

RS485 HaLow Converter

CII0031

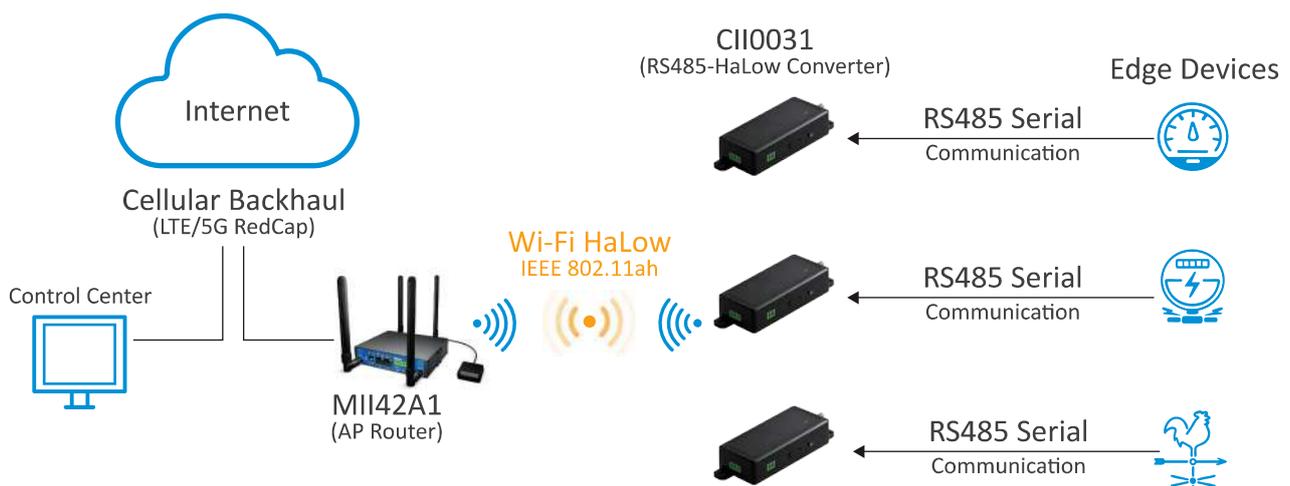


About

The CII0031 is an RS485-to-Wi-Fi HaLow wireless converter designed for industrial applications. By converting RS485 signals into Wi-Fi HaLow communication, it enables traditional industrial equipment to achieve long-range, low-power wireless connectivity. This allows users to remotely access operational data and clearly understand the status of each industrial device, greatly improving monitoring and management efficiency.

The CII0031 can also be paired with an AP-mode HaLow router, providing a complete wireless communication solution for industrial environments. This combination effectively solves equipment communication challenges and ensures real-time access to device status across the entire facility. Built with a reliable MCU, the CII0031 ensures stable data processing, while the USB Type-C interface offers convenient power and configuration options. Its compact and lightweight design makes it easy to install and integrate into various industrial systems, even in limited spaces.

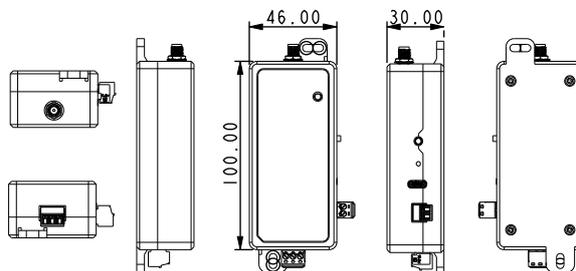
Application Figure



Features

- RS485 to Wi-Fi HaLow conversion for long-range, low-interference wireless communication
- Compatible with AP-mode HaLow routers to fulfill industrial communication requirements
- Real-time equipment monitoring through stable wireless data transmission
- Optimized for industrial environments with strong anti-interference capability
- Built-in MCU for efficient and reliable data handling
- USB Type-C interface for easy setup and flexible power supply
- Compact and lightweight design for effortless integration into existing equipment

Enclosure Drawing



Specifications

Hardware interface	<ul style="list-style-type: none"> • 1 x RS485 (D+/D-/GND, Non-Isolated) • 1 x Terminal Block Power Input: 9~60 VDC • 1 x USB Type-C (Device configurable, Power input) • 1 x Reset Button • 1 x Firmware upgrade Button • 1 x Wi-Fi HaLow antenna • 1 x LED (Red& Green) 	
Physical Characteristics	<ul style="list-style-type: none"> • Enclosure: Plastic • Dimensions (L x W x H): 100 x 46 x 30 mm • Installation: Wall Mounting 	
LED Display	<ul style="list-style-type: none"> • System Status LED (Yellow/Red) • Wi-Fi HaLow status LED (Green) 	
Power Supply	<ul style="list-style-type: none"> • USB Type-C Power Input: 5V/0.5A • Terminal block power input: 9 ~ 60VDC 	
Environment	<ul style="list-style-type: none"> • Operating Temperature -20 ~ +70°C • Storage Temperature -40 ~ +85°C • Ambient Relative Humidity 10 ~ 95% (non-condensing) • Humidity 0 ~ 95% (non-condensing) 	
Software	<ul style="list-style-type: none"> • Operating System & Kernel 	<ul style="list-style-type: none"> ◦ Operating System: FreeRTOS
	<ul style="list-style-type: none"> • Key Features 	<ul style="list-style-type: none"> ◦ Modbus RTU over RS485 ◦ RS485 over TCP/UDP protocol ◦ WiFi HaLow transparent mode through USB port