

# Tilgin Home Gateway HG2330 series



**Quick Guide**

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## 1. Introduction

The home gateway you have received enables services provided by your operator and can become the full service node in your home.

This Quick Guide contains start-up instructions for installing Tilgin Home Gateway HG2330 series.

When following the instructions to connect and start-up the home gateway it will automatically connect to your operator's network for enabling services offered by your operator. If provided, check the instructions from your operator for additional steps needed when connecting and powering up the device.

Quick Guide available on:

<http://www.tilginsolutions.com/company/support/>

## 2. Delivered with the home gateway

Confirm that you have received the following:

### Content in packages for HG2330 models

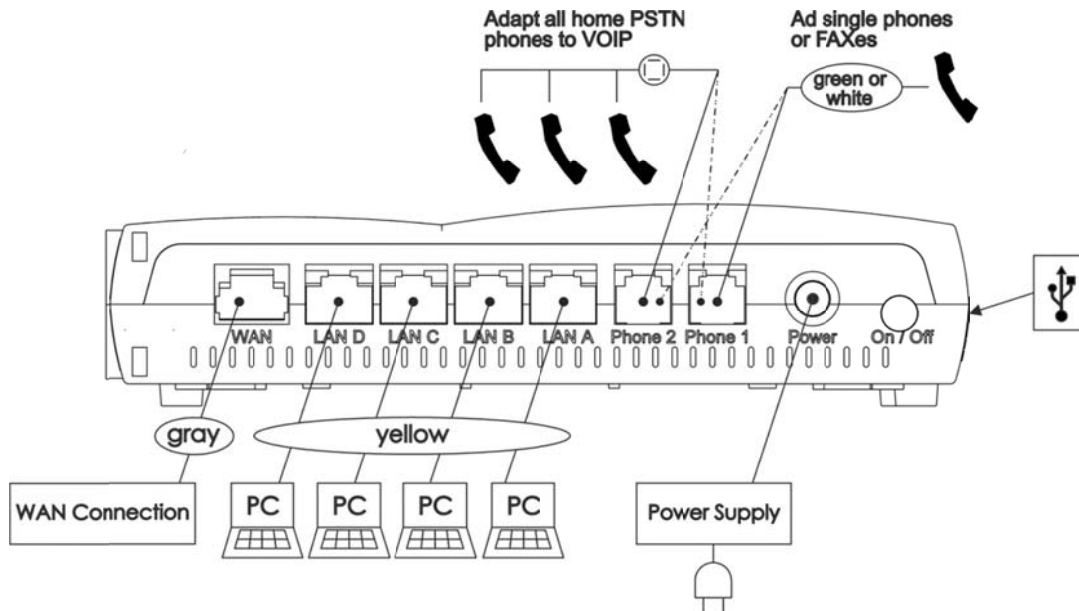
All models:	Specific	Qty
HG2330 series gateway		1
AC/DC adapter 12V output		1
Ethernet cable (yellow)		1
Quick Guide (this document)		1
EULA, End User License Terms and Conditions		1
Software pre-installed		1

