

HomeIQ Hub User Manual

1. Logging In

- **Connecting through Ethernet:** The hub will receive an IP address through DHCP that you can use to connect to the hub.
- **Connecting through Wi-Fi AP:** You can connect to the Wi-Fi AP of the hub using the credentials provided. Once connected you can access the hub through SSH at the IP address **192.168.200.1**.
- **Logging in with SSH:** Using a terminal client (e.g., PuTTY on Windows, Terminal on Mac) you can connect to the hub using the assigned IP address (from above) and the provided login user and password.

2. Using the Console Application

- Once logged in, execute the **zwave-console** command on the terminal. This will launch the console application and automatically connect to the local Z/IP Gateway.
- Once connected you can use the **Help** command to list available commands. The format is generally **<CommandClass>-<Command>** (e.g., **UserCode-Get**, **Battery-Get**, **DoorLock-ConfigurationGet**).
- All commands will prompt for their required input parameters. Some commands will provide default values for parameters and they will be shown in braces (e.g. [10]). Pressing enter at the prompt will accept the default value.
- Numeric input is in decimal by default but can be specified as hexadecimal by prefixing with **0x** (e.g., **0x16**, **0x0023**).
- Network functions (add, remove, node/network updates) can be aborted/interrupted using **Ctrl + C**.
- Exiting the console can be done via the **Quit** or **Exit** commands, as well as **Ctrl + C**, or **Ctrl + D**.

3. Z-Wave® Network Management

All commands stated below are assumed to be executed in the console application.

1. Add/Remove

a. Adding Non-S2 Devices

- i. Execute the **Network-Inclusion** command
- ii. Enter **N** on the “Pre-enter DSK?” prompt
- iii. Start add node procedure for the device to be added
- iv. Upon successful completion a message indicating which node ID was allocated to the included node is printed

b. Adding S2 Devices

- i. Execute the **Network-Inclusion** command
 - ii. Enter **N** on the “Pre-enter DSK?” prompt
 - iii. Start add node procedure for the device to be added
 - iv. If prompted, enter PIN (5 digits) to be included
 - v. Upon successful completion a message indicating which node ID was allocated to the included node is printed
 - c. Inclusion on behalf of another controller
 - i. Execute the **Network-InclusionOnBehalf** command
 - ii. Start add mode on the other inclusion controller
 - iii. If prompted, enter PIN (5 digits) to be included
 - iv. Upon successful completion a message indicating which node ID was allocated to the included node is printed
 - d. Removing/Excluding Devices
 - i. Execute the **Network-Exclusion** command
 - ii. Start exclusion mode procedure for the device to be removed
 - iii. Upon successful completion a message indicating which node ID was removed is printed
2. Failed nodes
 - a. Failed nodes allows you to remove nodes from the network that are now unreachable. E.g.) previously added nodes that have been factory reset, or nodes with dead batteries, etc. The **Network-RemoveFailedNode** command can be used and requires entering the node ID of the failed node.
 3. Copy network information to another controller
 - a. Use **Network-Inclusion** command to add another controller into the network, then follow the [Add/Remove](#) instructions.
 4. Performing capability rediscovery of a node
 - a. The **Node-Update** command will update the network status and device information of the provided node ID. If the node update does not fully rediscover the node’s capabilities it will have to be excluded and reincluded into the network.

4. Node Suggestions

When executing a command for an individual node there will often be a “suggested nodes” prompt that suggests nodes that are compatible with that command. You can enter one of the suggested nodes but can also enter any node that is on the network.

5. Multi-Channel Commands

When prompted for a Node ID you can use the format *nodeId:endpointId*. E.g.) **8:1** which will be node ID 8 and endpoint 1. Not providing the “:X” suffix will use the default endpoint of 0.

6. Device Control Commands

Devices can be controlled with the following commands:

- **Anti-Theft Unlock**
 - `AntiTheftUnlock-Set` can be used to unlock a node
- **Basic**
 - `Basic-Set` can be used to set the node state
- **Binary Switches**
 - `SwitchBinary-Get` retrieves the current switch state
 - `SwitchBinary-Set` will set the switches state
- **Configuration**
 - `Configuration-Set` will set a configuration parameter
 - `Configuration-Reset` will reset all configuration parameters to defaults
- **Door Locks**
 - `DoorLock-OperationGet` retrieves the current operating state
 - `DoorLock-OperationSet` will set the lock's operation state
 - `DoorLock-ConfigurationGet` retrieves the current lock configurations
 - `DoorLock-ConfigurationSet` will set the lock's configurations
 - In "Timed" operation the "Lock operation timeout" prompt for minutes and seconds are added together for the total timeout value.
- **Meters**
 - `Meter-Get` retrieves the current meter value with a chosen type and unit
 - `Meter-Reset` resets the accumulated value for the meter
- **Multilevel Switches**
 - `MultilevelSwitch-Get` retrieves the current switch state
 - `MultilevelSwitch-Set` sets the switch state
 - `Multilevel-StartChange` will start a dimming change
 - Dimming direction, step size, and starting level will be prompted for
 - Prompts for the dimming of the secondary switch will appear if supported
 - `Multilevel-StopChange` stops any in progress dimming changes
- **Thermostats**
 - `ThermostatFanMode-Get` retrieves the current fan mode
 - `ThermostatFanMode-Set` sets the thermostat fan mode
 - `ThermostatFanState-Get` retrieves the current state of the fan
 - `ThermostatMode-Get` retrieves the current thermostat mode

