Automatic network: all the power on the module of automatic networking, network modules such as electricity, network with self-healing functions: data transmission via a serial port for data transmission between any node can be:
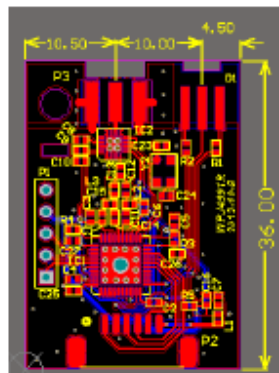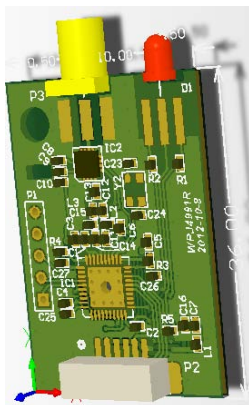
1, data transparent transmission: WPJ2530R data received from the serial port will be automatically sent to all the nodes;A node data received from the serial port will be automatically sent to the WPJ2530R;

2, instruction mode, data transmission between any node: the format of the data transmission is: 0 XFD (command) data transmission + 0 x0a (data length) + 0 x73 0 x79 (destination address) + 0 x01 0 x02 0 x03 x04 x07 x06 x05 0 0 0 0 0 0 x08 x09 0 x10 (data, a total of 0 x0a Bytes).Simple to use: users don't need to consider ZigBee protocol, like using the serial port using wireless module.

WPJ253ORparameter

	WPJ2530R
input voltage	Standard: 3.3 V DC, range: 2.6 V to 2.6 V
Temperature range	−40℃～85℃
weight	7g
Communication interface	UART/19200bps
Radio frequency	2.4 G (2460 MHZ)
Wireless protocol	Zigbee2007
Transmission distance	Visible, open, transmission distance of 1200 meters
Working current	Launch: 120 ma (Max), 80 ma (on average), receive: 45 ma (Max) Standby: 40 ma (Max)
Receiving sensitivity	−110 dBm
PAN ID	The factory default 0 x1b03

ZigbeeModule pin definition and size WPJ2530R

PIN 1：Network request, the low level > 100 ms
PIN 2：GND
PIN3：RXD。
PIN4：TXD。
PIN5：BUSY。
PIN6：VCC，2.6V-3.6V

WPJ2530R data transmission module
WPJ2530R series module data transmission function is very simple to use, there are two kinds of data transfer method: (1), data transparent transmission mode: as long as the transfer of the first byte is not 0 xfe, 0 XFD or 0 XFC, automatically enter the data transparent transmission mode;(2), point-to-point data transmission mode: any node within the network, through the point-to-point transfer instructions, data transmission;Instruction format: 0 XFD target address + data + + data length, all WPJ2530R can only receive data segments, all bytes filtered data segment.
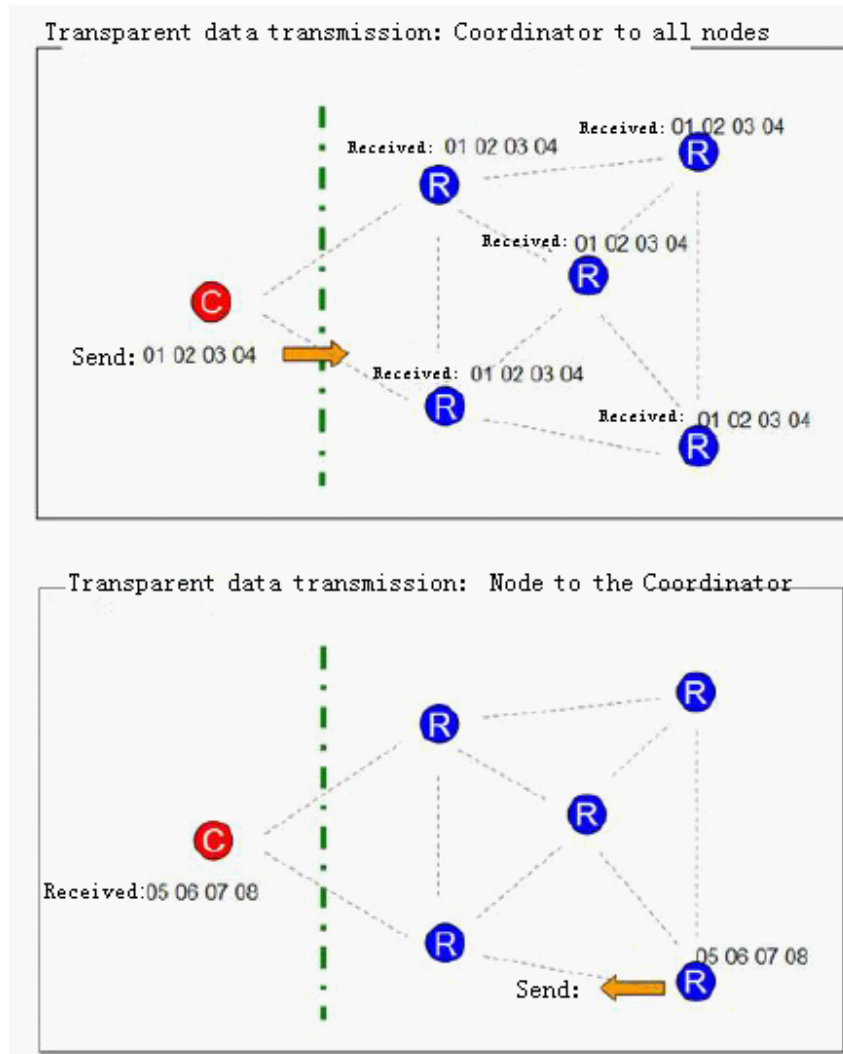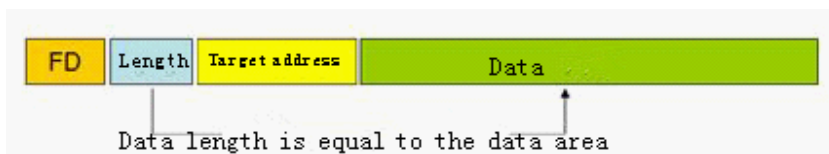

