# Vanguard
# NETWORKS
## Data Sheet

# 3410W ASG
## Access Services Gateway
### for Internet Access, Branch Banking and Retail Data Applications

## Features

· Advanced modular architecture delivers enhanced, integrated IP, serial data, and security services. The 3410W ASG with its modular, flexible chassis supports a portfolio of WAN and Data Cards, providing configuration flexibility for future growth.

· Integrated routing, back up, and remote management capabilities allows deployment of simplified managed services for remote locations and branch offices.

· Advanced, optional security functions, with stateful packet inspection firewall and multiple encryption options ensure the highest levels of security without sacrificing high throughput performance.

· Application Protocol Conversion enables support of existing serial transactional applications in an IP network.

· Standards-based design ensures complete interoperability in multi-vendor environments. With Vanguard Networks, customers can choose best-of-breed devices offering numerous benefits over monolithic, proprietary solutions provided by a single vendor.

· Robust routing includes full IP support, BGP4 and Multicast capabilities. The Vanguard 3410W is optimized to deliver the low-latency, advanced QoS and high throughput required for VoIP and video applications.

· Advanced Quality of Service/Traffic Management, granular class definition and multiple enforcement mechanisms provide the highest performance and low latency for VoIP and other high priority traffic.

· Multi-link capability allows for dynamic load balancing and bonding across multiple WAN connections (Up to 3 x v35 high speed MLPPP links).

· Secure Management interfaces include console port, SSHv2, Telnet, and  SMNP.

· The Vanguard 3410W data-only router complements the voice-capable Vanguard 3460 and 3480. Deployed in combination with the larger capacity Vanguard 6800 Series and the Vanguard 7300 series, the Vanguard product portfolio can support various sizes of branch office, regional sites, and Data Center deployments.

· Top notch performance, security, and reliability make the Vanguard 3410W an affordable platform for delivering converged networks, including high speed data, voice, and video.

## 3410W (Worldwide Version) ASG Technical Specifications

### Software Features

**WAN Capabilities**
Async and Sync PPP
Multi-Link PPP
PPPoE (RFC 2516), PPPoA (RFC 1483)
Frame Relay Annex A, Annex D, Annex G
Frame Relay DTE and DCE (Switching)
Frame Relay RFC 1490, FRF.8
X25 RFC 877/1356 (IP), CUG, NUI, Translation

**LAN Connectivity**
VLAN 802.1Q & 802.1P
Inter-VLAN routing (802.1Q)

**Routing and IP address services**
IPv4, RIP1/RIP2, OSPF, BGP4, BGP Communities (RFC 1997 & 1998)
BGP Multipath
Policy Based Routing
Classless Inter-domain Routing (CIDR)
Network Address Translation (NAT)
Port Address Translation (PAT)

Real-Time Transport Protocol (RTP) Header Compression (RFC 2508)
Multiple IP Addresses per Physical Interface
DHCP Client, DHCP Server

**Other Bridging/Routing Protocols**
IPX/Novell IPX WAN, AppleTalk
Transparent Bridging (Spanning Tree 802.1d), SLIP, SoTCP

**Multicast**
DVMRP, PIM-SM (Sparse Multicast), ICMP Router Discovery (RFC 1256)

**High Availability**
Virtual Router Redundancy Protocol (VRRP)
OnNet Proxy (Router Standby Protocol)
Bandwidth on Demand (BOD)
Dial on Demand (DOD), Link Backup (V.25bis)
Data Connection Protection (X.25, SDLC, LLC2)

**Advanced QoS and Bandwidth Management**
IP Type of Service (TOS)
Differentiated Services (DiffServ)
Priority Queuing (PQ), Class Based Queuing (CBQ), Weighted Fair Queuing (WFQ), Weighted Random Early Discard (WRED)
Packet Classification
Policy Based Routing
Generic Traffic Shaping (GTS)
Rate-Limiting

**VoIP aware QoS**
Priority Scheduling of Encrypted Voice Packets
Fast Path Switching for Voice
MLPPP Link Fragmentation and Inter-leaving Segmentation (RFC 1990 & 2686), FRF.12

## Software Features (cont.)

**Firewall**
SPI Firewall

**VPN**
IPSec (IP traffic), GRE (non-IP traffic)
IPSec Authentication Header (AH) and IPSec Encapsulating Security Payload (ESP)
IPSec Encryption: IPSec DES (56 bit), 3DES (128 bit) and 3DES (168 bit)
Dead Peer Detection
Authentication (MD5/SHA-1)
Dynamic IP Address (Dynamic VPN Tunnels)

