MOXA ITB-5105 Modbus TCP Gateway Controller User Guide

Gateway Controller
User's Guide
Model: ITB-5105

Contents

Introduction

This document describes the Gateway Controller (Model ITB-5105) overview and how to use Z-Wave™ functionality.

Feature Overview

The current product is a home gateway device. IoT devices such as sensors are connected and can be controlled with this device. This device supports various interfaces for the functionalities of Wireless LAN, Bluetooth®, Z-Wave™. The device can collect sensing data from various Z-Wave™ sensor devices, and uploading of the data to a cloud server by wired LAN communication is available.

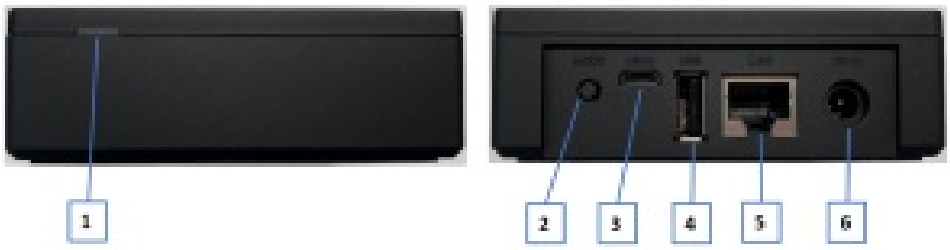
The Gateway Controller has the following general features:

- LAN Ports
- Wireless LAN client
- Z-Wave™ communication
- Bluetooth® communication

※ The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc

Names of Product Device Parts

The front and back view of the product device and parts names are as follows.



No	Part Name
1	System Status Lamp
2	Inclusion/Exclusion Button (Mode Button)
3	Micro USB Port
4	USB Port
5	LAN Port
6	DC-IN Jack

LED Indication Information

System status LED/Lamp Indicator:

LED Indicator	Device Status
White Turn on.	Device is booting up.
Blue Turn on.	Device is connected to the cloud and is operating normally.
Green Turn on.	Device is trying to connect to the cloud
Green Blinking.	Z-Wave Inclusion/Exclusion mode.
Red Blinking.	Firmware update is in progress.

Installation

Installation of the Gateway Controller is only a one step process:
1- Connect an AC adapter to the gateway and plug it into an AC outlet. The gateway has no power switch.

It will begin operating as soon as it is plugged into the AC adapter/outlet.
The gateway needs to be connected to the internet via a LAN port.

Z-Wave™ Overview

General Information
Device Type
Gateway
Role Type
Central Static Controller (CSC)
Command Class

Support	**Control**
COMMAND_CLASS_APPLICATION_STATUS COMMAND_CLASS_ASSOCIATION_V2 COMMAND_CLASS_ASSOCIATION_GRP_INFO COMMAND_CLASS_CRC_16_ENCAP COMMAND_CLASS_DEVICE_RESET_LOCALLY COMMAND_CLASS_MANUFACTURER_SPECIFIC_V1 COMMAND_CLASS_POWERLEVEL COMMAND_CLASS_SECURITY COMMAND_CLASS_SECURITY_2 COMMAND_CLASS_VERSION_V2 COMMAND_CLASS_ZWAVEPLUS_INFO_V2	COMMAND_CLASS_ASSOCIATION_V2 COMMAND_CLASS_BASIC COMMAND_CLASS_CRC_16_ENCAP COMMAND_CLASS_MULTI_CHANNEL _V4 COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3 COMMAND_CLASS_WAKE_UP_V2 COMMAND_CLASS_BATTERY COMMAND_CLASS_CONFIGURATION COMMAND_CLASS_DOOR_LOCK_V4 COMMAND_CLASS_INDICATOR_V3 COMMAND_CLASS_MANUFACTURER_SPECIFIC_V1 COMMAND_CLASS_METER_V5 COMMAND_CLASS_NODE_NAMING COMMAND_CLASS_NOTIFICATION_V8 COMMAND_CLASS_SENSOR_MULTILEVEL_V11

Securely S2 Supported Command Class
COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_ASSOCIATION_V2
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V1
COMMAND_CLASS_VERSION_V2

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

Security Enabled Z-Wave Plus™ Product
The gateway is a security enabled Z-Wave Plus™ product.

