ZIGBEE1080
User's Manual

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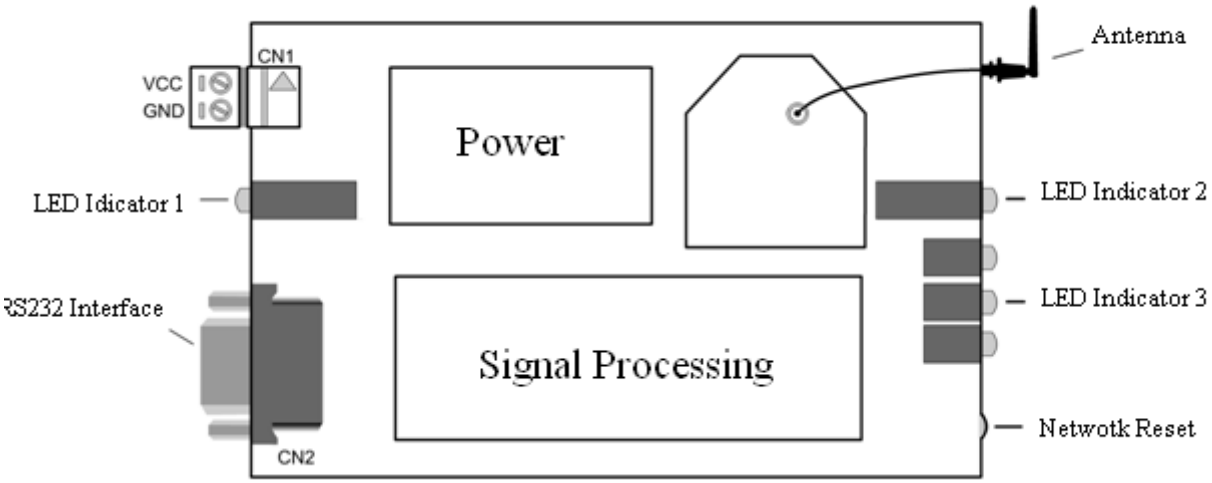
Overview

ZIGBEE1080 module is used to create simple ZIGBEE network. It can be used with ZIGBEE1082, ZIGBEE1085, ZIGBEE1080A and other ZIGBEE nodes. In ZIGBEE network, there is only one server. ZIGBEE1080 module can be used as the server. The module can work in API (default) and AT mode. AT is used for Dual couplet, API is not only used for Dual couplet, but also can be applied to a star network and mesh network, to better meet customer's needs.

Meanwhile, ZIGBEE1080 can be configured for routing mode, and can be used between server and other types of nodes that can not be communication caused by long distance.

ZIGBEE1080 can be configured for enhanced, its communication distance can be upgraded to 1600m (view distance, the theoretical value). Enhanced module's name is ZIGBEE1080+.

Module Structure and Terminal Block



Description

1. Terminal Block
   GND: Power supply negative terminal
   VCC: Power supply positive terminal, +10V~+30VDC
2. LED indicator 1
   Green: power supply indicator, on for normal.
   Red: network receive indicator
3. LED indicator 2
   Green: network send indicator
   Red: network connection indicator, it is on when network is formed
4. LED indicator 3
   The 3 indicators indicate the strength when receive the network data, the signal is strongest when all the indicators are on.
5. RS232 interface
   Use this interface to connect to the PC when configure the module (1, 3 of SW1 for on, 2, 4 for off)
6. Network reset button
   If the network can't be started normal when re-configure the module, reset it.

