<How to configure ZE10 1:1 Communication for GPIO Remote Control>

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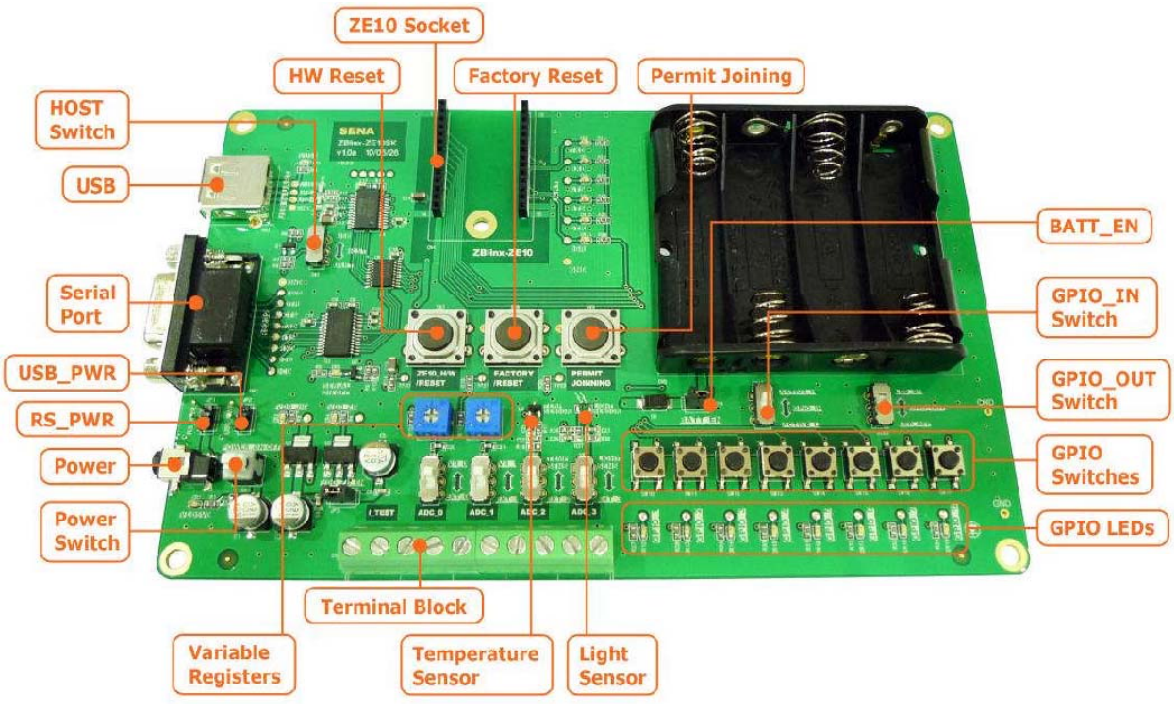
The ZE10 module supports that a node can change the digital output status of a remote node by switching local digital input pin and the local node should be possible to monitor the GPIO status.

☞ <Application Diagram>

INPUT ZE10-SK_A === ZigBee === OUTPUT ZE10-SK_B

In case of this, you need optional Starter-Kit Board for ZE10 device below.
After combining ZE10s and Starter-Kit Board, you can control the remote device I/O ports through the GPIO_OUT Switches.



1. Network Configuration

1-1. Input Device Network Configuration – ZE10-SK_A

AT+NODETYPE=1<CR> OK AT+PANID=1111<CR> OK ATZ<CR> OK	#Set Node Type (1=Coordinator) #Set 16-Bit PAN ID #Apply and Reboot

1-2. Output Device Network Configuration – ZE10-SK_B

AT+NODETYPE=2<CR> OK AT+PANID=1111<CR> OK ATZ<CR> OK	#Set Node Type (2=Router) #Set PAN ID # Apply and Reboot

2. GPIO Remote Control Configuration (IN/OUT Mutual Application)

The ZE10 module has total 14 I/O pins. Among these pins, I/O pin 6 is assigned to factory reset only and the user can use the rest 13 pins for general purpose inputs and outputs.
The AT command can be used to change the GPIO settings.

