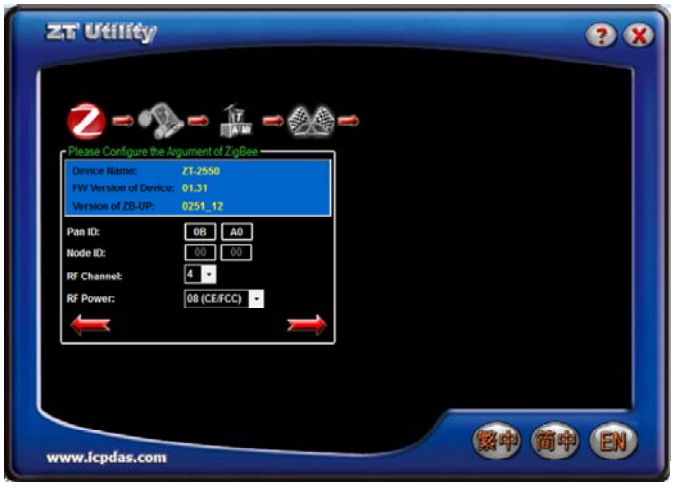
ZT series FAQ

Q1、How to get or set the parameter of ZigBee converter (ZT-255x / ZT-257x) ? (2013/09/30, Bao)

Ans.：

The step to get or set the parameter of ZigBee converter as below:

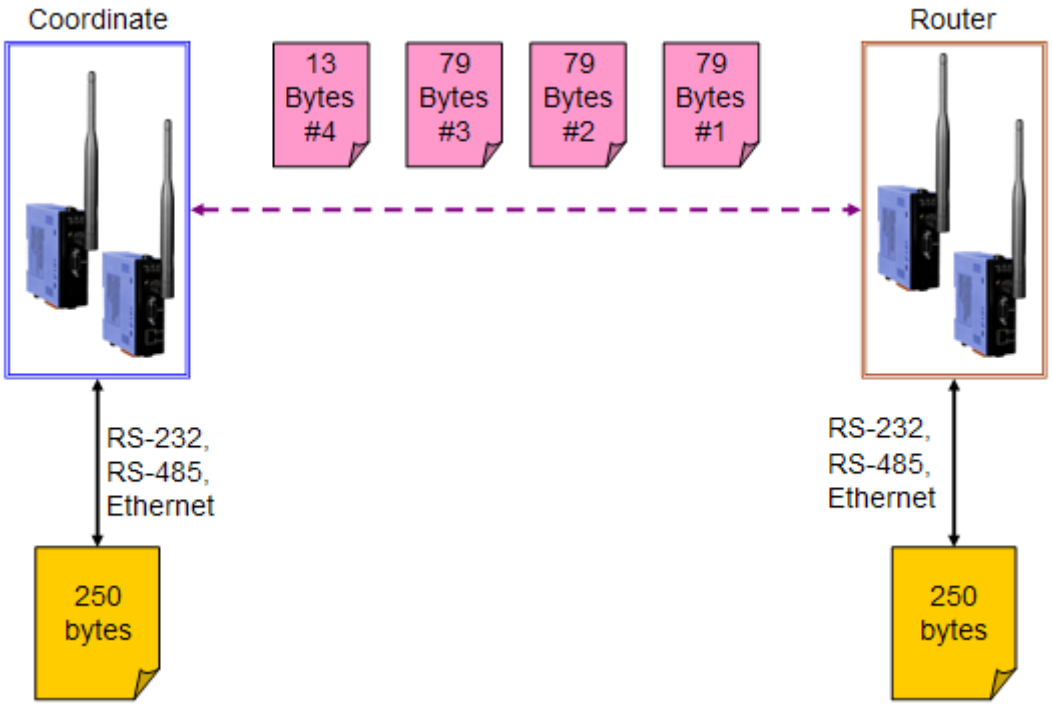
1. Make the DIP-switch of module to the [ZBSET] position, and re-power on again.
2. Connect the PC with ZT module's COM0 by using RS-232 cable which came with the ZT module. (Warning: The ZT-2551 / ZT-2571 need the RS-232 Null-Modem cable.(CA-0910N))
3. Run ZT Utility in the PC. (http://ftp.icpdas.com.tw/pub/cd/usbcd/napdos/zigbee/zt_series/utility/), the picture is as below, select COM port -> select module will get or set the parameter -> click wizard. In ZT Utility, it will show the parameter of module. If user follows the indicator of ZT Utility message, then ZT Utility will set the parameter to module. (2013/12/03, Bao)



