ORCHIDÉE
SEMICONDUCTOR

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Orchidée Semiconductor ALASKA
High Speed Firewall/Router Processor

Features

- Create complete Firewall router with only 5 chips
- Internal RISC processor performs low level firewall functions
- High speed (66MHz) 32 bit internal bus
- Simple SRAM interface allows easy integration with most system architectures
- May be configured as WAN/LAN or WAN/DMZ/LAN
- NBS FIPS Pub. 46-2 compliant encryption and decryption capability. Up to 100Mbps Triple-DES
- Secure, Pseudo-random Key generator
- 350MHz PLL
- Five 10/100 Mbps MACs, ISO/IEC 8802-3 and IEEE 802.3u compliant with configurable switch
- Co-processor design allows for a less expensive system processor to be used
- Low Power 3.3V Operation
- 208 TQFP Package

Functional Description

The Orchidée Semiconductor Alaska ASIC chip implements an advanced firewall/router with a minimum chip count. The Alaska™ ASIC provides industry standard MII interface to physical layers 10Mb, 100Mb, TP-PMD or ENDEC. The on-board ARM7TDMI CPU manages traffic among up to five networks. Industry standard DES or Triple DES encryption or decryption can be done with minimal amount of system processor intervention.

Dual ported RAM allows the firewall system processor to look only at IP headers – dramatically reducing traffic on the system bus. A typical packet may arrive on a LAN port, be encrypted and transferred to the WAN port without transferring the payload to the system processor – greatly improving system performance.

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