Description

The Zigbee Dongle is a lowcost, low consumption, and wireless mesh network targeted at wide development of long life devices in wireless control and monitoring applications.It provides a simple method of integrating ZigBee into computers, gateways and/or bridge devices. The Zigbee drivers allow the dongle to operate within a Zigbee network.
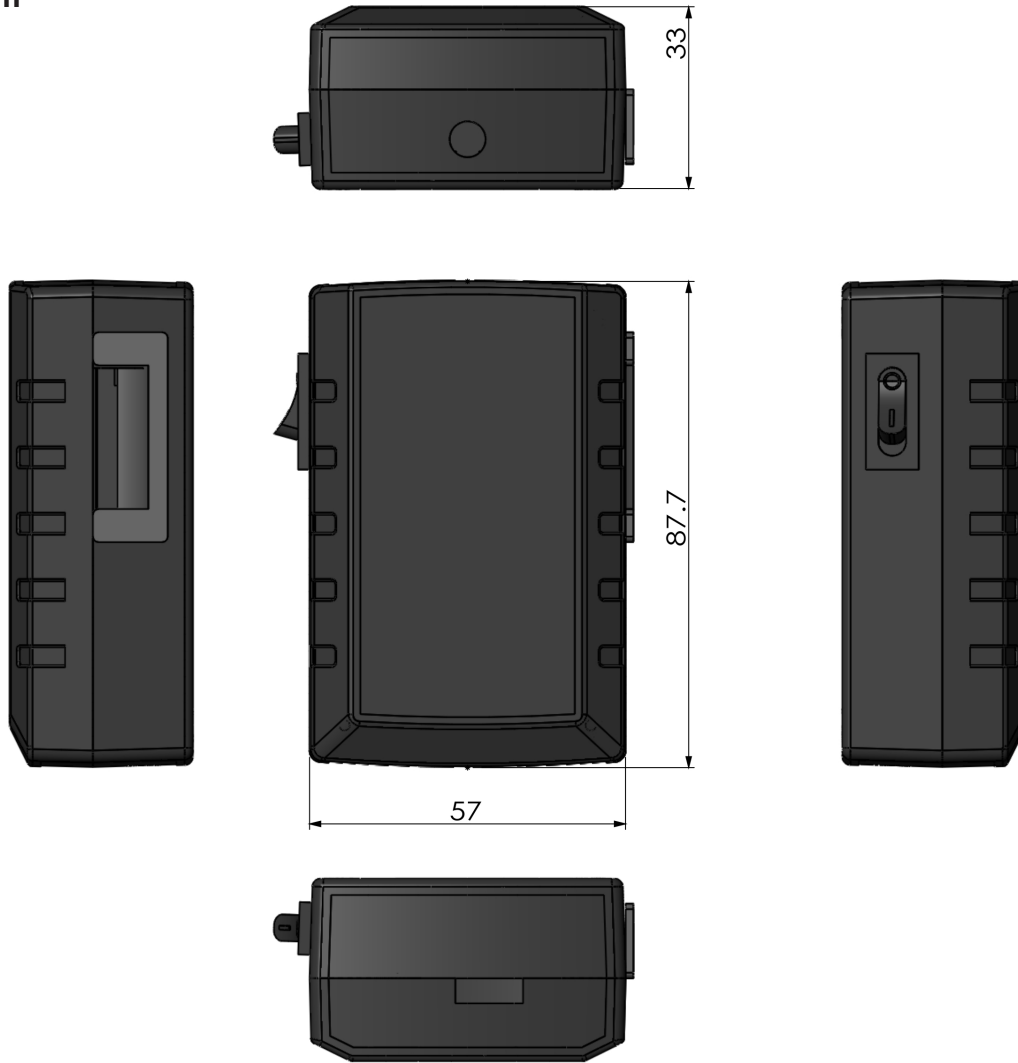
Specifications

