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# User Manual

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Thank you for selecting Keyking products. Please read this manual thoroughly before using



**WTC-485**

**Wireless Transfer Converter**

**KEYKING** KEYKING TECH

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# Chapter1 Introduction

## 1.1 Summary

WTC-485 is a Wireless RS485/232 Transfer Converter. It requires at least a couple of WTC-485 to provide normal function. One WTC-485 works as Host/Master and the other works as Client/Slave. The Host/Master collects RS485/232 data from PC or other device and transforms it to wireless signals, then the wireless signals will be received and transformed back to RS485/232 data by the Clients/Slave.

### Features:

1. Frequency: 433MHz。
2. Channel : 8 Channels.
3. Communication Distance: 1000m
4. Work Mode:
  - Host: Can transfer data to multi-Clients. Host is the one initiative to send data, please make sure only one host exists in one channel. Converters can not communicate in different channels.
  - Clients: Automatically match and receive data from host.

### Applications:

Access Control、Time & Attendance、 POS、 Car Parking System、 Electronic System、 Automatic Control, etc.

## 1.2 Specifications

- ◆ Frequency: 433MHz
- ◆ Voltage & Current: DC9V, 500ma
- ◆ Baud rate: 110—115,2000bps

- ◆ Communication Protocol: RS232/RS422
- ◆ CPU: ARM7
- ◆ Operating Temperature: -20°C to 70°C
- ◆ Humidity: 5% to 95%
- ◆ Dimension: L90mm×W83mm×H20mm

### 1.3 Appearance

WTC-485 Surface:



Figure 1

## 1.4 Indicator & Interface

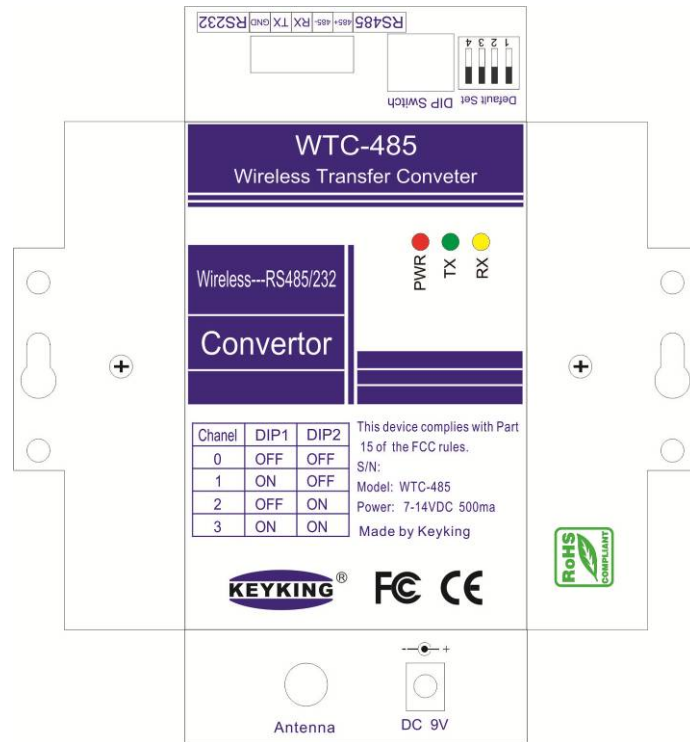


Figure 2 WTC-485 Converter Silk Screen:

### 1.4.1 Indicator

**PWR:** Power indicator.

**RX:** Data receive indicator. Flash while receiving RS485 data.

**TX:** Data transfer indicator. Flash while transferring RS485 data.

### 1.4.2 Power Interface

**DC 9V:** Input voltage range DC7~14V

### 1.4.3 Communication Interface

**RS485/232:**

Mark	Definition	Interface type
1	485+	RS485
2	458-	
3	GND	RS232
4	RX	
5	TX	

Sheet 1

### 1.4.4 DIP Switch

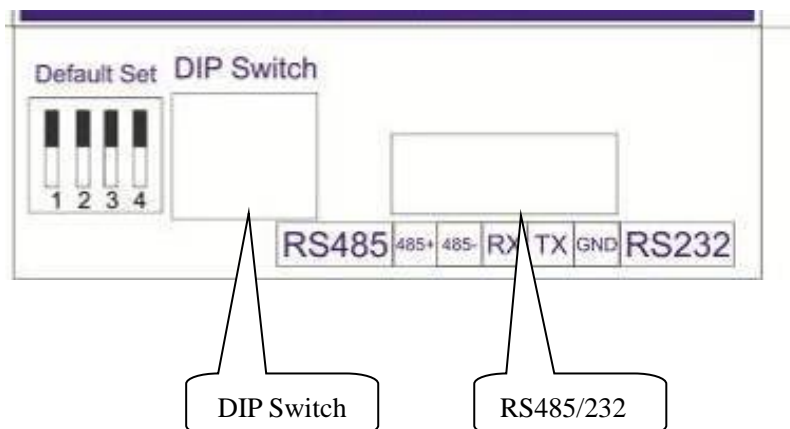


Figure 3

#### DIP Switch (Channel Selection):

Switch	Feature	Description
DIP1	Channel Selection	
DIP2	Channel Selection	
DIP3	Channel Selection	
DIP4	Reset	OFF: Normal ON: Reset