Q2、If packet length of data greater than 79 bytes, how the will ZigBee converter (ZT-255x / ZT-257x) dealt with? (2013/10/14, Bao)

Ans.：

When the data was sent to the COM port, RS-485 or Ethernet port of the ZigBee converter and the data length is greater than 79 bytes, the ZigBee converter will split the data into several 79-byte packages. And then, the ZigBee converter will transmit each package one by one. For example, there is a data which is 250 bytes and need to be transmitted by the coordinator (ZT-2550/ZT-2570), the coordinator will split the data into 4 packages which are 79, 79, 79, 13 bytes. After router receives these 4 packages, router will combine the 4 packages to 1 package with 250 bytes. Then router will transmit the data to COM port, RS-485 or Ethernet port, and vice versa. (2013/10/14, Bao)

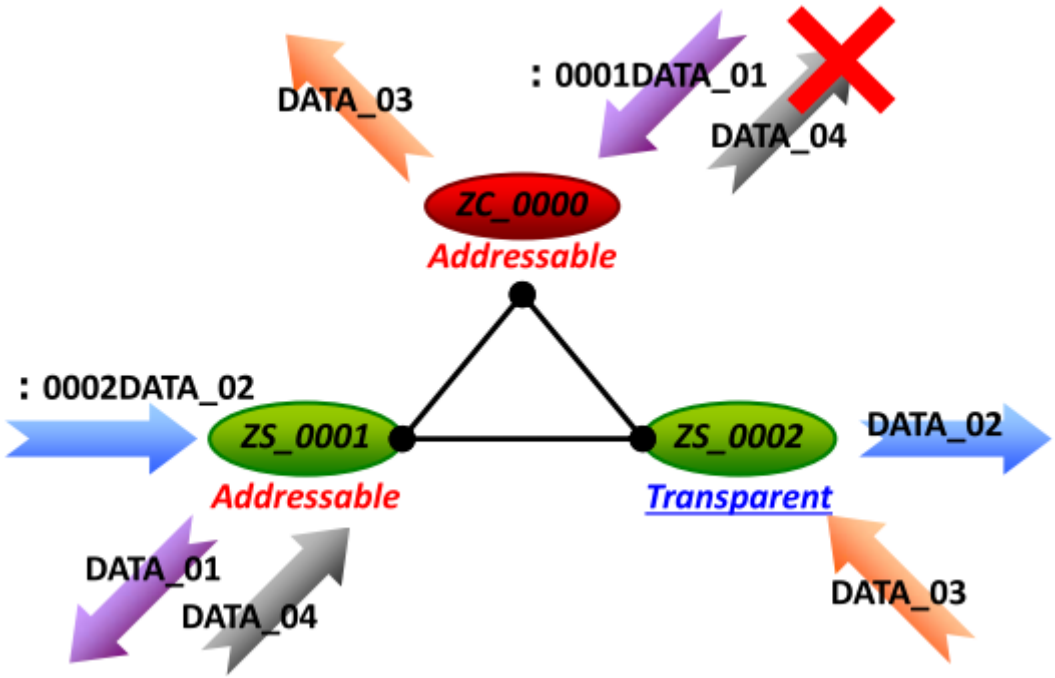


Q3、When the users has one coordinator and multiple routers and poll data one by one. What is the best configuration of the ZT modules? (2013/10/28, Bao)

Ans.:

When ZigBee converter be used in the state is one coordinator and multiple routers, and