**Your operator might also include additional cables or country specific phone plugs.**

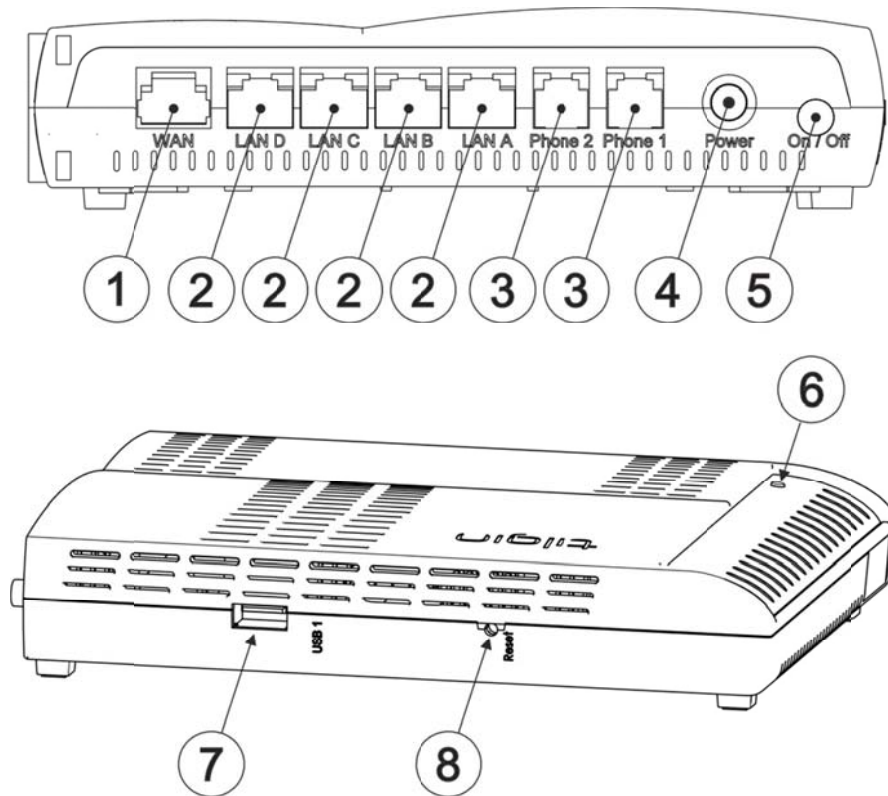
## 3. Home Gateway Overview

### 3.1. Home Gateway cable attachments

See more instructions below.



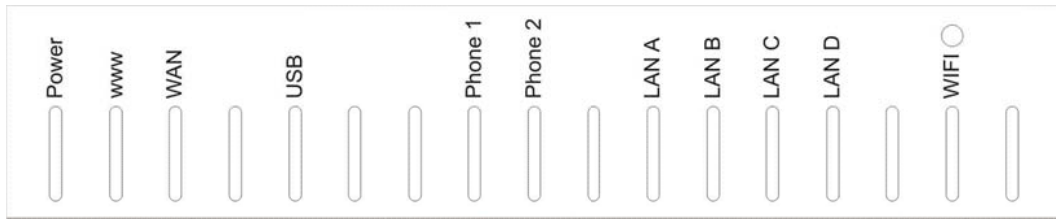
## Home Gateway Interfaces



Pos	Interface	Outlet color	Function
1	WAN	Gray	Connects to WAN(Internet)
2	LAN ports: A, B, C, D	Yellow	Connects Ethernet cables (RJ-45) to the home computers and other devices
3	Phone1 and 2	White and Green	Connects analogue phones or fax equipment
4	Power Input	Black	Connects the power adapter
5	ON / OFF button		Button for turning the home gateway on or off
6	WiFi button		Turn wireless LAN (WLAN) ON or OFF with short push. Activate Wireless Protected Setup (WPS) with push for 10 seconds.
7	USB Host Ports		Connects USB Device
8	Reset button		Button for factory reset

### 3.2. LEDs Front

Front LEDs indicates the home gateway and its connection status



LED	Signaling	Indication
<b>power</b>	GREEN, Stable	Normal operation.
	GREEN, Rapid flash	Upgrading or connecting to operator
	RED, Stable	Not ready, boot in progress
	RED, Slow flash	Connection to operator failed
	OFF	No power
<b>WWW</b>	GREEN, Stable	Internet Connectivity Established
	RED, Stable	No internet Connectivity
<b>WAN</b>	GREEN, Stable	Link 10/100/1000M
	GREEN, Rapid flash	Traffic activity
	ORANGE, Stable	Link 1000M
	OFF	No link
<b>USB</b>	GREEN, Stable	Connection established
	OFF	No device connected/detected
<b>Phone 1</b> <b>Phone 2</b>	GREEN, Stable	The telephone service is available
	GREEN, Short flash	Message waiting
	GREEN, Rapid flash	One or more telephone services failed
	OFF	VoIP account not registered
<b>LAN</b> A, B, C, D	GREEN, Stable	Link 10/100M
	GREEN, Rapid flash	Traffic activity
	ORANGE, Stable	Link 1000M (Only HG2332)
	OFF	No link
<b>Wireless</b>	GREEN, Stable	Wireless function enabled.
	GREEN, Slow flash	WPS in progress
	GREEN, Short flash	WPS succeeded
	GREEN, Rapid flash	WPS failed
	OFF	Wireless function disabled