Basic Command Class Handling
The gateway will ignore Basic Commands received from other devices in the Z-Wave™ network.

Support for Association Command Class
Group id: 1 – Lifeline
Maximum number of devices that can be added to the group: 5
All devices are associated with the group.

Android Controller Application "Gateway Controller"

Gateway Select Screen
When an available device is detected that can be used, the icon of the gateway is displayed.
If nothing is displayed, please confirm that the network is correctly set.

Device Viewer

When a gateway is selected, available devices will be displayed. If there are no available devices, nothing will be displayed.

In the case of a device that supports temperature, humidity or illuminance, a report value is displayed.

These icons represent the state of Home Security.
Whichever icon that appears shows the current event according to a notification received from the device.

If a device supports the lock / unlock function, the Lock Status is displayed.

The remaining battery power is displayed.

The values of various meters are displayed.
In order from the left: power meter, gas meter, and water meter.

The value of the indicator is displayed.

If a device has end points, all end points are displayed.

When an unsupported device is detected, no icon will be displayed in this area.

The report value of the latest Basic Command is displayed. *Only for unsupported devices.

Wakeupinterval: The value of the Wakeup Interval is displayed.

Manufacture: The Manufacture ID is displayed.
Product ID: The Product ID is displayed.
Node ID: The Node ID is displayed.

By tapping the Report icon, a dialog of Association, Association Group Info, and Configuration is displayed.

Node Name

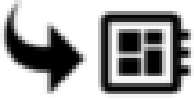
Node Location

Endpoint number is displayed.

Device button

means one device

Device End point button



means End point

Lock status

lock

unlock

Multilevel sensor

means humidity

means temperature

means illuminance

Home security

Motion Detection

Undetected Detected

Glass Breakage

Undetected Detected

Intrusion

Undetected Detected

Tampering

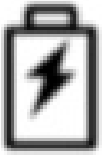
Undetected Detected

Unknown

Undetected Detected

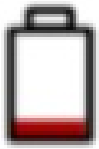
Battery

Battery level is displayed

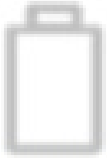


100%

Battery level is displayed
as numerical value.



It is displayed when the battery
level is low.



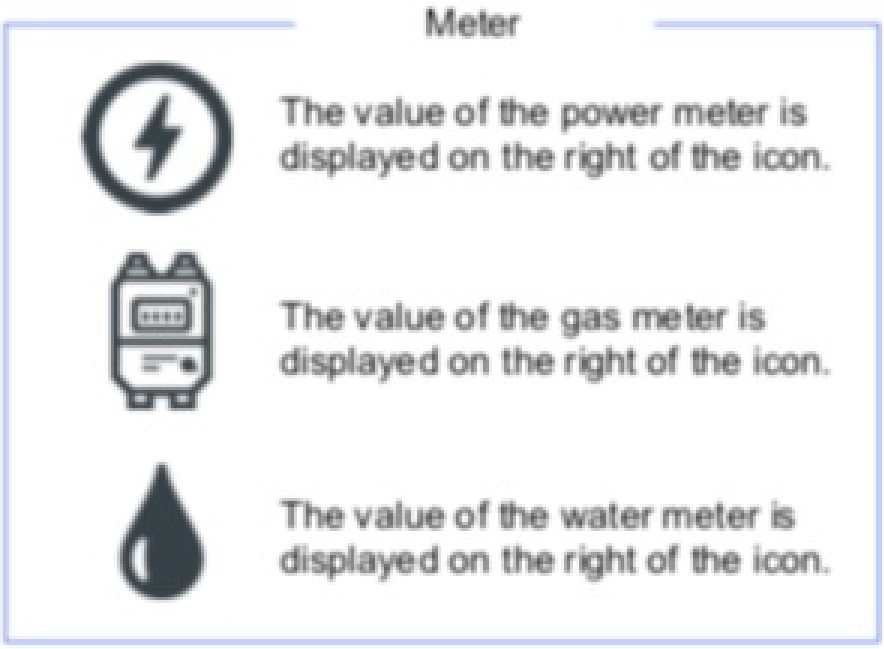
It is displayed when the battery
level is not acquired.

