



INNBOX V60-U

Universal Home Gateway

By introducing latest design awarded broadband technology, Iskratel brings carrier class high-end networking solution for advanced triple play services, including multiple HDTV channel support over wireless network. Universal Home Gateway Innbox V60-U combines ADSL2+, VDSL2, electrical Ethernet and P2P FTTH modem and powerful home networking engine in a single device. It enables service providers to offer line-speed connections up to 1Gbps. Furthermore, Innbox V60-U 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.

Universal Home Gateway fits in service provider's environments using different broadband access technologies: from ADSL2+ in legacy environments and VDSL2 with bandwidth consuming scenarios in FTTC environments to FTTH scenarios where electrical Ethernet interface is needed. Additionally, Universal Home Gateway Innbox V60-U can be used in full FTTH P2P scenario by using additional SFP transceiver, either 100BaseFX or 1000BaseFX. Using same stock keeping unit can reflect in significant OPEX reduction.

The Universal Home Gateway Innbox V60-U 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 five Ethernet ports including Gigabit capable as well as wireless access point of latest standard 802.11N 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 hub connectivity.

The Universal Home Gateway Innbox V60-U also embeds special Quality of Experience (QoE) monitoring client which enables on-line evaluation of data path all the way to HGW, which can reflect in further OPEX optimization.

Key Features and Benefits >

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

Multiple WAN interface options: ADSL2+, VDSL2, Ethernet, FTTH

Multiple LAN interface options: USB2.0, Gigabit Ethernet, FXS for POTS, WLAN 802.11N 2.4GHz/5GHz

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

Line rate routing performance

Fully featured Router and Firewall, secure wireless transmitting and authentication

Vectoring support

Embedded QoE monitoring solution

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

Optional Fiber Termination Unit with RF Fiber-Coax converter

TECHNICAL SPECIFICATIONS

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

WAN Specifications

- Four options of WAN connectivity: ADSL2+, VDSL2, Ethernet or FTTH

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 US0 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

Optical (FTTH) interface:

- SFP cage, support for dual rate 100baseFX and 1000baseFX interface

Local Interface

- 4 port Gigabit Ethernet 10/100/1000Base-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 port USB 2.0 host connectors
- Internal 802.11bgn WLAN Access Point, 2x2 MIMO, 2.4GHz (5GHz second band, simultaneous operation; optional) internal antennas
- 2 port FXS (RJ-11) for POTS connection
- 1 port FXO (RJ-11) for Line (PSTN) connection (optional)
- DECT base station, internal antenna (optional)

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

- Broadband – indicates WAN connection status
- Internet – indicates IP connectivity status
- Data – indicates LAN connection status
- Wireless – indicates status of WLAN
- USB – indicates USB status
- Phone – indicates VoIP is ready
- DECT – indicates DECT operation
- Battery – indicates backup power operation



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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
- IxRave QoE monitoring client of Ixia® (optional)
- 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 USB2.0 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 - 2.5A (depends on variant)
- UPS connector (optional)
- Power consumption, less than 24W (depends on variant)

Physical dimensions

- 155mm x 230mm x 38mm (W x D x H), weight 0.4 kg

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

Optional accessories

- FTU with RF Fiber-Coax converter, Innbox C30
- SFP optical modules (various models)

Certification

- CE, CB, RoHS compliant