



**Product Brief**  
**R7E-100 PCI Express NetLogic XLR**  
**Packet Processor Card**

**Rev 0.5**

## Summary:

The JumpGen Systems R7E-100 Accelerator Card is a high-performance network processor PCI Express card designed for use in PCI Express compliant systems. The R7E-100 is a 75W single slot PCI Express card featuring the latest NetLogic XLR732 eight core processor or XLR716 quad core processor with up to a 1.2GHz clock rate. The R7E-100 can be delivered with up to 8GB of dual-channel 72-bit wide DDR2 ECC memory running at 800 MHz. The NetLogic XLR732 and NetLogic XLR716 are multi-core, multi-threaded MIPS64® processors with a rich set of Integrated I/O.

The NetLogic XLR732 also provides up to 10 Gbps of bulk encryption (DES / 3DES, AES 128/192/256, ARC4 and others) via 4 high-speed crypto cores and integrated security acceleration (RSA / DH Exponentiation for SSL / IPsec). The NetLogic XLR716 provides up to 5 Gbps of bulk encryption. This makes the R7E-100 ideal for security applications in wireless and wireline access points, switches and routers, radio network controllers, media gateways and video processing applications.

The R7E-100 will support the following configuration build options

- 1) Processor Options
  - a. XLR732 or XLR716
  - b. CPU core speeds of 800MHz, 950MHz, 1.0GHz, 1.2GHz

## Features:

Network Processing Units (NPUs)	<p>NetLogic XLR732 Processor Family featuring eight 64 bit Processing Cores</p> <ul style="list-style-type: none"> <li>• Up to 1.2 GHz with 2MB L2 cache</li> <li>• Up to 8GB of DDR2 memory w/ ECC on dual-channel x72 bus per XLR732</li> <li>• Autonomous Security Acceleration Engine® (SAE) @ 10 Gbps</li> </ul> <p>NetLogic XLR716 Processor Family featuring four 64 bit Processing Cores</p> <ul style="list-style-type: none"> <li>• Up to 1.2 GHz with 1MB L2 cache</li> <li>• Up to 8GB of DDR2 memory w/ ECC on dual-channel x72 bus per XLR732</li> <li>• Autonomous Security Acceleration Engine® (SAE) @ 5 Gbps</li> </ul>
I/O Capabilities	<p>Dual front panel SFP+ 10GigE sites</p> <p>Dual front panel SFP 1GigE sites</p> <p>PCI Express x4 to base board</p> <p>16MByte of NOR Flash for code and data storage</p>
Mechanical	Standard single-slot PCI Express card form factor
Environmental	<p>Operating temperature range: 0 to 55 °C</p> <p>Humidity: 0 to 95% (non-condensing)</p> <p>Typical power consumption: 60W</p> <p>Worst-case power consumption: 75W w/ 1.2GHz NetLogic CPU</p>

### Block Diagram:

