worry about end-of-life or obsolescence issues. This platform-based approach lets you adapt and support new protocol requirements without having to go through a learning curve for every design generation.

## Want to Dig Deeper?

For more information about Altera's solutions for your DSL applications, please contact your local Altera FAE or sales representative, or visit [www.altera.com/wireline](http://www.altera.com/wireline).

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