Report button

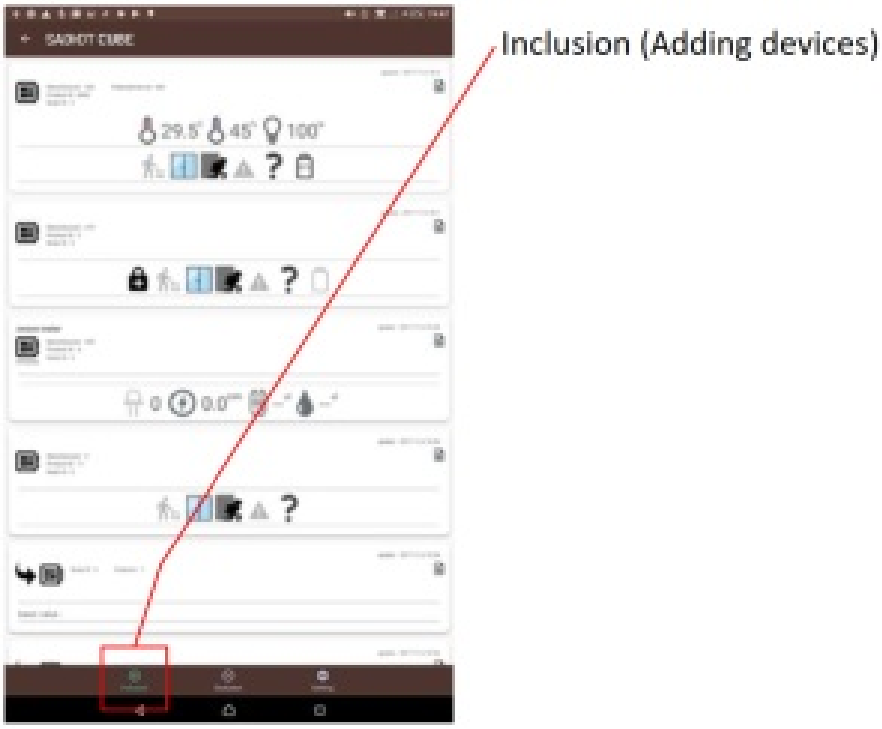
When the report has been updated,
It is displayed with a red icon.

Indicator

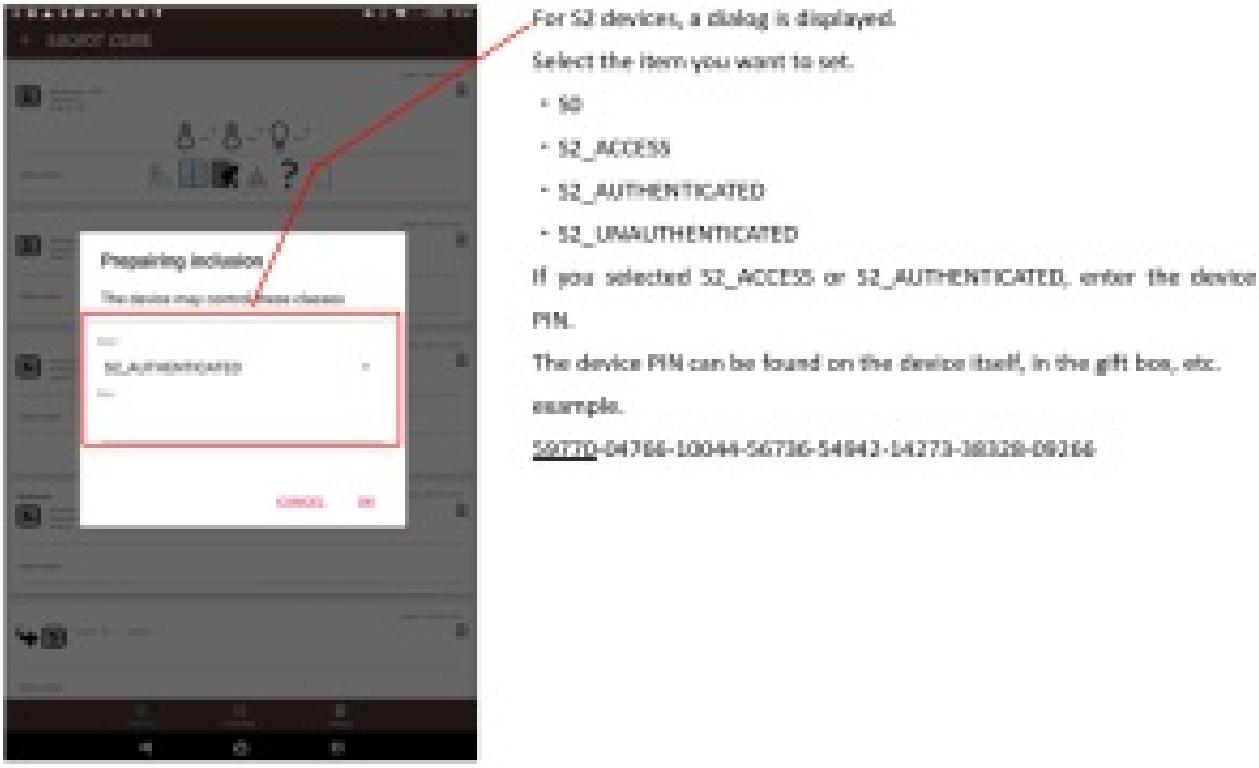
The numerical value is displayed
on the right of the icon.



