



# INNBOX V45

High-Performance VDSL2 Home Gateway

ISKRATEL



Full line-rate throughput



Superb wireless performance



Broad management capabilities

By introducing latest VDSL2 technology, Iskratel brings a carrier-class, high-end networking solution for advanced triple-play services, including multiple high-definition channels over the wireless network. Comprising of a VDSL2 modem and a powerful home-networking engine, the **Innbox V45** VDSL2 home gateway is designed for service providers meeting the demand for high-speed connections up to 100 Mbps in downstream.

The vectoring-enabled **Innbox V45** enables multiple VDSL profile arrangement for symmetrical or asymmetrical connections and is able to provide high data rates even over long subscriber loops.

The Innbox V45 VDSL home gateway offers two types of WAN connectivity. Over copper-pair uplink, **VDSL2 with vectoring** and **ADSL2+** are supported, while one of five Ethernet LAN ports can be used also as a WAN port in **ETH deployments**.

The Innbox V45 supports the delivery of triple-play services: internet data, voice over IP, and IP video, including bandwidth-consuming HD TV.

Services are delivered to users over **five Ethernet** ports, while a wireless **802.11n** access point guarantees that the delivery of services to all wireless devices and supreme user experience are never compromised.

Adding to local connectivity, Innbox V45 offers two ports for telephony services, using a SIP-compatible VoIP technology.

With embedded NAT, firewall and IP sharing, Innbox V45 delivers a **secure internet access** that can be shared by all connected clients.

Two USB 2.0 host ports are available to enable **value-added features**, such as a file server, an FTP server, a printer server, a hub or an external 3G/LTE modem.

## KEY FEATURES AND BENEFITS

- ITU-T, ANSI and ETSI compliant VDSL2, vectoring, ADSL2+/ADSL2
- USB 2.0, Gigabit/Fast Ethernet, FXS for POTS, 3G/LTE
- 802.11b/g/n 2x2 MIMO Wi-Fi access point
- Triple-play home gateway for multiple HDTV IP streams
- Fully-featured router and firewall, with secure wireless transmission and authentication
- Line-rate routing performance
- Support for centralised management, TR-069
- Management of mesh Wi-Fi satellite access points
- K.21 overvoltage protection on all wired interfaces



### DSL WAN specifications

- 100 Ohm line impedance, RJ-11
- VDSL2 compliance with ITU-T G.993.2 DMT, ETSI TS 101-270-1 V1.3.1, ETSI TS 101-270-2 V1.2.1
- Vectoring compliance with ITU-T G.993.5
- Profiles supported 8a, 8b, 8c, 8d, 12a, 12b, 17a
- ADSL compliance with ITU-T G.992.1 G.dmt, G.992.2 G.lite, ANSI T1.413 i2
- ADSL2 compliance with G.992.3 G.dmt.bis
- ADSL2+ compliance with G.992.5 G.dmt.bis+
- Support for 997 and 998 band plans
- Support for US0 band
- ISDN and POTS complementary services

### Local interfaces

- 1 port Gigabit Ethernet 10/100/1000Base-TX (RJ-45) usable either as LAN or WAN
- 4 ports Fast Ethernet 10/100Base-TX (RJ-45)
- Automatic MDI/MDIX crossover, Auto-negotiation and speed auto-sensing, half/full duplex support
- 2 ports FXS (RJ-11) for POTS connection
- 2 ports USB 2.0 with host connector

### Wireless

- 802.11b/g/n 2x2 MIMO access point, 2.4 GHz
- Wi-Fi protected setup (WPS)
- WEP with 64- or 128-bit key lengths
- WPA/WPA2 in PSK mode or using EAP with RADIUS
- Access control list based on MAC address

### Bridging

- Ethernet bridging/switching per IEEE 802.1D/802.1Q
- RFC2684 (RFC1483) bridged
- QoS with support for IEEE 802.1p and DSCP
- Per-port IEEE 802.1Q VLAN ID processing
- VLAN tagging/untagging, service-based tagging
- IP and PPPoE packet filter
- IGMP transparent snooping, IGMP forking (optional)
- Automatic MAC learning and aging

### IP routing

- IP routing: RIP1, RIP2, static routing
- RFC2684 (RFC1483) routed
- PPPoE client, PPPoE pass-through
- DHCP client, server and relay (RFC2131)
- (D)DNS client and relay
- IP multicast IGMP proxy
- RTP proxy

### USB 2.0 applications

- File server (using USB 2.0 disk, flash or HDD), DLNA
- Printer server
- Hub connectivity
- 3G or LTE modem (optional)

### Security and QoS

- NAT (RFC3022) basic firewall 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 prioritisation

### Configuration and 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 management (multi-level GUI)
- TR-069 data-frame model, TR-098, TR-104, TR-106
- IPERF (optional)
- Buttons: WLAN, WPS, reset

### Voice support

- G.711 (64 kbps, A-law,  $\mu$ -law), G.729ab (8 kbps) (optional)
- Line echo cancellation G.168 with configurable tail
- Voice-activity detection, Comfort noise generation
- Adaptive jitter buffer and packet-loss compensation
- DTMF dialling, modem/fax tone detection, pass-through
- SIPv2 (RFC 3261), RTP (RFC3550)
- RTP profile for audio and video conferences (RFC 3551)
- RTP payload for DTMF events (RFC2833)
- Caller ID (Type-1 and 2)

### Power

- External 115-230 V AC, 50-60 Hz, 12 V DC 2 A
- Power consumption less than 20 W
- K21 overvoltage protection on all wired interfaces

### Physical dimensions

- 190 mm x 143 mm x 27 mm
- 0.28 kg (without power adapter)

### Environment

- Operating: 5..40 °C, RH 5..85% non-condensing, compliant with ETSI 300 019-1-3, Class 3.1
- Storage: -25..+55 °C; RH 10..95% non-condensing, compliant with ETSI 300 019-1-1, Class 1.2

### Certification

- CE, CB, RoHS compliant

Some features are hardware-dependent.

Some features might not be included in dedicated software releases.

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