

Product Specification Manual

Product: Edge data acquisition gateway

Model:DAG-WB-T-LV-3.3

Manual Version: V1.0

Release Date: 2025-08-15

I. Product Introduction

The Edge data acquisition gateway (DAG-WB-T-LV-3.3) connects with customer equipment (such as devices, BMS, PCS, etc.) to collect and record the operational status of the equipment. The system cloud platform provides strong data support for the acquisition stick. The acquisition stick wirelessly transmits data to the monitoring platform, where both real-time and historical data of the equipment can be displayed in graphical form, making it intuitive and easy to understand. Users can also customize fault alarm methods, such as SMS and email, to promptly learn about system anomalies and faults. Additionally, users can remotely upgrade client equipment (devices/BMS/PCS, etc.), transmit commands, and set parameters via the data stick. This truly helps users monitor equipment status anytime and anywhere, greatly simplifying maintenance work.

II. Basic Parameters

Category	Parameter	Value
Wireless Parameters	Operating Frequency	2400MHz~2483.5MHz
	Transmit Power	802.11b: +17 dBm±1.5dBm(@11Mbps)
		802.11g: +15 dBm±1.5dBm (@54Mbps)
		802.11n 20: +14 dBm±1.5dBm (@HT20, MCS0)

	Antenna Option	External antenna
Bluetooth	Wireless Standard	BLE5.0
	Frequency Range	2400MHz~2483.5MHz
	Transmit Power	MAX 15dBm
Hardware Parameters	Data Interface	6-pin terminal
	Operating Voltage	DC 3.3V (+/-5%)
	Operating Power	0.3W
	Indicators	1x Router Connection LED,
		1x Status LED
	Data Storage	Default: 8MB FLASH
	Operating Temperature	-30°C~+125°C
	Operating Humidity	10%-90% RH, non-condensing
	Storage Temperature	-40°C~+125°C
	Storage Humidity	<50%
	External Interfaces	2 x 6-pin terminals
Software Parameters	Number of Connected Devices	1 device
	Serial communication baud rate	Default: 115200bps (adjustable 1200-115200bps)
	User Configuration	AT command set,
		local web page configuration
		Remote server
		App
	Firmware Upgrade	Local web page upgrade
		remote upgrade
	Data Transmission Platform	Solarhub
	Others	Real-time control, breakpoint resume transfer

III. Module Interface Definitio

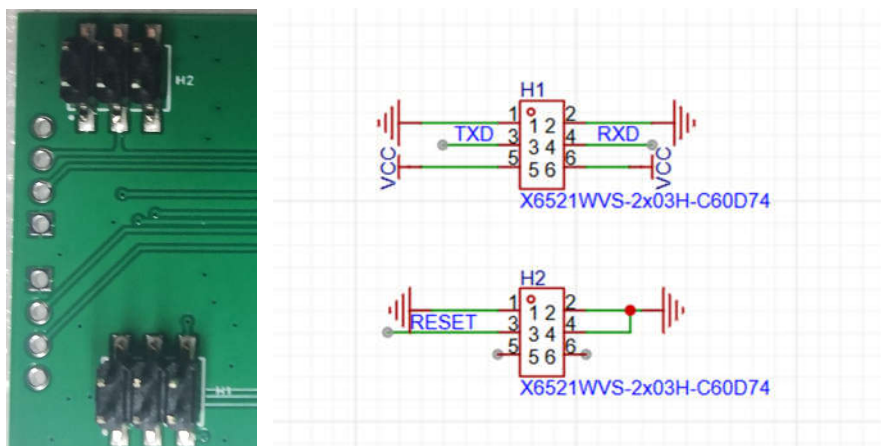


Figure 3.1 Interface Definition

Pin No.	Pin	Description	Net Name	Type	Note
H1	1/2	Power	GND	Power	External Power: GND
	5/6	Power	VCC	Power	External Power: VCC
	3	Data Transmission	TXD		Data+
	4	Data Transmission	RXD		Data-
H2	1/2/4	Power	GND	Power	External Power: GND
	3	Reset	RESET		Reset
	5/6	NC	NC	NC	

IV. PCB Dimensions (Unit: mm)

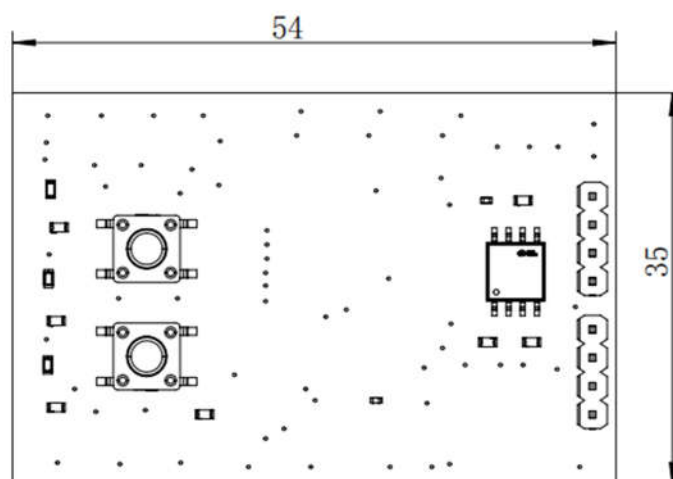


Figure 4.1 PCB Dimensions
54*35 (PCB thickness 1.6mm)