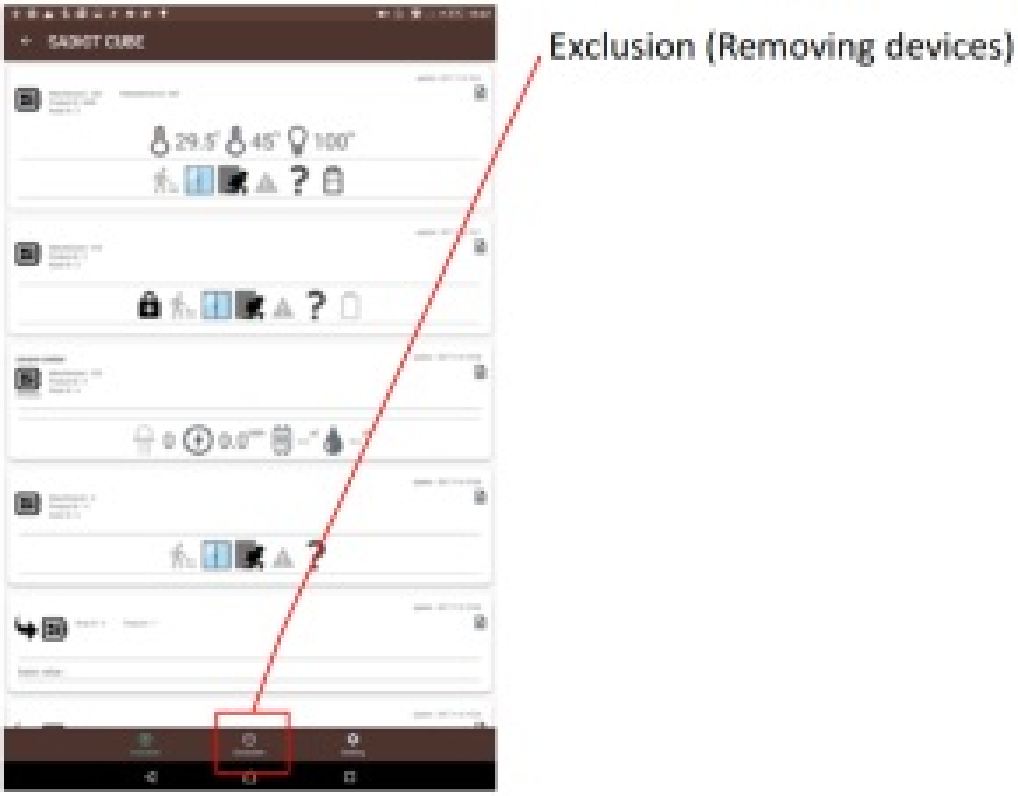
Inclusion (Add)



To add a device to the Z-Wave™ network, press the “Inclusion” button in the Android Controller Application. This will put the gateway into Inclusion Mode. Then a gateway operation dialog will appear in the Android Controller Application. The gateway operation dialog will be displayed during the Inclusion Mode. To stop the Inclusion Mode, press the “Abort” button in the gateway operation dialog, or wait for one minute and the Inclusion Mode will automatically stop. When the Inclusion Mode has stopped, the gateway operation dialog will automatically disappear.

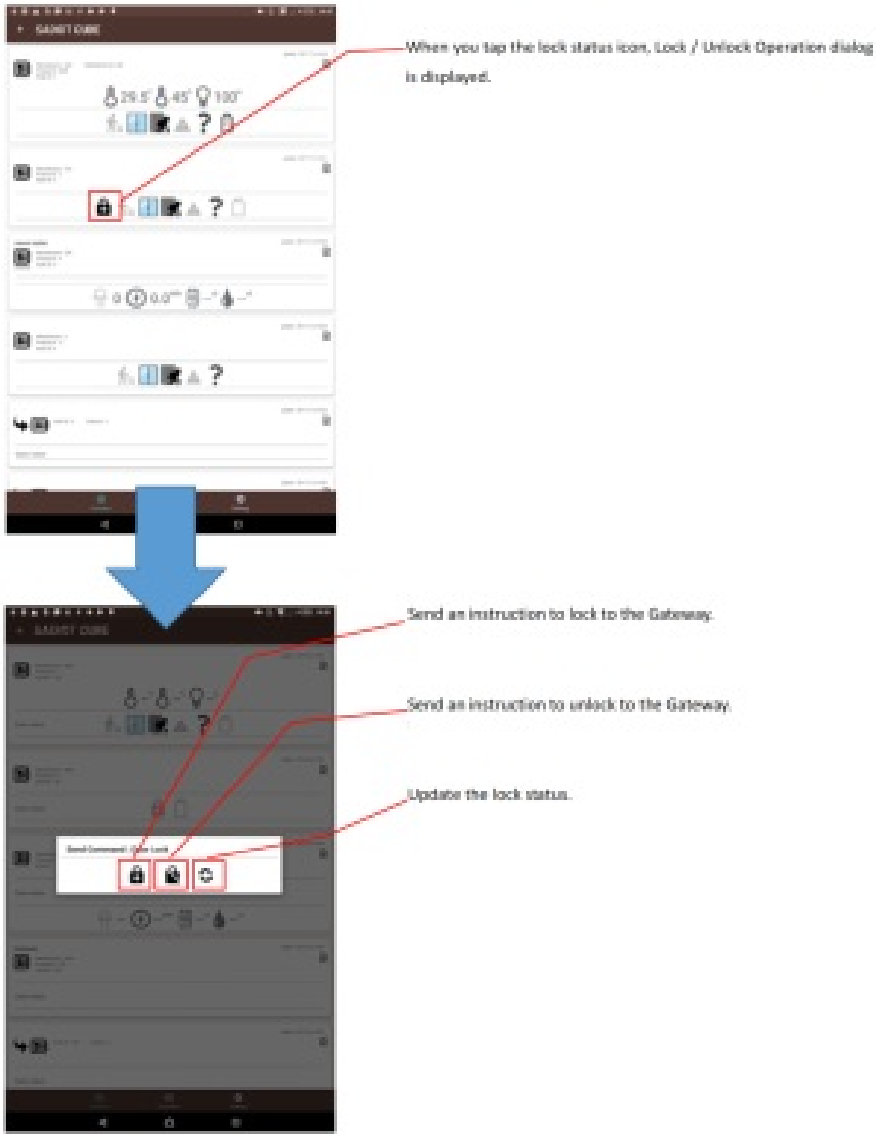


Exclusion (Remove)