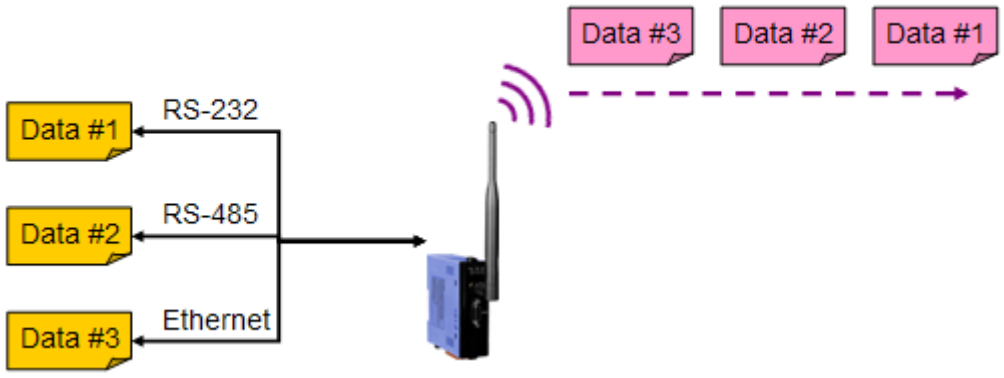
the communication mode is query and response in pairs. We suggest the coordinator to set the address mode, and the router to set transparent mode. And coordinator will poll to query each router.



Q4、When the data was send to the RS-232 / RS-485 / Ethernet of the ZigBee converter (ZT-255x/ZT-257x) at the same time, how will the ZigBee converter dealt with the data? (2013/09/23, Bao)

Ans.:

If the data simultaneous input ports of ZigBee converter, ZigBee converter will save the data of each port. And ZigBee converter will transmit each data sequentially to air by wireless. (2013/09/23, Bao)

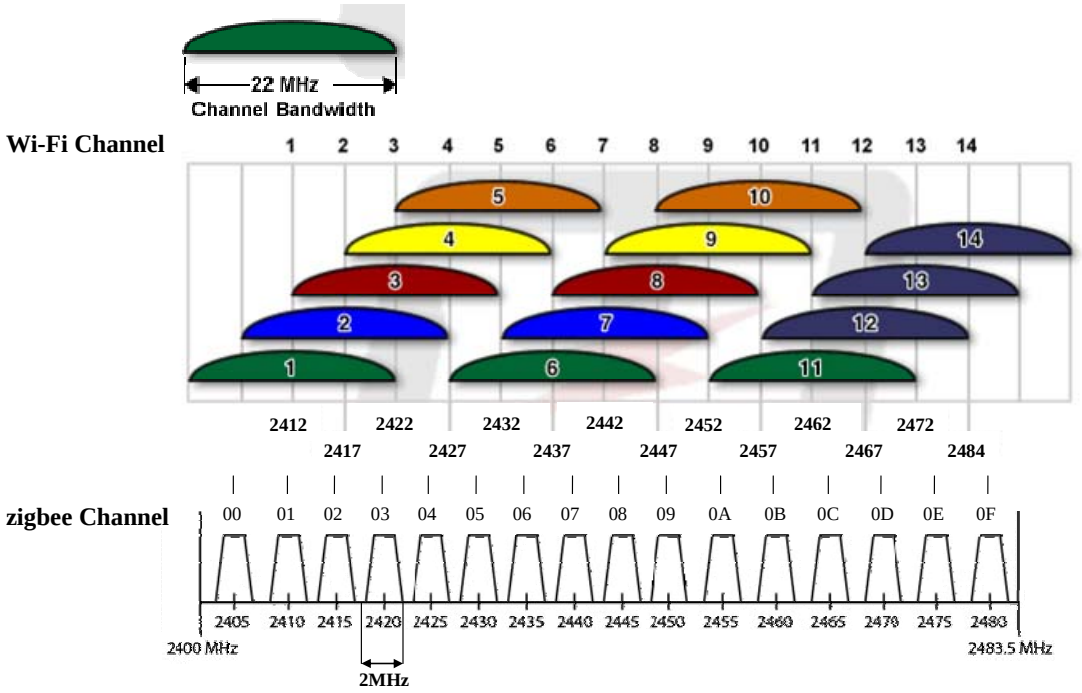


Q5、How to avoid Wi-Fi signal to influence ZigBee signal?

(2013/09/23, Bao)

Ans.:

Because Wi-Fi and ZigBee use 2.4GHz band together, their signal maybe overlap as below picture 1. User can select different channel between Wi-Fi channel and ZigBee channel.



Picture 1 Wi-Fi channel and ZigBee channel

By the way, user can use the free APP “Wifi Analyzer” in the smart phone or use the free software “inSSIDer” in the notebook (must built-in wireless network card) to detect Wi-Fi signal.