## 4. Installing your Home Gateway

When the home gateway is connected, it will automatically be provisioned by your operator. However, the level of configuration can vary from a completely automatic configuration to full manual configuration, depending on what your operator offers.

Follow the specific configuration instructions you may have received from your operator.

The home gateway use Web GUI pages for local configuration with your computer. Pages available in the Web GUI depend on your operator's offering.

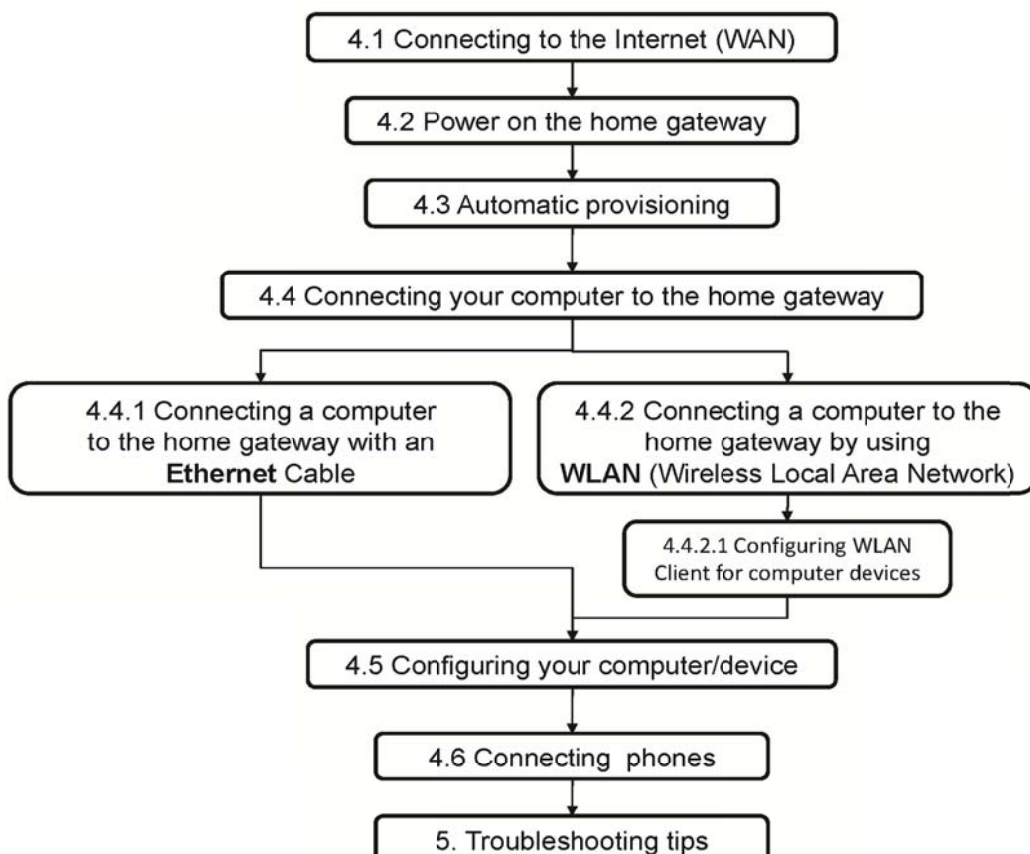
Home gateways and power supplies are electrical devices that can overheat without ventilation.

Place standing or wall mounted on a firm and flat surface and do not cover or crowd them with objects or clothing that prevents good ventilation.

For best WiFi performance place the unit standing up in a high and free position, preferably in a central location of the home.

Home gateways must always be installed away from heat sources and direct sunlight.