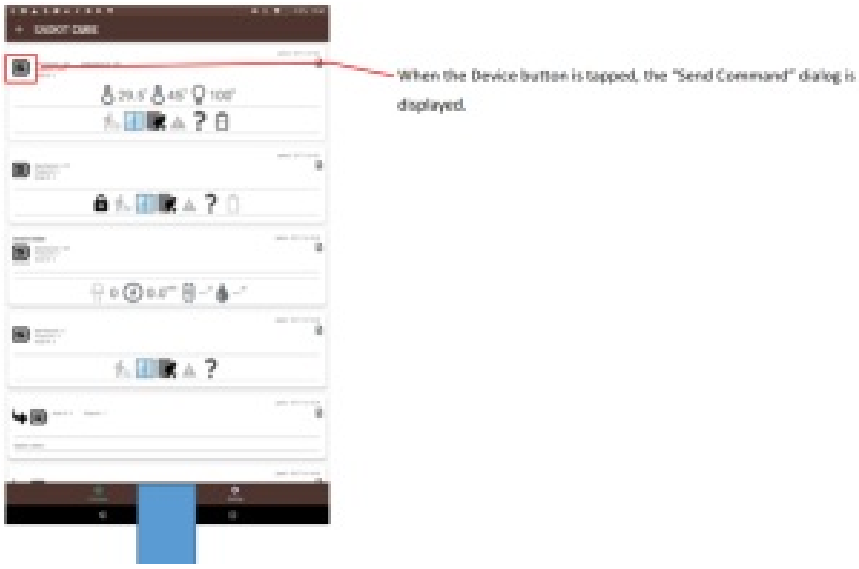


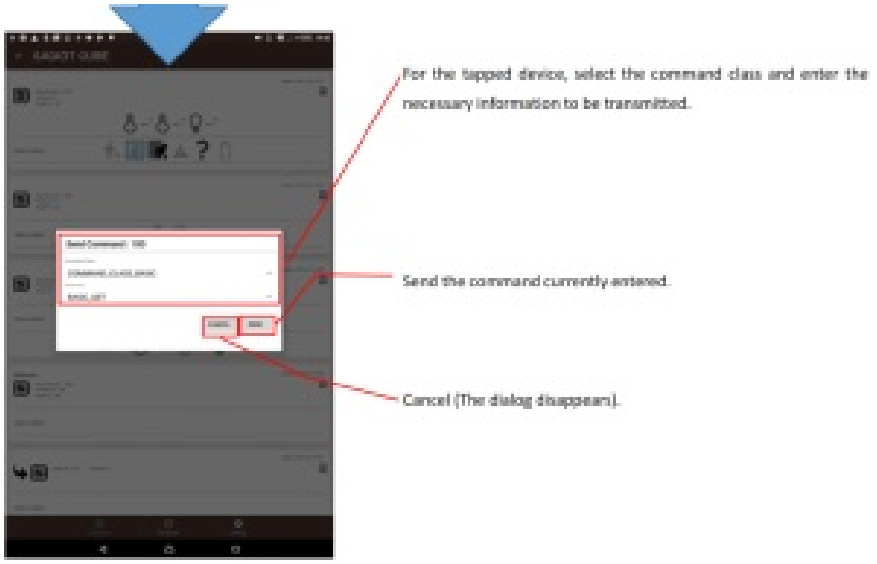
To remove a device from the Z-Wave™ network, press the “Exclusion” button in the Android Controller Application. This will put the gateway into Exclusion Mode. A gateway operation dialog will appear in the Android Controller Application. The gateway operation dialog will be displayed during the Exclusion Mode. To abort the Exclusion, press the “Abort ” butt on in the gateway operation dialog, or wait for one minute and the Exclusion Mode will automatically stop. When the Exclusion Mode has stopped, the gateway operation dialog will automatically disappear.