Zigbee Dongle

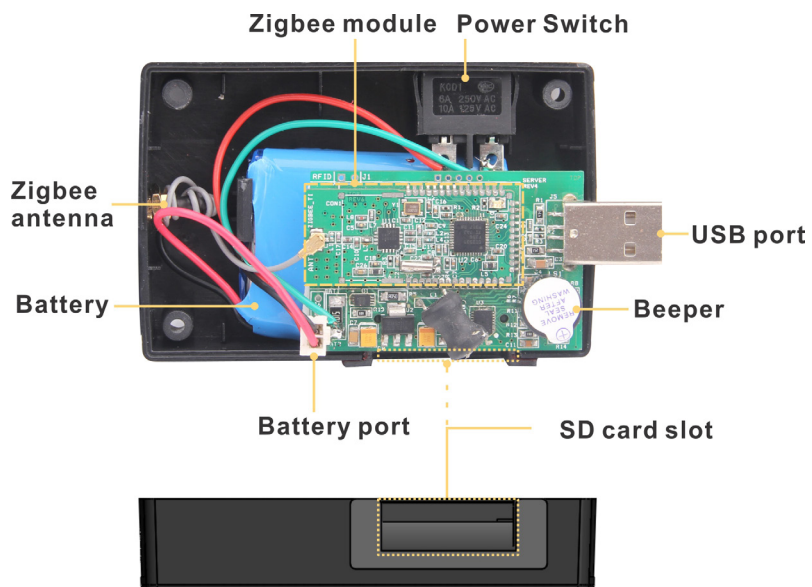|	
Supple Voltage	2.1 to 3.6V
Communication	USB, Zigbee
Antenna	RPSMA Connector,50Ω
Transmission Range	Penetrate a wall inside room; 200m wide open outside space
Max Current	<20mA @24VAC
Transmit Power	100mW(+20dBm)
Receiver	-101 dBm
Data Rate	RF 250 Kbps,Serial up to 1Mbps
Frequency Band	ISM 2.4 GHz
Operating Temperature	-40º C to +85º C
Memory	Standard: N/A Programmable: 256KB Flash/4 KB RAM
IDS	PAN ID and addresses, cluster IDs and endpoints
Channels	16 channels
Transmit Current	Standard: 120 mA @ 3.3 VDC Programmable: 120 mA @ 3.3 VDC
Receive Current	Standard: 31 mA @ 3.3 VDC Programmable: 45 mA @ 3.3 VDC
Power-down Current	<3 µA at 25º C

Dimension

Unit:mm

33

87.7

57

Internal View

Zigbee module   Power Switch

Zigbee antenna

Battery

USB port

Beeper

Battery port

SD card slot

Note:

1.The SD card is only for trend logs. On the upcoming hardware, Arm based units, there's a flash chip on board the module so those can do logging without messing around with SD card.

2.The power switch is a simple on-off switch. The device can be powered through the USB port. The battery will keep the unit alive for a short period during power outages.