The flowchart below describes the procedures to install your home gateway and is in detail explained in the following pages





## 4.1 Connecting to the Internet (WAN)

Connect the Ethernet cable into the WAN port (#1 on the **Home Gateway Interfaces** page) and into your Ethernet access port. (**Home Gateway cable attachments**)

## 4.2 Connect the power cord to the AC/DC adapter

1. Connect the AC/DC adapter power cord to the power connector (#4) on the backside of the unit.
2. Plug the power cord into a power outlet.
3. Push the ON/OFF-Button (#5) on the back side to ON
4. Check that the power LED on the front side is lit (red).

## 4.3 Automatic Provisioning

When the home gateway is properly connected, an automatic configuration will begin.

The home gateway is pre-loaded with software but it will always download newer software and settings from your operator.

Just wait until the power LED turns stable green, which normally takes a few minutes, but may take up to 30 minutes. If the LED still has not turned stable green after 30 minutes, then reboot (push power ON/OFF-button). If problem persists, contact your operator.

For more information about the LED status, see **LEDs Front**.

## 4.4 Connecting a computer to your Home Gateway

There are two ways to connect a computer to your home gateway, either with the **Ethernet cable** or by using **WLAN (Wireless Local Area Network)**.

Other Ethernet devices or WLAN enabled clients may use same methods to connect.

**Note:** Some computers can have problems when connecting both Ethernet and WLAN simultaneously.

### 4.4.1 Connecting a computer by Ethernet cable

Connect the Ethernet port on your computer with an Ethernet cable to one of the LAN ports marked LAN 1 – LAN 4.

### 4.4.2 Connecting a computer by using WLAN (Wireless LAN)

#### **WPS method**

The Tilgin home gateway supports the Wi-Fi Protected Setup (WPS) feature to make it easy to set up a secure wireless home network.

Two WPS methods are supported, **PIN** and Push Button Connect (**PBC**).

If your wireless device/adaptor supplier does not support WPS setup, the WLAN connection with the home gateway can be setup manually.

#### **WPS-PIN method**

- Enable the WLAN by pressing the WiFi button once (see picture in 3.3 LEDs Front) once. The WLAN LED on the front will turn green when enabled.
- Enter the PIN code, provided by your wireless device/adaptor supplier, in the local Web GUI of the home gateway.

#### **WPS-PBC method**

- Enable the WLAN by pressing the WiFi button once. The WLAN LED on the front will turn green when enabled.
- Press the WiFi button again for 5-10 seconds to enable the PBC function on the home gateway.
- Press the PBC button on your wireless device/adaptor.

#### **Manual method**

The WLAN settings are configured manually according to operator specific WLAN settings or by using the default WLAN settings of the home gateway.

**Note:** Your wireless device/adaptor usually has a connection guide or wizard that will guide you through configuration and connecting to the home gateway.

You should follow these instructions and take into account any WLAN security level settings provided by your operator.

If the instructions provided with the WLAN client fail, and/or your operator does not recommend specific WLAN settings, use the default WLAN port settings described in chapter 4.4.2.1 Configuring WLAN Client for computer devices.

## 4.4.2.1 Configuring WLAN Client for computer devices

The Wireless LAN configuration is dependent on your computer/operating system. For more detailed instructions refer to your computer operating systems Help.

If you have received instructions from your operator regarding WLAN security level settings, you should follow these instructions when running the WLAN configuration.

If the configuration fail, and/or your operator do not recommend specific WLAN settings, use the default WLAN port settings below.

### Default WLAN port settings

Check that the parameters for WLAN are set according to SSID and WPA key found on the casing label on the back of the home gateway.

SSID = Tilgin-<12 random characters>

Example: **Tilgin-1wa23sbg9skm**

Channel = Auto

**Note:** Your operator may instruct you to use a WPA key that they provide to you, or use the WPA key printed on the label on the backside of the home gateway.



Make sure your WLAN profile is saved, and make sure your computer network settings are configured properly.

