UZB

Z-Wave USB Adapter
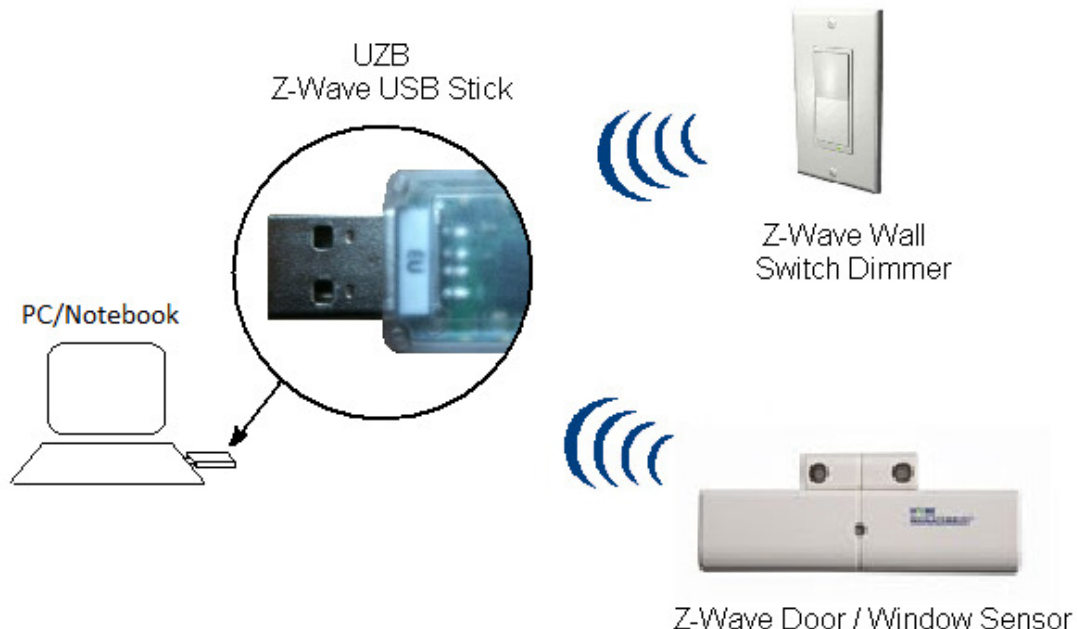# User's Manual

CONTENTS

1. INTRODUCTION

UZB, Z-Wave USB Stick and bundled application software (PC Controller) enables you to control a range of Z-Wave enabled devices through your PC or Notebook.

Z-wave is an established short range interoperable two way RF mesh network technology.

Refer to http://www.z-wave.com/modules/ZwaveStart/ for detail of the technology.

Refer to http://www.z-wave.com/modules/Products/ for various Z-Wave ready products.

Refer to http://www.z-wavealliance.org/modules/AllianceStart/ for Z-Wave Alliances.

Features

- Simply plug in UZB to USB port of a PC/Notebook with PC Controller installed

- Fully compatible with Z-wave enable network that can communicate with any Z-wave certified device.

System Requirements

- Windows 2000/XP/Vista 7 32 & 64 bit
- Linux kernel 2.6.24+

2. LED INDICATORS

- Red LED   USB Power indicator
On when powered.

- Green LED   Z-Wave communication activity indicator
Blink during z-wave communicating activity.

3. SPECIFICATIONS

Z-Wave & RF Specification

RF	EU	US
Z-Wave Chip	SD3402	
Z-Wave Library	Serial API	
Basic Device Class	Static Controller	
Z-Wave Protocol	Release 6.0.1	Release 6.0.1
Data Rate	9.6kbps / 40kbps / 100kbps	
Frequency	9.6 kbps: 868.42 MHz 40 kbps: 868.40 MHz 100 kbps: 869.85 MHz	9.6 kbps: 908.42 MHz 40 kbps: 908.40 MHz 100 kbps: 916.00 MHz
Range	Typical 30 meters	

