



NIETZSCHE ENTERPRISE CO.,LTD

14F, No.965, Chung Cheng Rd, Chung Ho City, Taipei Hsien, Taiwan, R.O.C.

TEL: +886-2-2223-1118 FAX: 886-2-2223-5333

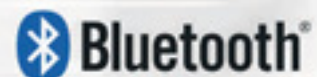
Email: service@nhr.com.tw Website: <http://www.nhr.com.tw>

BT Series

BTX-150

Industrial Bluetooth Transmitter User manual

Version 1.2



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

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to conjunction with any other antenna or transmitter.

FCC INFORMATION

The Federal Communication Commission Radio Frequency Interference Statement includes the following paragraph:

The equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication.

However, there is no grantee that interference will not occur in a particular installation. If this equipment dose cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on , the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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1. Product Introduction

1.1 Product Introduction

- BT series is a long distance wireless transmitter with Bluetooth technology. With BT series, devices communicate without cable as long as plugging onto BT series on each device with RS485 or USB connector. The maximum distance is 150 meters in free space. BT series is specially designed for industry instruments & equipments, the working voltage ranges from 9 to 30V DC. BT series supports Peer to Peer Mode, ie PLC to device and Direct to Host Mode ie PC to device, very friendly installation and can be applied to various fields in data wireless transferring between devices which saves the time and cost of cabling and reduces the risk of cabling in dangerous environment and we enjoy the convenience of wireless automation operation.