## 4.5 Configuring your computer/device

Your computer must be configured properly to be able to connect to the Internet and the computers network card and network properties must be configured to obtain an IP address from the home gateway's built-in DHCP server.

This means that you must check that your computer network settings are set to TCP/IP protocol and that the IP address will be obtained automatically.

For detailed instructions how to set up your home network check instructions/Help for your operating system on your computer.

## 4.6 Connecting phones / equipment

You can connect your analogue phones/equipment to the home gateway.

The devices connected to the gateway are adapted for VoIP calls.

Mind that you might need a country specific phone plug and a special phone cable (both supplied by your operator) to connect multiple analogue devices.

If your services do not include telephony, contact your operator.

### **Connecting a single analogue phone/equipment**

Connect the phone directly to a phone port (#3).

### **Connecting multiple analogue phones/equipment**

All of the phones in your household can be connected to the home gateway using a country specific phone plug and a special phone cable.

Each port can handle up to five devices in cascade. In this case, **DO NOT** connect any of the home gateway phone ports directly to the phone socket on the wall.

Plug the special cable into one of the phone ports (#3) and then into the specific phone plug connected to the main phone socket on the wall.

**DO NOT** use an ordinary phone cable for this purpose. It requires a special Phone cable and can be different from country to country.

This option must be supported in your country and by your operator.

## 5. Troubleshooting Tips

If the home gateway is not working as expected, please try out the following troubleshooting tips.

- Check that all cables are connected properly.
- Check if the power LED is lit. If not, switch the On/Off button to On.
- If the power LED has not turned stable green within 30 minutes reboot (push power On/Off). If the power LED still has not turned stable green after reboot, contact your service operator.
- If the Internet indicator (front of the home gateway) does not lit green check the Ethernet cable is properly connected.
- Verify that the LEDs lights according to the table in LEDs front panel page.
- Verify that you can hear a dial tone after hooking off the Telephone receiver. If not check that the Telephone line cord from the Telephone is connected to one of the phone ports.
- When there is slow, or no connection over WLAN, push the WLAN button (WLAN Off). Now press the WLAN button again (WLAN On). The Auto channel feature then searches for the best channel and select it.

**•If these actions still do not solve the problem, contact your operator or the vendor that supplied your home gateway.**



## 6. Safety Information

Tilgin AB products are designed and tested to meet the international Safety of Information Technology Equipment standard. This standard provides general safety design requirements that reduce the risk of both personal injury and product injury, protecting against the following hazards:

- Electric shock (hazardous voltage levels)
- Fire (overload, temperature, material flammability)
- Energy (high energy circuits or potential burn hazards)
- Heat (accessible parts of the product at high temperatures)
- Radiation (noise, etc.)

## 7. Safety Recommendations

When using the product and to ensure general safety, you are instructed to follow these guidelines:

- Use only the power supply adapter that comes with the package. Replacement power supply adapters can be obtained from an authorized Tilgin distributor.
- Do not open or disassemble this product.
- Place on a firm and flat surface.
- Gateways and power supplies are electrical devices that can overheat without ventilation. Do not cover or crowd them with objects or clothing that prevents good ventilation.
- Do not expose the product to liquid or moisture.
- Do not expose the product to lit candles, cigarettes, open flames, etc.
- Do not drop, throw or try to bend the product.
- Do not allow children to play with the product, as it contains small parts that could be detached and create a choking hazard.
- Use only original Tilgin components and replacements parts. Failure to do so may result in performance loss, damage to the product, fire, electric shock or injury. It will also invalidate the warranty.
- Avoid using the unit during an electrical storm. There may be a remote risk of electric shock from lightning.
- Treat the product with care, keep it in a clean and dust free place. Use only a soft, damp cloth to clean the product.

All use of the product is subject to the Safety Recommendations above.

