

Tilgin Home Gateway HG351/HG354 HG350 Series



Quick Guide

tilgin

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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 Gateways HG350 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 Unit

Confirm that you have received the following:

Content in packages for HG350 models:

HG350 models:	Qty
HG350 series Home Gateway	1
Power Supply	1
Ethernet cable, Yellow	1
Quick Guide (this document)	1
EULA, EndUserLicenseTerms and Conditions	1
Software pre-installed	1

Your equipment provider might also include additional cables or country-specific phone plugs.

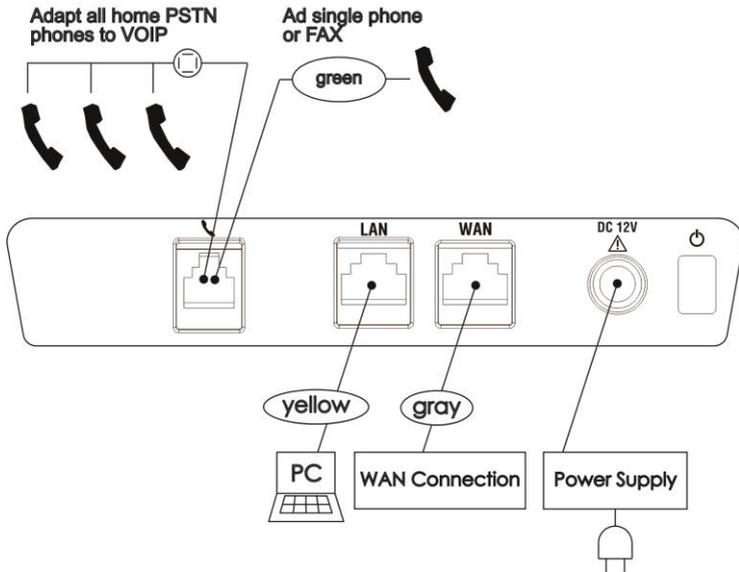
3. Home Gateway Overview

3.1. Home Gateway cable attachments

See more instructions below

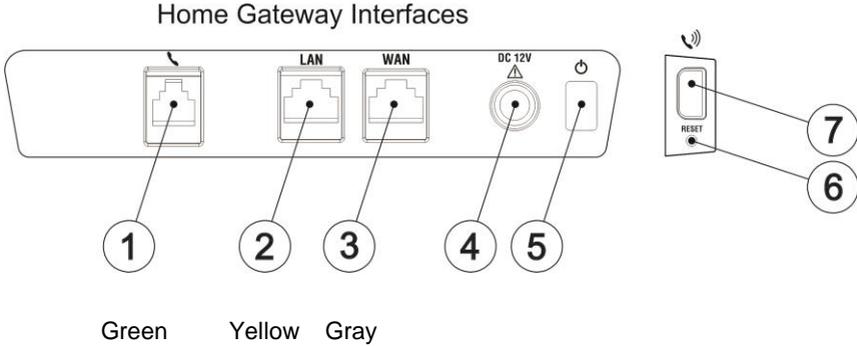
HG351 and HG354 cable connections

Home Gateway Cable Attachments



3.2. Home Gateway Interfaces

HG351 and HG354 Rear Panel



Pos	Interface	Outlet & Cable Color Codes	Function
1	Phone Port	Green	Connects analogue phones or fax equipment
2	LAN Port	Yellow	Connects to the Local Area Network
3	WAN Port	Gray	Connects to WAN (Internet)
4	Power / DC Power Input	Black	Connects the power adapter
5	Power On/Off		Button for turning the home gateway on or off
6	Reset		Button for factory reset
7	DECT		Pairing and localization button for DECT and CAT-iq handsets. Pairing button for ULE devices.

3.3. LEDs Front Panel

The front panel LEDs indicates the status of the Home Gateway, its services and the network connectivity.