Application

The dongle instantly enables a wireless Zigbee connection for existing equipment such as desktops, notebooks to monitor and control Zigbee devices with plug and play convenience.The dongle can be configured as a network coordinator to start a new network.The diagram below will show you how to properly set up a Zigbee Dongle.
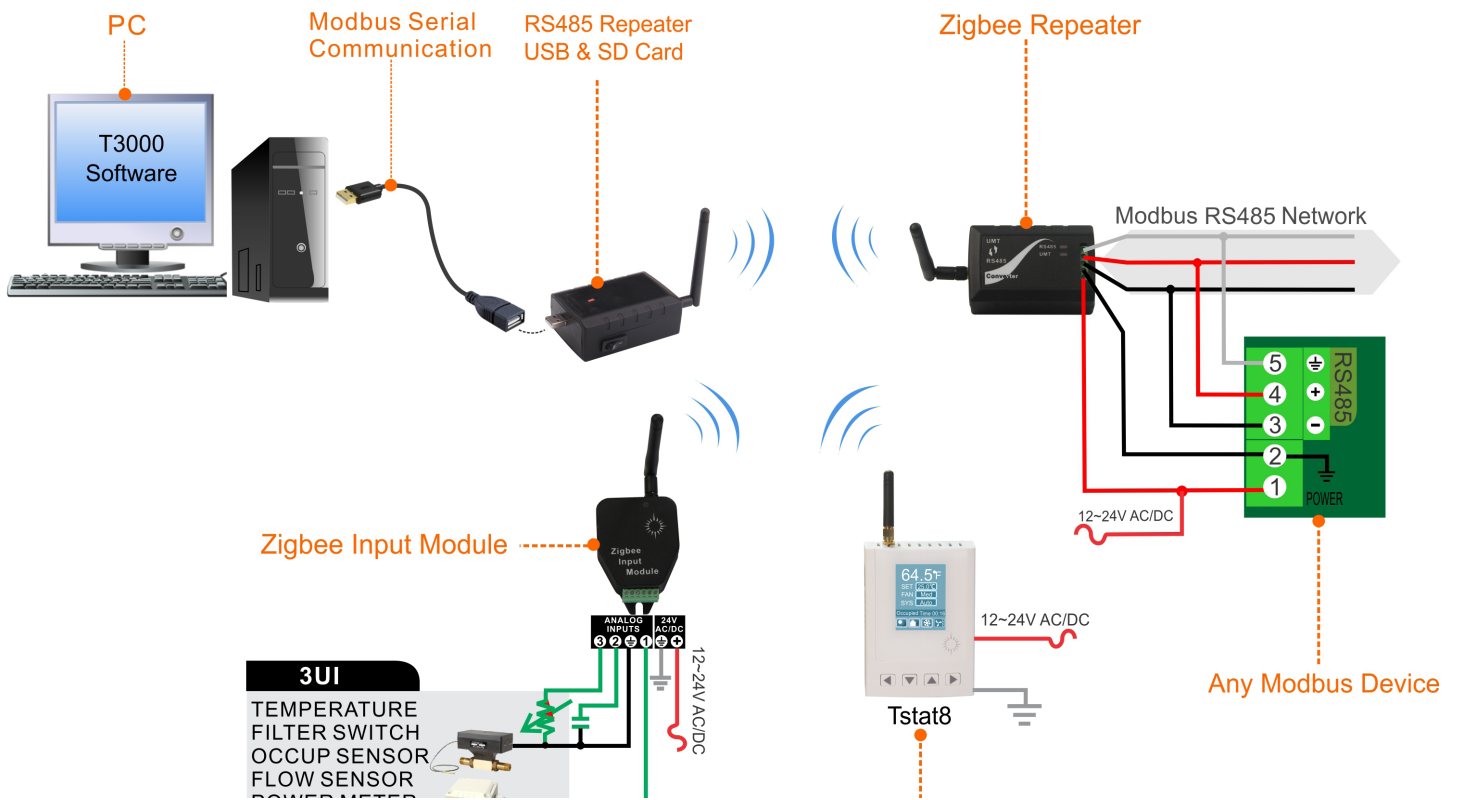
T3000 Operation

This example will show you how the unit will properly work with T3000 software when connecting any Modbus module to a Zigbee Dongle.
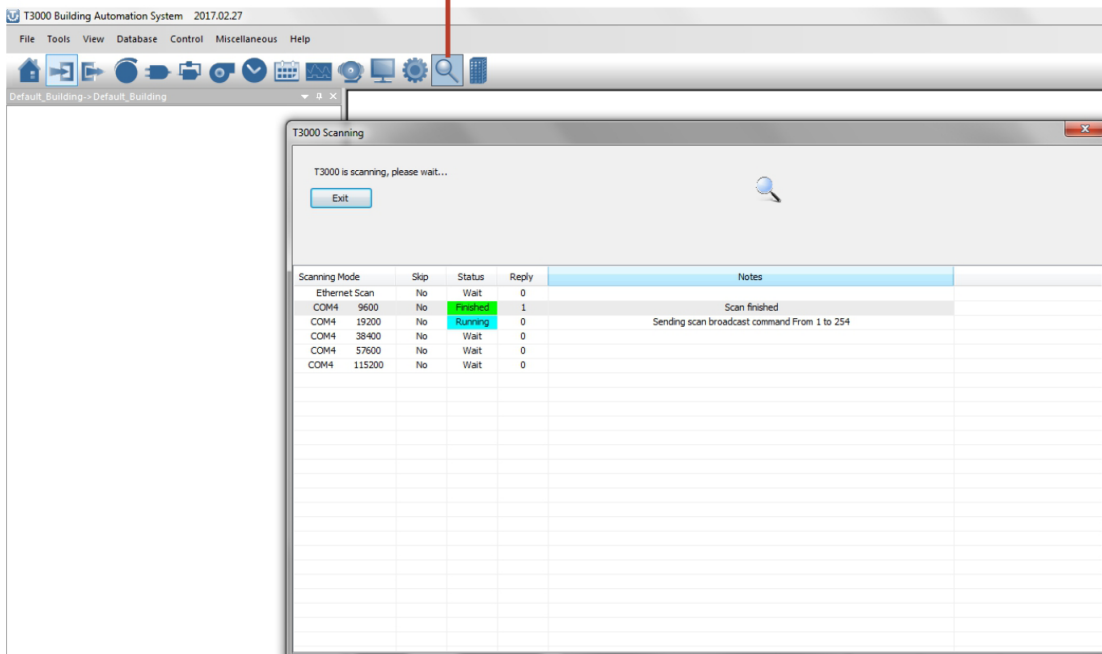
Step1.