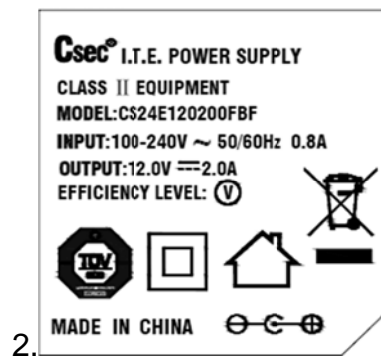
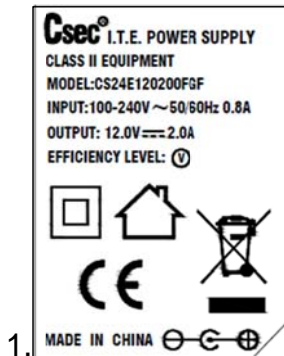
Tilgin AB waives all and any liability for damages caused to i) the product or any other property or ii) yourself or any other individual as a consequence of using the product in ways that deviate from the safety recommendations set out above.

## 8. Power Supply

Do not use any other power supply than the one delivered by Tilgin. Using the wrong power supply could be hazardous to you or the product.

The power supply shall be installed near the gateway and shall be easily accessible.

The power supply is approved by one or more of the following safety organizations:



Power supplies are defined for these products.

1. CSEC: CS24E120200FGF, Input: 100-240V 50/60Hz 0.8A; Output: 12V 2.0A, supplied by Chou Sen Electronics (Shenzhen) Co., Ltd.
2. CSEC: CS24E120200FBF, Input: 100-240V 50/60Hz 0.8A; Output: 12V 2.0A, supplied by Chou Sen Electronics (Shenzhen) Co., Ltd.

## 9. Technical Specifications

Max dimension, CPE	W x H x D = 175x37x180mm	
Max dimension, Giftbox	W x H x D = 210x78x188mm	
Weight, Giftbox	0.655 kg	
Operating voltage	See the supplied power adapter	
Operating frequency	See the supplied power adapter	
Temperature	Operating	0°C to 40°C 32°F to 104°F
	Non-operating:	-20°C to 60°C -4°F to 140°F
Humidity (relative, non-condensing)	Operating	10% to 90%,
	Non-operating	5% to 95%
Frequency Band	According to Directive 2014/53/EU	2412 – 2472MHz
Maximum Radio-Frequency Power (EIRP)	According to Directive 2014/53/EU	100mW

## 10. Environmental Information

The equipment you purchased has required the extraction and use of natural resources for its production. It may contain substances that are hazardous to your health and to the environment. To avoid putting such substances into our environment and to reduce pressure on our natural resources, we ask that you reuse or recycle your end-life equipment by using an accredited electronics take-back system.

The symbols below indicate that this product should be reused or recycled and not simply discarded. Please locate and use an appropriate reuse and recycling site. If you need more information on collection, reuse and recycling systems, contact your local or regional waste administration. You may also contact your operator for more information on the environmental performances of these products.



## 11. Warranty

No warranty, express or implied, with respect to the product is extended directly to you from or on behalf of Tilgin AB. Limited warranties may be granted to you by the equipment provider in its capacity as reseller of the product. Please contact your equipment provider for information regarding warranties for the product.

## 12. Notice of Copyright and Patent Protection

This product incorporates technology, which is copyrighted, patented, or otherwise protected under intellectual property laws and treaties and proprietary to **Tilgin AB** or Tilgin's third party licensors. All use of the products is subject to the applicable End User License Terms and Conditions provided in conjunction with the product.

## 13. How to place the Home Gateway

The stand / wall bracket is used both as a foot stand and for wall mounting.

