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LoRaWAN Handheld Unit

Jurgen-K HHU

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The Jurgen- K Hand - Held Unit is a LoRaWAN - enabled HHU tailored for Walk - by / Drive - by applications. It serves diverse functions such as remote meter reading, remote valve control, RF noise analysis, and packet error detection. By establishing a Bluetooth connection with a cellphone APP, it enables data upload to the server.

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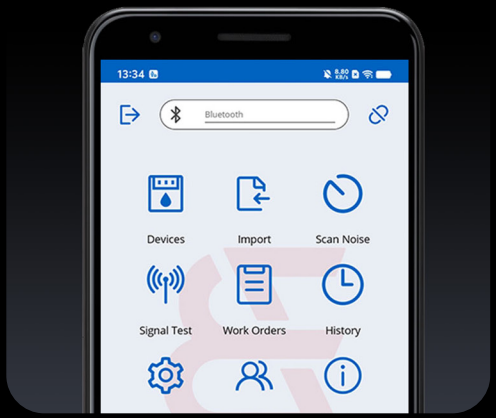
Tailored to real - world field environments, this solution enables the remote reading of water meter measurement data within a range of 100 - 400 meters. It operates with remarkable speed and efficiency, significantly reducing labor costs. Moreover, it allows for the remote control of the valve opening and closing of Bove's B97 VW - M model ultrasonic water meters.

By leveraging Bluetooth technology, it can connect to the mobile APP developed by Bove. This connection facilitates efficient data management and upload of data to the server via the cellular network. Undoubtedly, it stands as an extremely effective and practical tool for the LoRaWAN - based remote water meter reading solution.

Portable and Robust Design

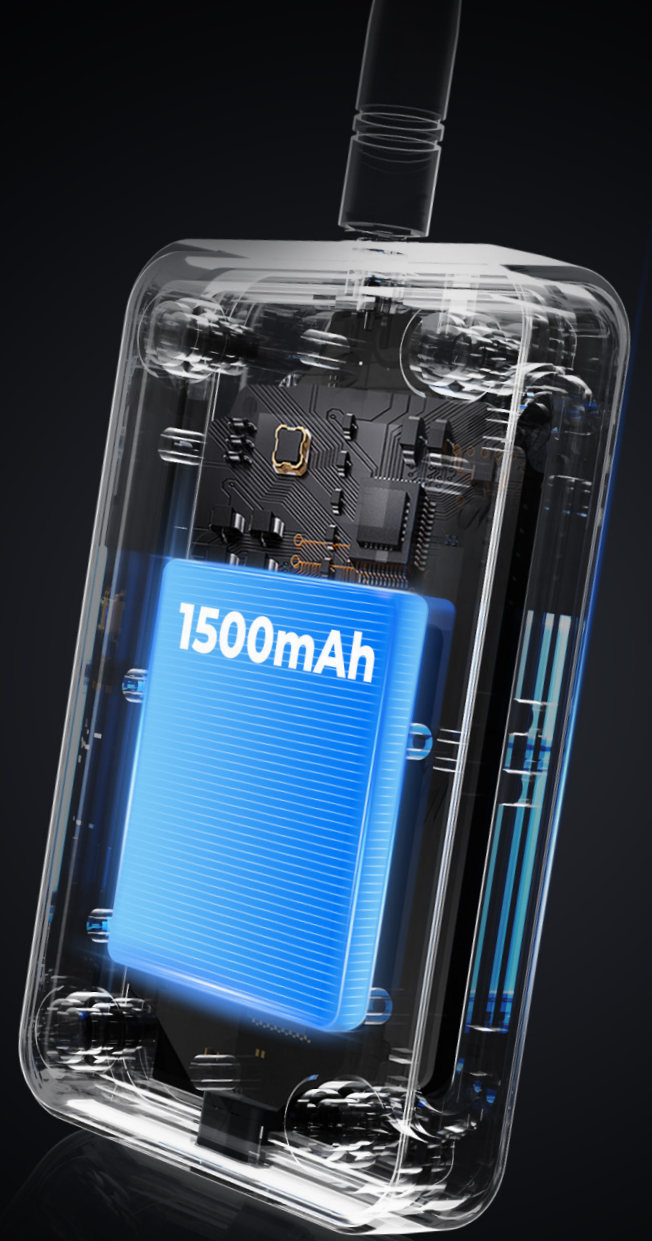
Equipped with a rechargeable battery, the Jurgen - K HHU can be recharged via a 5V USB power source. The battery, with a capacity of up to 1500 mAh, can support the device's normal operation for up to four days.

