

e-Life

Easy Access E-Life Zigbee Module

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User Manual

Notational Conventions used in the document:

Token	Requirement	Description
[]	Mandatory	[param1] then param1 shall be present.
<>	Optional	<param1> then param1 may be present.
[[]]	Mandatory within mandatory	[param1[param2]] param2 shall be present within param 1
[<>]	Optional within mandatory	[param1<param2>] param2 may be present within param1
<[]>	Mandatory within optional	Must be present if optional param is present.
<<>>	Optional within optional	<param1<param2>> param2 may be present if param1 is present.
	Exclusive Values	One option excludes the other.
&	Inclusive Values	One option includes and other,
()	Group of Values	Group of exclusive or inclusive values.
-	Value Range	Range of values, e.g. 1-10, then all values from and including 1 to and including 10 are valid.
VAL_NAME	Parameter Name	Name of parameter in capital letters and underscore, followed by value.
:	Param Id separator	Separates Param Id from values.

Example:

[param1[param1-1]<param1-2> (A|B|C)&D]<param2[param2-1]<param2-2>>; here param1 is mandatory, and sub param1-1 is mandatory within param1, while sub param1-2 is optional within param1, param2 is optional, but if present, param2-1 is mandatory within param2, while param2-2 is optional within param2.

Param 1 always contains only one of the values A, or B, or C, but always D.

[Param1: VALUE_01 0x00|0x01] The parameter Id is Param1, the value is named VALUE_01 and can either be 0x00 or 0x01.

Implementation Details:

Endpoint: 11

Zigbee Channel Mask: 0x07FFF800

Server Clusters: Basic, Power Configuration, Identify, Groups, Scenes, Door Lock, EA v4 (proprietary), EA v2 (proprietary)

Client Clusters: OTA Update

Usage:

Devices that want so receive responses and attribute reports have to bind to the specific end point and clusters and subscribe to the reporting attributes.

Basic Cluster (0x0000)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 3.2

The module implementation supports the following Basic cluster attributes.

Attribute	Id	Type	Default Value	Description
ZCLVersion	0x0000	Read Only	0X02	Supported ZCL version
ApplicationVersion	0x0001	Read Only	0x01 or higher	Module FW version
StackVersion	0x0002	Read Only	10	Zigbee implementation version
HWVersion	0x0003	Read Only	11 or higher	Module HW version
ManufacturerName	0x0004	Read Only	“Onesti Products AS”	Module Manufacturer Id
ModelIdentifier	0x0005	Read Only	“easyCodeTouch_v1” or “EasyCode903G2”	Lock device model identifier
DateCode	0x0006	Read Only	20201211 or newer	ISO 8601 date format: YYYYMMDD
PowerSource	0x0007	Read Only	0x04	ZCL DC Source
LocationDescription	0x0010	Read Only	“Entrance Door”	
PhysicalEnvironment	0x0011	Read Only	0	ZCL Unspecified
SWBuildId	0x4000	Read Only	n/a	Not set

Commands:

No commands for the Basic Cluster.

Power Configuration (0x0001)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 3.3.

The module implementation supports the following Power Configuration Battery Information Attribute Set defined in Zigbee Cluster Specification chapter 3.3.2.2.3 and 3.3.2.2.4.

Attribute	Id	Type	Default Value	Description
BatteryVoltage	0x0020	Read Only	45	100 mV steps, equaling 4,5V
BatteryPercentageRemaining	0x0021	Read Only, Reporting	100	Remaining battery in percent
BatterySize	0x0031	Read Only	3	Using AA batteries
BatteryQuantity	0x0033	Ready Only	3	Using 3 batteries
BatteryRatedVoltage	0x0034	Read Only	15	Voltage in 100mV steps (1,5V = 15)

Commands:

No supported commands for the Power Configuration cluster.

Identify (0x0003)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 3.5.

The module implementation supports the following Identify Attribute Set defined in Zigbee Cluster Specification chapter 3.5.2.2.

Attribute	Id	Type	Default Value	Description
IdentifyTime	0x0000	Read Write	0	Remaining identifying time

Commands:

No supported commands for the Identify cluster.

Groups (0x0004)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 3.6.

The module implementation supports the following Groups Attribute Set defined in Zigbee Cluster Specification chapter 3.6.2.2.

Attribute	Id	Type	Default Value	Description
NameSupport	0x0000	Read Only	n/a	Indicates if group names are supported.

Commands:

No supported commands for the Groups cluster.

Scenes (0x0005)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 3.7.

The module implementation supports the following Scenes Attribute Set defined in Zigbee Cluster Specification chapter 3.7.2.2.

Attribute	Id	Type	Default Value	Description
SceneCount	0x0000	Read Only	n/a	
CurrentScene	0x0001	Read Only	n/a	
CurrentGroup	0x0002	Read Only	n/a	
SceneValid	0x0003	Read Only	n/a	
NameSupport	0x0004	Read Only	n/a	

Commands:

No supported commands for the Scenes cluster.

Door Lock (0x0101)

Cluster Role: Server

Detailed description can be found in Zigbee Cluster Specification chapter 7.3.

The module implementation supports the following Door Lock Attribute Set defined in Zigbee Cluster Specification chapter 7.3.2.11.