4. PC CONTROLLER APPLICATION SOFTWER INSTALLATION

4.1 Installation

1. Exit all programs.

2. Run the installation file of the Z-Wave PC Controller application.
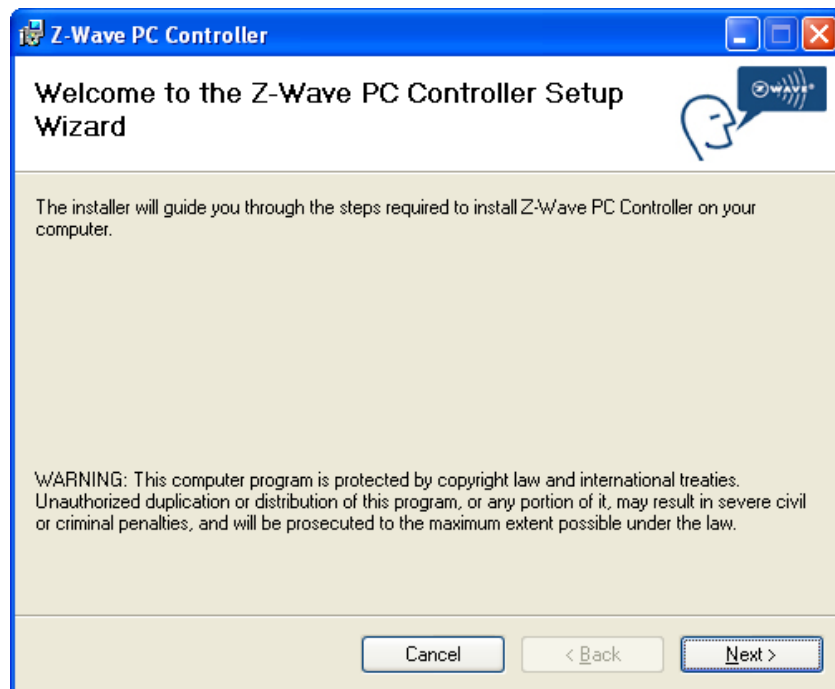

Figure 1. Welcome page of Z-Wave PC Controller installation

3. Select the installation folder and who should be able to use the Z-Wave PC Controller application. Please note, that it is not recommended to move the Z-Wave PC Controller application manually after it has been installed into the above specified folder. When done, click **Next**.
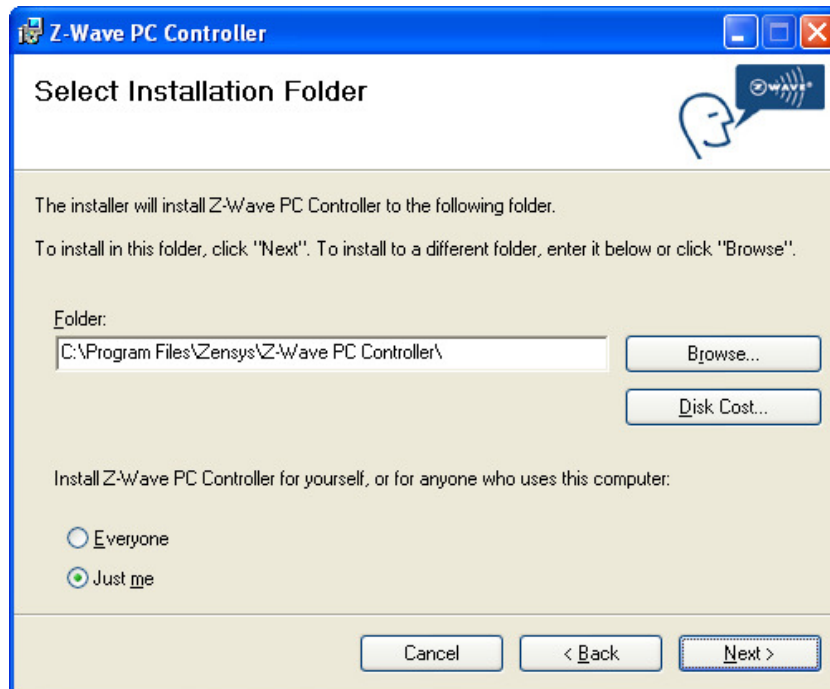
Figure 2. Installation folder

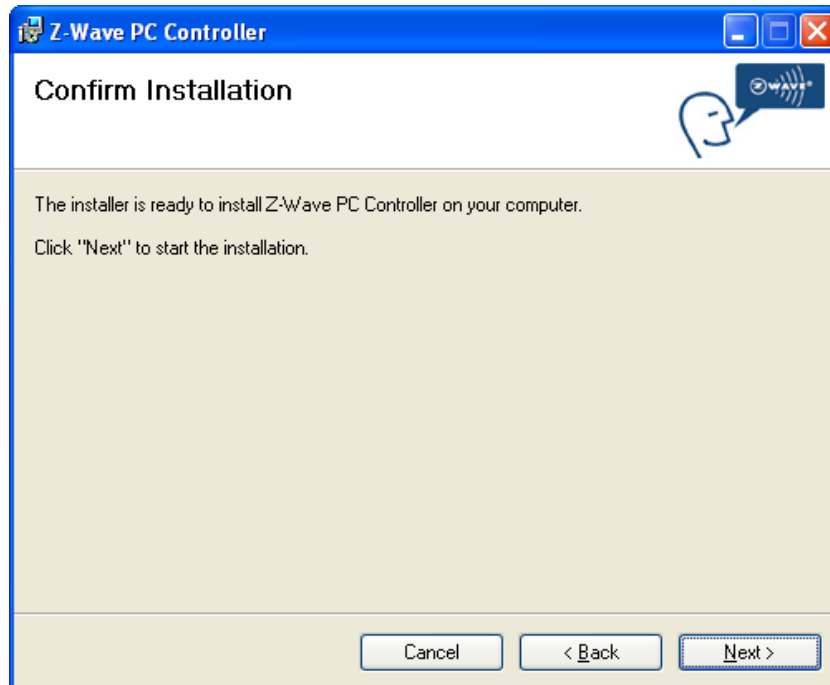4. Installation confirmation appears. Click **Next** again to confirm and start the installation.

Figure 3. Confirmation page of Z-Wave PC Controller installation

5. The actual installation procedure will pass with progress indicator and final confirmation appears.

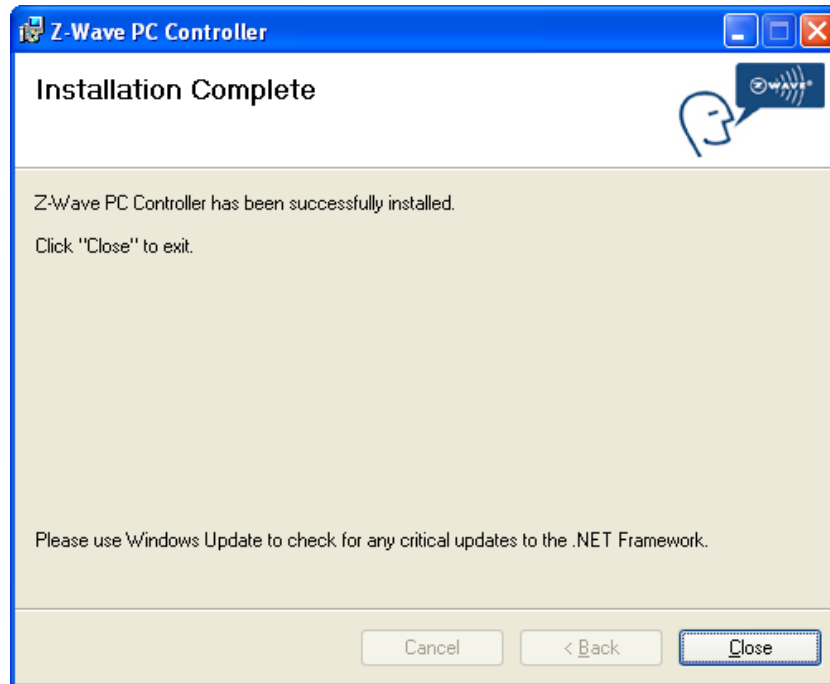6. Click **Close** to complete the installation.

Figure 4. Installation complete

4.2 Start the Z-Wave PC Controller application

You can start the Z-Wave PC Controller using the Start menu. To open the Start menu, click the **Start** button in the lower-left corner of your screen. Or, press the **Windows logo** key on your keyboard. The Start menu appears.

To open Z-Wave PC Controller, click its icon shown in the left pane of the Start menu that displays the most frequently used programs list. If you don't see its icon there, click **All Programs** at the bottom of the left pane. Instantly, the left pane displays a long list of programs in alphabetical order, followed by a list of folders. Click **Zensys** folder, then click **Z-Wave PC Controller** folder and finally **Z-Wave PC Controller** icon.

Each time you start Z-Wave PC Controller, you are actually running the "C:\Program Files\Zensys\Z-Wave PC Controller\ZWaveController.exe" executable file, although you do not usually type its name or even see it.

