RAVLIN® IPSec Card

PRODUCT OVERVIEW

RedCreek provides Windows NT 4.0 server users with the means to incorporate the latest network security features quickly and easily. Secure communications over Intranets/Extranets and secure Remote Access are easily implemented using the Ravlin IPSec Card for the Windows NT 4.0 Server platform.

The Ravlin IPSec Card advances the state of IPSec networking and server communications in two very important and innovative ways. For the rst time users can implement Internet Protocol Security Standard encryption (IPSec) and authentication on an NT 4.0 Server or workstation. Also, this IPSec capability is based on a new VPN form factor. All the functionality associated with RedCreek's standalone Ravlin10 VPN hardware device has been implemented on a PCI base card that is simply installed into an NT server just like an Ethernet card.

Internet Protocol Security Standard (IPSec) is a framework of open standards for ensuring secure private communications over public networks like the Internet. Based on standards developed by the Internet Engineering Task Force (IETF) IP Security Working Group, IPSec is an industry-driven standard that ensures condentiality, integrity, and authenticity of an IP network. IPSec is a key component of this standards-based, exible solution for deploying a network-wide security policy.

The Ravlin IPSec Card allows private communications over any network, including the Internet, without performance degradation. It turns an NT Server from a commerce web terminal server into a secure commerce, secure web, and secure terminal server for VPN tunnels. It also allows NT-based rewalls to do both thorough access control and IPSec encrypted tunnels from one platform.

SECURE INTRANETS/EXTRANETS
Ravlin IPSec Card

The Ravlin IPSec Card is a Network Interface Card (NIC) that can transparently encrypt, authenticate, manage, and route datagrams over LANs and WANs. The VPN process allows private communications over any network, including the Internet, without performance degradation. Electronic commerce servers can outsource processor-intensive encryption and authentication. Terminal servers, network computers and communication servers running telephony applications can use real-time encryption and authentication to enhance privacy and reduce network usage costs.

Providing integrated hardware and software security solutions for secure Virtual Private Networking (VPN)

Hardware encryption accelerates the encryption and decryption of sensitive data on servers, access routers, and network computers. This makes it possible to encrypt and decrypt les on hard drives, diskettes, or shared servers without the processing and network performance degradation usually associated with encryption.

The Ravlin technology is based on IPSec standards developed by the Internet Engineering Task Force. IPSec is an industry driven standard that ensures condentiality, integrity, and authenticity of an IP network.

Hardware

The Ravlin IPSec Card is based on the Ravlin CryptoCore™ technology and the Intel® i960 processor. It provides 45 Mbps buffer-to-buffer speeds and uses a 10/100 Base-T Ethernet Controller. The system image resides in ash memory, and can be remotely updated at runtime.

Software

The Ravlin IPSec Card uses standard off-the-shelf parts and standard security and network protocols for future interoperability with other IPSec standard products. It is interoperable with the RedCreek Ravlin 4, Ravlin 10, RavlinSoft remote access client, and Ravlin RADIUS Authentication.

SECURE REMOTE ACCESS
RavlinSoft

The Ravlin IPSec Card is interoperable with RavlinSoft, a software client application that provides the same security as a Ravlin hardware unit. RavlinSoft runs on Windows® 95 or Windows NT® 4.0. With the RavlinSoft client, remote users (such as mobile employees and telecommuters) can securely access corporate resources using either public networks or existing corporate dial-up facilities. Like the Ravlin IPSec Card, RavlinSoft follows the IETF IPSec security standards, using full 40-bit/56-bit DES and 168-bit Triple DES encryption, X.509 v.3 Digital Certicate Authentication, and Internet Key Exchange (IKE) for key management.

MANAGEMENT
RavlinNodeManager

The RavlinNodeManager is an easy-to-use management and control tool for conguring, managing, and integrating Ravlin products in an organization's network and security infrastructure. This tool provides robust security management by allowing multiple levels of security among Ravlin hardware units and RavlinSoft clients. Compatible with Windows NT 4.0, Windows 95, RavlinNodeManager allows easy setup and dismantling of secure intranets, extranets, and remote access clients through installation and conguration wizards. From a single centralized location, network managers can manage Ravlin products in an IPSec-compliant secure Virtual Private Network (VPN), checking the status of units and users and adding or removing remote users. Network managers can also monitor trafc between units and modify existing congurations.

