

Description

The Zigbee Dongle is a lowcost, low consumption, and wire-less 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

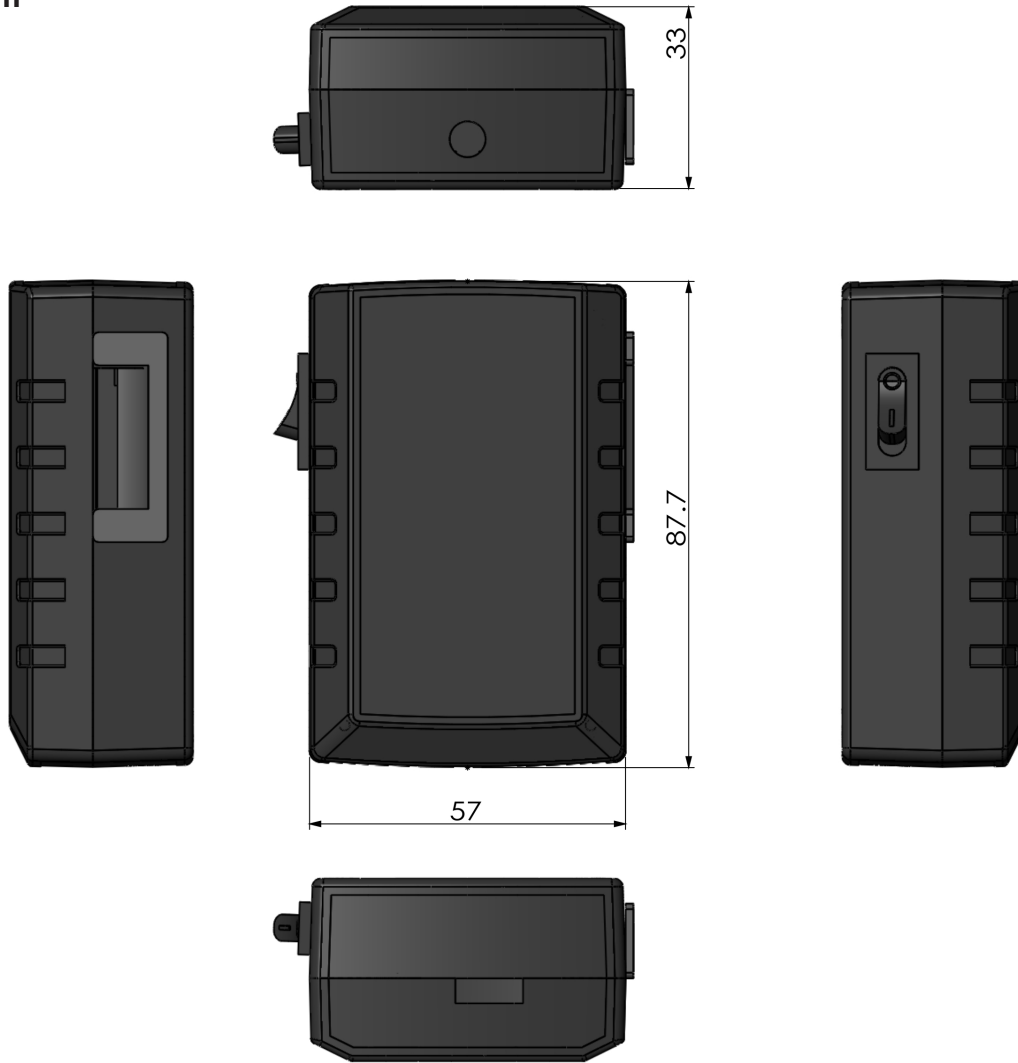
Supple Voltage	2.1 to 3.6V
Communication	USB, Zigbee
Antenna	RPSMA Connector,50Ω
Transmission Range	Penetrate a wall inside room; 200m wide open outside space
Max Current	<20mA @24VAC
Transmit Power	100mW(+20dBm)
Receiver	-101 dBm
Data Rate	RF 250 Kbps,Serial up to 1Mbps
Frequency Band	ISM 2.4 GHz
Operating Tempera- ture	-40° C to +85° 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 25° C