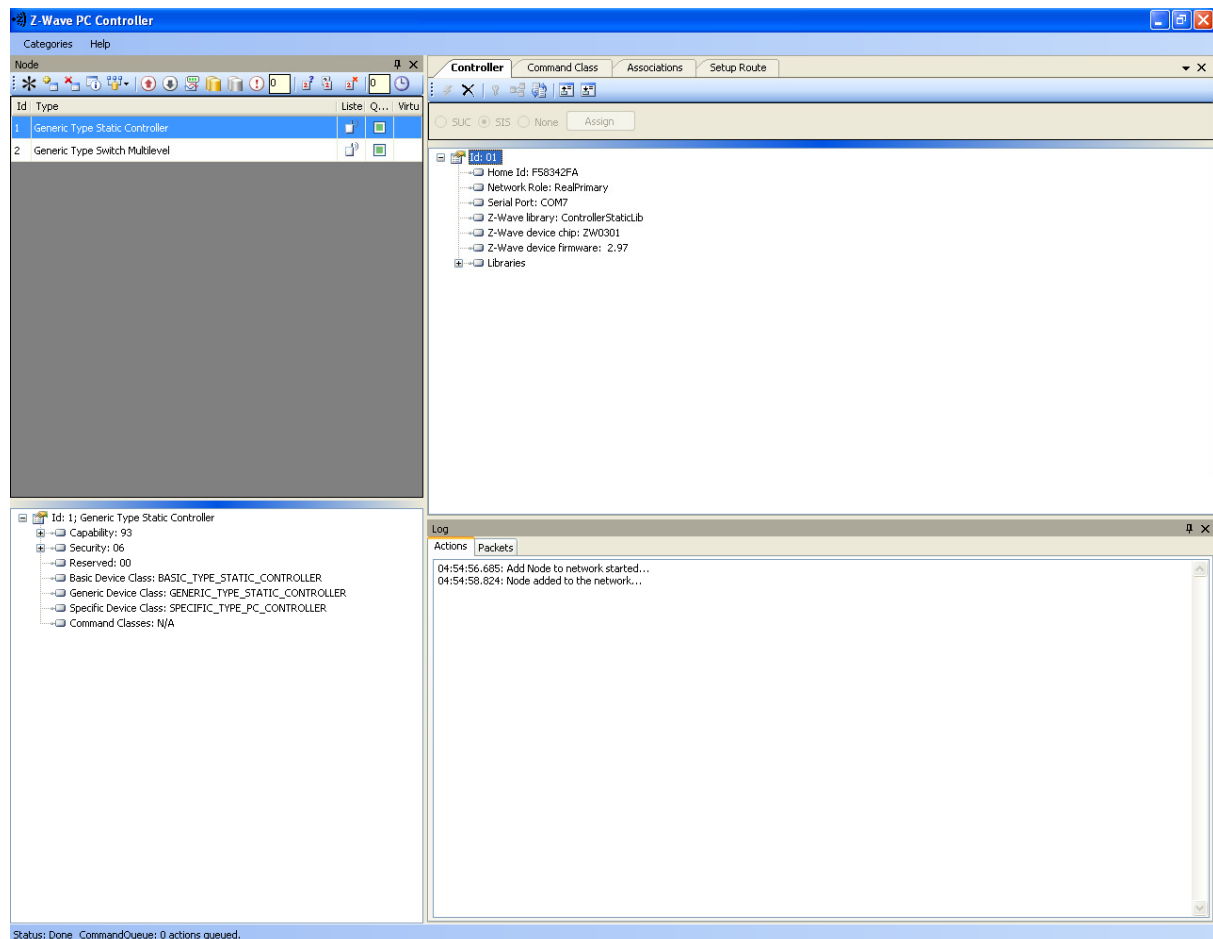Run the PC based Controller application, and the Main window will appear as shown below:

Figure 5. PC based Controller Main Window

4.3 Remove Z-Wave PC Controller application Software

You can uninstall Z-Wave PC Controller from your computer if you no longer use it.

1. Open **Add or Remove Programs** in Control Panel.

    To do it, click **Start**, then click **Control Panel** (in Classical View – click **Start**, then point to **Settings**, and click **Control Panel)**, and then double-click **Add or Remove Programs**.

2. Click the program in the list and then click the **Remove** button. You can sort programs by selecting different options in **Sort by**.

3. Standard confirmation dialog appears. Click **Yes** to continue the removal of the Z-Wave PC Controller software.

4. Z-Wave PC Controller and its settings will be removed without prompting you further.

4.4 User Interface

The PC Based Controller application Main window (See Figure 3) is divided into the following views:

- **Title bar**
- **Menu bar**
- **Node**
- **Controller**
- **Command Class**
- **Associations**
- **Setup Route**
- **Node Info**
- **Log**
- **Status Bar**

4.4.1 Main Menu

On top of the Main window is the Application **Main Menu**. It has the following items:

Categories Menu

Menu item	Description
Node	Toggle shows the Node section
Controller	Toggle shows the Controller section
Cmd Class	Toggle shows the Command Class section
Associations	Toggle shows the Associations section
Setup Route	Toggle shows the Setup Route section
Log	Toggle shows the Log section
Settings	To detect available serial ports and query them to find all connected Z-Wave devices
Security Test Schema	Toggle shows the Security Test Schema tab (only in Z-Wave Security PC Controller)
ERTT	Toggle shows the ERTT tab
Exit	To exit the application.

Help menu

Z-Wave Pc Controller comes with its own built-in Help system. The Help menu includes the items to access this Help system.

Menu item	Keyboard Shortcut	Description
Index		Browses Help system by keywords.
Contents	F1	Browses Help system by topics.
Search		Opens search tab of the Help system.
About…		Displays the version and short status information of the application