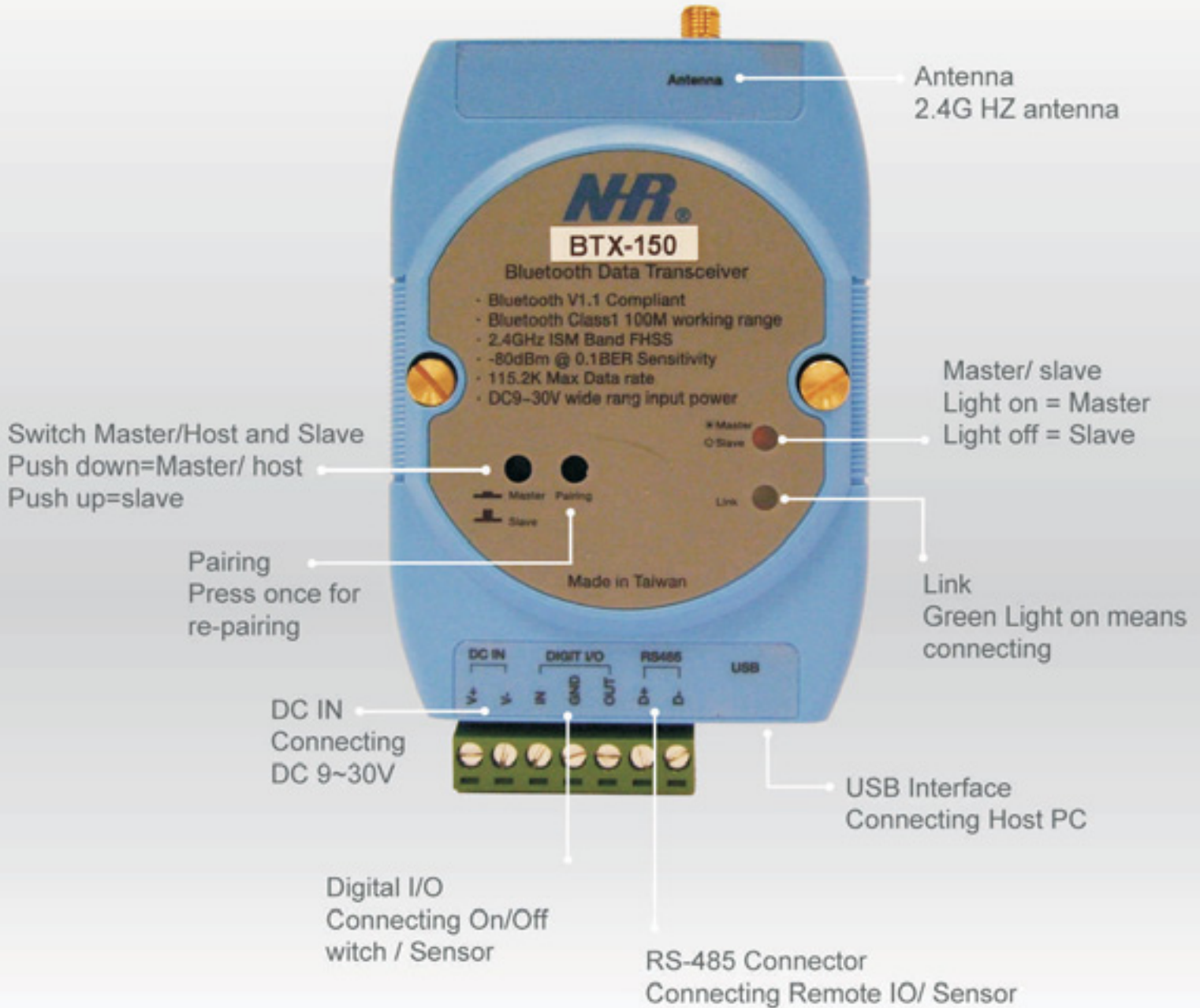
1.2 Product Feature

- Transmission Coverage up to 150 meters in free space.
- Wide range of working voltage 9~30V DC.
- MODBUS, PROFIBUS, CANBUS Compatible
- Watchdog function: reconnect itself while temporarily disconnecting
- With RS485 connector, 256 devices maximum is allowed to link into one BTX-150 simultaneously.
- Auto directionally RS485 and USB signal communication
- Supports Peer to Peer Mode and Direct to Host Mode (pc).
- FHSS technology high interference resistance.
- Data transmitting synchronization
- Power-saving Mode, sleep and trigger function

1.3 Product Specification

- Bluetooth Version 1.2
- Frequency: 2.40~2.48G HZ ISM Band (FHSS)
- Baud Rate: 4.8K~115.2Kbps
- Distance Transmission: Class1, 150 meters (free Space)
- Sensitivity: -80dBm @0.1% BER
- Interface: RS485, Digital I/O, USB.
- Working Voltage: 9~30V DC
- Environment: [T]-20°C~60°C [H]10%~90%RH
- Dimension: 93*62*25 (mm)
- Weight: 85g
- RS485 signal: 2 half-duplex wires. (D+. D-)

2. Product Appearance



3. Set-up & connecting process

3.1 BTX-150 Defaults

- Device Name: NHR BTX-150
- PIN CODE:1234
- Role setting: SLAVE
- UART set
- Baud rate: 9600
- Data bit: 8
- Parity check: None
- Stop bit: 1
- RTS/CTS Flow control: Disable