Attribute	Id	Type	Default Value	Description
LockState	0x0000	Read Only. Reporting	n/a, has no notion of the current state of the lock when powered on.	Reports the states LOCKED (0x01) and UNLOCKED (0x02)
LockType	0x0001	Read Only	0x00	Dead Bolt
ActuatorEnabled	0x0002	Read Only	True	
NumberOfTotalUsersSupported	0x0011	Read Only	100	Code and RFID users in total
NumberOfPINUsersSupported	0x0012	Read Only	50	PIN Users in total
NumberOfRFIDUsersSupported	0x0013	Read Only	50	RFID Users in total
MaxPINCodeLength	0x0017	Read Only	8	Maximum length of supported by module
MinPINCodeLength	0x0018	Read Only	4	Minimum length of supported by module
MaxRFIDCodeLength	0x0019	Read Only	14	Maximum length of supported by module

MinRFIDCodeLength	0x001A	Read Only	4	Minimum length of supported by module
AutoRelockTime	0x0023	Write, Reporting	n/a	Autolock Enable = 0x01, Disable = 0x00 These are the only valid values. Reported when changed.
SoundVolume	0x0024	Write, Reporting	n/a	Volume: Off = 0x00, Low = 0x01 Normal = 0x02, Default on lock device is "Normal". Reported when changed.

Commands:

The following commands are the only supported commands and parameters from the ZCL Door Lock Cluster, see ZCL specification 7.3 for more information.

Lock/Unlock Door

[Lock Command Id: LOCK 0x00 | UNLOCK 0x01]<Pin Code: LENGTH 0x00>

The Lock/Unlock command does not support PIN code in the command, and if a Pin Code parameter is present, it can only have the parameter Length and it must be set to 0. See ZCL specification chapter 7.3.2.16, 7.3.2.16.1 and 7.3.2.16.2

Set PIN Code

[SET_PIN_CODE 0x05][User Info: [USER_ID 1-50][USER_STATUS 0x00][USER_TYPE 0x00][LEN 4-8 & PIN_CODE 0xXX...0xXX]]

The Set PIN Code command is only valid for the number of users supported by the module for the lock device. The User Status and User Type values are mandatory but not used by the module implementation. The PIN code must be at least 4 digit long and maximum 8 digits. The format is specified in the ZCL Specification chapter 7.3.2.16.7

Clear PIN Code

[CLEAR_PIN_CODE 0x07][USER_ID 1 - 50]

The Clear PIN Code command is only valid for the number of users supported by the module for the lock device. The format is specified in the ZCL Specification chapter 7.3.2.16.10.

Change the volume

The volume on the device is changed by writing the SoundVolume attribute. The supported values are defined in the cluster specific attributes table.

Autolock

Autolock is either enabled or disabled by writing the AutoRelock attribute. The only supported values are either disabled (0x00) or enabled (0x01).

Server Commands

The Server Commands are either events or responses to a received command.

Lock/Unlock Door Response

[Lock/Unlock Response Id: LOCK_RESPONSE 0x00 | UNLOCK_RESPONSE 0x01][Status: FAILURE 0x00 | SUCCESS 0x01]

The response returns SUCCESS if a sent successful lock/unlock command has been executed. If the command fails FAILURE is returned.

Set PIN Code Response

[SET_PIN_CODE_RESPONSE 0x05] [Status: FAILURE 0x00 | SUCCESS 0x01]

The response returns SUCCESS if a sent successful command has been executed. If the command fails FAILURE is returned. The statuses Memory Full (2) and Duplicate Code error (3) are not supported in the module implementation.

Clear PIN Code Response

[CLEAR_PIN_CODE_RESPONSE 0x07] [Status: FAILURE 0x00 | SUCCESS 0x01]

The response returns SUCCESS if a sent successful command has been executed. If the command fails FAILURE is returned.

Set RFID Code Response

[SET_RFID_CODE_RESPONSE 0x16] [Status: FAILURE 0x00 | SUCCESS 0x01]

The response returns SUCCESS if a sent successful command has been executed. If the command fails FAILURE is returned. The statuses Memory Full (2) and Duplicate Code error (3) are not supported in the module implementation.

Clear RFID Code Response

[CLEAR_RFID_CODE_RESPONSE 0x18] [Status: FAILURE 0x00 | SUCCESS 0x01]

The response returns SUCCESS if a sent successful command has been executed. If the command fails FAILURE is returned.

Operation Notification Response

[RSP_ID 0x20][SOURCE][CODE][USER_ID 0x00][PIN 0x00][LOCAL_TIME 0x00][DATA 0x00]

The Operation Notification Response is defined in the ZCL Specification chapter 7.3.2.17.27, and is partially supported.

Source:

- 0x00 KeyPad: If the user uses the code panel.
- 0x02 Manual: If the user used a key, button or fingerprint.
- 0x03 RFID: If the user used an RFID tag.
- 0xFF Other: If the user used an unknown method.

Event Code:

- 0x00 Lock: The device was locked using either button, code panel or RFID.
- 0x01 Unlock: The device was unlocked using either button, code panel or RFID.
- 0x08 Key Lock: If the user locked with a key.
- 0x09 Key Unlock: If the user unlocked with a key.
- 0x10 Fingerprint Lock: The device was locked using fingerprint.
- 0x11 Fingerprint Unlock: The device was unlocked using fingerprint.

OTA Upgrade Cluster (0x0019)

The module implementation supports the OTA Upgrade cluster for FW update.