4.4.2 Node View

The **Node View** contains *Menu Bar, Node List* and *Node information* for the selected node.
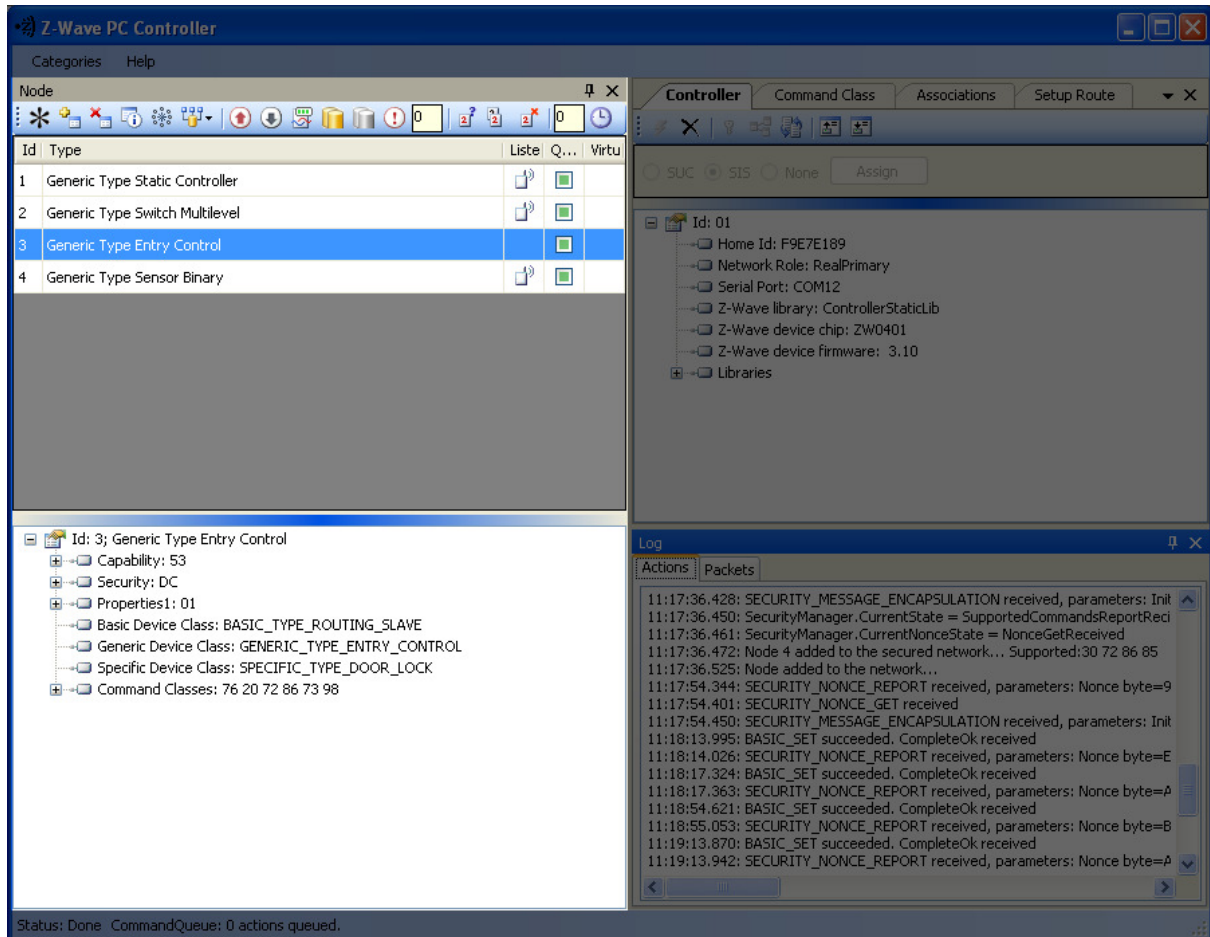
It is used for operations with nodes.

Figure 6. Node section

The Node's *Menu Bar* has the following items:

Menu item	Description
NW Inclusion	Network Wide Inclusion, to include all nodes into network once they have been reset and given power
Add	To Add a node
Remove	To Remove a node
Node Info	To request Node info from a node
Request Node Neighbor Update	To get the neighbors from the specified node.
Set SUC/SIS	To set the "Set SUC" or "Set SIS" command to the selected Controller
Basic Set On	Send the BASIC SET ON command to Switch a selected node(s) ON
Toggle Basic Get	Starts/stops sending consequent BASIC GET commands to the selected node(s)
Basic Set Off	Sends the BASIC SET OFF command to Switch a selected node(s) OFF
Switch All On	To switch all nodes in the network ON
Switch All Off	To switch all nodes in the network OFF
Send NOP	'No Operation' – to send a frame not carrying any functional info to a node
Numeric box after NOP	To enter the Node ID of the node to which a NOP frame is to be sent
Is Failed	To send a Failure signal to a node
Replace failed	To Replace a failed node
Remove Failed	To Remove a failed node
Wake Up Interval (Set)	To set up the Wake Up Interval for a non-listening node

The *Node List* has three columns:

- **Node Id** – shows the IDs of all nodes in the network;

- **Device Type** – shows description of the type of every node in the network;

- **Status** – shows the current status of a node.

The *Node Info* section gives structured information about the selected node. For more information, please refer to Z-Wave Device Class Specification documentation.

4.4.3   Controller View

The **Controller view** includes *Menu Bar*, *Network Role Option* and *Controller Information* sections.

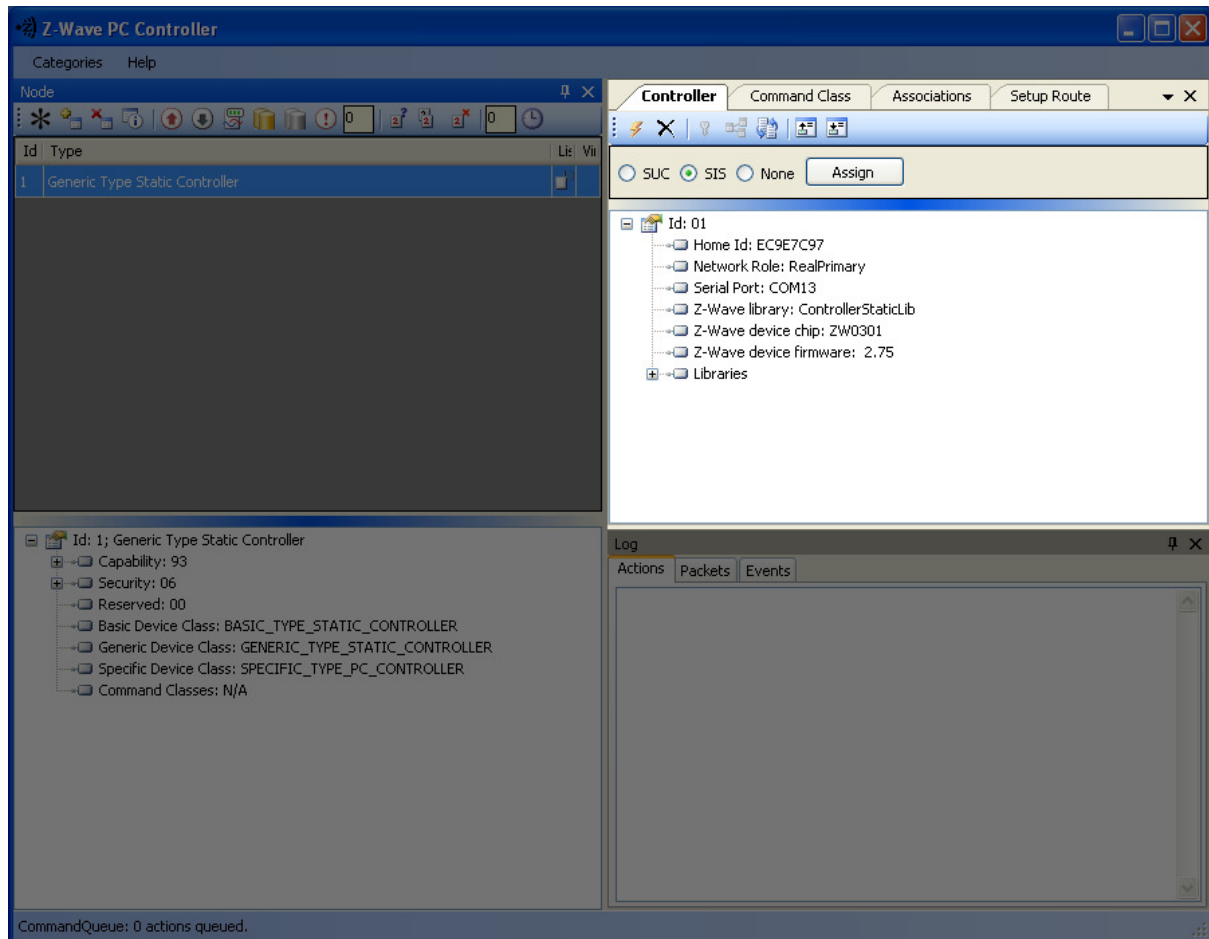The **Controller view** is used for operations with controllers.