Lock/Unlock Operation

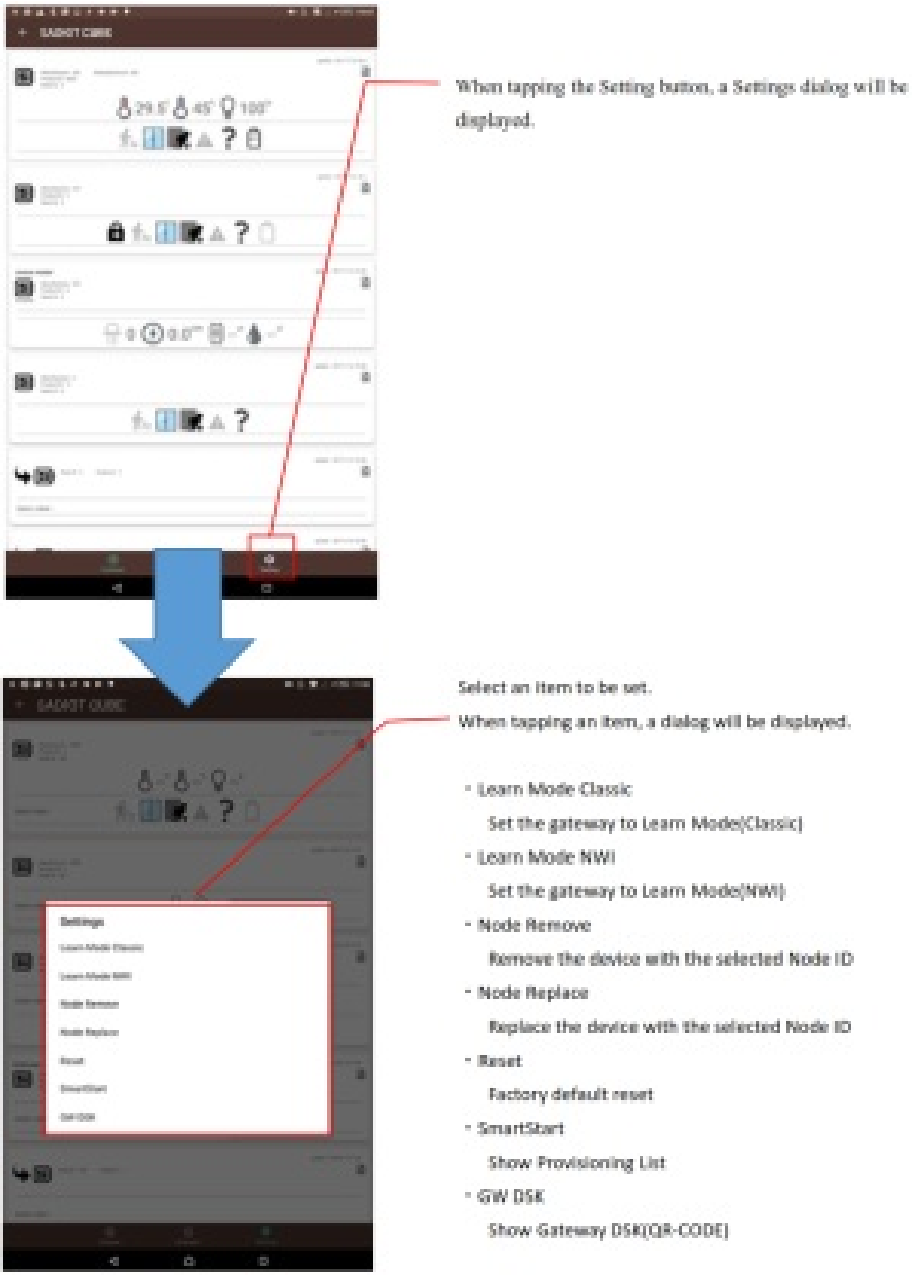


Send Command





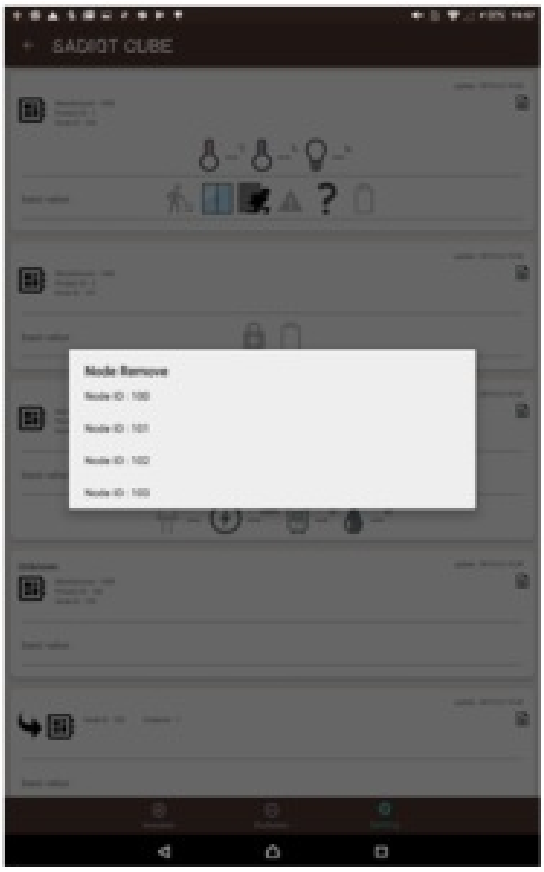
Settings



Node Remove

To remove a failing node from the Z-Wave™ network, press “Node Remove” in the Settings dialog, and tap the

Node ID to be removed in the Node Remove dialog.



