



Home Automation Combined Interface



Integrating ZigBee®
Home Automation

The Telegesis Home Automation (HA) Combined Interface is the quick and easy way to design a ZigBee Home Automation product. No ZigBee firmware expertise is required and you can be confident that your finished product will pass ZigBee HA certification.



The control device shown is for illustration purposes only



Home Automation explained

The ZigBee® Home Automation (HA) Profile defines devices and standard practices for applications commonly found in a residential environment. The key applications included in this profile are lighting, HVAC, door lock, window shades and home security.

To simplify remote control and achieve centralized control, a Combined Interface device can be used in a ZigBee HA network.

Combined Interface explained

The Combined Interface device is capable of controlling and monitoring other devices in an HA network. It is usually attached to, or integrates with, a home hub, PC, TV or other third party device. It can be used to:

- Turn on/off the lights
- Dim the lights
- Check indoor temperature
- Turn on the heating or cooling system
- Remotely control the window shades

Telegesis Home Automation Combined Interface

The Telegesis HA Combined Interface command set is designed to support all the major features specified by the HA profile 1.1 specification and enables rapid Home Automation product development without the need for ZigBee firmware expertise. It can be pre-configured by using supported cluster attributes and Telegesis defined S-registers. It can send commands to group other devices together, identify them, create a scene etc.

The following are the supported HA clusters included in the Telegesis Combined Interface:

Identify	Scene
Group	Pump Configuration and Control
On/Off	Thermostat
On/Off Switch Configuration	Thermostat User Interface Configuration
Level Control	Color Control
Shade Configuration	Illuminance Measurement
Door Lock	Illuminance Level Sensing
Window Covering	Temperature Measurement

As an additional feature, the Telegesis HA Combined Interface firmware supports the On/Off output server cluster on its endpoint 0x0A. The user can send On/Off commands from a remote device such as the Telegesis 5-in-1 dev board to observe the status of the LED on the Telegesis CI USB stick.

The Telegesis Combined Interface firmware can be supplied with any of the Telegesis SiLabs based ETRX3 module series including the ETRX357 and ETRX357LRS. Telegesis can also design and build complete end products or assist customers in their design effort.

Home Automation Evaluation Kit

The Telegesis HA Evaluation kit is the ideal starting point for development of HA applications. The kit includes:

- ETRX3USB equipped with Telegesis Combined Interface firmware
- ETRX3 dev board with an ETRX3 module equipped with 5-in-1 device firmware

For more information, please refer to the Combined Interface and 5-in-1 product manual as well as Telegesis HA Evaluation Kit manual.



Example AT commands

To simplify the communication with the Telegesis modules an AT command set, similar to the industry standard Hayes modem control language, is used. For example:

AT+EN	Establish an HA network
AT+JN	Join an HA network
AT+DASSL	Leave the network
AT+RONOFF	Remote turn on/off a light or a group of lights
AT+TSTATSET	Update set points on a thermostat

Customised commands are also available for high volume customers upon request.