### 13.1 Desktop Placement.

1. Snap the stand / wall bracket to the home gateway. Fig 1
2. Place the gateway on a level surface. Fig 2

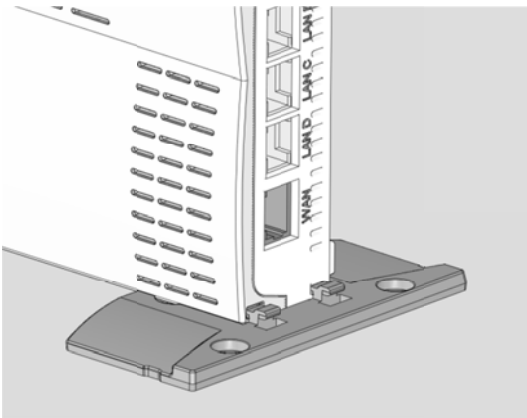


Fig 1

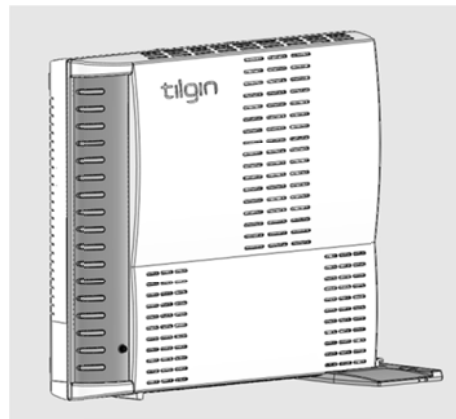


Fig 2

### 13.2 Wall mounting using Wall Bracket.

1. Use the stand / wall bracket as a drill template. Fig 3
2. Screw the stand / wall bracket to the wall. Fig 3
3. Attach the gateway to the wall bracket. Fig 4

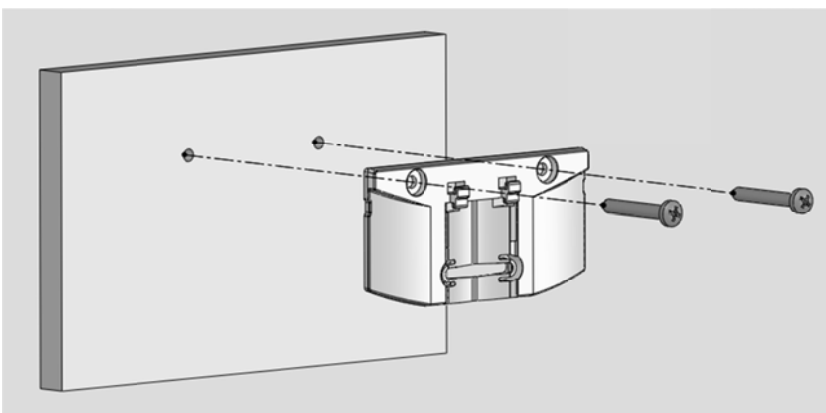


Fig 3

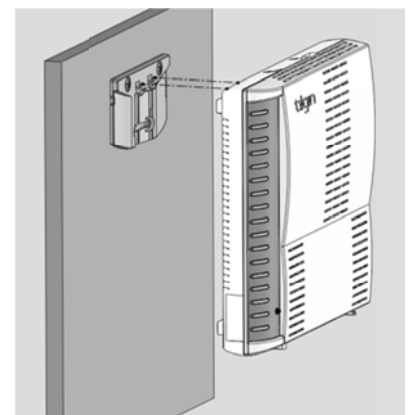


Fig 4



## 13.3 Wall Mounting directly to the wall.

1. Screw two suitable screws to the wall. The screws should be in a horizontal position and with a distance of 125mm. Fig 5

The distance between the screw head and the wall should be 6mm. This could be adjusted depending on the wall structure. Fig 6