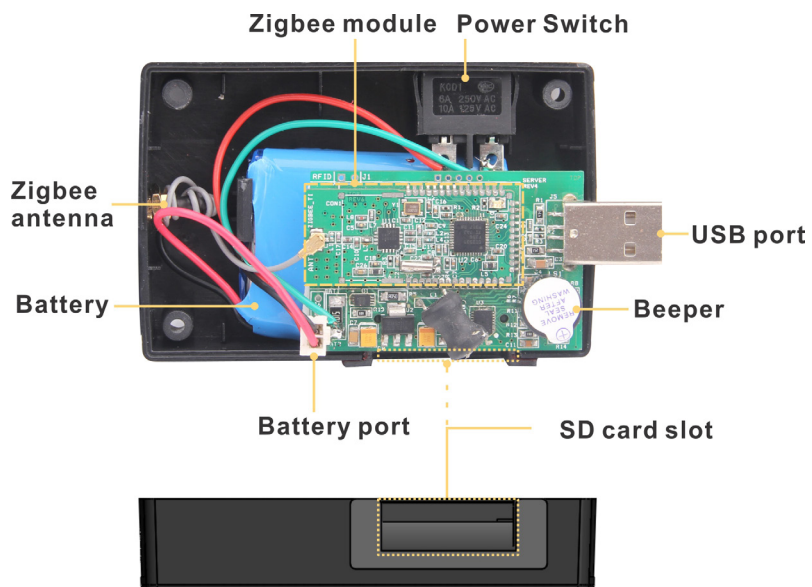
Zigbee Dongle

Dimension

Unit:mm



Internal View



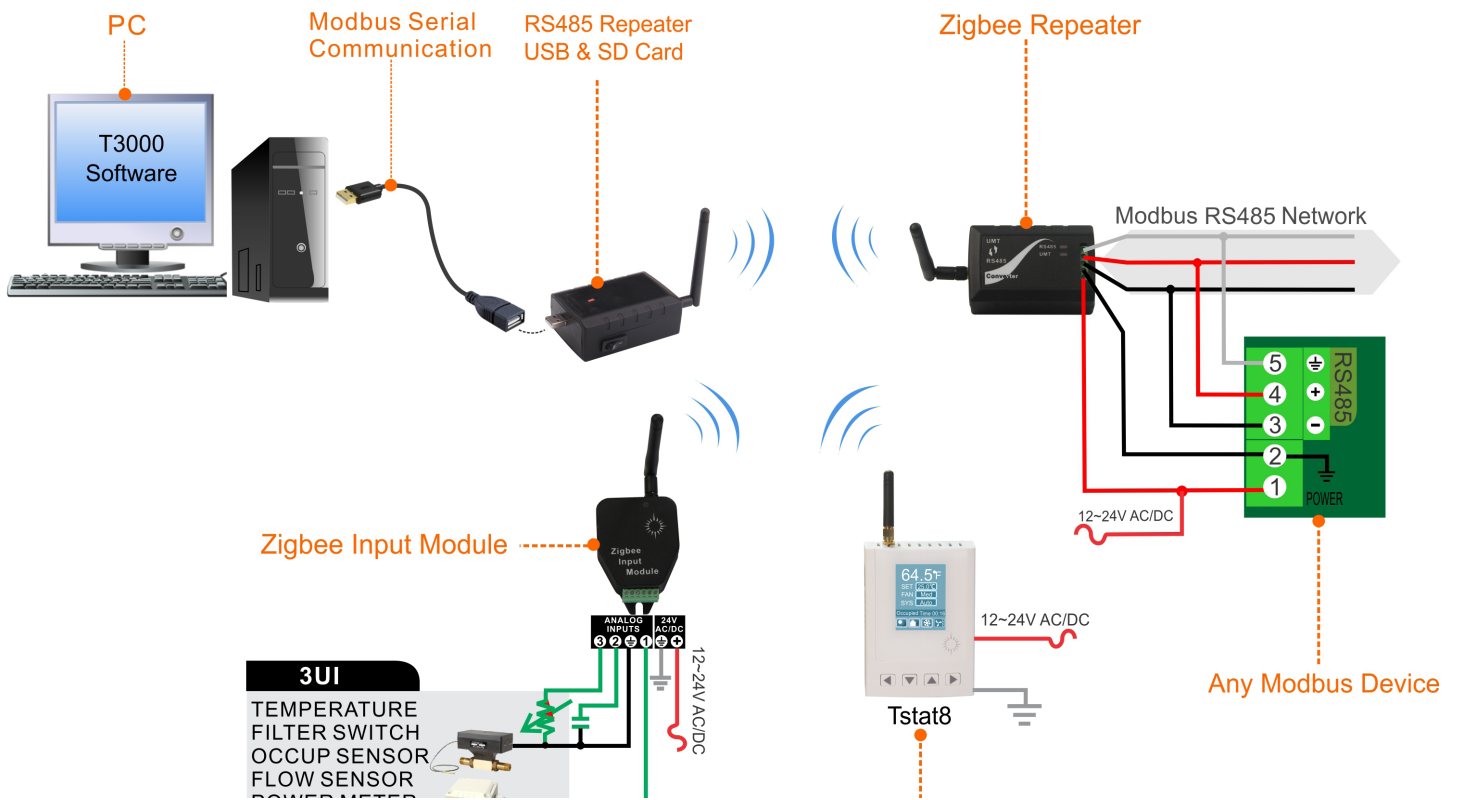
Zigbee Dongle

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;