Sheet-2

#### Channel Selection:

Switch	DIP1	DIP2	DIP3	Remark
Chanel 0	OFF	OFF	OFF	
Chanel 1	ON	OFF	OFF	
Chanel 2	OFF	ON	OFF	
Chanel 3	OFF	OFF	ON	
Chanel 4	OFF	OFF	ON	
Chanel 5	ON	OFF	ON	
Chanel 6	OFF	ON	ON	
Chanel 7	ON	ON	ON	

Sheet-3

# Chapter2 Diagram

## 2.1 A host, a client

A host, a client:

1. Set host and client in the same Channel, e.g.: Set DIP1, 2, 3 to OFF if “Channel 0” is to be used.
2. Connect one WTC-485 to PC serial port which works as Host.
3. Connect the other WTC-485 to the terminal device which works as client. E.g.: connect to access controller.

Diagram

A) A Host, a client (only one panel):

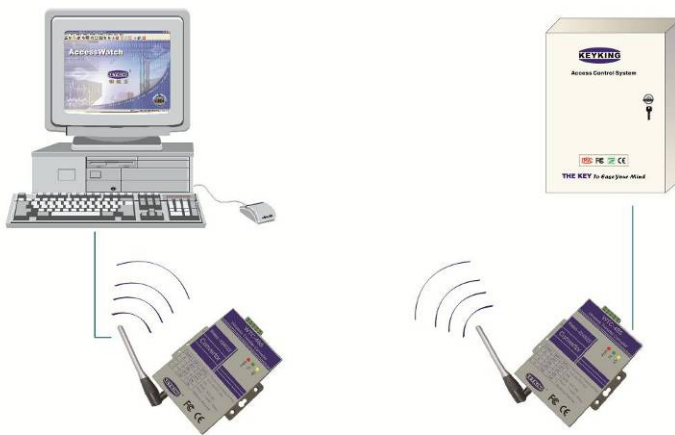


Figure 4

B) A Host, a client (multi panels)



Figure 5

## 2.2 A host, multi clients

A host, multi clients:

1. Set host and all clients in the same Channel, e.g.: Set DIP1, 2, 3 to OFF if “Channel 0” is to be used
2. Connect one WTC-485 to PC serial port which works as Host.
3. Connect the other WTC-485s to the terminals device which work as clients. E.g.: connect to access controllers.

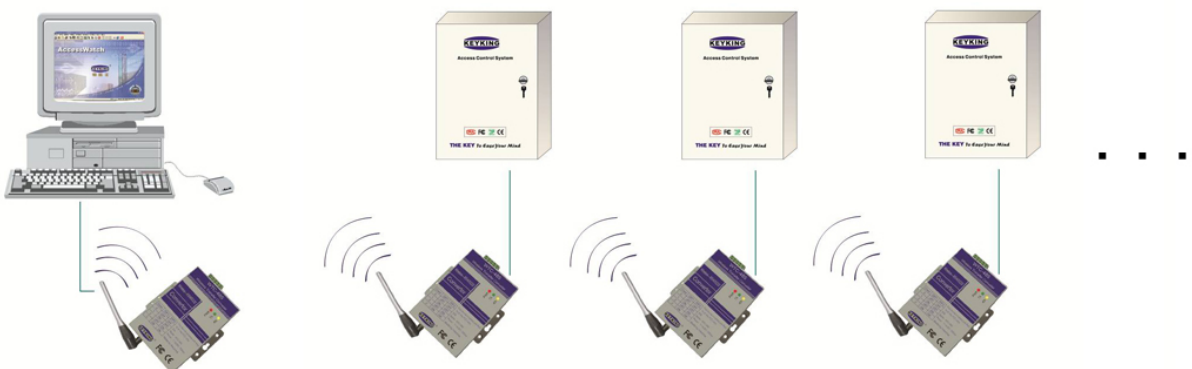


Figure 6

## 2.3 Multi hosts, multi clients

Multi hosts, multi clients:

1. Set host and all clients in the same Channel, make sure that only one host exists in a channel, make full use of all the channels.