2. Attach the gateway to the screws. Fig 7

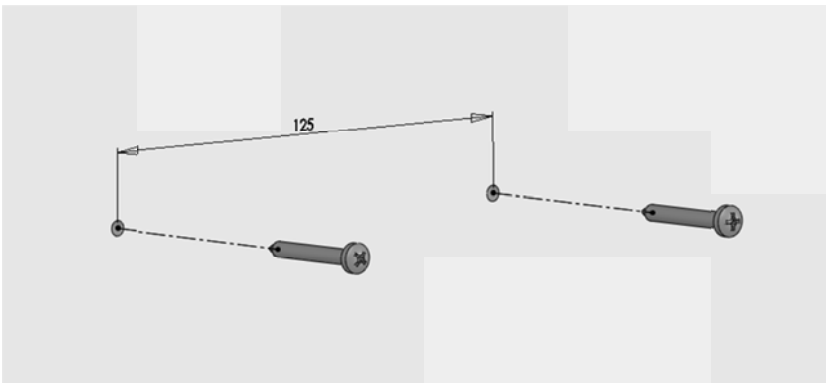


Fig 5

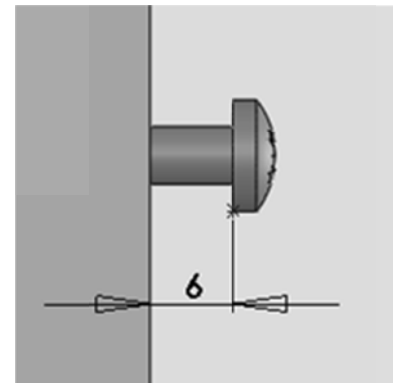


Fig 6

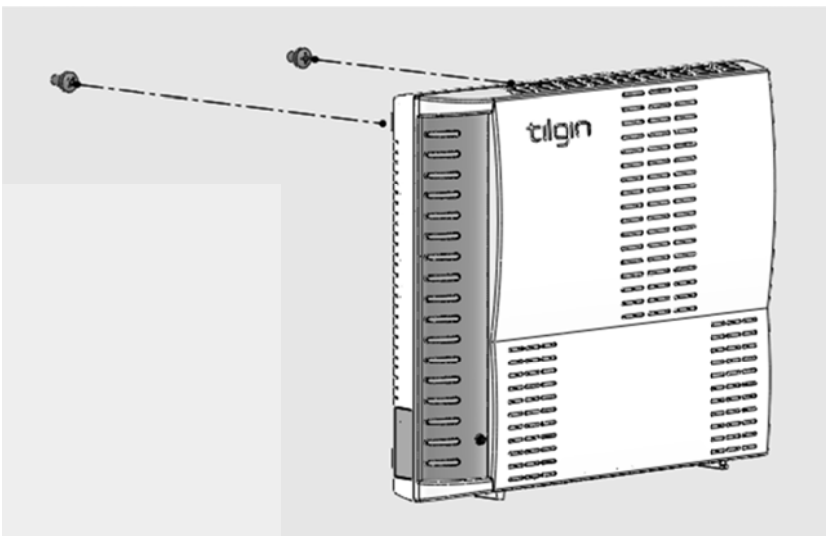


Fig 7

## 14. Acronyms

DECT	Digital Enhanced Cordless Telecommunications
DHCP	Dynamic Host Configuration Protocol
GUI	Graphical User Interface
LAN	Local Area Network
LED	Light Emitting Diode
PBC Method	Push Button Connect method
SSID	Service Set Identifier
VoIP	Voice over IP
WAN	Wide Area Network
Wi-Fi	Trademark for Wi-Fi Alliance
WLAN	Wireless Local Area Network
WPA	Wi-Fi Protected Access
WPS	Wi-Fi Protected Setup

## 15. Declaration of Conformity

Declaration of Conformity available on: <http://www.tilginsolutions.com/company/support/>

### Declaration of Conformity



#### Declaring Organization:

Tilgin AB  
Box 1240  
164 28 Kista  
Sweden

Product Name: Home Gateway  
Product Model Name: HG2331, HG2332

We, Tilgin AB, declare under the sole responsibility that the above named product conforms to the essential requirements of the European Union Directives below.

2014/53/EU	The Radio Equipment Directive
2014/30/EU	The Electromagnetic Compatibility Directive
2014/35/EU	The Low Voltage Directive
2011/65/EU	RoHS Directive

The following harmonized standards are those to which the product's conformance has been verified.

EMC - Emission	EN 55032:2012
EMC - Immunity	EN 55024:2010
	EN 61000-3-2:2014
	EN 61000-3-3:2013
EMC - Radio	EN 300328:V2.1.1
EMC - WLAN	EN 301489-17 V3.2.0
	EN 301489-1 V2.2.0
Health - Safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Health - SAR	EN 50385:2002

Transmitter frequency: 2412 – 2472MHz, Max EIRP 100mW

June 15, 2017



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