V. Product Image

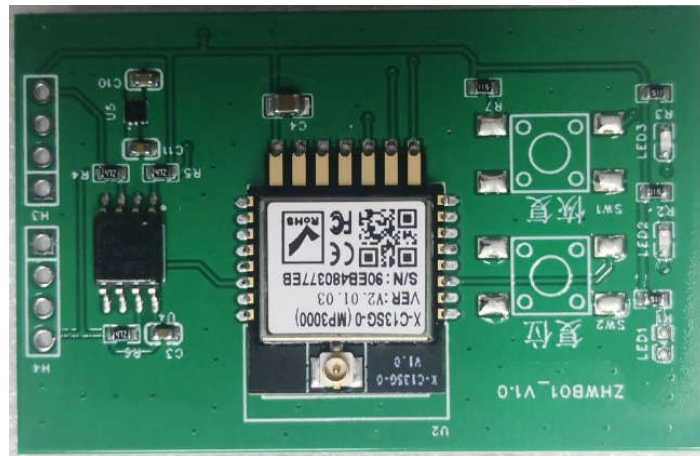


Figure 5.1 Module Front View

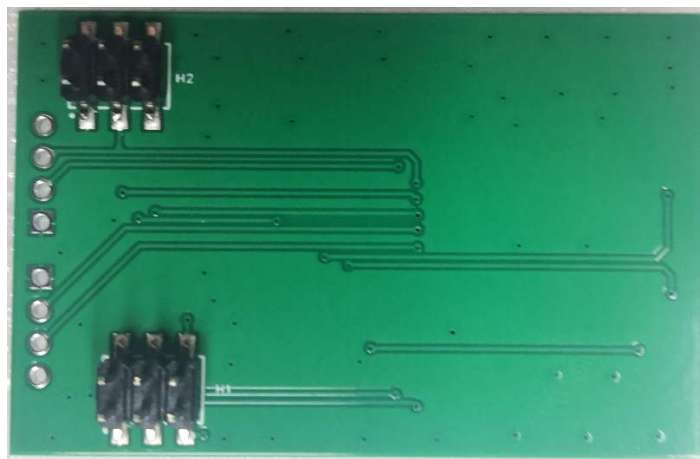


Figure 5.2 Module Back View

VI. External Antenna

The external antenna consists of a 30cm waterproof IPEX to SMA feeder cable and a 2.4G SMA antenna.

FCC Warning

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules

FCC Part 15.247

2.3 Specific operational use conditions

This transmitter/module and its antenna(s) must not be co-located or operating in conjunction with any transmitter. This information also extends to the host manufacturer's instruction manual.

2.4 Limited module procedures

Not applicable.

2.5 Trace antenna designs

It is "not applicable" as trace antenna which is not used on the module.

2.6 RF exposure considerations

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This compliance to FCC radiation exposure limits for an uncontrolled environment, and minimum of 20cm separation between antenna and body.

The host product manufacturer would provide the above information to end users in their end-product manuals.

2.7 Antennas

Glue stick antenna; 4.96dBi; 2400 - 2450 MHz

2.8 Label and compliance information

The end product must carry a physical label or shall use e-labeling followed KDB 784748 D01 and KDB 784748 stating "Contains Transmitter Module FCC ID: 2BRWLZH-000001.

2.9 Information on test modes and additional testing requirements

The module has WiFi and BLE functions.

- Operation Frequency:
 - WiFi: 2412 ~ 2462 MHz
 - Bluetooth: 2402 ~ 2480 MHz
- Number of Channel:
 - WiFi: 11
 - Bluetooth: 40
- Modulation:

- WiFi: DSSS; OFDM
- Bluetooth: GFSK

For more information on testing, please contact the manufacturer.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for the specific rule parts (FCC Part 15.247) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed when contains digital circuitry.

2.11 Note EMI Considerations

Note that a host manufacture is recommended to use D04 Module Integration Guide recommending as "best practice" RF design engineering testing and evaluation in case non-linear interactions generate additional non-compliant limits due to module placement to host components or properties

2.12 How to make changes

Since only Grantees are permitted to make permissive changes, it is recommended that module manufactures provide contact information and some guidance to host providers in the integration instructions if they expect their module will be used differently than granted. Please contact us for further process with Shanxi Zhonghe Technology Co., Ltd. Contact: Shuo Cheng, E-mail: lixiaodong@zhonghejs.com

FCC Statements

(OEM) Integrator has to assure compliance of the entire end-product incl. the integrated RF Module. For 15 B (§15.107 and if applicable §15.109) compliance, the host manufacturer is required to show compliance with 15 while the module is installed and operating.

Furthermore the module should be transmitting and the evaluation should confirm that the module's intentional emissions (15C) are compliant (fundamental / out-of-band). Finally the integrator has to apply the appropriate equipment authorization (e.g. Verification) for the new host device per definition in §15.101.

Integrator is reminded to assure that these installation instructions will not be made available to the end-user of the final host device.

The final host device, into which this RF Module is integrated has to be labeled with an auxiliary label stating the FCC ID of the RF Module, such as "Contains FCC ID: 2BRWLZH-000001".

The Integrator will be responsible to satisfy SAR/ RF Exposure requirements, when the module integrated into the host device.

Module statement

The single-modular transmitter is a self-contained, physically delineated, component for which compliance can be demonstrated independent of the host operating conditions, and which complies with all eight requirements of § 15.212(a)(1) as summarized below.

- 1) The radio elements have the radio frequency circuitry shielded.
- 2) The module has buffered modulation/data inputs to ensure that the device will comply with Part 15 requirements with any type of input signal.
- 3) The module contains power supply regulation on the module.
- 4) The module contains a permanently attached antenna.
- 5) The module demonstrates compliance in a stand-alone configuration.
- 6) The module is labeled with its permanently affixed FCC ID label.
- 7) The module complies with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee.
- 8) The module complies with RF exposure requirements.

NOTE: This 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does 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 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.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.