2. Connect one WTC-485 to PC serial port which works as Host.
3. Connect the other WTC-485s to the terminals device which work as clients. E.g.: connect to access controllers.

Channel 1:



Figure 7

Channel 2:



Figure 8

Channel 3:

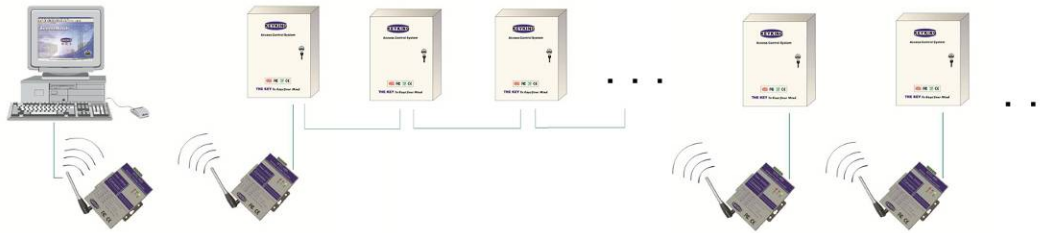


Figure 9

Channel 4:



Figure 10

## 2.4 RS232 cable to PC

Follow the connection as below

**RS485/232:**

Sheet 4

PIN	Description	Type
1	485+	RS485
2	485-	
3	GND	RS232
4	RX	
5	TX	

### 2.4.1 Socket to PC

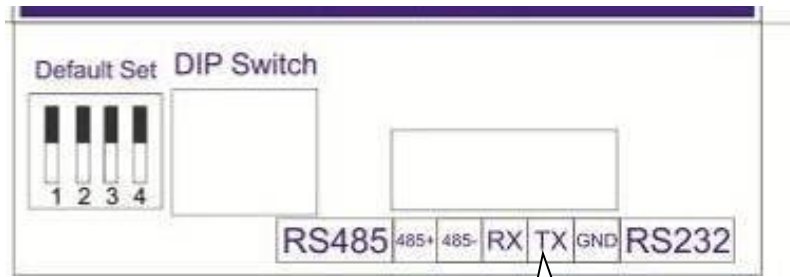
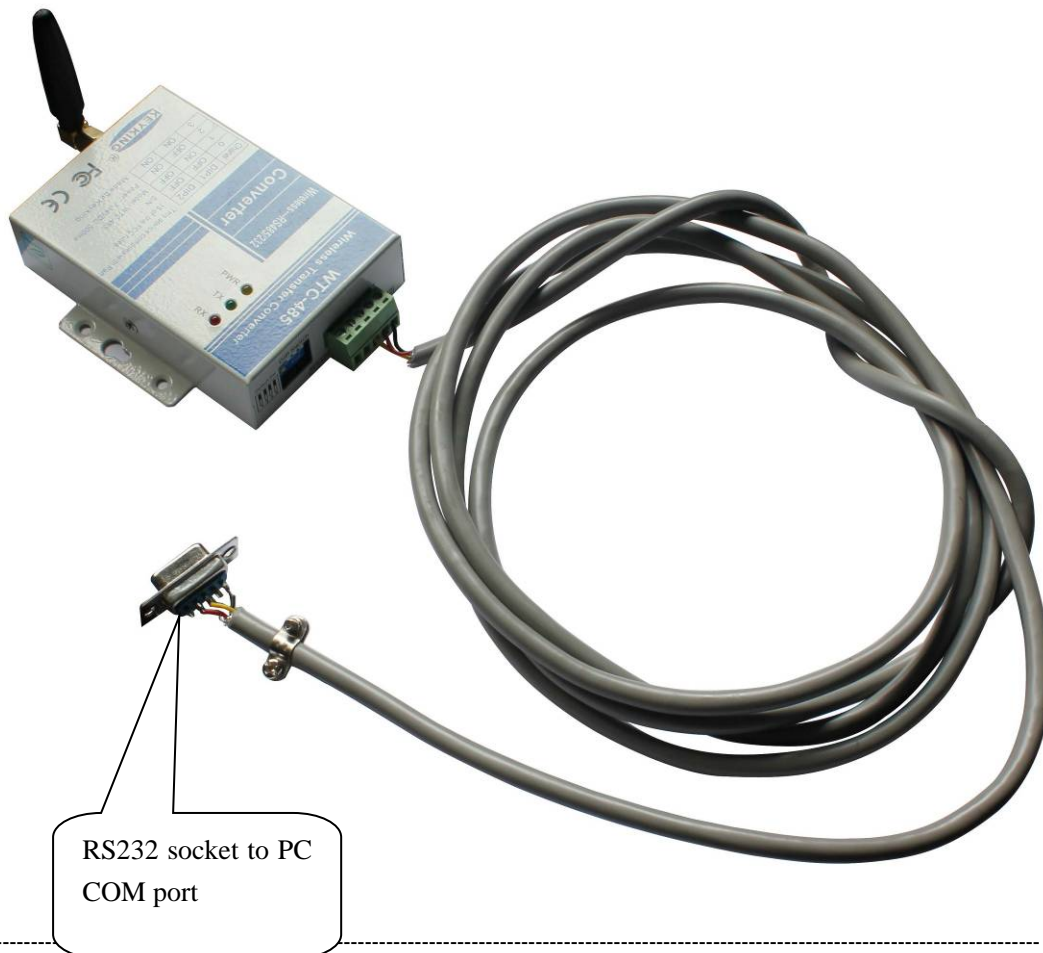