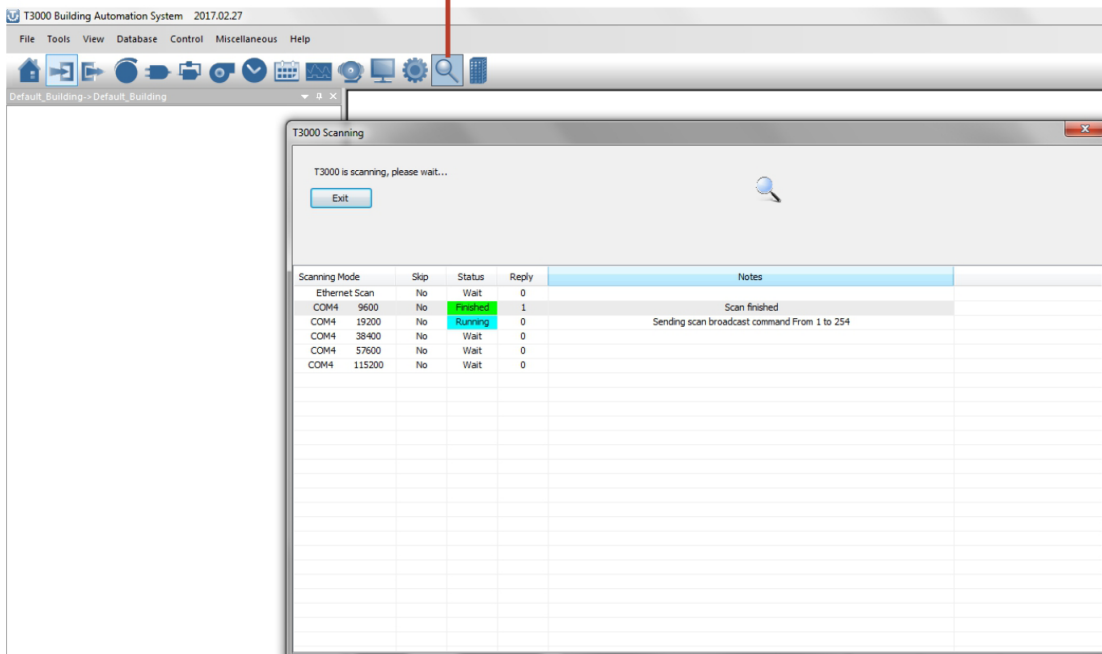
Visit [https://temcocontrols.com/ftp/software/15CC2531 Driver.zip](https://temcocontrols.com/ftp/software/15CC2531%20Driver.zip),download and install the software.



