



# INNBOX U92

Universal Home Gateway and EasyMesh™ Wi-Fi Controller

# ISKRATEL



Full gigabit throughput



Top-of-the-line wireless performance



Unparalleled reach and coverage

# Wi-Fi 6

Iskratel's **Innbox U92 universal home gateway** unites VDSL2/ADSL+, copper GE, fibre GE, GPON and 3G/LTE uplink connectivity on a single home-networking device. It **slashes stock costs** significantly by allowing operators to use a single, universal home gateway regardless of broadband-access technology, and at the same time **simplifies the migration** between WAN technologies even in single-box setups.

Supporting data rates up to **300 Mbps** over DSL, **1 Gbps** over P2P fibre, and **2.5 Gbps** over GPON, Innbox U92 easily delivers advanced triple-play services, including multiple **ultra-high-definition TV** streams over wired or wireless home network. Its embedded **Wi-Fi 6 802.11ax** access point uplifts wireless connectivity and performance to the highest level possible. What is more, Innbox U92 includes an EasyMesh™ compliant **mesh Wi-Fi** controller that will unlock the true potential of gigabit connectivity by providing **multi-gigabit wireless** in even the biggest homes.

Innbox U92 universal home gateway arms operators with a box supporting an array of access technologies, be they copper-based (**VDSL2/ADSL2+, FE, GE**), fibre-based (**GPON, P2P**), or mobile (**3G/LTE**).

Innbox U92 supports smooth delivery of services such as internet data and IP video – including multiple UHD TV streams – over **four gigabit Ethernet ports** or over its unbeatable **Wi-Fi 6**

**802.11ax** access point that operates concurrently at **2.4 GHz and 5 GHz**.

Furthermore, Innbox U92 acts as an **EasyMesh™ compliant controller** for a gigabit mesh Wi-Fi network that will end the headaches caused by dead zones. Complemented by EasyMesh™ compliant agent access points, such as Iskratel's **Innbox M84**, the wireless mesh ensures **seamless roaming and smooth handover** without service

interruptions, never compromising supreme user experience.

Adding to connectivity, Innbox U92 offers SIP-compatible VoIP services over two telephony ports. One USB 3.0 host port is available for **value-added features**, such as a file server, an FTP server, a printer server, a hub, or an external **3G/LTE modem** for backup uplink connectivity.

The devices' embedded NAT, firewall and IP sharing deliver **secure internet access** to all connected users.

## KEY FEATURES AND BENEFITS

- Powerful home gateway for advanced triple-play services and multiple UHD TV IP streams
- Multiple WAN interfaces: VDSL2, ADSL2+, copper FE/GE Ethernet, fibre FE/GE P2P FTTH, GPON FTTH, 3G/LTE
- Multiple LAN interfaces: Gigabit Ethernet, Wi-Fi 6, concurrent dual-band 802.11n/ac/ax at 2.4 GHz/5 GHz, USB 3.0, FXS POTS
- EasyMesh™ compliant mesh Wi-Fi controller
- Smooth multi-streaming and gaming with MU-MIMO
- Integrated fibre-termination unit



## WAN interfaces

- One xDSL port (RJ-11)
  - VDSL2/ADSL2+, full ITU G.993.2 compliance
  - VDSL2 Annex Q VPlus/35b
  - Profiles 8a, 8b, 12a, 12b, 17a, 30a, 35b
  - G.vector, ATM and PTM, G.INP
- One Gigabit Ethernet 10/100/1000Base-TX (RJ-45)
  - For FTTH and/or dual-box setups
  - Configurable to LAN interface
- One SFP cage
  - Gigabit Ethernet SFP transceiver for P2P FTTH
  - GPON SFP transceiver for GPON FTTH
- 3G/LTE modem via USB port (optional)

## LAN interfaces

- Four ports Gigabit Ethernet 10/100/1000Base-TX (RJ-45)
  - Automatic MDI/MDIX crossover, Auto-negotiation and speed auto-sensing, half/full duplex support
  - Compliance with IEEE 802.3
- Two ports FXS (RJ-11) for POTS connection
- One port USB 3.0 with host connector

## Wireless LAN

- Wi-Fi access point 802.11b/g/n/ac/ax 2x2 and 2x2 MU-MIMO with internal antennas
- Simultaneous dual-band 2.4 GHz and 5 GHz
- Wi-Fi protected setup (WPS)
- WPA/WPA2 in PSK mode or using EAP with RADIUS
- Access control list based on MAC address

## Mesh Wi-Fi

- Compliance with EasyMesh™
- Embedded EasyMesh™ controller, operating with agent access points via wireless or wired backhaul
- Plug-and-play operation with Iskratel's EasyMesh™ compliant agent access points (such as Innbox M84)
- 802.11k/v/r compliant roaming and band steering

## Bridging

- Ethernet bridging/switching per IEEE 802.1D/802.1Q
- Traffic management (priority queuing, traffic shaping)
- QoS with support for IEEE 802.1Q/p and DSCP
- Per-port IEEE 802.1Q VLAN ID processing
- VLAN tagging/untagging
- IGMP v2/v3 snooping
- Automatic MAC learning and aging
- Unlimited MAC addresses for OMCI-configured flows
- Support for 4096 MAC addresses for RG traffic flows
- Broadcast storm control

## 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 PPPoE
- NAT/NAPT with port forwarding

## USB applications

- File server (using USB 3.0 disk, flash or HDD), DLNA
- Printer server
- Hub connectivity
- 3G/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
- 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
- TR-143 testing and troubleshooting tools
- IPERF and TCP dump (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 and 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)
- T.38 Fax

## Power

- External 115-230 V AC, 50-60 Hz, 12 V DC 1.5 A
- Power consumption less than 16 W

## Physical dimensions

- 247 mm × 154 mm × 42 mm
- 0.50 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, EAC, RoHS compliant

Some features are hardware-dependent.

Some features might not be included in dedicated software releases.

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