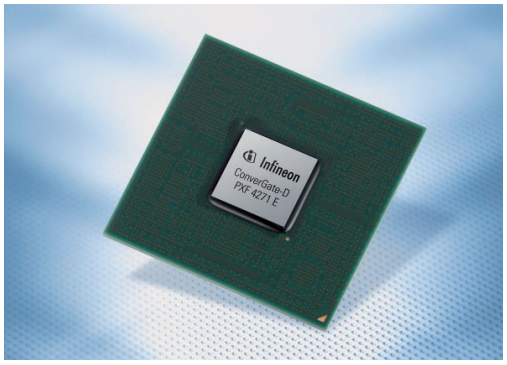
ConverGate™-D

Access Network Processor
PXF 4271E



ConverGate™-D is the second addition to Infineon's ConverGate Access Network Processor family designed for aggregation and interworking of ATM or Ethernet based xDSL traffic on IP-DSLAM line cards.

Infineon ConverGate™-D is a flexible, future proof, high-end Access Network Processor with layer 2, layer 3 and layer 4 processing capabilities. It includes a dual UTOPIA/POSPHY line interface for non-blocking mixed mode ATM cell/ Ethernet packet support.

The ConverGate™-D is a highly integrated low cost solution which features best in class power consumption. It includes an AAL5 SAR and integrated Traffic Management which provides Class of Service (CoS) based queuing, scheduling, and shaping for de-centralized network services and topologies.

The ConverGate™-D is based on a powerful 32-bit packet processor cluster, and is supported by a comprehensive firmware/ software package. This package provides a programmable solution which reduces software development time while allowing flexibility for feature upgrades and extensions.

ConverGate™-D supports the IP-DSLAM features required by DSL Forum TR-101, the reference for DSL Access Nodes. Combined with the xDSL PHY solutions from Infineon, high performance, low-cost line card system solutions are now reality.

Applications
- IP-DSLAM Line Cards
- ATM to Ethernet Gateways

Features
- ATM AAL5 SAR termination in hardware
- Line side connections for up to 128 xDSL lines and, via cascading, for up to 256 lines
- Protocol-aware Parser up to L4; Multiple frame/packet classification
- IEEE 802.1D Bridging (including IEEE 802.1p)
- IEEE 802.1Q VLAN support (including IEEE 802.1ad stacked VLAN)
- IEEE 802.1X Port Security, ingress filtering
- L2 and L3 Multicast, IGMP Snooping
- Flexible Policing of multiple flows, color marking
- Exceptions for L2/L3 Control Frame Detection
- Downstream traffic buffer with external DDR2 memory

QoS and Queuing
- Four priority scheduled queues per Ethernet port
- Up to 8 WFQ or priority scheduled queues per UTOPIA/POS-PHY interface port
- Multiple Leaky Bucket Shaping and WRED buffer acceptance in UTOPIA/POS-PHY egress direction

Protocols
- Multiprotocol Encapsulation via AAL5 (RFC2684)
- Over ATM-TC: EoA, PPPoA, IPoA, native ATM
- Over Packet-TC: Ethernet, IP, PPP
- Over Ethernet MAC: native Ethernet, PPPoE, AoE

Interfaces
- Pin-shared 2xGMII/TBI and 4xMII/SMII full duplex system side interface, load sharing and redundancy
- Pin-shared 128-port dual UTOPIA L2/ POS-PHY L2 line side interface, 16-bit, up to 50 MHz
- 8/16-bit microprocessor interface

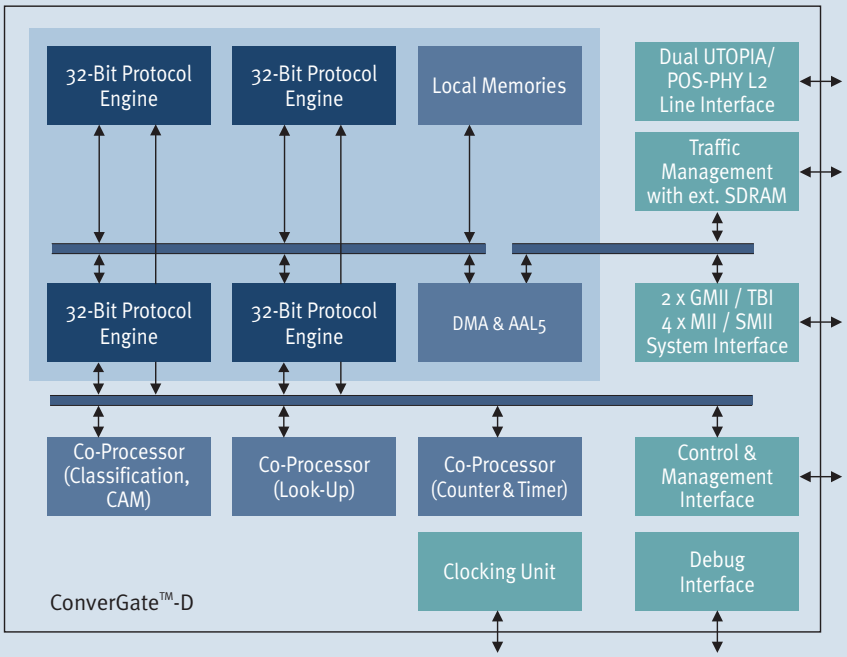
Physical Characteristics
- Extended Temperature Range -40°C to +85°C
- Power Supply 1.5 V core, 3.3 V I/Os, 1.8 V DDR2 memory
- Power Consumption 2.8 W (maximum)

www.infineon.com/convergate

Communication Solutions

Never stop thinking

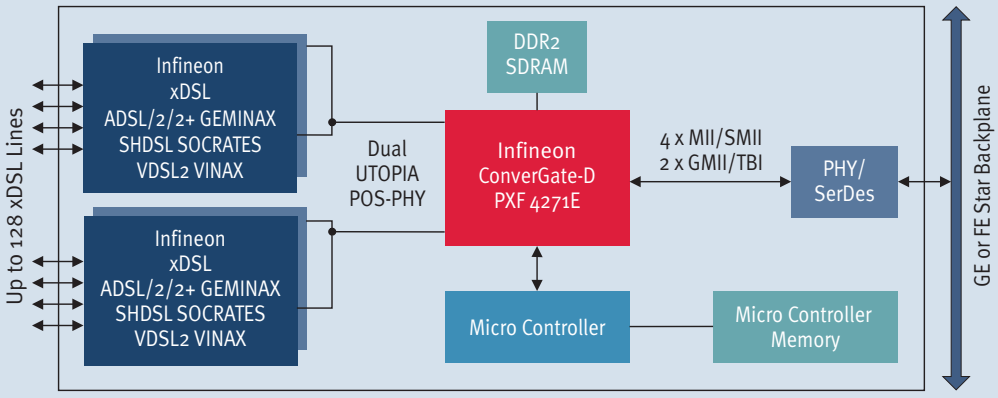
ConverGate™-D PXF 4271E Block Diagram



Product Summary

Type	Sales Code	Description	Package
ConverGate™- D	PXF 4271E	Access Network Processor	SG-FCBGA-496-1 (25 mm x 25 mm, 1 mm ball pitch)

IP-DSLAM xDSL Line Card Application Example



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