The Value is a number between 0 to 5 as explain below :

- 0 Disabled (unmonitored digital input)
- 1 Digital input, monitored
- 2 Digital output, default low
- 3 Digital output, default high
- 4 Analog input, single ended (only valid for GPIO3~6)
- 5 Reserved for pin-specific alternate functionalities

(Input Device ; 3~7 Input / 8~12 Output)
(Output Device ; 3~7 Output / 8~12 Input)

2-1. Input Device Configuration – ZE10-SK_A

AT+IO 5550000055550 OK AT+IO=5551111122222 OK AT+IO 5551111122222 OK ATS44=1 OK	# Configuration Status of GPIO Mode # Set GPIO Mode Configuration # To recheck the new configuration # Enable GPIO change detection sampling

ATS45=1 OK ATZ OK	# Enable GPIO remote control # Apply and Reboot

2-2. Output Device Configuration - ZE10-SK_B

AT+IO 5550000055550 OK AT+IO=5552222211111 OK AT+IO 5552222211111 OK ATS44=1 OK ATS45=1 OK ATZ OK	# Configuration Status of GPIO Mode # Set GPIO Mode Configuration # To recheck the new configuration # Enable GPIO change detection sampling # Enable GPIO remote control # Apply and Reboot

3. Data Transmit Mode Configuration

3-1. Input Device Configuration - ZE10-SK_A

AT+DESTLA=000195000000000B<CR> OK AT+TRANSMITMODE=1<CR> OK ATZ<CR> OK	#Set the Address of Destination device (ZE10B) #Set TRANSMITMODE (1=Unicast) # Apply and Reboot

3-2. Output Device Configuration - ZE10-SK_B

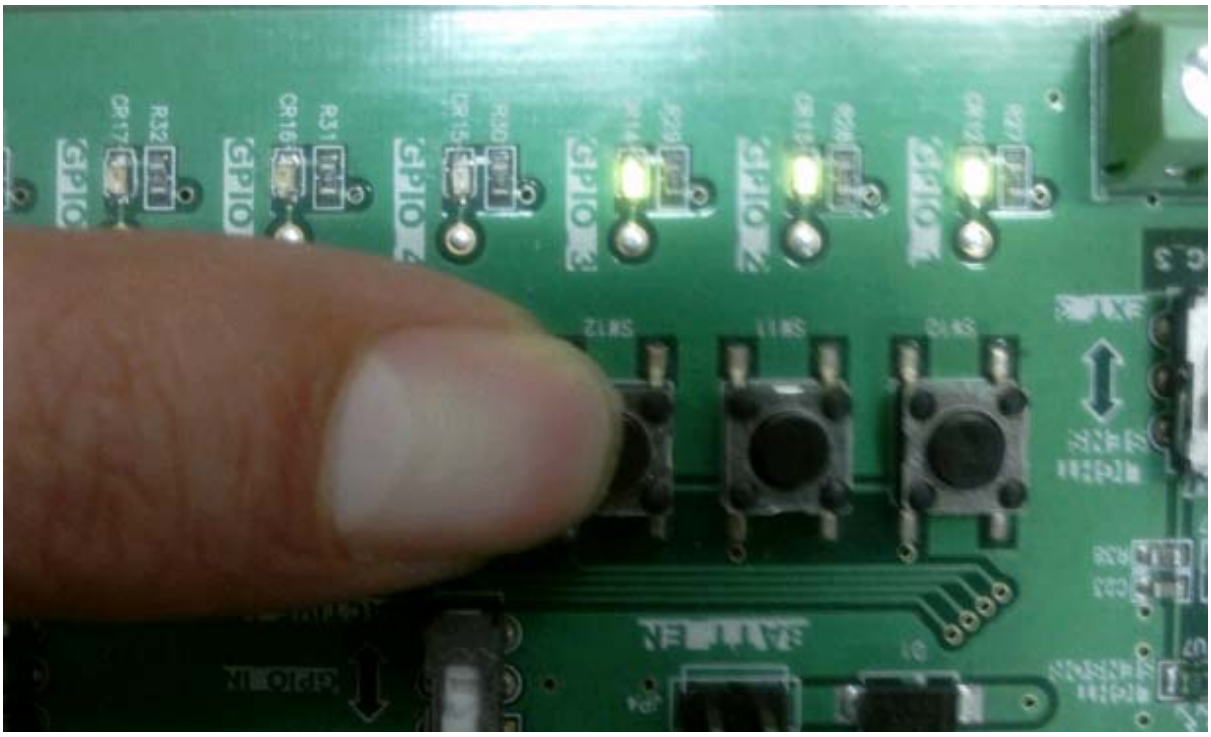
AT+DESTLA=000195000000000A<CR> OK AT+TRANSMITMODE=1<CR> OK ATZ<CR> OK	# Set the Address of Destination device (ZE10A) #Set TRANSMITMODE (1=Unicast) # Apply and Reboot

These two ZE10s can communicate each other after above setting.

4. Demonstration of GPIO Remote Control

- GPIO1=Power, GPIO2=Status

1. After configuration, push the “GPIO 3” button of Input Device like below.



2. You can see that the “GPIO 3” LED of Output Device is on.