“Wifi Analyzer” (https://play.google.com/store/apps/details?id=com.farproc.wifi.analyzer&hl=zh_TW) and “inSSIDer” (http://www.metageek.net/products/inssider/) are as below picture 2 and picture 3. (2013/09/23, Bao)

Picture 2 Wifi Analyzer

Picture 3 inSSIDer

Q6、Does the ZT-2570/ZT-2571 supports TCP or UDP protocol over the Ethernet? (2013/11/04, Bao)

Ans.:

ZT-2570/ZT-2571 only support TCP protocol, doesn't support UDP protocol. (2013/11/04, Bao)

Q7、The Ethernet interface of ZT-257x that whether support Virtual COM? (2015/02/06, Bao)

Ans.：

Yes, the Ethernet interface of ZT-257x can support Virtual COM. The user needs to set the Virtual COM function by ZT-Utility, such as Fig.1-1, Fig.1-2, and install VxComm Driver/Utility to set IP address of ZT-257x into which Virtual COM, such as Fig.1-3. About the setting of Virtual COM in the VxComm Utility, please refer to "4.3 Confiiguriing the Virtuall COM Ports" in the user manual of VxComm Utility.

Download VxComm Driver/Utility:
(http://www.icpdas.com/products/Software/VxComm/vxcomm.htm)
Download the user manual of VxComm Driver/Utility:
(http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/vxcomm_driver/manual/)。

Fig1-1. Set ZT-257x to use virtual COM

Fig1-2. Setting IP of ZT-257x

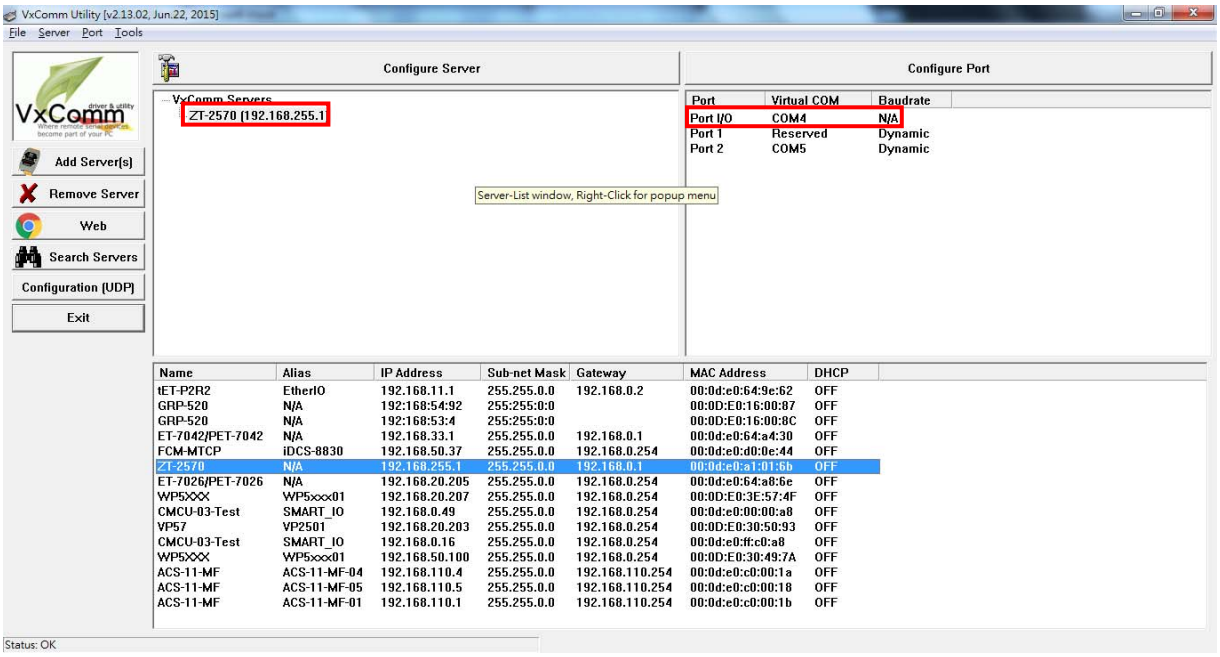


Fig-1-3. Setting virtual COM port of ZT-257x

Q8、Can the virtual COM of ZT-257x be set one IP address to pair multi COM ports, and let multi software use these COM in the same time? If it can't, what suggests can to do? (2015/04/22, Bao)

Ans.：

No, one IP address only pair one COM port. Only one software open the COM port in the same time, and open the COM port again after it be closed. If the user need to use multi software to send data to ZT-257x, we will suggest user to use IP address directly.