Visit https://temcocontrols.com/ftp/software/T3000.zip,download and install the software;

Visit https://temcocontrols.com/ftp/software/15CC2531 Driver.zip,download and install the software.
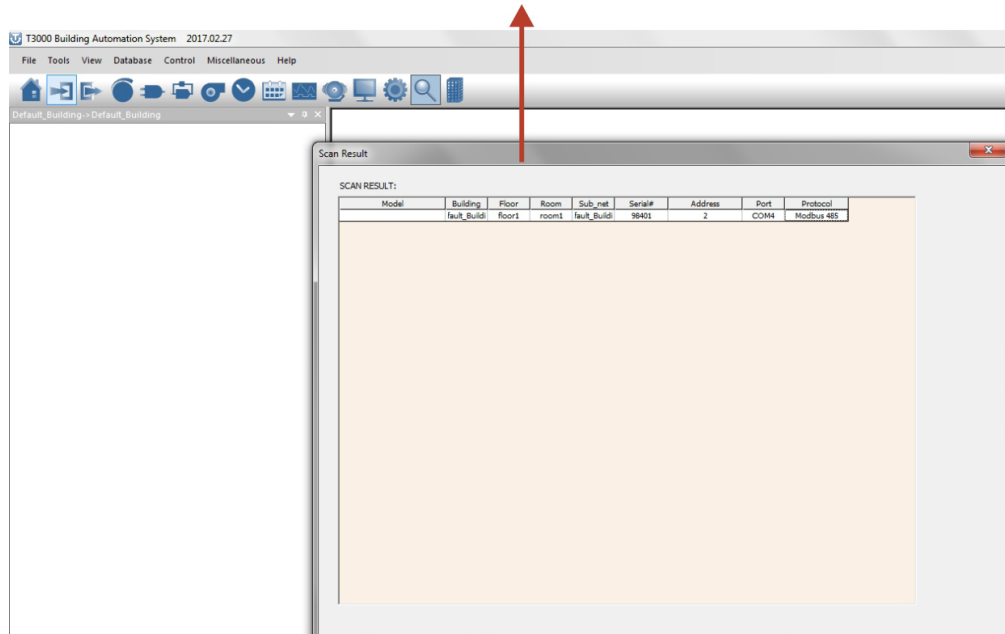
Step2.

Plug the Zigbee Dongle and any modbus device(for example,Tstat8) in power,then start them.Connect the Zigbee Dongle to a PC USB port.

Click to scan

Device scanned

Step3.

Start T3000 software,click to scan,then you can find the device as below

Device information →

Modbus Register List

Address	Bytes	INTs	Multipler	Length info	Operation info	Register and Description
0 to 3	4	int8	1	Low byte	R	Serial Number - 4 byte value. Read-only
4 to 5	2	int8	0.1	Low byte	R	Software Version – 2 byte value. Read-only
6	1	int8	1	Low byte	W/R	ADDRESS. Modbus device address, default:MainBoard-1
7	1	int8	1	Low byte	R	Product Model. This is a read-only register that is used by the microcontroller to determine the product
8	1	int8	1	Low byte	R	UTC time, hour
9	1	int8	1	Low byte	R	UTC time, minute
10	1	int8	1	Low byte	R	UTC time, second
11	1	int8	1	Low byte	R	UTC time, month
12	1	int8	1	Low byte	R	UTC time, day
13	1	int8	1	Low byte	R	UTC time, year
18 to 20						Blank, for future use
21	1	int8	1	Low byte	R	BaudRate, default 0-9600,1-19200,2-38400,3-57600,4-115200
22	2	int16	1	Full	W/R	PANID for zigbee devices
23	1	int8	1	Full	W/R	Device type of zigbee. 0 means coordinator , 1 means router
24 to 25	4	int16	1	Full	W/R	Channel of Zigbee, default channel is channel 13, 0x00002000
26	1	int8	1	Low byte	R	Zigbee module software revision
27-34	8	int8	1	Low byte	R	Zigbee extented address(MAC address)
35	1	int8	1	Low byte	W/R	Set 1 to reboot zigbee module
36-51	16	int8	1	Low byte	W/R	Seurity key