DTK 深圳市鼎泰克电子有限公司
SHENZHEN DIGITALTEK ELECTRONICS CO.,LTD

DRF1600 Setting Instruction（Data is Hex format）

NO.	Instruction	Function	Return	Restart？
1	FC 02 91 01 XX XX XY （XY =The sum for the first 6 Bytes and keep low 8 Bit ，same as follow）	Set the module's PAN ID to a specific value XX XX 1, If Setting the PAN ID to FF FF If It's Coordinator, restart automatically generate a new PAN ID If It's Router, after restarted then will research new network and join automatically Can not be set to FF FE 2 resetting after the PAN ID (or the same value after reset) If the Coordinator, will clear the network nodes have been joined If Router, Clear has joined the network, find and re-join the network	XX XX Example：Input：FC 02 91 01 12 34 D6 　　　　Return：12 34	Yes
2	FC 00 91 02 （Canceled）			Yes
3	FC 00 91 03 A3 B3 XY	Read PAN ID	PAN ID Value 1，If it's a Router and not join network, is FF FE 2，Coordinator's value as setting value	No
4	FC 00 91 04 C4 D4 XY	Read Short Address	Short Address 1，If it's a Router and not join network, is FF FE 2，Coordinator's Short Address always is 00 00	No
5	FC 00 91 05（Canceled）			No
6	FC 01 91 06 XX F6 XY	Set the module's serial port baud rate 　XX = 01：9600 　XX = 02：19200 　XX = 03：38400 　XX = 04：57600 　XX = 05：115200	00 00 09 06 00 00 00 01 09 02 00 00 00 03 08 04 00 00 00 05 07 06 00 00 01 01 05 02 00 00	Yes
7	FC 00 91 07 97 A7 XY	Test module's serial port baud rate	If the serial port baud rate is correct, return to: 　01 02 03 04 05 FF X1 X2 　X1 X2：Firmware version If the serial port baud rate error, no return	No

深圳市鼎泰克电子有限公司
SHENZHEN DIGITALTEK ELECTRONICS CO.,LTD

8	FC 00 91 08 A8 B8 XY	Read MAC Address	MAC Address (8 Bytes) Example：00 12 4B FF 56 78 FE FF	No
9	FC 00 91 09 A9 C9 XY	Setting Module to Coordinator （PAN ID change to：19 9B）	If Setting correct, return： 43 6F 6F 72 64 3B 00 19	Yes
10	FC 00 91 0A BA DA XY	Setting Module to Router （PAN ID change to：19 9B）	If Setting correct, return： 52 6F 75 74 65 3B 00 19	Yes
11	FC 00 91 0B CB EB XY	Read Module's point type (Coordinator or Router)	If it's Coordinator，return 43 6F 6F 72 64 69 If it's Router, return 52 6F 75 74 65 72	No
12	FC 01 91 0C XX 1A XY	Setting module's radio channel： XX = 0B：Channel 11，2405MHz XX = 0C：Channel 12，2410MHz XX = 0D：Channel 13，2415MHz XX = 0E：Channel 14，2420MHz XX = 0F：Channel 15，2425MHz XX = 10：Channel 16，2430MHz XX = 11：Channel 17，2435MHz XX = 12：Channel 18，2440MHz XX = 13：Channel 19，2445MHz XX = 14：Channel 20，2450MHz XX = 15：Channel 21，2455MHz XX = 16：Channel 22，2460MHz XX = 17：Channel 23，2465MHz XX = 18：Channel 24，2470MHz XX = 19：Channel 25，2475MHz XX = 1A：Channel 26，2480MHz	Return： 00 08 00 00 0B 00 10 00 00 0C 00 20 00 00 0D 00 40 00 00 0E 00 80 00 00 0F 00 00 01 00 10 00 00 02 00 11 00 00 04 00 12 00 00 08 00 13 00 00 10 00 14 00 00 20 00 15 00 00 40 00 16 00 00 80 00 17 00 00 00 01 18 00 00 00 02 19 00 00 00 04 1A	Yes

