



## **iNAV<sup>®</sup> 9200 Access Gateway**

*Application-ready solution offers multimillion packet Processing per second and pre-developed interworkings for ATM to Ethernet Bridging and IP Routing*

### **FEATURES**

Purpose-built for Convergence, Wireless, Multimedia, & Broadband Access applications

Wintegra™ WinPath™ WIN787-233 MHz Packet Processor: Revolutionary design purpose-built for high-end access networking yielding multimillion packet processing per second

ATM to Ethernet interworking function bridges ATM and Ethernet networks

High degree of configurability via:

- Industry standard command line interface (CLI)
- SNMP for fault management

Primary network interfaces available

- Up to 16 T1/E1/J1 ports
- 2 or 4 DS-3/E3 ports
- Up to 4 OC-3c/STM-1 ports
- One OC-12c/STM-4 port

Secondary network interfaces:

- Dual 10/100/1000 Auto-sensing Ethernet ports for management and data

Multiprotocol support:

- ATM (AAL5)
- Gigabit Ethernet
- RFC 1483/2684/1577 Bridging and Routing
- VLAN
- IGMP
- DHCP relay agent
- MPEG over ATM conversion to IP/UDP unicast of multicast flows
- TDM-RTP packetization / depacketization

### **APPLICATIONS**

*Packet Routing LMDS (Fixed Wireless) Gateway*

*DSLAM & CMTS (Headend)*

*Media Gateway*

*Access Wireless Access Gateway*

*Multiservice Gateway*

### **Gateway in a Box**

Functioning as standalone product, the iNAV 9200 is based on the powerful Wintegra Winpath processor housed in a 1RU enclosure. The iNAV 9200 provides ATM to Ethernet interworking using OC-3/STM-1 or OC-12/STM-4, and Gigabit Ethernet interfaces supporting AAL5 to Ethernet bridging.

### **ATM to IP Bridging**

The iNAV 9200 performs an interworking function enabling IP-based DSLAMs to connect to backbone ATM facilities. The iNAV 9200 supports IGMP and MPEG over ATM conversion to IP/UDP unicast or multicast flows making the iNAV 9200 ideal for IPTV applications.

### **Multimedia Application Support**

The iNAV 9200 can also be used to support IPTV applications where the video feed is provided as MPEG over ATM and must be converted to IP/UDP unicast. This solution is ideal for supporting new IPTV deployments where core network video distribution is provided over QoS managed ATM infrastructure





## iNAV 9200 Access Gateway

### Data Path Software and Protocol Support

The iNAV 9200 incorporates the WinPath Packet Processor, which provides pre-developed network protocols and multimillion packet processing per second performance. The WinPath is one of the driving forces behind the 9200 appliance that enables it to yield up to a 5X performance/price-ratio improvement over alternative solutions on the market today.

### Enclosure

- 1U high chassis, 19" rack-mountable
- Compatible wiring for American and European standards
- Industrial grade -48 V DC
- Guarded power switch and reset button
- Hot swappable fans

### Interfaces

- Dual Gigabit Ethernet ports for management and data
- Additional network interfaces available:
  - Eight or sixteen T1/E1/J1 ports
  - Two or Four DS-3/E3 ports
  - Two or four, OC-3/STM-1
  - One OC-12/STM-4 port interface bridged to the dual Gigabit Ethernet ports
  - Software selectable feature on all interfaces enables port selection of international interface variants without changing hardware components
  - OC-3/STM-1 and OC-12/STM-4 Interfaces available in multimode fiber and single mode fiber (intermediate and long range)
  - OC-3 supported for ATM/POS depending on configuration. OC-12 support for ATM
- OC-3 / STM-1 & OC-12 / STM-4 SFP Optics:
  - Single Mode Long Reach (SMLR)
  - Single Mode Intermediate Reach (SMIR)
  - Multimode Short Reach (MMSR)

### Management and Configuration Tools

The iNAV 9200 Access Gateway includes a command line interface (CLI) for managing and configuring the product to meet specific needs. The CLI is available via TTY console or remote shell telnet session and offers several levels of access dependent on user privileges.

The CLI tool enables modification of the following main aspects of the solution:

- Controller configuration
- Interface configurations
- ATM Virtual Circuit (VC) class configuration
- Bridge configuration
- Management configuration

An internal SNMP agent is currently available with support for the physical layer OC-3/STM-1 MIB (RFC 2558).

### Application Software Packages

The iNAV 9200 supports:

- ATM AAL5 via OC-3/STM-1 or OC-12/STM-4 bridging with IP over Gigabit Ethernet per RFC2684
  - VLAN stacking (IEEE P802.1ad)
  - IGMP snooping. IGMP V1, V2 or V3 are supported.
  - DHCP relay agent & Option 82 per RFC 3046
  - 4531P (DS3/E3) supported in ATM mode (POS is not supported)
  - ATM traffic management 4.1 – traffic shaping
- IP Routing per RFC2684 ATM/POS OC-3/STM-1 or ATM OC-12/STM-4 interfaces and Gigabit Ethernet interfaces
  - IGMP V1 or V2. Server side only, no propagation, no other multicast protocol supported.
  - MPEG over ATM conversion to IP/UDP unicast of multicast flows.
- TDM Media Access
  - TDM-RTP packetization/depacketization (DS0 basis)
  - DS0 tromboning (within one unit)
  - Control and Management interfaces over TCP/IP

## Technical Specifications

### Architecture

Processor Speeds	Winpath: 233 MHz PowerPC™ 750GX: 800 MHz
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Memory on	128 – 256 MB SDRAM, based on Configuration 8-16 MB Flash, based on configuration
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### Mechanical

Length	200 mm (7.9 in.)
Width	442 mm (17.4 in.)
Height	1U 44.5 mm (1.75 in.)
Weight	4.25 kg (9.37 lbs.) single blade
Indicators	Board Operational, Link active

### Operating Environment

Temperature	0 to 55 °C (32 to 131 °F)
Relative Humidity	5% to 95% non-condensing
Altitude	0 to 15,000 ft.
Power	-48V DC
Power Consumption	<54 W (configuration dependent)

### Corporate Headquarters

2901 N. Dallas Parkway  
Plano, Texas 75093  
1-800-FASTNET  
Phone: + 1.214.654.5000  
Fax: + 1.214.654.5500

### European Headquarters

Centre d'affaires 10ème Avenue  
855, avenue Roger Salengro  
92370 Chaville - France  
Tél.: + 33 (0) 1 41 15 44 00  
Fax: + 33 (0) 1 41 15 12 13

### About Interphase Corporation

Interphase Corporation (NASDAQ: INPH) delivers solutions for network connectivity, interworking, and packet processing for key applications for the communications, Mil/Aero, and enterprise markets. Founded in 1974, Interphase provides expert customization services and contract manufacturing, in addition to its COTS portfolio, and plays a leadership role in next generation AdvancedTCA® (ATCA), AdvancedMC™ (AMC), PCI-X, and PCIe standards and solutions. Interphase is headquartered in Plano, Texas, with sales offices across the globe.