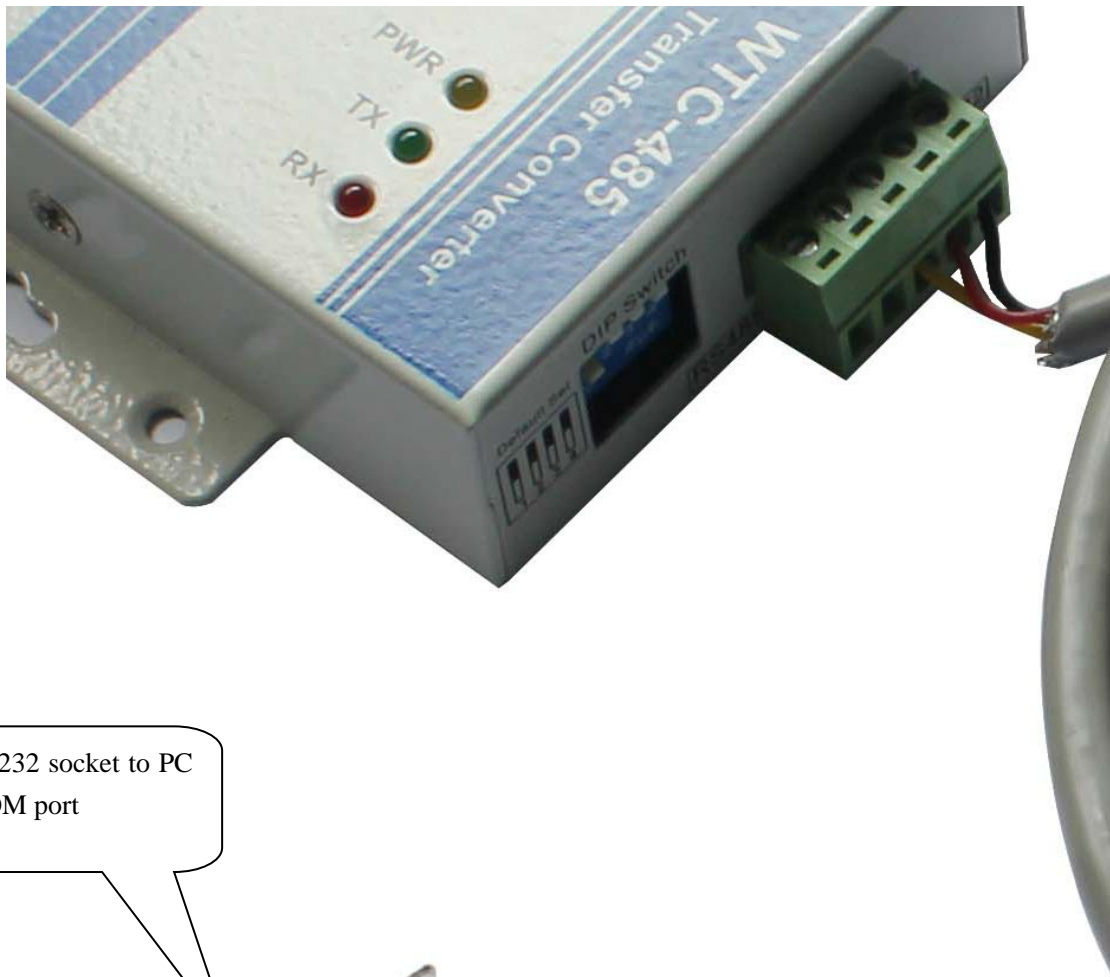
Figure 11

PIN	WTC-485	PC COM	PIN of COM	Type
1	485+			RS485
2	458-			
3	GND	GND	PIN5	RS232
4	RX	TXD	PIN3	
5	TX	RXD	PIN2	

Sheet 5

**2.4.2 RS232 cable to PC**





RS232 socket to PC  
COM port