HG351 and HG354 Front Panel



LED symbol	LED indication	Status description
	OFF	Device is powered off
	RED, Stable	Not ready, boot in progress
	RED, Slow Flash	Connection to operator failed
	RED, Rapid Flash	Upgrading or connecting
	GREEN, Stable	Normal operation
	OFF	No connection to internet
	GREEN, Stable	Connection to internet
WAN Ethernet Connector (Rear, Gray)	OFF	No link
	GREEN, Flash	Link is being established or link established and there is traffic
	GREEN, Stable	Link established but there is no traffic
LAN Ethernet Connector (Rear, Yellow)	OFF	No link
	GREEN, Flash	Link is being established or link established and there is traffic
	GREEN, Stable	Link established but there is no traffic
	OFF	No telephone services configured
	GREEN, Rapid Flash	One or more telephone services failed to register
	GREEN Short Flash	Message waiting
	GREEN, Stable	The telephone services to your Operator is OK
DECT (HG354 only)	OFF	VoIP account not registered
	GREEN, Short flash	Message waiting
	GREEN, Rapid flash	One or more telephone services failed
	GREEN, Stable	The telephone service is available

4. Installing the 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.

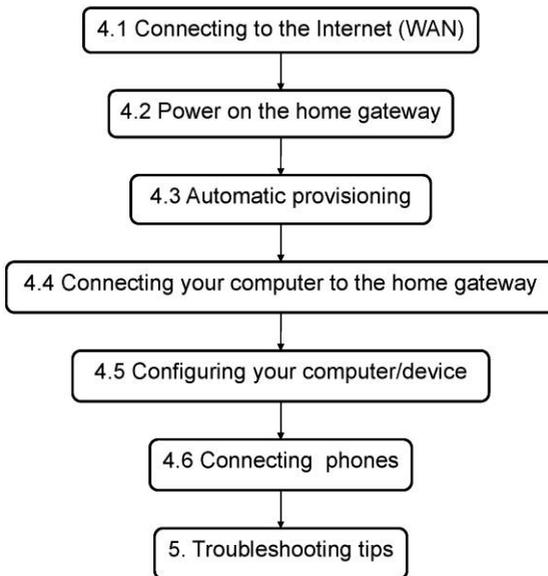
Home gateways and power supplies are electrical devices that can overheat without ventilation.

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 DECT 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 (#3 on the **Home Gateway Interfaces** page) and into your Ethernet access port. (**Home Gateway cable attachments**)

4.2. Power on the Home Gateway

1. Connect the power cord to the AC/DC adapter
2. Connect the AC/DC adapter power cord to the power connector (#4) on the backside of the unit.
3. Plug the power cord into a power outlet.
4. Push the ON/OFF-Button (#5) on the backside to ON
5. Check that the power LED on the front panel 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 is stable green, which normally takes a few minutes, but may take up to 30 minutes. If the LED still does not show 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 panel**.

4.4. Connecting a computer to your Home Gateway

Connect the Ethernet port on your computer with an Ethernet cable to the LAN port #2.

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 analogue phones and other equipment such as fax machines to the home gateway. The home gateway will then turn these units into IP telephony capable devices by performing translation between analogue telephony services and IP based telephony services.

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 devices to the phone port (#1 in chapter 3.2)

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 to the phone socket on the wall.

Plug the special cable into the phone port (#1) and then into the specific phone plug connected on the main phone socket on the wall.

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

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

4.7. Connecting a DECT handset to the HG354

If your home gateway is equipped with a built in DECT base station, such as for instance the HG354, you can connect DECT handsets to your home gateway.

For the handsets to work properly, they should support either the CAT-iq 1.0, 2.0 or the GAP standard. This is true for most handsets on the market that are reasonably new. It might also be the case that your operator provides a handset together with the unit you have received.

To connect (or pair) a handset to the home gateway, press the “Page” button (see picture in 3.2 #7) on the home gateway for 5-10 seconds, the DECT LED will start flashing when the pairing function is activated. Now set the DECT handset in registration mode from the menu of the handset, the procedure for this varies for each type of handset.

If the handset asks for a PIN to identify itself to the home gateway, use “0000” which is the default PIN.

When the pairing is completed, the DECT LED on the home gateway will stop flashing, and the handset will signal that pairing is completed.

Up to 6 handsets can be connected to the home gateway by repeating the procedure above for each handset.

If you have several phone numbers you can change to which phone number a specific handset should be associated from the local GUI of the home gateway.

Note that different handsets behave in different ways and that the description above is a generic description for “any” handset. For details, see the user guide for your DECT handset, or the information received from the operator if the handset was provided together with the gateway.