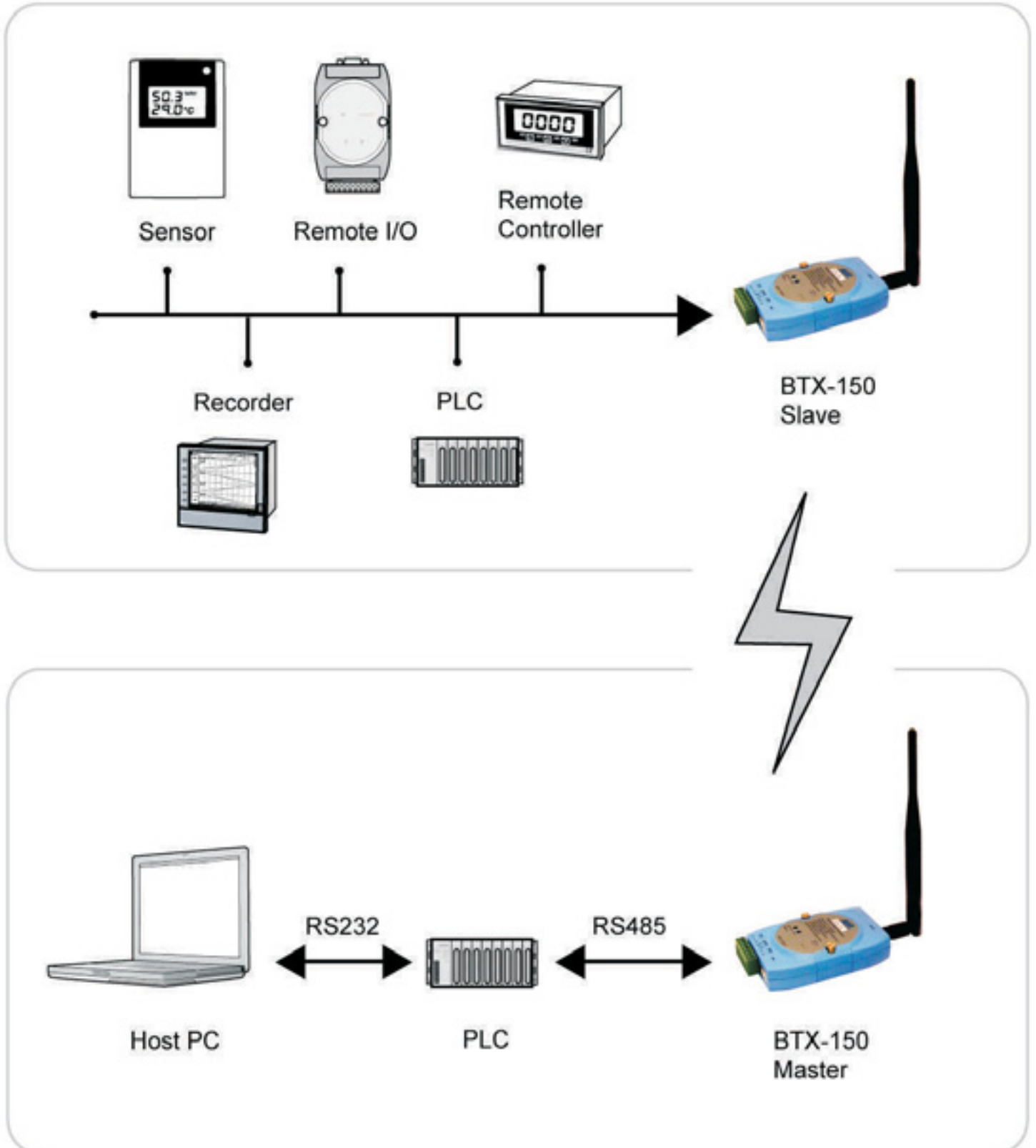
3.2 How to use BTX-150

- BT Series supports Peer to Peer Mode and Direct to Host Mode(pc).
Users choose the proper mode according to the context they are using.

