# Access211N
## VoIP Residential Gateway

**Superior voice quality even with heavy data traffic**

**T**he Access211N VoIP residential router gateway delivers toll-quality voice over existing broadband service (DSL, cable, etc.). Combined with an internal fullfeature router, it enables service providers to easily and cost-effectively provide their residential and small office home office (SOHO) subscribers with high-quality VoIP service using traditional analog telephones and fax machines.

Service providers and users have uniquely positioned Access211N as the best solution in its class with its rich feature set and superior voice quality. Users find the voice rivals their landline service even while maintaining available bandwidth to provide high speed downloads and sending or sending emails.

Access211N uses enhanced traffic shaping which ensures the best voice quality and bandwidth, on top of integrated QoS and powerful priority mechanisms. Among its many QoS mechanisms, it provides unique traffic shaping features that ensure the voice gets the appropriate bandwidth. It uses voice priority mechanisms such as 802.1p and 802.1q while leveraging Diffserv and TOS marking to guarantee undisturbed, clear voice calls.

Access211N offers auto-provisioning and auto-configuration tools for mass deployments, simplifying and speeding up field deployment as well as support and maintenance. It can be automatically configured and upgraded through TFTP or HTTP servers, reducing OPEX and human error.
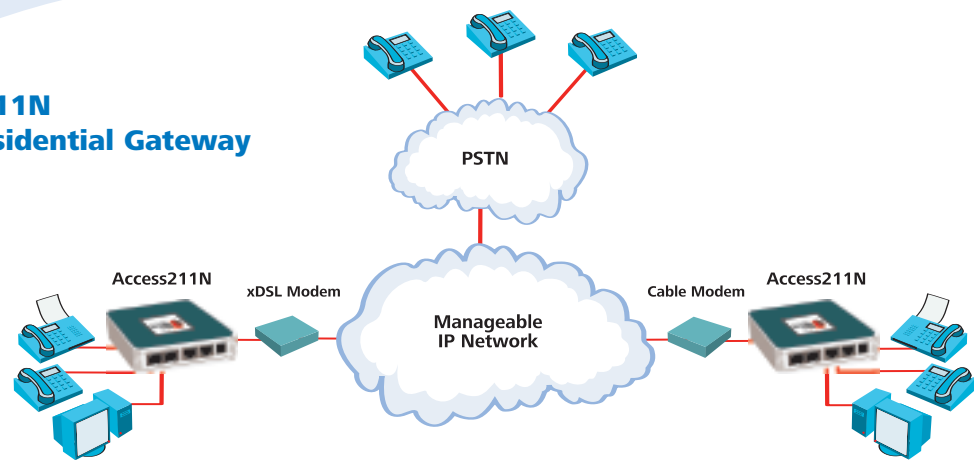
Access211N is one in a series of VoIP residential gateways that deliver up to 4 Ethernet ports for LAN or video applications, FXO, 10/100BaseTX copper, and 100BaseFX fiber uplink WAN interfaces.■

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# Specifications

**Voice protocols**
SIP (RFC 2543, RFC 3261 selected sections)
MGCP (RFC 2705, NCS)
H.323

**CODECS** (concurrently on both ports)
ITU G.711 (µ-law, A-law)
ITU G.723.1
ITU G.726
ITU G.729 A/B
ITU T.38 (SIP, MGCP)
ITU FXS

**Voice features**
Automatic fax/modem detection
Voice Activity Detection (VAD)
Comfort Noise Generation (CNG)
RTP voice packet encapsulation
DTMF detection and generation
**Enhanced call features:** Caller ID, call hold, attended/unattended call forward, 3 way conferencing, redial
**Automatic tone generation:** dial, busy, fast busy, ring back, stutter tone, distinctive ring

**Routing and Provisioning**
PPPoE RFC 2516
PPTP RFC 2637
Dynamic Host Configuration Protocol (DHCP) server (RFC 2131), client (RFC 2131), and relay
Network Address Translation (NAT)
RFC 2068 HTTP
Static and dynamic IP address assignment
DMZ

**Quality of Service**
VLAN tagging IEEE 802.1q
Voice priority over data IEEE 802.1p
IEEE 802.3
Traffic shaping using dynamic bandwidth limitation
Layer 3 TOS marking

**WAN Interface**
10/100BaseTX auto sensing (IEEE 802.3u)
Connector RJ-45
Transmission Full/half duplex, auto negotiation, auto detect, auto polarity, cross or straight cable

**LAN Interface**
10/100BaseTX auto sensing (IEEE 802.3u)
Connector RJ-45
Transmission Full/half duplex, auto negotiation, auto detect, auto polarity, cross or straight cable

**LAN Cabling**
10BaseT UTP, Cat. 3, 4, 5 100m
100BaseTX UTP, Cat. 5 100m

**Telephony Interface**
Analog Connector RJ-11 (POTS)
5 REN (distance dependent)

**Management**
Web-based management for user and Admin
TELNET
Remote auto configuration mass software download and auto configuration using TFTP or HTTP
IP Configuration DHCP or static

**Security**
Passwords, encrypted configuration file

**General**
Dimensions (H) 0.95" (24.1mm)
(W) 3.5" (88.9mm)
(D) 3.5" (88.9mm)
Power 5 VDC external power supply
Weight 0.88 lbs (0.4 kg)
Operating Temp. 0° to 45° C (32° to 113°F)
Operating Humidity 10% – 90%, non-condensing

**Emission and Safety Regulations**
FCC part 15 class B, UL, CUL, CE

# Features and Benefits

- T.38 and G.711 fax over IP support

- Embedded router eliminates home router

  - DHCP server client and relay

  - NAT server enables simultaneous phone and PC use on one IP address

  - PPPoE and PPTP client

- SIP and MGCP protocol support

- Voice activity detection (VAD) saves bandwidth

- Complex CODEC schemes simultaneous on both ports minimize bandwidth use

- Telephone line pulse metering, used as call-charge units for pay phone

- Interoperable with most major softswitches

- Integrated web server for simple end-user provisioning

- Fully managed solution and auto provisioning and automatic configuration with TFTP and HTTP to aid large installations

- Desktop or wall mounted

# Ordering Information

| Part Number | Description |
| --- | --- |
| AC211N-X | VoIP gateway, 2 voice ports, 1 10/100BaseTX LAN port, 1 10/100BaseTX uplink port.  X = S for SIP, M for MGCP, H for H.323. |

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