

Krakatoa 8155-2P Product Sheet

Two-Port Gigabit Ethernet Network Adapter with Integrated IPsec and SSL Processor



Highlights:

- Integrated Dual-port Ethernet and Security Processor
- Hot Swappable Copper or Optical SFP Transceivers
- 4 Gb/s Clear Text Bidirectional
- 1.25 Gb/s 3DES or AES128
- Native Ethernet Driver support for all major Operating Systems

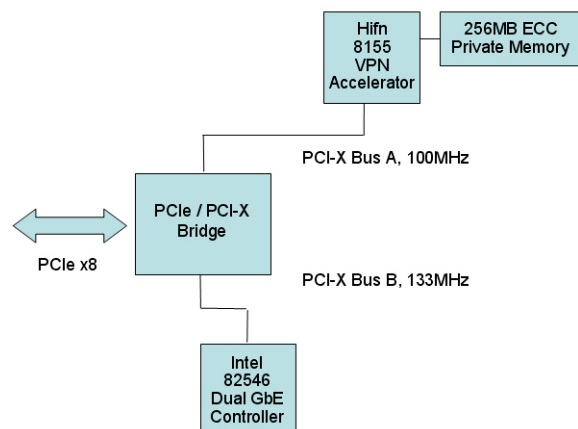
Dual Port SFP Gigabit Ethernet Ports – Fiber or Copper

The Dual Port Krakatoa 8155 is a RoHS compliant adapter offering two independent gigabit Ethernet channels and a security processor on a single PCI Express card. Ideally suited for space constrained network appliances and servers, it offers Ethernet connectivity with integrated IPsec and SSL acceleration.

Applications

Network Security Appliances	Firewall / VPN Multi-purpose Gateway / Router High Availability / Redundancy Load Balancing
Servers	Link Aggregation High Availability / Redundancy Backup Networks Storage / Web / DNS
NAS	iSCSI, AoE, SoIP
Video over IP	Surveillance, IPTV
Traffic Generator	Maximize Bandwidth and Connectivity

Block Diagram



Controller Specific Data

<h3>Intel 82546 Ethernet Controller Features</h3> <ul style="list-style-type: none"> • Highest Ethernet Port Density • Small Form Pluggable (SFP) Transceivers • IEEE 802.3ab compliance • Ultra Deep 64KB Packet Buffers • Large Send Off-load & TCP Segmentation Off-load • Adapter Fault Tolerance • Switch Fault Tolerance • Adaptive Load Balancing • 802.3AD Link Aggregation • 802.1Q VLAN Tagging • 802.3x Flow Control • 802.1p Class of Services • TCP Checksum Offload • TCP Segmentation Offload • Interrupt Moderation 	<h3>Hifn 8155 Security Processor Features</h3> <p>Security Regulatory Compliance:</p> <ul style="list-style-type: none"> • NIST certified hardware implementation of standard strong cryptography functions • AES FIPS 197; Cert. #266 • DES FIPS 46-3, FIPS 81 Cert. #322 • 3DES FIPS 46-3, FIPS 81, Cert. #348 • SHA FIPS 180-1, Cert. #345 • HMAC FIPS 198, Cert. #78 • PRNG FIPS 186-2, ANSIX9.62, ANSIX9.31 Cert. #110 <p>Lossless Data Compression:</p> <ul style="list-style-type: none"> • LZS, MPPC <p>Encryption:</p> <ul style="list-style-type: none"> • AES (128, 192, 256); CBC, ECB, and CTR modes) • 3DES/DES, ARC4 <p>Public Key Cryptography:</p> <ul style="list-style-type: none"> • RSA, Diffie-Hellman, DSA • True random number generator • 3K Bignum ALU <p>Symmetric Key Cryptography</p> <ul style="list-style-type: none"> • AES (128, 192, 256-bit keys); ECB, CBC, CTR modes • ARC4 <p>Secure Hash</p> <ul style="list-style-type: none"> • SHA-1, MD5 <p>Message Authentication</p> <ul style="list-style-type: none"> • HMAC, SSL-MAC <p>Protocol Support:</p> <ul style="list-style-type: none"> • IPSec (ESP, AH, Transport and Tunnel modes) • UDP encapsulation for NAT traversal • IKE, IPPCP, SSL/TLS/DTLS, 802.11i, IPv4, IPv6
<h3>Intel 82546 Ethernet Controller Performance</h3> <p>Clear Text Performance</p> <ul style="list-style-type: none"> • 4 Gbps sustained aggregate 	<h3>Hifn 8155 Security Processor Performance</h3> <p>IPSec Performance</p> <ul style="list-style-type: none"> • 3DES/SHA1 – 1.3 Gbps sustained (1500 byte pkts) • AES/SHA1 – 1.3 Gbps sustained (1500 byte pkts) • ARC4/MD5 – 1.3 Gbps sustained (1K byte and larger) <p>Public key performance</p> <ul style="list-style-type: none"> • 1K IKE handshakes/sec (quick mode w/2DH) • 1K SSL/TLS handshakes/sec • Support for up to 3,072-bit public keys native <p>Compression</p> <ul style="list-style-type: none"> • Up to 2.0 Gbps LZS, MPPC, PPP
<h3>Hifn 8155 Operating System Support</h3> <ul style="list-style-type: none"> • Linux 2.6x • VxWorks • Windows • Inferno 	<h3>Intel 82546 Ethernet Controller Operating System Support</h3> <ul style="list-style-type: none"> • Windows Server 2008, 2003 and 2000 • Windows XP, 32 & 64 bit • Windows NT 4.0 • Linux 2.4x or later, 32 bit & 64 bit • FreeBSD 4.x or later • NetBSD 1.6.x or later • Novell Netware 4.11 or later • Solaris 7 or later • UnixWare 7.x • OpenUNIX 8 (ddl8) • SCO5 • VxWorks • Inferno • Xen, XenEnterprise • VMWare ESX • Mac OS X (from Small Tree Communications, www.small-tree.com)

Onboard Controllers	(1) Intel 82546GB Dual Port Gigabit Ethernet, (1) Hifn 8155 IPSec & SSL Processor	Power	22W Max
Status LEDs	Link Active, Link Activity, VPN Activity	Media Connector	(2) GbE mini-GBIC SFP
IEEE Compliance	802.3z, 802.3ad, 802.1q, 802.3x, 802.1p, 802.11i	Network Topology	1000BASE-SX, 1000BASE-LX, 1000BASE-LH, 1000BASE-T
Onboard Memory	384 KB (64 KB/port) for Ethernet 256MB ECC for Security Processor	Form Factor	10.43 in x 4.33 in
Environmental		Slot Type	PCI Express, x8. Operable in x8 and x16 slots
Operating Temp	0 to 55° C with 200 LFM air flow	Emissions Certification	USA – FCC Part 15, Class A Canada – IC-ES003 EU – CE, EN55022/VCC, EN300-386-2, EMC Directive Class A AS/NZS – 3548 CISPR PUB 22 Japan – VCCI Class A
Storage Temp	-40 to 80° C		
Operating Humidity	5 to 85% non-condensing		
Storage Humidity	0 to 85% non-condensing		
RoHS Compliant	Yes		

Ordering Information

Product Name	Part Number	Description
Krakatoa 8155-2P	02S01E1465513	Dual-port PCI-Express SFP Gigabit NIC with Integrated Hifn 8155 Security Processor