**Optional Encryption Accelerator Card**
Advanced Encryption Standard (AES): 128, 192, and 256 bit key lengths
Device Authentication and Key Management: Public Key Infrastructure (PKI) and X.509v3 Digital Certificates

**Access Control and User Authentication**
RADIUS
PAP/CHAP

**Protocol Conversion**
Conversion of SDLC to RFC 1490
Conversion of SDLC to LLC2
Conversion of LLC2 to RFC 1490
Conversion of BSC 3270/3780 to IP (VBIP)
TPDU (Async to IP)

**Serial Protocol Support**
APAD
Transparent COP (TCOP)
Transparent BOP (TBOP)
ATPAD, SLIP
X.42 Lottery Protocol

**SNA/SDLC for Serial Connections**
BSC 2780, 3780, 3270 (HPAD, TPAD)
QLLC X.25 (IBM NPSI)
AS/400 5494 Communication Server
TN 3270 Remote Server

**Service Provisioning**
SNMP v1, v3
Telnet
TFTP
CLI
Embedded Web HTTPD
SSH2 Server
OS Image Management
Configuration Management

## Hardware Features

Space saving desktop base unit with one expansion slot for a daughter card and one internal slot.

1 CTP Management Port (up to 115.2 kbps)
1 Universal High Speed Serial Port
2 Auto-sensing 10/100BaseT Ethernet Ports
MPC8270 PowerPC Processor
64 MB SDRAM
16MB of non-volatile flash
High MTBF universal external power supply

**WAN and Data Daughter Cards**
2 Port Serial Daughter Card
(V.24, V.35/V.36, V.11/X21)
1 Port Serial Daughter Card
(V.24, V.35/V.36, V.11/X21)

**Option cards**
3DES/AES Encryption Acceleration Card
V.90 Modern Daughter Card

**Physical Dimensions**
Height: 2.6 in (6.6 cm)
Width: 8.4 in. (21.3 cm)
Depth: 12.3 in (31.2 cm)
Weight: 7.4 lb (3.36kg) unloaded, 8 lb (3.63kg) fully loaded
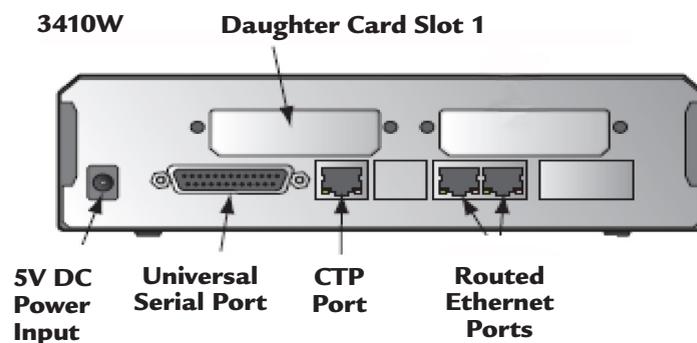
**Power Requirements**
100 - 240 VAC, 60/50 Hz, 1.1 - 0.6 Amps, 30 watts external

**Environmental**
Operating Temperature: 32 ° to 104°F (0° to 40 °C)
Storage Temperature: -40 to 158 °F (-40 °to 70 °C)
Relative Humidity: 5% to 90%, non-condensing

**Regulatory Compliance**
Safety Certifications: UL1950 3rd Edition, CUL/CSA No.950-95 3rd Edition, IEC 950 2nd Edition Amendment 1, 2, 3, & 4 (CB Scheme), EN60950 Amendment 1, 2 & 3
EMC Certifications: FCC Part 15 Class A, Canadian IC Class A, CISPR 22 Class A, EN55022: 1997 Class A, EN50082-1 (EN55024)
Telecom Certifications: FCC Part 68, Industry Canada CS-03, CTR-2, CTR-4, CTR-12, CTR-13, Country Specific (contact your local sales representative)

**3410W** — **Daughter Card Slot 1**

**5V DC Power Input** — **Universal Serial Port** — **CTP Port** — **Routed Ethernet Ports**

Vanguard Networks offers a full range of network lifecycle services. Service may differ from country to country.
Contact your local Vanguard Networks representative for details or access our web site at: www.vanguardnetworks.com