- `ThermostatMode-Set` sets the thermostat operating mode
- `ThermostatOperatingState-Get` retrieves the current thermostat operating state
- `ThermostatSetpoint-Get` retrieves the current setpoint
- `ThermostatSetpoint-Set` sets the setpoint given the type and units
- **Time**
 - `Time-GetDate` retrieves the device's current date
 - `Time-GetTime` retrieves the device's current time
- **User Code**
 - `UserCode-Set` can be used to set or erase a user code
 - `UserCode-SetKeypadMode` sets the keypad mode
 - `UserCode-SetAdminCode` sets the admin code

7. Notification Reports

The `Notification-ViewRecent` command can be used to view the last received notifications. You can choose whether to see all notifications or ones from a single device.

8. Devices from Multiple Manufacturers

This product can be operated in any Z-Wave network with Z-Wave certified devices of different product categories or from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

9. Factory Default Reset

Using the console application, you can execute the `Network-Reset` command to factory reset the Z-Wave controller. Resetting will result in the nodes in your network being orphaned and it will be necessary after the reset to exclude and re-include all the nodes in the network.

10. Identify

The `Indicator-Identify` command can be used to identify the controller or any node that supports the Identify command. The hub will blink both of its status LEDs white to identify itself.

The `Indicator-Set` command can be used to send specific indicating parameters to a node.

11. Association

The *Lifeline Group* association is supported. The Device Reset Locally Report will be sent to nodes in the group. The maximum number of nodes in this group is one.

12. Security 2 Command Classes

Command Class	Version	Required Security Level
Association	3	Either S2 Access Control or S0
Association Group Info	3	Either S2 Access Control or S0
Device Reset Locally	1	Either S2 Access Control or S0
Firmware Update MD	5	Either S2 Access Control or S0
Indicator	3	Either S2 Access Control or S0
Manufacturer Specific	2	Either S2 Access Control or S0
Multi-Channel Association	4	Either S2 Access Control or S0
Network Management Basic	2	Either S2 Access Control or S0
Network Management Inclusion	4	Either S2 Access Control or S0
Network Management Installation Maintenance	4	Either S2 Access Control or S0
Network Management Proxy	4	Either S2 Access Control or S0
Node Provisioning	1	Either S2 Access Control or S0
Powerlevel	1	Either S2 Access Control or S0
Version	3	Either S2 Access Control or S0
ZIP Gateway	1	Either S2 Access Control or S0 (Supported on LAN-side only)
ZIP Naming	1	Either S2 Access Control or S0 (Supported on LAN-side only)
ZIP Portal	1	Either S2 Access Control or S0 (Supported on LAN-side only)
Application Status	1	None
CRC16 Encapsulation	1	None
Inclusion Controller	1	None
Multi-Cmd	1	None
Security	1	None
Security 2	1	None
Supervision	1	None
Time	1	None
Transport Service	2	None
ZIP	4	None (Supported on LAN-side only)
ZIP ND	1	None (Supported on LAN-side only)
Z-Wave Plus® Info	2	None

13. Update Device Firmware

A device's firmware can be updated using the **Firmware-Update** command. This requires that the firmware update file has already been transferred onto the hub. It will then prompt for its location and begin the update. If the option to not activate the firmware immediately has been chosen the **Firmware-Activate** command can be used when ready.

14. SmartStart

SmartStart enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

- **Print Provisioning List**
 - **SmartStart-Get** can be used to see an individual entry
 - **SmartStart-GetAll** can be used to see all SmartStart entries
- **Add to Provisioning List**
 - **SmartStart-Add** will prompt for the DSK of the device to be added
- **Remove from Provisioning List**
 - **SmartStart-Delete** can be used to remove an entry

15. Z-Wave Device Specific Key

The Device Specific Key (DSK) for the controller is available through the console application using the **DSK-Get** command. The full DSK (ex: 26812-06634-16142-05208-24315-35221-63933-59053) will be printed.

16. Known Issues

Dynamic endpoints (a deprecated Z-Wave feature) may not be properly interviewed and may not be controllable.