Q9、If the user do not add controllers, can the IO module of ZT series support the feature like as wireless switch? (2015/05/14, Bao)

Ans.：

Please refer to ZT-2000-IOP series, the series support pair-connection, and the feature can achieve wireless switch, such as Fig.3-1.

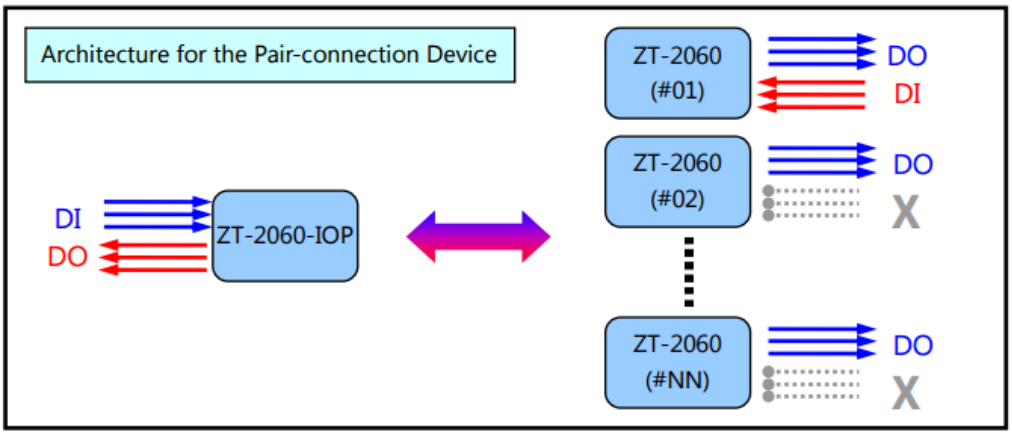


Fig3-1.Pair-connection of ZT-2000-IOP series

Q10、If the user changes original USB device to ZT-USBC, can the delay time less 5 ms? (2015/06/18, Bao)

Ans.：

No, because the ZigBee is defined to low speed and low power protocol, the delay time can’t less 5 ms. By the way, if have multi devices that such as ZigBee, Wi-Fi, Bluetooth use 2.4GHz in the same time, the delay time will extend. If the user uses the ZT-USBC in the environment with Line-of-sight and no interference, one master device sends data to slave device, and slave device responses the data will about 100 ms.

Q11、If the user's slave devices don't have address, whether can know the response data from which slave device? (2015/08/27, Bao)

Ans.：

Yes, please refer to "Non-addressable Device Communication" in the user manual. The example like as barcode readers, such as Fig. 5-1.