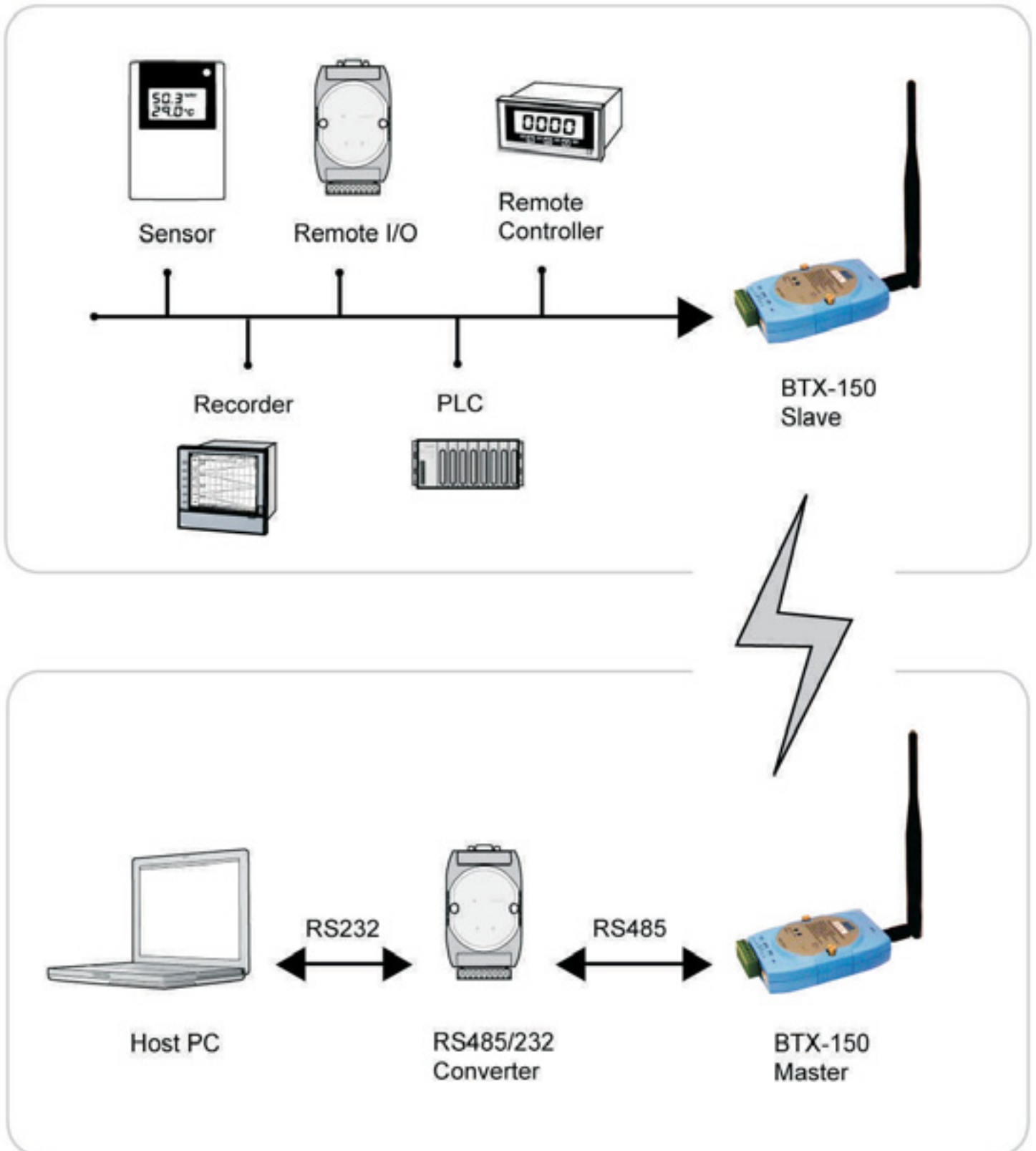
3.2.1 Peer to Peer Mode

- Peer to Peer Mode enables user to build up a wireless data transmitting environment between two devices or two PLCs easily. RS485 devices connect with one slave, on the other side, RS485 devices or PLC connect with master. No need any driver; user can start pairing and then connecting automatically. Connecting structure is as below:

Peer to Peer Connection (A)



Peer to Peer Connection (B)



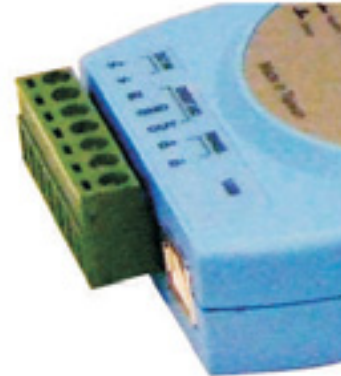
● Operation steps

1



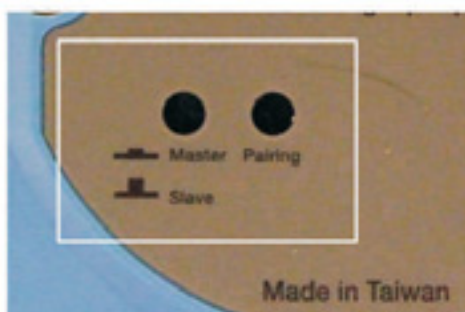
Install antenna.

2



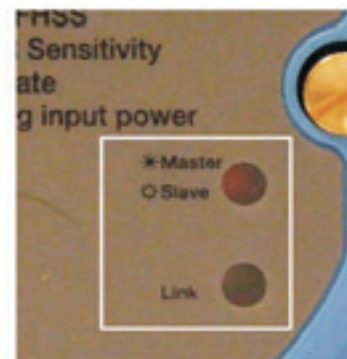
Connect the power devices to corresponding terminals.

3



Assign master and slave and push PAIRING button.