Figure 7. Controller view

The Controller's *Menu Bar* has the following items:

Menu item	Description
Start Learn Mode	Starts learn mode for the controller if it is needed to include it in another controller's network
Reset	Resets a controller
Create New Primary	A SUC can create a new Primary Controller in the network if the existing Primary controller fails
Request Update	An Inclusion controller can request network updates from a SUC or a SIS
Shift	Is used to shift primary role to another controller in the network
Load Command Classes from device memory	To load command classes from the device memory (previously saved to device memory)
Save Command Classes to device memory	To save command classes from the PC Controller application memory to the Static Controller device memory

The *Network Role Option* section has controls to assign the role of the SC in the network:

- **SUC – Static Update Server**

- **SIS – Static Update Controller with ID server**

- **None**

General information regarding the SC is displayed in the *Controller Information* section in the following items:

Section	Description
Controller ID	Displays the node ID of the PC based SC
Controller Home ID	Displays the current Home ID of the PC based SC
Controller Network Role	Displays the PC based SC network role
Serial Port	Displays the serial port in use.

4.4.4   Associations View

The **Associations** view has a *Menu bar*, and two fields: *Source* and *Groups*. It is used to set up associations between nodes.

The *Menu bar* has two items:

Menu item	Description
Create Association	Creates an association between selected nodes
Remove Association	Removes selected association

The Source field shows the list of available source nodes that support the Association command class, e.g. Binary sensor.

The Groups field shows the association groups that can be or have been created.

The "Assign Return Routes" checkbox is to define whether the Controller should assign return routes together with setting the association.
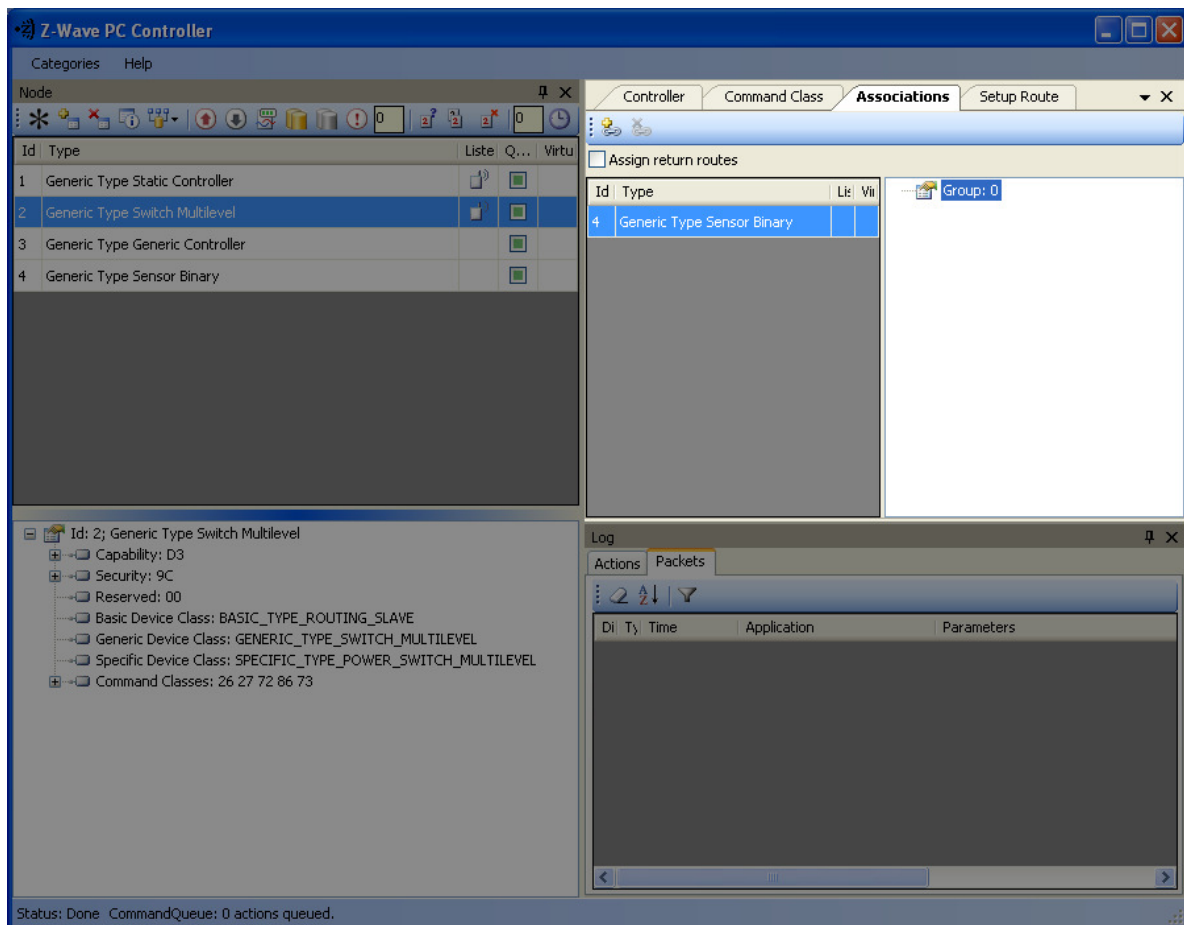
Figure 8. Associations view

4.4.5   Command Class View

The **Command Class view** is used to send a specified command class to a selected node. It has the following items:

- **Command Classes**: drop-down list to select a command class;
- **Command Name**: drop-down list to select a command name belonging to the selected class;
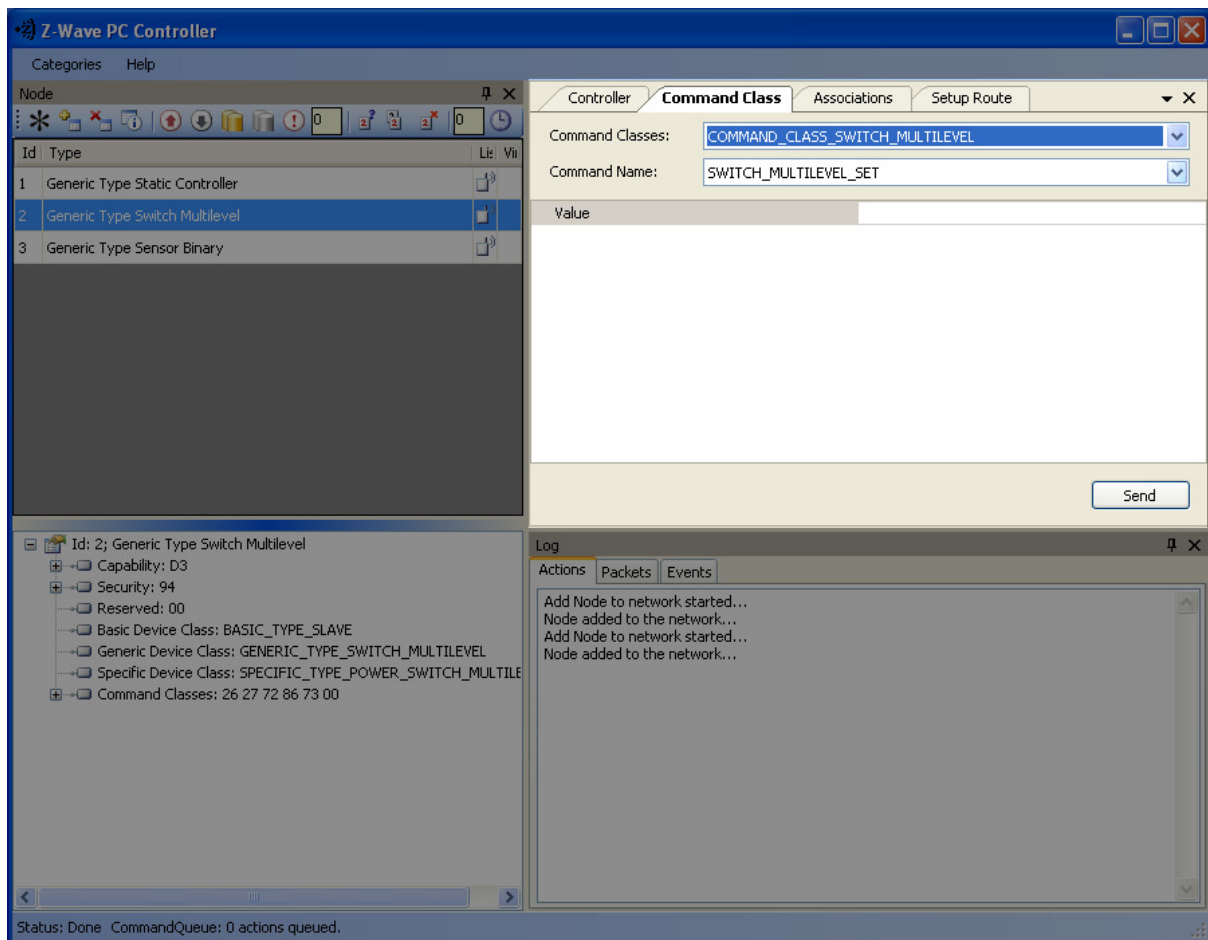- **Command Parameters Grid**: to enter command parameters.

Figure 9. Command Class view

4.4.6 Setup Route View

The **Setup Route** view has a *Menu Bar*, *Source Node list* and *Destination Node list*. It is used to set up routes between nodes.

The *Menu Bar* has two items:

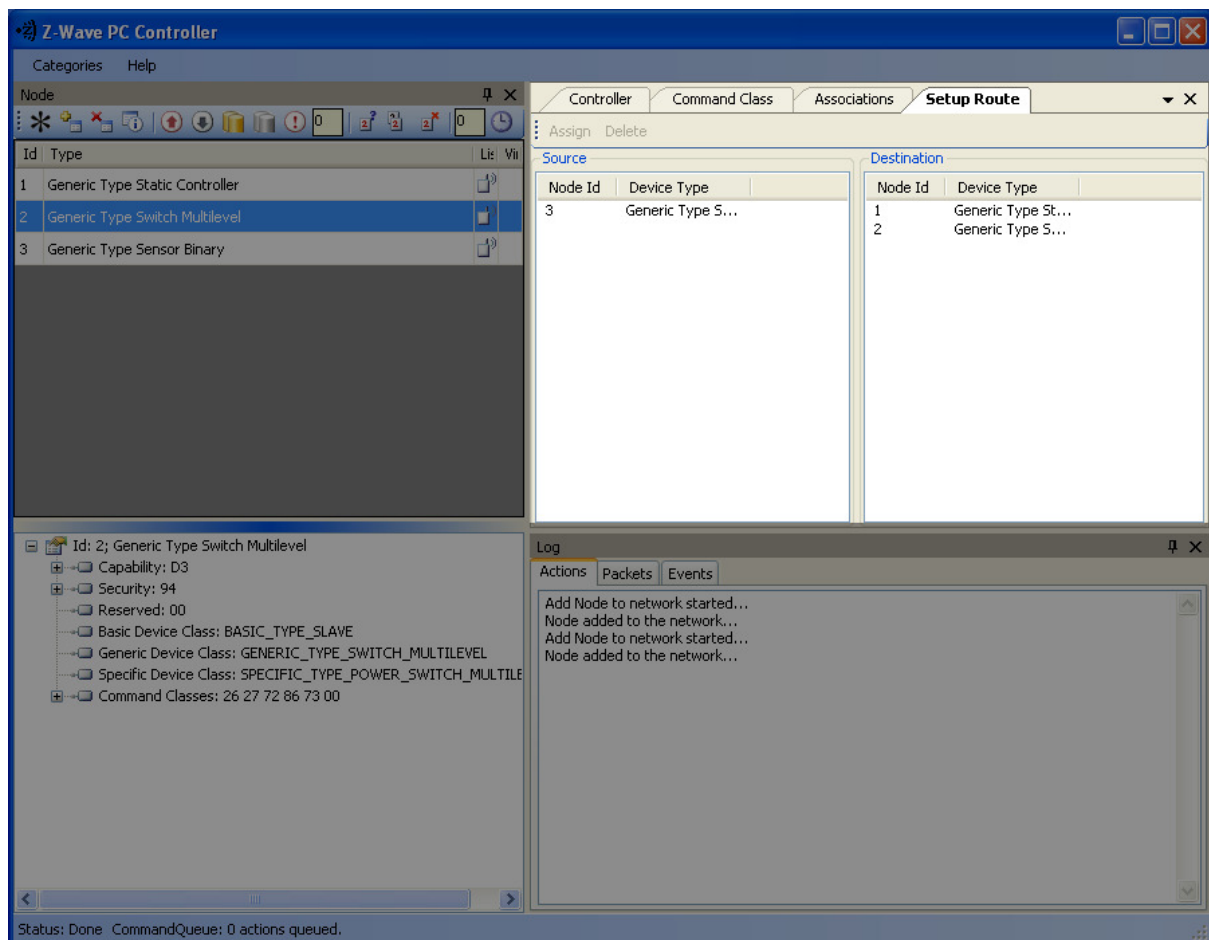| Menu item	Description
Assign	To assign routes via nodes
Delete	To delete assigned routes

Figure 10. Setup Route view

Source Node list and *Destination Node list* show the lists of source and destination nodes in a routed network respectively.