As a management tool, RavlinNodeManager is complementary to standard SNMP managers like HP OpenView® for monitoring, displaying statistics, and sending alarms.

BENEFITS AND FEATURES
Performance

RedCreek's CryptoCore technology, along with the Intel i960, provides 45 Mbps buffer-to-buffer encryption/decryption throughput.

REDCREEK® SECURING THE NET
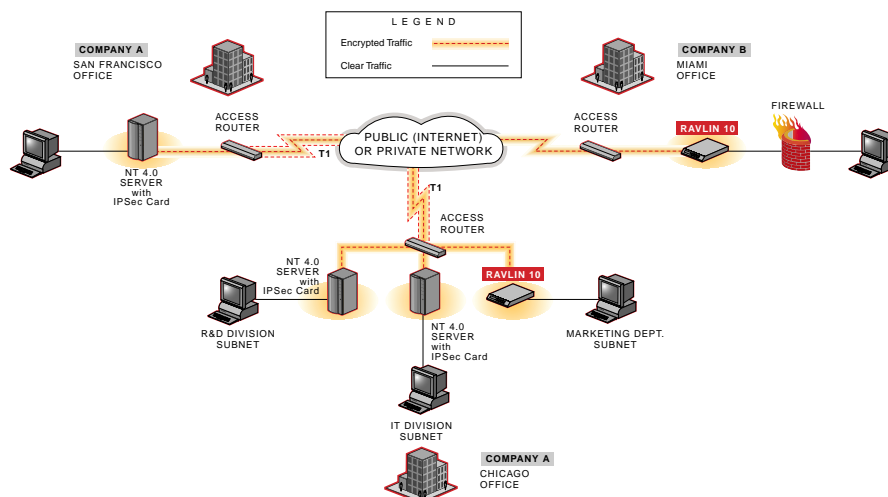
RAVLIN IPSec Card

Using Ravlin IPSec Card to establish Secure Intranets, Secure Extranets and Secure Remote Access.

RAVLIN IPSEC CARD TECHNICAL SPECIFICATIONS/STANDARDS

CryptoCore Scalable Encryption Engine	PCI Local Bus Specication Revision 2.1 Compliant
45 Mbps Buffer-to-Buffer Throughput	10/100 Ethernet Base-TX (auto-sensing)
Intel i960 RP processor	Scatter/Gather DMA
Intel CDSA Over I$_2$O	Short Length PCI Form Factor
33MHz 32-bit PCI Bus	5V PCI

Scalability

The I$_2$O software specication enables off loading of processor-intensive tasks from the host, and ensures ease of use and maintainability.

Privacy

40-bit/56-bit Data Encryption Standard (DES) and 168-bit Triple DES encryption algorithms are the most widely adopted U.S. and international algorithms for encryption. Over 750 simultaneous hardware-to-hardware connections are supported.

Authentication

To perform authentication across networks, the Ravlin IPSec Card uses X.509 v.3 digital certicates, a widely accepted standard specied by the International Standards Organization (ISO). To verify the identity of the sender, the card uses Digital Signature Standard (DSS) and Secure Hash Algorithm (SHA), in conjunction with X.509 v.3 certicates. (DSS provides proof of authorship for digital signatures.)

Interoperability

To perform key exchange during the establishment of secure associations, the Ravlin IPSec Card uses the Internet Security Association and Key Management Protocol, or ISAKMP. ISAKMP/Oakley is the mandatory key exchange protocol specied by the IETF.

Strong Security

The Internet Engineering Task Force (IETF) IP Security Standard (IPSec) offers two signicant features: enhanced security and protocol interoperability. The customer can be certain that IP-based communications passing over the network conform to the most secure and comprehensive standard for encryption, authentication, key management, and anti-replay services. A Ravlin IPSec Card can exchange keys and encrypted communications with any other IPSec-compliant products so customers can use multiple IPSec vendors for multiple scenarios. RedCreek Communications, Inc. can provide a list of IPSec interoperability partners.

CUSTOMER SUPPORT/SERVICE

RedCreek Communications, Inc. believes that customer advocacy and support are critical to our success. Because of this belief, we offer innovative support programs to assist with installation and conguration of Ravlin products. Traditional technical assistance and support are provided by Redcreek's Customer Support Center. Please reference our Customer Support link: http://www.redcreek.com

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