2, point-to-point data transmission mode:
The following graphs, and briefly describes the point-to-point data transmission way: (data x50f5 transmitted from 0 to 0 x143e)

Point to point data transmission:
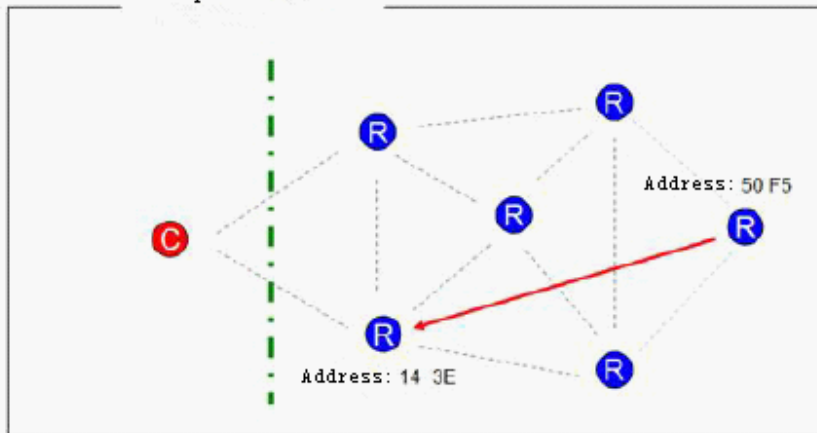
Send instruction format: data transfer instructions (0 XFD) target address + data + + data length (up to 32 Bytes) support variable length data length in 32 Bytes.

Such as sending:

FD 10:0 a data transfer instructions, data area data length, 10 bytes
14 3 e: target address 06 07 01 02, 03 04 05 08 09 10: data
Receive data format: to receive all the data sender and finally increase the source address (2 bytes)

If the received data is:

FD: 0 a data transfer instructions, data area data length, 10 bytes 14 3 e: target address of the sender and the receiver itself address 06 07 01 02, 03 04 05 08 09 10:50 F5 data: the sender's address, the data source address note: WPJ2530R received data is actually only 10 bytes of data segment

Zigbee module Settings
Setup instructions below (has value for all hexadecimal number) :

Serial number	Instruction	Function	Feturn	Need to restart?
1	FC 02 91 01 XX XX XY (x, y = 6 bytes before and, keep low 8 bits, hereinafter the same)	Setting module PAN ID for a specific value XX XX If the PAN ID of the module, setting of FF FF: If the Coordinator, restart automatically generate a new PAN ID If the Router, restart automatically after looking for new networks to join Can not be set to FF FE After a reset PAN ID (or the same value after reset) If it is the Coordinator, will remove has joined the nodes of the network If the Router, has joined the network, to find and join the network	XX XX Such as: input: FC 02 91 01 12 34 D6 Returns: 12 34	Yes
3	FC 00 91 03 A3 B3 XY	Read the module of PAN ID value	The module of the PAN ID value Didn't join the network, if the Router, read the value of FF FE Read the Coordinator for the set value	No
4	FC 00 91 04 C4 D4	Read module of Short Address (modules within the network Address)	Short Address	NO

			XY	
			If modules have not yet joined the network, read the value for the FF FE Coordinator's address is 00 00 forever	
6	FC 01 91 06 XX F6 XY	A serial port baud rate setting module XX = 01 ~ 05: set to 9600 ~ 115200 XX = other	(see instructions)	Yes
7	FC 00 91 07 97 A7 XY	Testing a serial port baud rate	If the serial interface baud rate, right returns: 01, 02 03 04 05 If the serial interface baud rate error, no return	No
8	FC 00 91 08 A8 B8 XY	The MAC address of the read module	MAC address of 8 bytes 12 4 b, such as: 00 FF 56 FE 78 FF	No

Important to OEM Manufacturer:
This following FCC Warning must be included in the HOST User Manual.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

Note 1: This module certified that complies with RF exposure requirement under portable or mobile or fixed condition, this module is to be installed only in portable or mobile or fixed applications.

A portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user

A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

A fixed device is defined as a device is physically secured at one location and is not able to be easily moved to another location.

Note 2: Any modifications made to the module will void the Grant of Certification, this module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products.

Note 3: The device must not transmit simultaneously with any other antenna or transmitter.

Note 4: To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host was previously authorized as an unintentional radiator under the Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that the after the module is installed and operational the host continues to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, ASK PROXIMA CO., LIMITED shall provide guidance to the host manufacturer for compliance with the Part 15B requirements.

Note 5: FCC ID label on the final system must be labeled with "Contains FCC ID: 2AALLWPJ2530R" or "Contains transmitter module FCC ID: 2AALLWPJ2530R".

The transmitter module must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the host product. ASK PROXIMA CO., LIMITED is responsible for the compliance of the module in all final hosts.