地址：深圳市宝安区宝安大道卡罗大厦 2A 栋 505-506 室   网址：www.dtkcn.com

13	FC 00 91 0D 34 2B XY	Read module's Radio Channel	Return： 　　00 00 08 00 52 0B 　　00 00 10 00 52 0C 　　00 00 20 00 52 0D 　　00 00 40 00 52 0E 　　00 00 80 00 52 0F 　　00 01 00 00 52 10 　　00 02 00 00 52 11 　　00 04 00 00 52 12 　　00 08 00 00 52 13 　　00 10 00 00 52 14 　　00 20 00 00 52 15 　　00 40 00 00 52 16 　　00 80 00 00 52 17 　　01 00 00 00 52 18 　　02 00 00 00 52 19 　　04 00 00 00 52 1A	No
14	FC 01 91 64 58 XX XY	Setting Module's transfer mode 　XX = 01, Transparent transfer 　XX = 02, Transparent transfer and add short address at the end of data package 　XX = 03, Transparent transfer and add MAC address at the end of data package	Return: Correct: 06 07 08 09 0A XX Error: 16 17 18 19 1A FF	
15	FC 00 91 87 6A 35 XY	Restart Module	Module restart	

XY = the sum for the first 6 Bytes and keep low 8 Bit

Transparent transfer functions (all of the following hexadecimal values)

NO.	Instruction	Function	Return	Restart？
1	Coordinator: The First byte can not be FE, FD or FC	Send to all Router	NULL	No
2	Router: The First byte can not be FE, FD or FC	Send to Coordinator	NULL	No

Remarks:

1, The first byte is not FE, FD, or FC, then the automatic transmission into the transparent state;

2, Coordinator of the data received from the serial port, automatically sent to all nodes (data content remains unchanged);

3, The node receives the data from the serial port, automatically sent to the Coordinator (data content remains unchanged);

4, Between any node and Coordinator, similar to cable for direct connection;

5, Support for variable length packets (without setting), the maximum does not exceed 256 bytes，

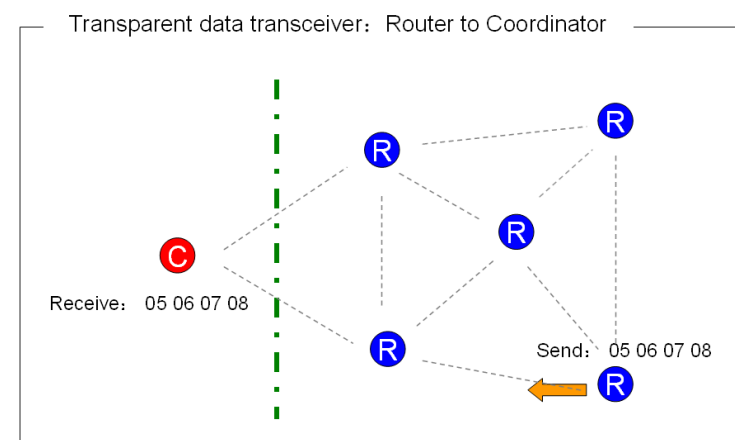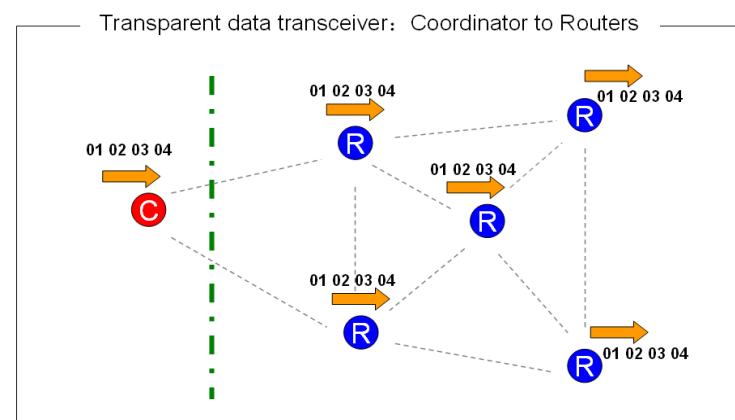6, The Proposed general application packet does not exceed 32 bytes;

Detail:

Send： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10

A7： The First byte can not be FE, FD or FC

A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10： Data

Receive： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10

Receive data

Transparent data transceiver：Coordinator to Routers

Transparent data transceiver：Router to Coordinator

地址：深圳市宝安区宝安大道卡罗大厦 2A 栋 505-506 室　网址：www.dtkcn.com

Transparent transfer functions (all of the following hexadecimal values)

(Add short address at the end of data package) (Instruction 14)

NO.	Instruction	Function	Return	Restart？
1	Coordinator: The First byte can not be FE, FD or FC	Send to all Router	NULL	No
2	Router: The First byte can not be FE, FD or FC	Send to Coordinator	NULL	No

Remarks:

1, The first byte is not FE, FD, or FC, then the automatic transmission into the transparent state;

2, Coordinator of the data received from the serial port, automatically sent to all nodes (data content remains unchanged);

3, The node receives the data from the serial port, automatically sent to the Coordinator (data content remains unchanged);

4, Between any node and Coordinator, similar to cable for direct connection;

5, Support for variable length packets (without setting), the maximum does not exceed 256 bytes，

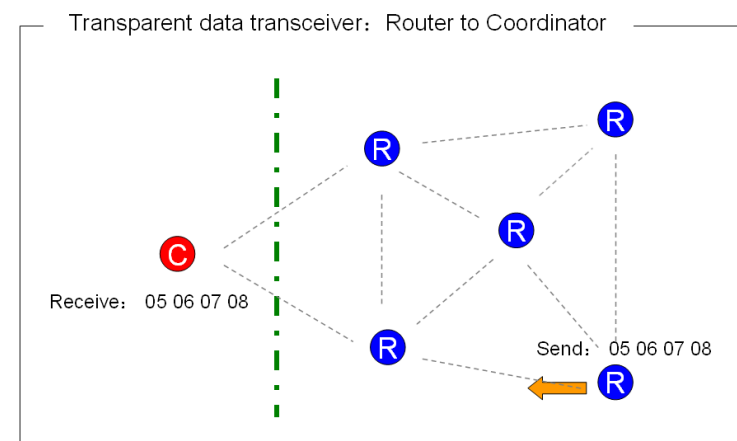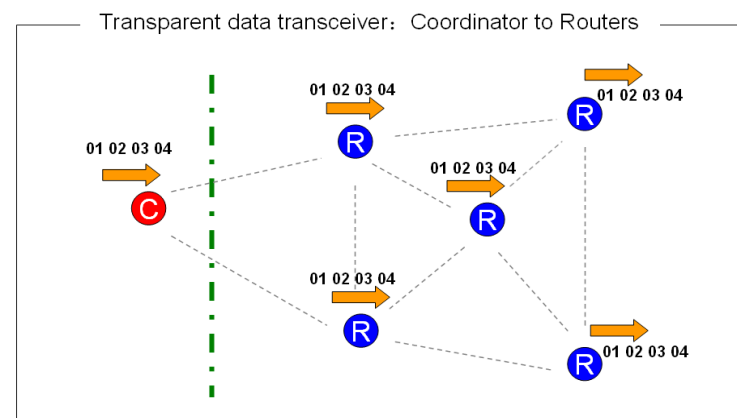6, The Proposed general application packet does not exceed 32 bytes;

Detail:

Send： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10

    A7： The First byte can not be FE, FD or FC
    A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10： Data

Receive： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10 14 3E
    Receive data

Transparent data transceiver：Coordinator to Routers

Transparent data transceiver：Router to Coordinator

深圳市鼎泰克电子有限公司
SHENZHEN DIGITALTEK ELECTRONICS CO.,LTD

Transparent transfer functions (all of the following hexadecimal values)

(Add MAC at the end of data package) (Instruction 14)

NO.	Instruction	Function	Return	Restart？
1	Coordinator: The First byte can not be FE, FD or FC	Send to all Router	NULL	No
2	Router: The First byte can not be FE, FD or FC	Send to Coordinator	NULL	No

Remarks:

1, The first byte is not FE, FD, or FC, then the automatic transmission into the transparent state;

2, Coordinator of the data received from the serial port, automatically sent to all nodes (data content remains unchanged);

3, The node receives the data from the serial port, automatically sent to the Coordinator (data content remains unchanged);