4.8. Locating a DECT handset

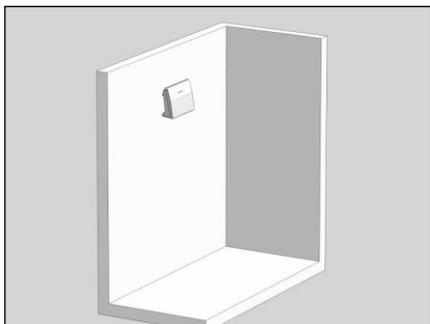
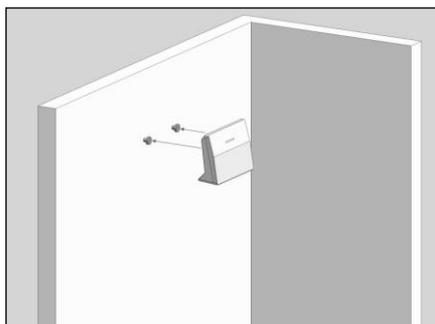
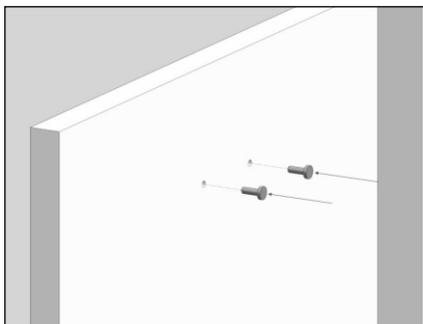
A feature in the home gateway allows you to located connected DECT handsets.

To locate the handsets press and release the “Page” button on the home gateway. All connected handsets will start ringing. Press and release the button again to turn off paging immediately, or wait until paging stops automatically.

4.9. Mount the home gateway to the wall

The products in the HG350 series are wall mountable.

Use two suitable screws where the screw head fit the holes on the back side of the product. The screws should be in a horizontal position and with a distance of 138mm. The distance between the screw head and the wall should be approximately 5mm, adjust as needed to make the product fit properly. See pictures below.



5. Troubleshooting Tips

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

- Check the cable connections.
- Check if the power LED is lit. If not push the ON/OFF button to ON. Check that the power cord is attached in both ends.
- If the power LED not lights stable green within 30 minutes reboot (push power ON/OFF)
- If the power LED still not lit stable green after reboot contact your service operator.
- If the WAN indicator (front of the gateway) does not lit green (front of the home gateway), check that 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.
- If your operator provides Web GUI access, status information is available via a computer login to the home gateway. Please see information provided by your operator.

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.
- Home 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.

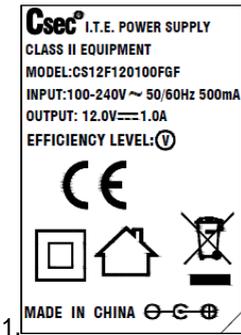
Tilgin AB waives all and any liability for damages caused to i) the product or any other property or ii) yourself or any other individual as a consequence of using the product in ways that deviate from the safety recommendations set out above.

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 defined for these products.

1. CSEC: CS12F120100FGF
Input: 100-240V 50/60Hz 0.5A; Output: 12V 1.0A
Supplied by Chou Sen Electronics (Shenzhen) Co., Ltd.
2. CSEC: CS12F120100FBF,
Input: 100-240V 50/60Hz 0.5A; Output: 12V 1.0A
Supplied by Chou Sen Electronics (Shenzhen) Co., Ltd.

9. Technical Specifications

Dimensions	180x130x60 mm
Weight	0.255 kg
Operating voltage	See the supplied power adapter
Operating frequency	See the supplied power adapter
Temperature	Operating: 0° C to 40° C Non-operating: -20° C to 60°C
Humidity (relative, non-condensing)	Operating: 10% to 90%, Non-operating: 5% to 95%
Frequency Band. According to directive 2014/53/EU	1880 – 1900 MHz
Maximum Radio Frequency Power Acc. to directive 2014/53/EU (EIRP)	250 mW

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 or 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. **Used Acronyms**

LAN	Local Area Network
LED	Light Emitting Diode
VoIP	Voice over IP
WAN	Wide Area Network
DECT	Cordless telephony standard
CAT-iq	New generation cordless telephony standard

14. 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: HG351, HG354

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.

Health - Safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
EMC - Emission	EN 55032:2012
EMC - Immunity	EN 55024:2010
	EN 61000-3-2:2014
	EN 61000-3-3:2013
EMC - DECT	EN 301489-6 V2.2.0
	EN 301489-1 V2.2.0
RF / Health - DECT	EN 301406 V2.2.2
RF / Health - SAR	EN 50385:2002

Transmitter frequency: 1880 - 1900 MHz. Max EIRP 250 mW.

June 16, 2017



Michael Gustavsson

VP Product and Service Management Tilgin AB

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