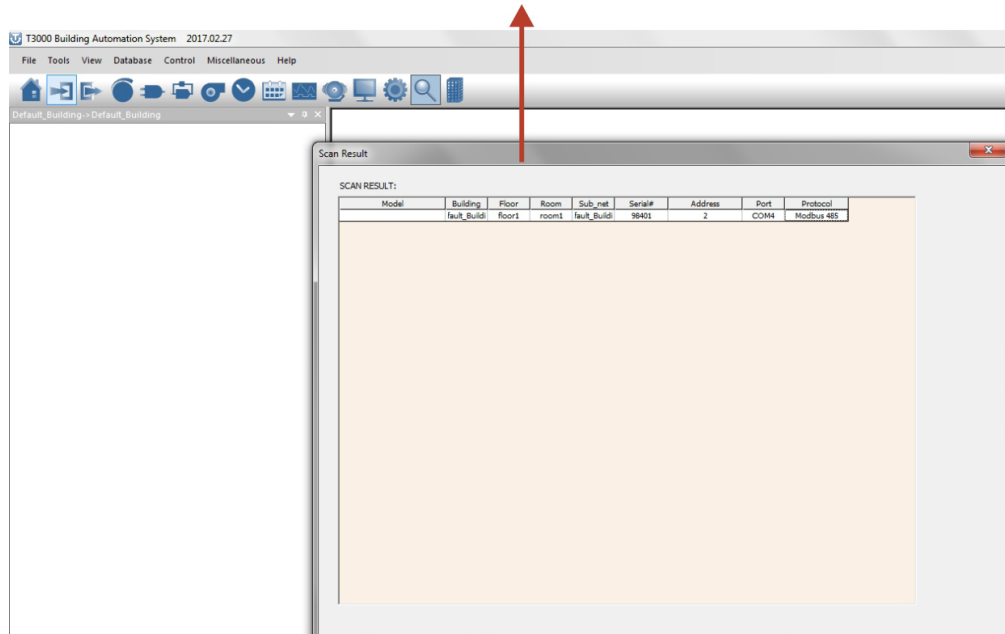
Step2.

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

The screenshot displays the T3000 Building Automation System interface. On the left, a tree view shows the device hierarchy: Default_Building -> Local Network -> Serial Port -> Comp -> TStat8-98401. A red dashed box highlights the TStat8-98401 device, with an arrow pointing to the 'Device information' label. The main window shows the configuration page for this device, including fields for Name, ID Address, Serial Number, Firmware Version, Model, Hardware Version, PIC, Date, Time, and Sync Time. It also features a 'Temperature and Setpoint' section with a bar chart showing current temperatures for Home (20.5 C), Occupied (21.0 C), Work (22.0 C), and Unoccupied (20.0 C). The 'Advanced Setup' section contains two tables: Input and Output.

Device information

Temperature and Setpoint

Setpoint	Home	Occupied	Work	Unoccupied
Current Temperature	20.5 C	21.0 C	22.0 C	20.0 C

Advanced Setup

Input		Output	
Name	Value	Name	Value
0 Input1	0	1 Output1	On
1 Input2	0	2 Output2	Off
2 Input3	0	3 Output3	Off
3 Input4	0	4 Output4	Off
4 Input5	0	5 Output5	Off
5 Input6	0	6 Output6	0.0%
6 Input7	0	7 Output7	0.0%
7 Input8	0		
8 Internal Temp Se	20.5		
9 Humidity Sensor	N/A		
10 CO2 Sensor	-400		
11 Lighting Sensor	1712		

Health: 100% Multi Read ID=2,start address=900,length=100

Modbus Register List

Address	Bytes	INTs	Multiplier	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 extended 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	Security key