4, Between any node and Coordinator, similar to cable for direct connection;

5, Support for variable length packets (without setting), the maximum does not exceed 256 bytes,

6, The Proposed general application packet does not exceed 32 bytes;

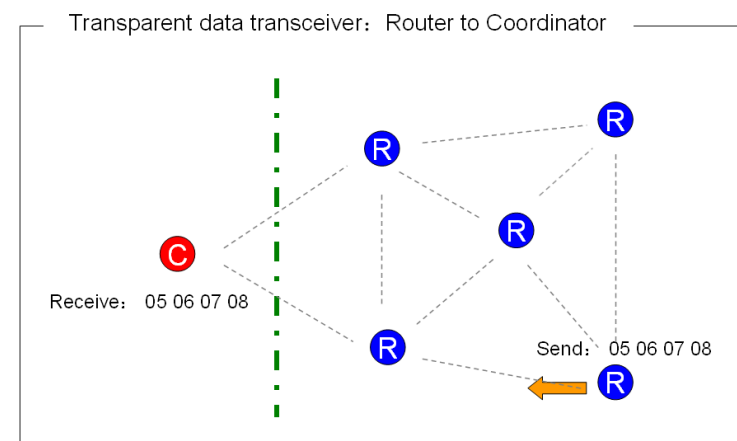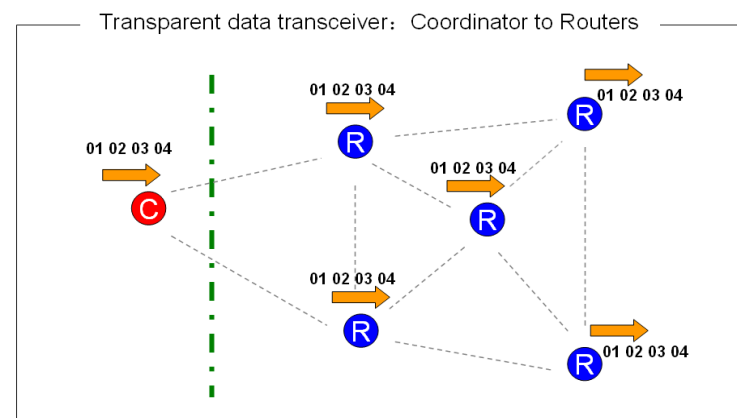Transparent data transceiver：Coordinator to Routers

Detail:

Send： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10

     A7：   The First byte can not be FE, FD or FC

     A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10：   Data

Receive： A7 A1 A2 A3 01 02 03 04 05 06 07 08 09 10 00 12 4B 00 01 9A 98 81

     Receive data

Transparent data transceiver：Router to Coordinator

Receive： 05 06 07 08

Send： 05 06 07 08

地址：深圳市宝安区宝安大道卡罗大厦 2A 栋 505-506 室　　网址：www.dtkcn.com

Point to point data transmission (All of the following hexadecimal values)

No	Instruction	Function	Return	Restart？
1	FD + Data Length (1 Byte)　+ Destination Address (2 Bytes)　+ Data	Transfer Data to destination Address	NULL Receiver receives the same content, and increased in the last source address (2 Bytes)	No

Remarks:

1, Point for the Zigbee network transmission of any data transmission between two points;

2, The receiver knows the address of the data source (an increase of the last 2 bytes);

3, The maximum packet length 36 bytes (32 bytes of data area length);

4, Target address = FF FF, then the broadcast is sent, each node within the network can receive;

5, Coordinator's address is always 00 00

Detail

Such as a Zigbee network, the node from 50 F5 transfer data to a another point 14 3E:

Send：　　FD 0A 14 3E 01 02 03 04 05 06 07 08 09 10

Point to Point Data Transmission

Address：50 F5

Address：14 3E

　　FD：　Point to Point transfer instruction

　　0A：　Data Length （The data must match the data length, not be treated as transparent data transmission ）

　　14 3E：Destination Address

　　01 02 03 04 05 06 07 08 09 10：Data

Receive：　FD 0A 14 3E 01 02 03 04 05 06 07 08 09 10 50 F5

　　Receive all the data that be sended

　　50 F5：Source address (an increase of the last 2 bytes)