

# HUASU

Hangzhou Huasu Technology Co., Ltd



## CTB-485WL

Wireless Converter  
Specification

<https://huasu-tech.com/>





**Hangzhou Huasu Technology Co., Ltd**

**Battery Management System Supplier**



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**BMS Technology Servicing Customer Globally**

# About HUASU

Hangzhou Huasu Technology Co., Ltd is an innovative high-tech company that specializes in battery monitoring and management. Our products provide a state of the art battery management platform for various industries and use cases while ensuring safety and reliability. Our design are informed by more than a decade of research and development. We are a leader in the battery monitoring industry at both the national and global level.



## Real-time & Online Management

Convert wireless communication signal of wireless cell monitoring module to RS485 signal in real time

## Core Technology

Adopt a new generation of ZigBee wireless communication technology  
Reduce on-site wiring and avoid hidden safety dangers of too many cables  
High stability and anti-interference



## Capability

1 CTB-485WL module/1 battery string  
1 CTB-485WL module max manages 150 wireless cell monitoring modules

## Easy Installation

Hot swappable connection, 4-core ports connect to COMB port of control module  
With 3M sticker, it can be installed on battery surfaces



# Overview

## Introduction

CTB-485WL wireless converter (hereinafter referred to as CTB-485WL module) is the industry's leading high-end product. 1 CTB-485WL module is needed for 1 battery string. CTB-485WL module converts wireless communication signal of wireless cell monitoring module to RS485 signal in real time. Each wireless converter up to manage 150 wireless cell monitoring modules.

Powered by control module, its working current is  $\leq 20\text{mA}$  and consumption  $< 0.3\text{W}$ .

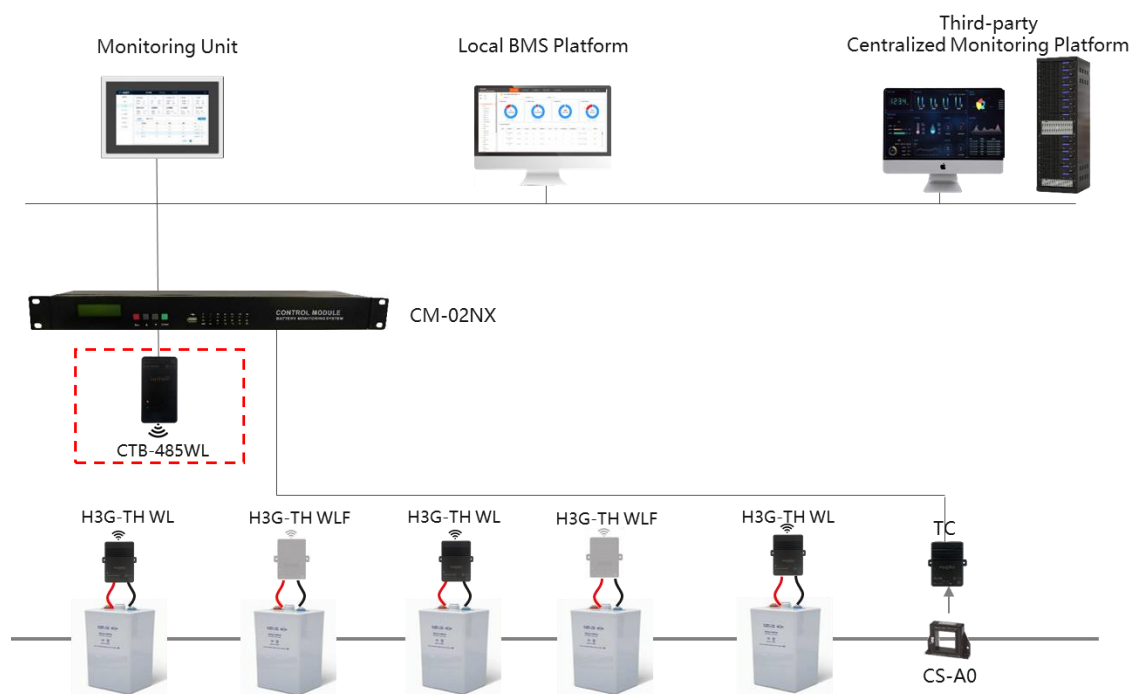
CTB-485WL module is easy for installation. With 3M sticker, it can be installed on battery surfaces.