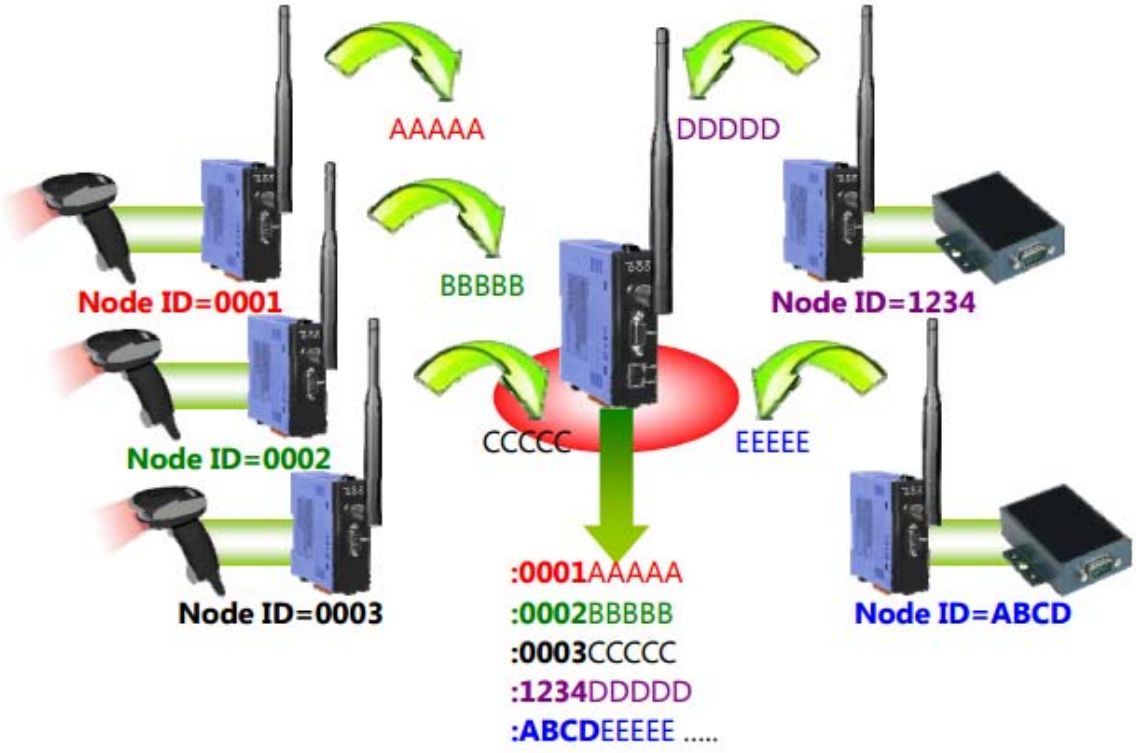


Fig5-1. Architecture of non-addressable device

Q12、ZT-2000-IOP series and ZT-2000-IOG series have IO pair-connection function, what are different about them? (2016/03/16, Bao)

Ans.：

The two series support IO pair-connection function, and the different between them can refer as below description and picture 3-1:

1. ZT-2000-IOP series:
   A The master is ZT-2000-IOP, and it's slave need to use the IO modules with

ZT-2000.

B The DI of master is triggered will be synchronized to the DO of the slaves.

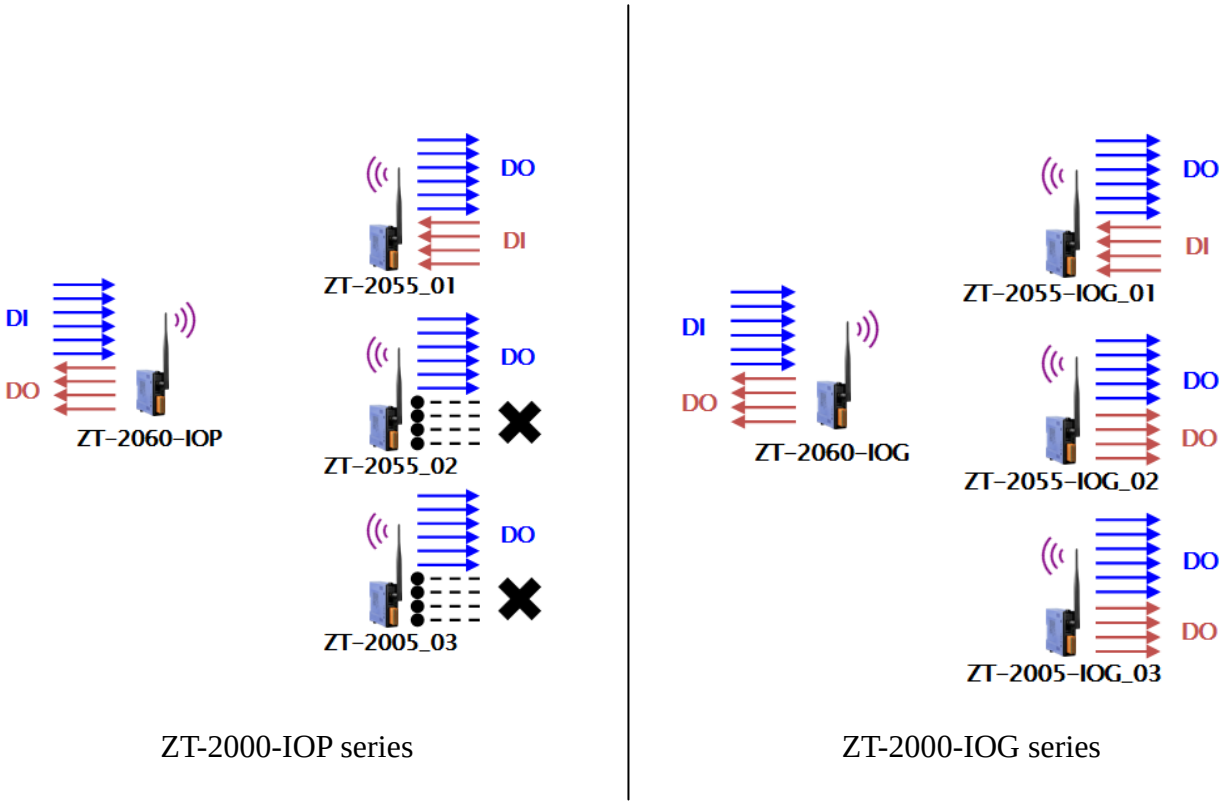
C Only the DI of number one slave module is triggered will be synchronized to the DO of the master.