4



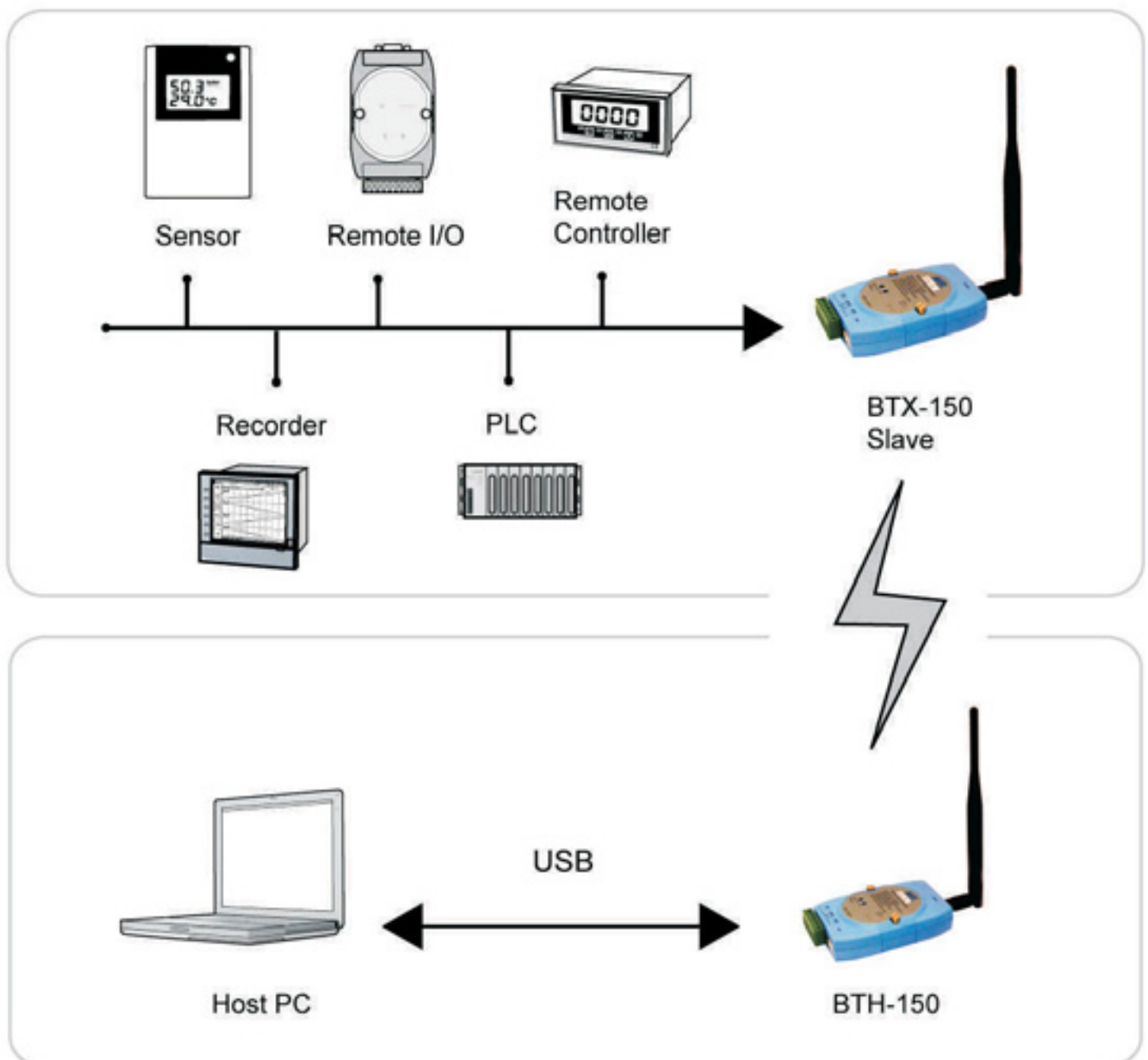
Green light on means connected ready to transmit data.

Note : Transmitting speed referring to BTX-150 defaults.

Direct to Host Connection Mode

- In Direct to Host Mode, Personal computer can receive data from devices wirelessly and easily. After connecting PC with one BTH-150 with USB port and installing the IVT Bluesoliel driver on PC, on the other side, RS485 devices connecting with one BTX-150, then PC and devices can communicate wirelessly. Particularly, in this mode, BTH-150 is able to communicate with 4 BTX-150. Structure as below.

Direct Mode Connection (BT COM Service)



Operating Steps

- Connecting devices BTX-150 (With RS485)
- Set up transmission parameters on the device
- Baud Rate: 9600 、 Parity: None 、 Data Bit:8 、 Stop Bit: 1 。
- Connecting PC to BTH-150 (With USB)
- Setup IVT Bluesoleil Driver and parameters on the PC/ DTE(as below)

NOTE

- DCE :Data Communication Equipment
- DTE :Data Terminal Equipment