Using a mobile phone, users can conveniently query and configure the device parameters through the dedicated APP. Additionally, the firmware can be upgraded wirelessly (Over - the - Air, OTA), enhancing the device's functionality and adaptability without the need for manual intervention.



Mobilephone APP for smart management

Rechargeable Battery

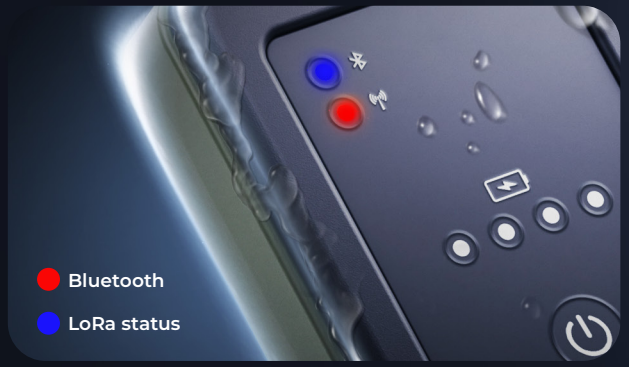


IP64 protection level

In certain outdoor work settings, handheld devices are prone to encountering challenges such as rain and dew. Exceptional waterproof capabilities are crucial as they guarantee the stable operation of the equipment in these environments. Wwhen exposed to rainy or humid conditions, the device is able to work flawlessly without any malfunctions.

Status Indication

The device is equipped with LEDs for status indication. A blue LED is utilized to indicate the Bluetooth status, while a red LED serves to indicate the LoRa status.



Product Specification

Device Body (excluding the antenna)

Dimension	112mmx70mmx24.3mm
Weight	116g with battery

Environmental Specification

Operating Temperature	-20~55℃
Storage Temperature	-40~85℃
Operating relative Humidity	5~95%RH，No Condensation
IP Rating	IP 64
ESD class	Air Discharge: +8kV Contact Discharge: +4kV

Wireless Communication

LPWAN Network	LoRa; Supporting LoRaWAN network and the Reelink protocol.
WLAN Wireless	BLE; Establishing a connection with the smartphone application.

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Product Specification

LoRa RF Specification

Frequency	LoRa low frequency band:433MHz~510MHz; LoRa high frequency band:862MHz~960Hz; Support global LoRaWAN frequency band
Max Output power	20dBm
RX sensitivity	-134dBm@SF12/125KHz
Antenna type	External Rubber Antenna
Antenna Gain	Peak 1dBi@868/915MHz,1dBi @470MHz

Power Supply Specification

Power supply	4.2V internal Lithium polymer battery, rechargeable
Battery capacity	Typical 1500mAh, maximum 1800mAh
Charge input voltage	4.5~6V, typical 5V
Charging curent	80mA~800mA, typical 800mA. Normally 2hours needed for full charge.
Standby curent	54uA
MCU Active current	8.7mA
LoRa RX current	15mA
LoRa TX peak curent	129mA
Battery life*	Designed for 4 - day continuous usage; 3 years under standby mode.

Note: A typical usage scenario involves connecting to cellphone APP. In this scenario, data from 4000 metering devices can be read daily.

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Creating an Eco Society

Add: Building 23, No. 36, Changsheng South Road, Jiaxing, Zhejiang, China, 314000

www.bovetech.com +86(0)573 83525916 bove@bovetech.com