



# INNBOX V45

## VDSL2 Home Gateway

By introducing latest VDSL2 technology, Iskratel brings carrier class high-end networking solution for advanced triple play services, including multiple HDTV channel support over wireless network. VDSL2 Home Gateway Innbox V45 combines VDSL modem and powerful home networking engine in single device. It enables service providers to offer connections of 100 Mbps downstream with the latest VDSL2 technology. Furthermore, Innbox V45 enables multiple profile arrangement to gain symmetrical or asymmetrical connections from CO or remote access module deployments and to provide desired bandwidths even on longer subscriber loops.

The VDSL2 Home Gateway Innbox V45 supports delivery of all triple play services: internet data, Voice over IP (VoIP) and IP video including bandwidth consuming HDTV. For packet based terminal devices it provides 4 Ethernet ports as well as a 802.11N wireless access point that brings relief to those troublesome wirings.

Additionally two ports for telephony services are provided using Voice over IP technology compatible with SIP server environments.

With embedded firewall and IP sharing technology this Home Gateway delivers secure broadband Internet access to be shared by all connected clients.

Furthermore two USB2.0 host ports are available to enable value-added features such as file server, FTP server, printer server or external 3G modem connectivity.

## Key Features and Benefits >

Powerfull Home Gateway engine for offering 3Play services on broadband connectivity

Multiple local interface options: USB2.0, Ethernet, FXS for POTS, WLAN 802.11N 2.4GHz

Real 3Play proven Home Gateway to provide multiple HDTV IP streams

Fully featured Router and Firewall, secure wireless transmitting and authentication

Vectoring support

Line rate routing performance

Support for centralized management node of multiple CPE (e.g. controlled mass remote SW upgrade and auto configuration provisioning), TR-069

## TECHNICAL SPECIFICATIONS

Note: some features are hardware dependant;  
some feature may not be included in dedicated software release.

### WAN Specifications

#### DSL Interface:

- Copper pair loop, 100 ohm line impedance, RJ-11
- Comply with ADSL ITU-T G.992.1 (G.dmt), G.992.2 (G.lite), ANSI T1.413 i2, G.992.3 ADSL2 (G.dmt.bis), G.992.5 ADSL2+ (G.dmt.bis+)
- Comply with VDSL2 ITU-T G.993.2 (DMT), ETSI TS 101-270-1 V1.3.1 and ETSI TS 101-270-2 V1.2.1
- Profiles supported 8a, 8b, 8c, 8d, 12a, 12b, 17a
- Support for vectoring ITU-T G.993.5
- Support for 997 and 998 Band plan
- Support for USO band
- Support for ISDN and POTS complementary services

#### Ethernet Interface:

- Comply with Gigabit Ethernet 10/100/1000Base-TX (RJ-45), reconfigurable to electrical Ethernet LAN

### Local Interface

- 4 port Ethernet 10/100Base-TX (RJ-45)
- 1 port Gigabit Ethernet 10/100/1000Base-TX (RJ-45), reconfigurable to electrical Ethernet WAN
- Automatic MDI/MDIX crossover, Auto-negotiation and speed-auto-sensing, Half/Full duplex support
- 2 ports USB 2.0 with host connector
- Internal 802.11bgn WLAN Access Point, 2x2 MIMO, 2.4GHz
- 2 port FXS (RJ-11) for POTS connection

### Bridging

- Transparent Bridging (IEEE 802.1D)
- RFC2684 (RFC1483) Bridged
- VLAN tagging (IEEE 802.1Q)
- Service based tagging (SBT)
- Supporting QoS (IEEE 802.1p)
- Supporting IP and PPPoE packets filter function
- IGMP transparent snooping
- IGMP forking (optional)

### Routing

- IP routing: RIP1, RIP2, and static routing
- RFC2684 (RFC1483) Routed
- PPPoE client
- PPPoE pass-through
- DHCP client, server & relay (RFC2131)
- DDNS client & relay
- IP Multicast IGMP Proxy
- RTP Proxy

### Visual Indicators

- Power – indicates power-on status
- DSL – indicates DSL connection status
- Internet – indicates IP connectivity status
- WAN – indicates Ethernet WAN connection status
- LAN1...LAN4 – indicates LAN connection status
- WLAN – indicates status of WLAN
- WPS - indicates WPS status
- TEL1, TEL2 – indicates VoIP is ready
- USB1, USB2 – indicates USB status

### Security & QoS

- NAT (RFC3022) basic Firewall support with extensive ALG support
- Firewall with well known applications setup
- URL filtering
- Time Scheduler (parental control)
- DMZ/IP pass-through
- VPN pass-through
- ToS/DSCP to CoS mapping
- Bandwidth reservation
- Voice traffic prioritization

### Configuration & Network Management

- UPnP
- DLNA
- Simple port configuration
- DHCP server for IP management
- Telnet for local or remote management
- WEB for firmware upgrade and configuration
- WEB-based configuration and management (multi-level GUI)
- TR-069 data-frame model support, including TR-098, TR-104 and TR-106
- IPERF (optional)
- Buttons: WLAN, WPS, Reset

### Voice support

- Voice compressions G.711 (64kbps, A-law, u-law PCM), G.729ab (8kbps) - optional
- Line Echo Cancellation G.168 with configurable tail
- Voice Activity Detection (VAD), Comfort Noise Generation (CNG)
- Adaptive jitter buffer and Packet Loss Compensation (PLC)
- DTMF (tone) dialing, modem/fax tone detection and pass-through
- Supports SIPv2 (RFC 3261), RTP (RFC3550)
- Supports RTP Profile for Audio and Video Conferences with minimal control (RFC 3551)
- Supports RTP payload for DTMF events (RFC2833)
- Caller ID (Type-1 and 2)

### USB2.0 applications

- File server (by using USB disk, flash or HDD)
- Printer server
- Hub connectivity
- 3G modem (optional)

### Wireless

- WiFi Protected Setup (WPS)
- WEP: 64 or 128 bits key length
- WPA/WPA2 (Wi-Fi Protected Access) in PSK mode or using EAP with RADIUS
- Access control list based on MAC address

### Power

- External 115-230 VAC, 50 - 60 Hz, 12VDC 2A
- Power consumption, less than 20W

### Physical dimensions

- 190mm x 143mm x 27mm (W x H x D), weight 280g

### Environment

- Operating Temperature: 5°C ~ 40°C, Humidity: 5% ~ 85% (non condensing), compliant with ETSI 300 019-1 –3, Class 3.1
- Storage Temperature: -25°C ~ +55°C, Humidity: 10% ~ 95% (non condensing), compliant with ETSI 300 019-1 –1, Class 1.2

### Certification

- CE, CB, RoHS compliant