4.4.7 ERTT

Z-Wave PC Controller has the **Enhanced Reliability Test Tool** implemented. It can be activated as a tab through the **Categories** menu or through Ctrl+E keyboard shortcut.
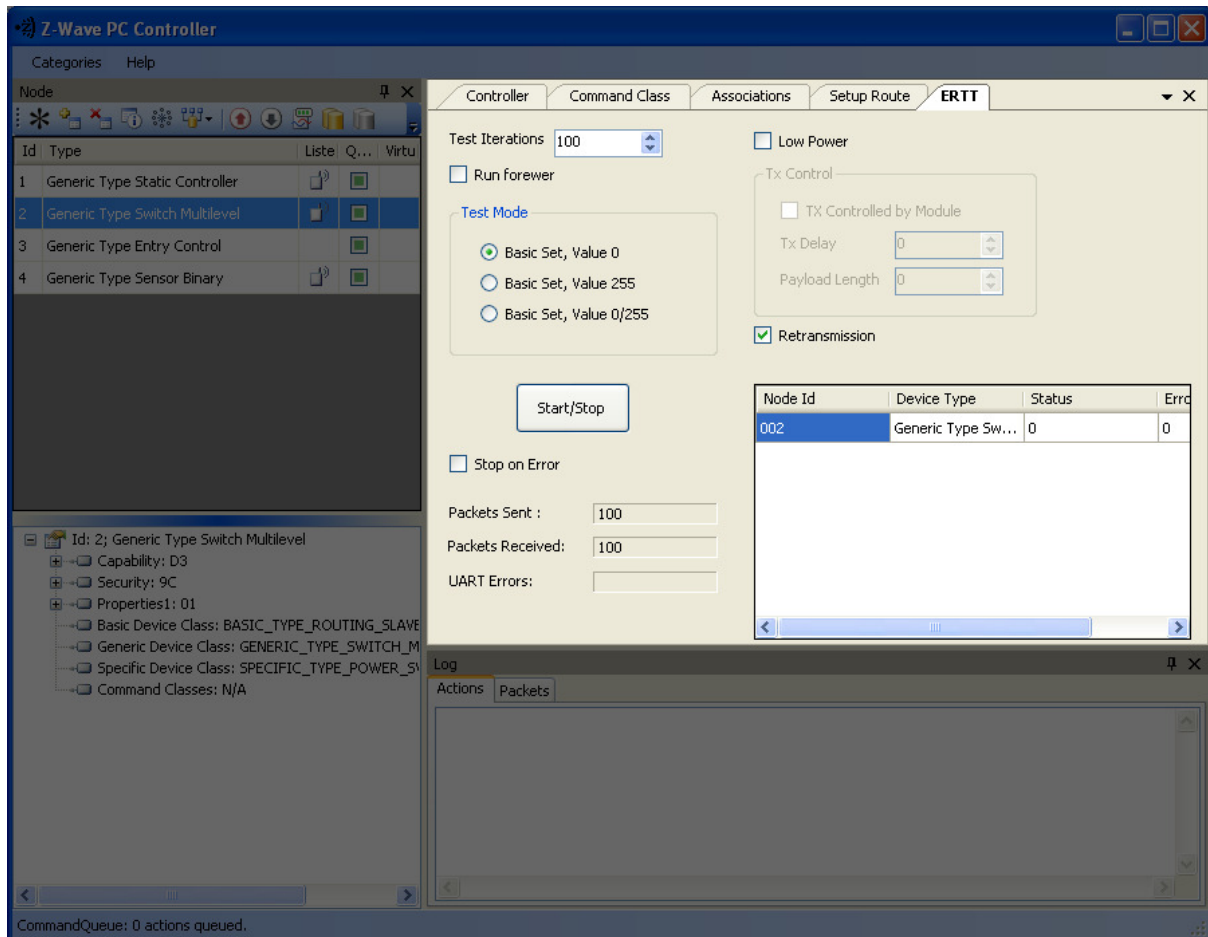

