Tilgin HG2500

Ethernet Home Gateways

The family of products in the HG2500 series offers a high end HW solution with superior capacity for all current and future services. The platform is equipped with the wave two generation of 802.11ac Wi-Fi together with dedicated HW support for IoT applications and advanced QoS support

HG2500 highlights

- **Latest Wi-Fi standard support**
  - 802.11ac, wave 2, MU-MIMO @ 5 GHz
  - Explicit beamforming @ 5 GHz
  - Any client beamforming @ 2.4 GHz
  - Full offload of all Wi-Fi routing
  - Solution optimized for many clients
  - Support for intelligent Wi-Fi range extenders
- **Advanced QoS engine**
  - Layer 7 deep packet inspection
  - Prioritization per client application
- **High level of security**
  - Secure boot with signed SW
  - HW supported sandbox environment
  - HW support for encrypted services
- **New generation DECT**
  - Support for DECT / CAT-iq
  - ULE for smart home and IoT
- **Seliro Device Software Platform**
  - Supported with ULE and Wi-Fi
  - HW virtualization for 3rd party software
  - Support for all Seliro Device Software Platform services
  - Full TR-069 support
  - VPN termination
  - Wi-Fi Hotspot
  - Fail safe provisioning
  - Operator log

Tilgin's HG2500 product family is based on a platform with a highly distributed hardware architecture. The solution has dedicated HW for full off-loading of wired as well as wireless routing, an entity for QoS, a security engine for acceleration of encrypted traffic services such as IPSec, SIP/TLS, SRTP and OpenVPN.

The solution has a dual core architecture hosting the application software with the possibility to run specific software in a sandbox environment, thus preventing for instance an IoT application from interfering with or affecting other services in the gateway.

The product family is truly a platform that has full focus on Wi-Fi, with its concurrent dual band solution, offering an accumulated Wi-Fi link speed exceeding 2000 Mbps.

The 5 GHz radio supports the wave 2 generation of 802.11ac including support for MU-MIMO, band steering, roaming and more.

The 2.4 GHz radio is a state of the art 802.11n compliant radio that supports "any client" beamforming that gives improved coverage in the home for all type of devices.

Since the whole Wi-Fi solution has full hardware off-loading, the maximum throughput goes beyond all limits without involving the host processor and the applications running there. Actual Wi-Fi speeds beyond 1000 Mbps are supported, where only the connected clients and wired interfaces are limiting factor.

The wired routing capacity goes beyond what is seen on most home gateways today, with the capacity to provide full gigabit bidirectional routing also for the smallest Ethernet packets.

The product family is prepared for and can act as a Wi-Fi mesh extender controller in a Wi-Fi mesh network to control and manage one or more Wi-Fi mesh extenders in a home, for superior Wi-Fi coverage also in the most difficult environments. The hardware support advanced features such as ability to seamlessly move connected clients between the gateway and the Wi-Fi extenders in the home.

The HG2500 has an option for DECT/CAT-iq, allowing high definition voice and bring speech quality to a new level. It opens a seamless path to IoT services with the support for ULE – the CAT-iq evolution into the IoT and specifically the smart home segment.

Tilgin HG2500 Home Gateways

The HG2500 product family, takes the home gateways to the next level in the evolution of operator managed home gateways. The platform truly turns the gateway into a service platform that can grow with new service offerings for many years to come.

4xGELAN GEWAN FXS USB Adaptor
Reset ON/OFF
60mm
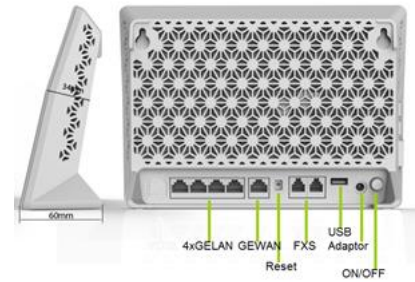
HG2500 Model Configurations

Model	Memory		WAN	VoIP			LAN and Home Networking					
									WLAN			
	Flash (MBytes)	RAM (MBytes)	Copper Ethernet ports	PSTN	CAT-iq	ULE	Ethernet ports	USB 3.0 Host ports	SSID	WPS	2.4 GHz 802.11n	5 GHz 802.11ac
HG2501	128	256	1 x GE	2 x FXS	No	No	4 x GE	1	4+4	Yes	MIMO 3x3 3 streams	MIMO 4x4 4 streams
HG2502				No								
HG2504				2 x FXS		Yes						
HG2505				No								

All products support 2000 Mbps accumulated routing for all packet sizes utilized with the built-in router engine.
All products support Line rate switching on all interfaces simultaneously.

WAN interfaces
10/100/1000 Base-Tx
Autoneg, Auto MDI/MDI-X
Connector: RJ-45

LAN interfaces
10/100/1000 Base-Tx
Autoneg, Auto MDI/MDI-X
Connector: RJ-45

Voice interfaces
Ring voltage: min 45vrms
Connector: RJ-11
REN, Ring Equivalency Number per FXS: 5
CAT-iq: Versions 1.0, 2.0, 2.1, ULE 1880-1900 MHz

USB Interface
USB 3.0 Host

Green mode
Standby button for low power mode
Designed for CoC compliance

WLAN interfaces
IEEE 802.11n, 2.4GHz
MIMO 3x3, three spatial streams
600 Mbps link speed with 256 QAM
4 SSID
Implicit beamforming
HW ready for MU-MIMO
Support for
802.11b,g,n,d,e,h,i,w,k,v,r,ai

IEEE 802.11ac (5GHz), Wave 2
MIMO 4x4, four spatial streams
1700 Mbps link speed, 256 QAM
4 SSID
Explicit beam forming, MU-MIMO
Supported 802.11ac options:
STBC, LDPC, MRC, DFS
Support for
802.11a,n,ac,d,e,h,i,w,k,v,r,ai

IEEE 802.11i/ WEP, WPA, WPA2 per SSID
IEEE 802.11e/WMM, QoS for voice and video over WLAN
Wireless Protected Setup (WPS) with PIN and Push Button
Automatic channel bandwidth and optimum channel selection
Internal antennas

Switch
2048 MAC address table entries
Full 4K width VLAN support, 64 simultaneous VLAN
32 L2/L3 QoS queues, programmable flow classification
Stacked VLAN support, Ingress port and flow based policing
Support for jumbo frames
Programmable QoS engine for layer 2 to 7 classification and tagging
Programmable support for traffic monitoring

Regulatory Compliances
CE mark
WEEE
RoHS

Physical Specifications
Dimension 220x160x36
Weight: 0.65 Kg
Operating temperature: 0-40C/ 32-104F
Non-operating temperature: -20-60C/ -4-140F
Operating humidity:
RH, non-condensing: 10-90%
Non-operating humidity:
RH, non-condensing: 5-95%
External Power Supply:
In: 100-240VAC, Out: 12VDC 2.5A

Tilgin HG2500 is powered by by Seliro Device Software Platform

POWERED BY
Seliro
SOFTWARE

Seliro Device Software Platform is common for and integrated to all Tilgin Solutions Home Gateways.
The device software can be easily upgraded from standard to premium features by normal auto-provisioning.
For further details about Seliro Device Software go to www.seliro.com

Full matrix of Tilgin hardware and Seliro's Device Software Ensemble and modules compliance			
	Ensemble	ULE based IoT & Smart Home	Intelligent range extender solution
HG2501	√		√
HG2502	√		√
HG2504	√	√	√
HG2505	√	√	√

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