Node Replace
To re plac e a failing Node with another equivalent device, press “Replace” in the Settings dialog, and tap the Node ID to be replaced in the Node Replace dialog. The Gateway Operation dialog will appear.

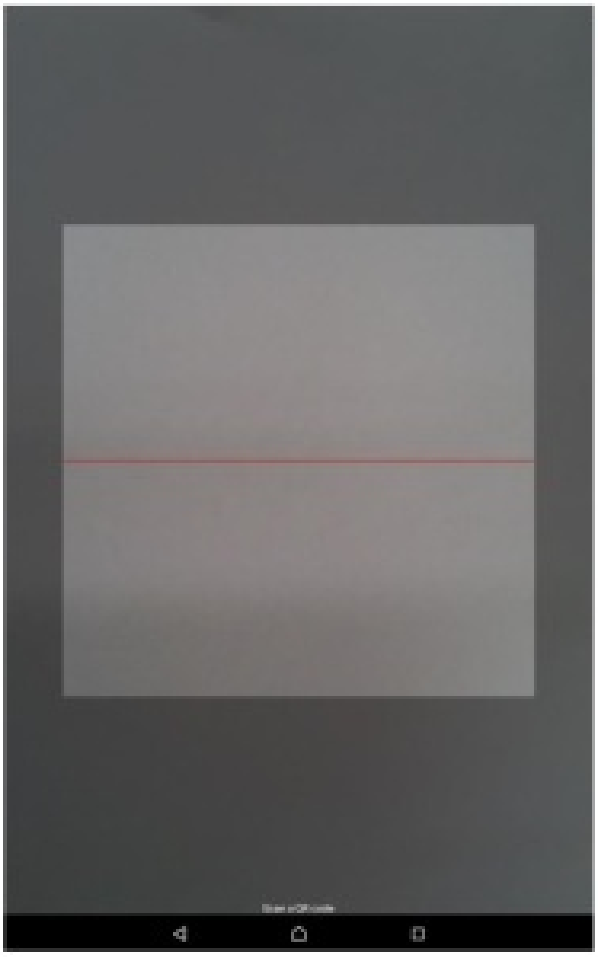
Reset (Factory Default Reset)
Press “RESET” in the Factory Default Reset dialog. This will reset the Z-Wave™ chip, and the gateway will show “DEVICE RESET LOCALLY NOTIFICATION” after the restart. If this controller is the primary controller for your network, resetting it will result in the nodes in your network becoming orphaned, and it will be necessary after the reset to exclude and re-include all of the nodes in the network. If this controller is being used as a secondary

controller in the network, use this procedure to reset this controller only in the event that the network primary controller is missing or otherwise inoperable.

SmartStart

This product supports SmartStart integration and can be included in the network by scanning the QR code or entering the PIN.

As the camera starts, hold it over the QR code.
Register the DSK when you correctly hold the camera over a QR code on the product label.

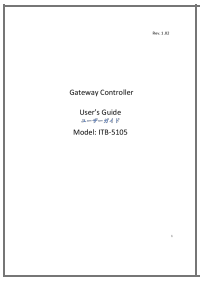


Z-Wave S2(QR-Code)

Replication (Copy)

In the event that the gateway is already the controller of the Z-Wave™ network, put the gateway into Inclusion Mode, and put another controller into the Learn Mode. The Replication will begin and network information will be sent to another controller. In the event that the gateway is integrated into an existing Z-Wave™ network, put the gateway into Learn Mode, and put the existing controller into Inclusion Mode. The Replication will begin and network information will be received from the existing controller.

Documents / Resources

	**MOXA ITB-5105 Modbus TCP Gateway Controller** [pdf] User Guide ITB-5105, Modbus TCP Gateway Controller