Figure 11. ERTT

4.4.8 Log View

Here output of current actions is recorded. The two tabs, Actions and Packets, show full information about what is happening within the PC Controller.
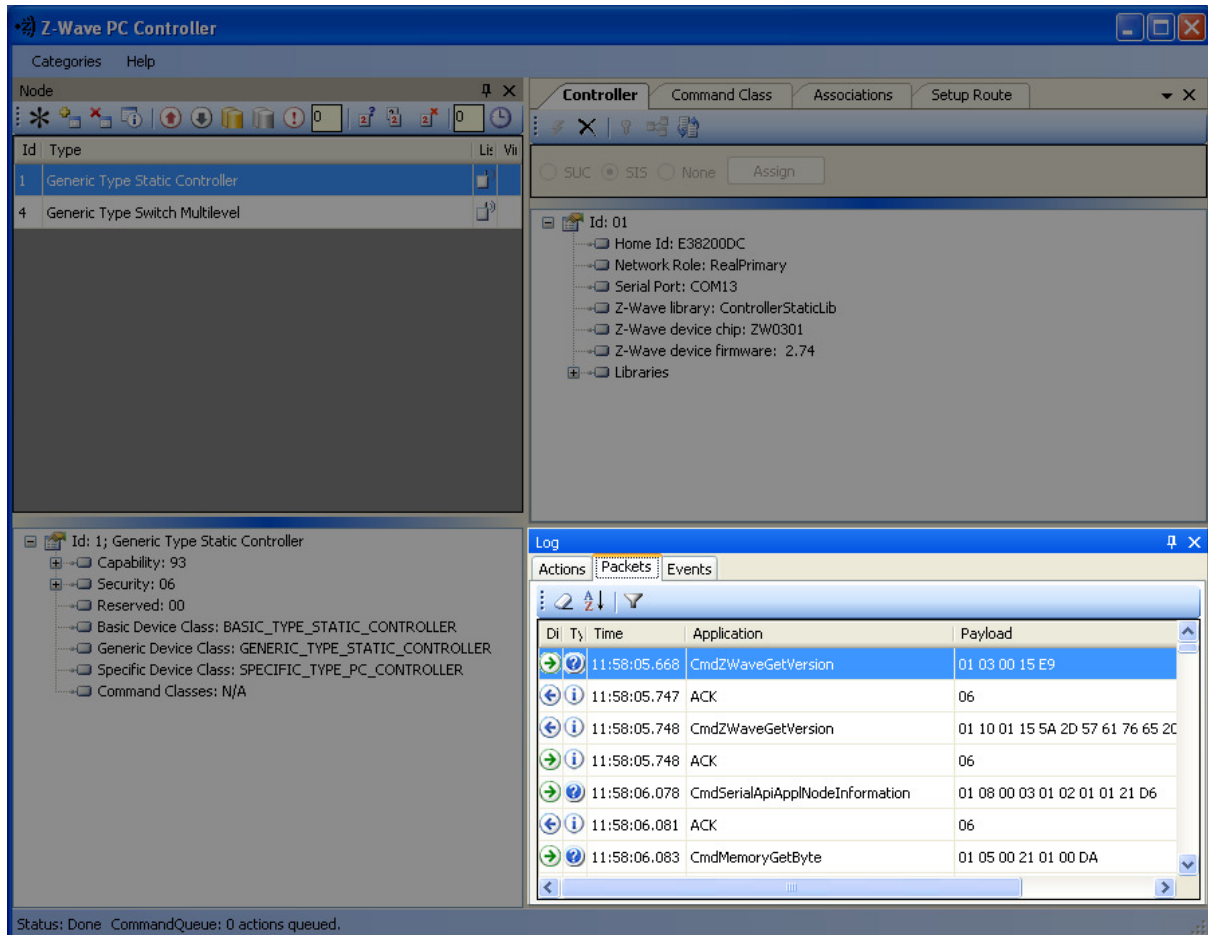

Figure 12. Log View

4.4.9 Log View

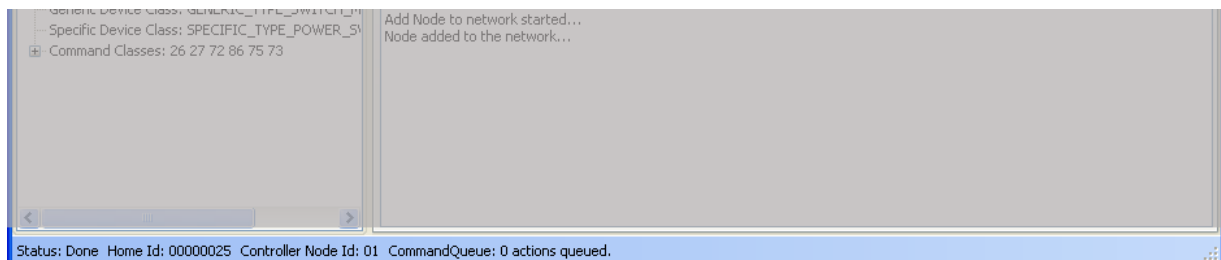**Status Bar** displays Home ID, controller node ID and Command queue status.

Figure 13. Status Bar

5. FCC NOTICE TO USERS

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

The USB dongle transmitter is approved for use in typical laptop and computers. To comply with FCC RF exposure requirements, it should not be used in other devices or certain laptop and tablet computer configurations where the USB connectors on the host computer are unable to provide or ensure the necessary operating configurations intended for the device and its users or bystanders to satisfy RF exposure compliance requirements.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

6. EU DECLARATION OF CONFORMITY

EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- **EN 60950-1: 2006 + A11: 2009 + A1: 2010**
  Safety of Information Technology Equipment
- **EN300220-2 V2.3.1: (2010-02)**
  Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD);
  Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels
- **EN 301 489-1 V1.8.1: (2008-04)**
  Electromagnetic compatibility and Radio Spectrum Matters (ERM);
  ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
- **EN 301 489-3 V1.4.1: (2002)**
  Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range
- **EN 50371 V1: (2002-10)**
  Generic standard to demonstrate the compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz - 300 GHz) -- General public

This device is UZB Z-wave USB Adaptor, intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

CE0560

⌷Česky [Czech]	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
⌷Dansk [Danish]	Undertegnede *[fabrikantens navn]* erklærer herved, at følgende udstyr *[udstyrets typebetegnelse]* overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
⌷Deutsch [German]	Hiermit erklärt *[Name des Herstellers]*, dass sich das Gerät *[Gerätetyp]* in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
⌷Eesti [Estonian]	Käesolevaga kinnitab *[tootja nimi = name of manufacturer]* seadme *[seadme tüüp = type of equipment]* vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
⌷English	Hereby, *[name of manufacturer]*, declares that this *[type of equipment]* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
⌷Español [Spanish]	Por medio de la presente *[nombre del fabricante]* declara que el *[clase de equipo]* cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
⌷Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *[name of manufacturer]* ΔΗΛΩΝΕΙ ΟΤΙ *[type of equipment]* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
⌷Français [French]	Par la présente *[nom du fabricant]* déclare que l'appareil *[type d'appareil]* est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
⌷Italiano [Italian]	Con la presente *[nome del costruttore]* dichiara che questo *[tipo di apparecchio]* è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo *[name of manufacturer / izgatavotāja nosaukums]* deklarē, ka *[type of equipment / iekārtas tips]* atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių	Šiuo *[manufacturer name]* deklaruoja, kad šis *[equipment type]* atitinka esminius

[Lithuanian]	reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl Nederlands [Dutch]	Hierbij verklaart *[naam van de fabrikant]* dat het toestel *[type van toestel]* in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt Malti [Maltese]	Hawnhekk, *[isem tal-manifattur]*, jiddikjara li dan *[il-mudel tal-prodott]* jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu Magyar [Hungarian]	Alulírott, *[gyártó neve]* nyilatkozom, hogy a *[... típus]* megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
pl Polski [Polish]	Niniejszym *[nazwa producenta]* oświadcza, że *[nazwa wyrobu]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt Português [Portuguese]	*[Nome do fabricante]* declara que este *[tipo de equipamento]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl Slovensko [Slovenian]	*[Ime proizvajalca]* izjavlja, da je ta *[tip opreme]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	*[Meno výrobcu]* týmto vyhlasuje, že *[typ zariadenia]* spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	*[Valmistaja = manufacturer]* vakuuttaa täten että *[type of equipment = laitteen tyyppimerkintä]* tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv Svenska [Swedish]	Härmed intygar *[företag]* att denna *[utrustningstyp]* står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.