2. ZT-2000-IOG series:

A The master and slave are ZT-2000-IOG series, the user need to pay attention don't use together with ZT-2000.

B The DI of master is triggered will be synchronized to the DO of the slaves.

C The DI of one slave is triggered will be synchronized to the DO of the master and other slaves.



ZT-2000-IOP series

ZT-2000-IOG series

Fig.3-1. The different between ZT-2000-IOP and ZT-2000-IOG

Q13. How to assess the wireless installation location and signal strength in the site environment? If the signal is not good, it is recommended to improve the way? (2016/06/17, Bao)

Ans.：

Because the barrier situations of each site environment are different, it's like trees, metal, cement wall ... etc, we suggest use the new topology software by ICP DAS supplied to measure the signal strength in the site environment. The topology software is like picture 2-1 can measure the signal strength and data delivery status. The user manual of software can refer the link as below:

http://ftp.icpdas.com.tw/pub/cd/usbcd/napdos/ZigBee/zt_series/document/zt-255x/

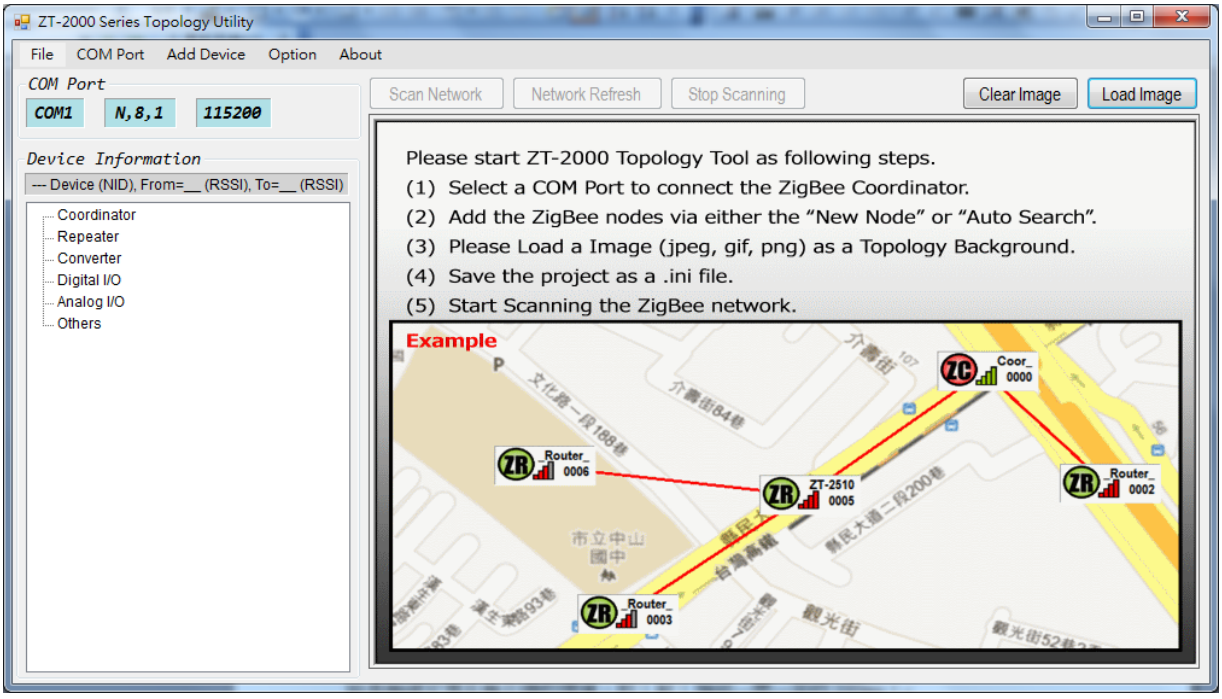


Fig.2-1. Topology software of ZT-2000 series

In addition, if signal strength is not good, the user can refer the way as below to improve it:

1. Changing the install position to avoid the position the signal is good, or using the extension cable of antenna to extend the distance, it's like picture 2-2. But using the extension cable will let the wireless signal attenuation, so the length of extension cable is suggest 1 ~ 3 meter (the best is 1 meter) to avoid too much attenuation of the wireless signal. Please refer to the 3S00x-1 series in the link: http://www.icpdas.com/root/product/solutions/accessories/cable/cable_selection.html

Fig. 2-2 Use extension cable of antenna

2. Using the configuration software of ZT module (ZT-2000 configuration utility) to adjust the RF power, if the larger the value, the greater the transmission power. (Note: RF power=08 has the ability to certify CE and FCC, if the user adjust it is purely personal behavior, ICP DAS can not guarantee the adjustment of the parameters are still in line with CE, FCC regulatory restrictions, nor assume any adjustment due to the parameters derived from legal liability.)
3. Changing the 5dBi antenna to other antenna like 8dBi antenna. Please refer to the 2.4GHz antenna in the link: http://www.icpdas.com/root/product/solutions/industrial_wireless_communication/wlan_products/external_antenna.html

Q14. If I have indoor Wi-Fi AP, but I want to monitor the flow meter with 4~20mA signal in the outdoors several hundred meters away. Is it possible to take advantage of Wi-Fi to ZigBee? (2016/08/26, Bao)

Ans.：

Yes, please refer to application architecture diagram as like picture 5-1. However, the need to pay attention to one thing, Wi-Fi for high-speed, high flow, and ZigBee for low-speed, low-flow applications, in this application, the speed of ZigBee will be slower, so we suggest the polling rate in the computer will slower. For example, when the number of ZT-2017C is less than 20, the polling cycle is about 1 second.

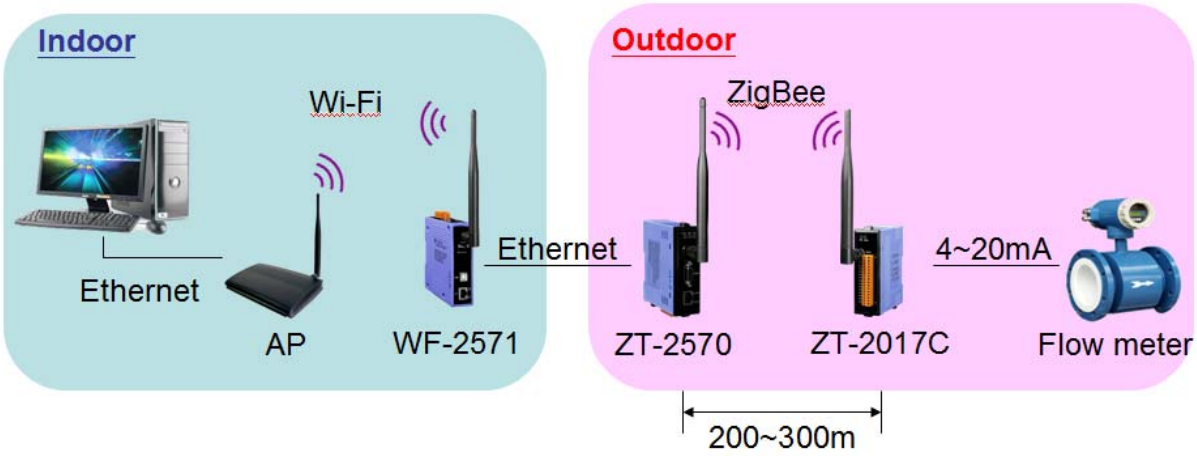


Fig. 3-1 Application architecture diagram of Wi-Fi to ZigBee