Application scenarios:

CTB-485WL modules can be applied to H3G-TA WL, H3G-TH WL system or customized system.

## Topology

### \*Typical application topology




# Introduction

## Appearance



Appearance	Size(mm)
	

## Port/Indicator

	
	<div>Communication &amp; Power Port</div> <div>Indicator Light</div>
Name	Description
Indicator Light	Two indicator lights. The green light is on: The module is powered on. The red light flashes: The communication is normal.
Communication & Power Port	COM3 port of the CTB-485WL module. Pins from left to right are B, A, + and -. B is RS485 -, A is RS485 +, baud rate is 9600BPS, +/- is 12VDC power supply positive and negative input, the maximum power consumption is 0.3W.

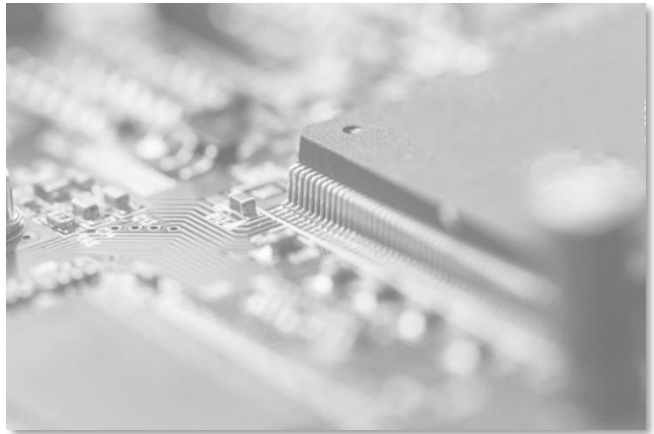
# Configuration & Core Tech.

## Standard

Appearance	Model	Configuration
	CTB-485WL	<b>Standard</b> <b>Wireless converter</b> 1 CTB-485WL module max manages 150 cells <b>1 to 4 strings managed by CM module:</b> 1 CTB-485WL module/1 string; 2 CTB-485WL module/1 string if cells amount of 1 string >150. <b>5 to 6 strings managed by CM module:</b> Total 3 CTB-485WL modules <b>Installed close to total positive of string</b>
	5010064	<b>Standard</b> <b>Four-core telephone line</b> 8 meters/ 1 string 2464 26AWG TS/4C For power supply

## ZigBee Wireless Communication

- Exclusive wireless communication technology:  
Good timeliness and high stability.
- Convert wireless communication signal of wireless cell monitoring module to RS485 signal.
- Each wireless converter up to manage 150 wireless monitoring modules.
- Intelligent communication port and frequency choice, with strong anti-interference.



# Tech. Specification

## Specification

### Environment

Operating Temperature: -20~+60°C (0~2000m ASL)

Relative Humidity: 5~95%

Atmospheric Pressure: 80~110kPa

### Performance

1 CTB-485WL/1 string or 1 series battery

Up to manage 150 wireless cell monitoring modules

### Power Requirements

Powered by control module

10.8~13.8VDC, current  $\leq 20\text{mA}$ , consumption  $< 0.3\text{W}$

### Signal Conversion

Convert wireless communication signal of wireless cell monitoring module to RS485 signal

### Protection

Two-level protection, reverse connection protection, photoelectric isolation, and power-on self-test (POST)

### Insulation

2000VAC

### Protection Grade

IP30

### Overvoltage Category

II

### Anti-interference & High-voltage Shock Resistance

High-level industrial-grade hardware design, suitable for various complex electromagnetic environments

### Port & Protocols

RS485

ZigBee, MODBUS/RTU protocols

### Flame Retardant Rating

Shell and wire harness flame retardant rating meet UL94-V0 standard

### Installation

4-core ports connect to COMB port of control module.

### Weight

55g

### Reliability

Automatic restart trigger: Built-in WDT

MTBF: 100,000 hours

### Certification

EMC:

EN 55032:2015+A11:2020 EN 55035:2017+A11:2020

EN 61000-3-3:2013+A1:2019 EN IEC 61000-3-2:2019

RED: EN 301489-1 V2.2.3 EN 301489-17 V3.2.4

Safety: EN61010-1:2010

CE and TTL certification

### Application

Fields need to convert wireless communication signal to RS485 signal project

## FCC Statement

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.