Features

- Transmission Distance: view distance 100m (ZIGBEE1080)/view distance 1600m (ZIGBEE1080+)
- Power Supply: untreated +10V~+30V
- Serial Port Baud Rate: 115200bits (default)
- Power Consumption: 0.38W @24VDC (when the module do not use XBEE network to transmit data)

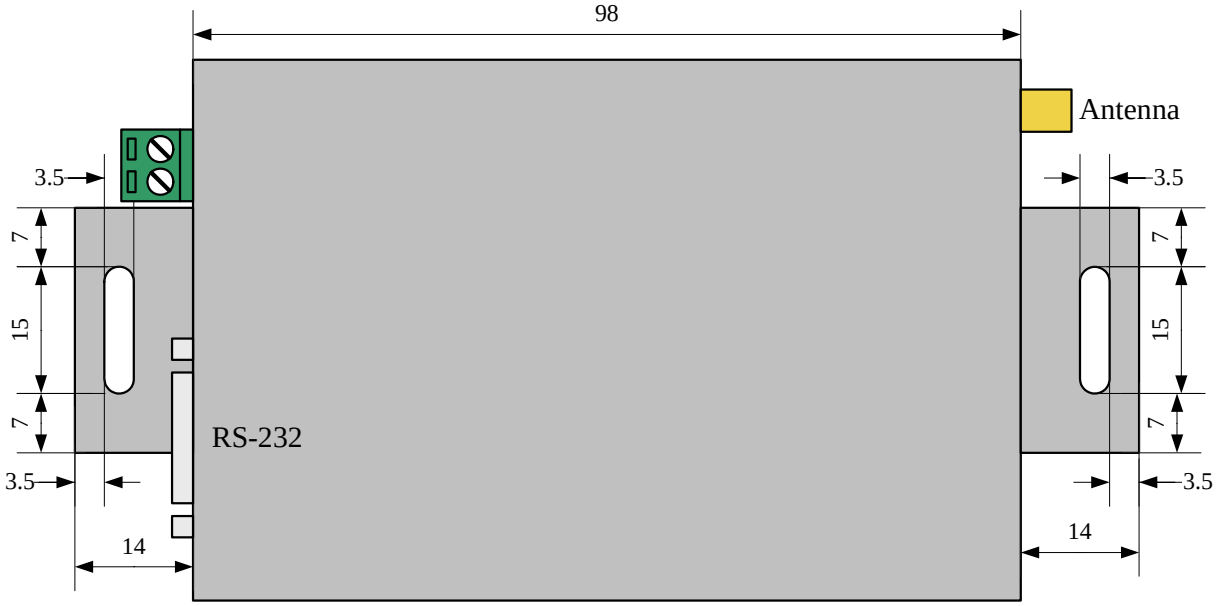
Considerations

1. If there are multiple ZIGBEE1080s or other servers, we must set the PAN ID of the all the servers to different values.
2. When use the API approach, the maximum packet size is 72 bytes, remove the specific byte of the API, if use the ZIGBEE network to send data packets, the user area allows the maximum transmission length is 54 bytes, and if receiving the data packets, the user area allows the maximum receiving length is 55 bytes.
3. If you want to use ZIGBEE1080 as route, please indicate.
4. This module supports only six hop, view distance 100m, can add to six routes, the length can be expanded to 600m.
5. If the ZIGBEE1080 is used as the routing, then the PAN ID of the Zigbee1080s must be the same as the PAN ID of the server, otherwise, the route can not be added to the network.
6. If the communication distance more than 100m, we can use ZIGBEE1080+.

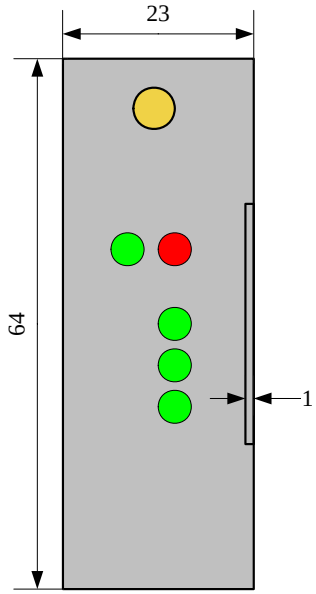
Product Dimension

Case Size (does not contain Positioning holes): 98 (L) * 64 (W) * 23 (H) mm

Positive detailed dimensions shown as below: (Unit: mm)



Side (the side of the antenna) dimension shown as below: (Unit: mm)


23
64
1