Both improved and more deterministic performance.

*Glueless Framer Interface Support*

The nP7250 has dual symmetric frame interfaces configurable in the following formats: UTOPIA L3, POS-PHY L3, Flex Bus 3, RGGI or ViX-V3. The OC-48 port can also be used as streams of channelized 4xOC-12, 16xOC-3 for UTOPIA L3, POS-PHY L3 and Flex Bus 3. The nP7250 is fully standards-compliant with the OIF ’s SPI -3 and ATM Forum ’s UTOPIA 3 specifications.

*Packet and Cell Processing*

The nP7250 ’s flexibility to process both cells and packets sets it apart from almost all other NPU offerings today. Each port can be configured to process cells, packets, or both simultaneously.

*Embedded Network Coprocessors*

Multiple on -chip coprocessors further enhance the nP7250 ’s performance.

- **Packet Transform Engine** — Specially optimized for packet and cell manipulation, performs special commands on frames as a service and in parallel to the nPcores. Insert/delete data, compute and attach CRC32, and attach packet header components can all be performed by a single instruction.

- **Special Purpose Engine** — Eliminates the need for semaphores and other software -based constructs to dramatically reduce the number of instructions needed for operations related to external memory access, especially the synchronization of access to shared data by multiple threads, as is common with multiple packets or cells “in flight” from the same flow.

- **Policy Engine** — Essentially an on -chip packet classification and search coprocessor, it allows flexible, programmable policy enforcement. Several lookups — up to 512 bits in multiple keys — are returned simultaneously with fixed latency. A key application of the Policy Engine is as a “Network -Aware CASE Statement, ” using multiple simultaneous classifications to eliminate nested If -Then -Else software structures, reducing code size and yielding both improved and more deterministic performance.

- **Statistics Engine** — Automatically collects RMON statistics.