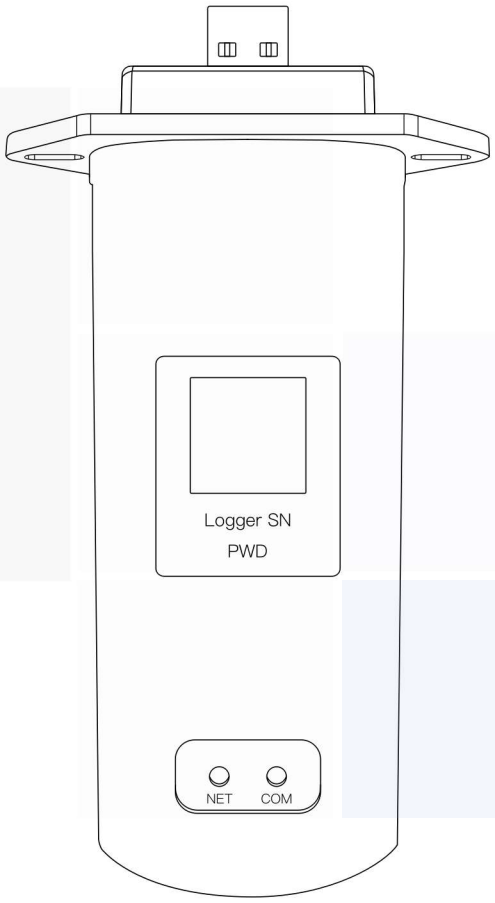


Data Logger
DL1000B-ETH SPECIFICATION

Version: V1.0

Revision history

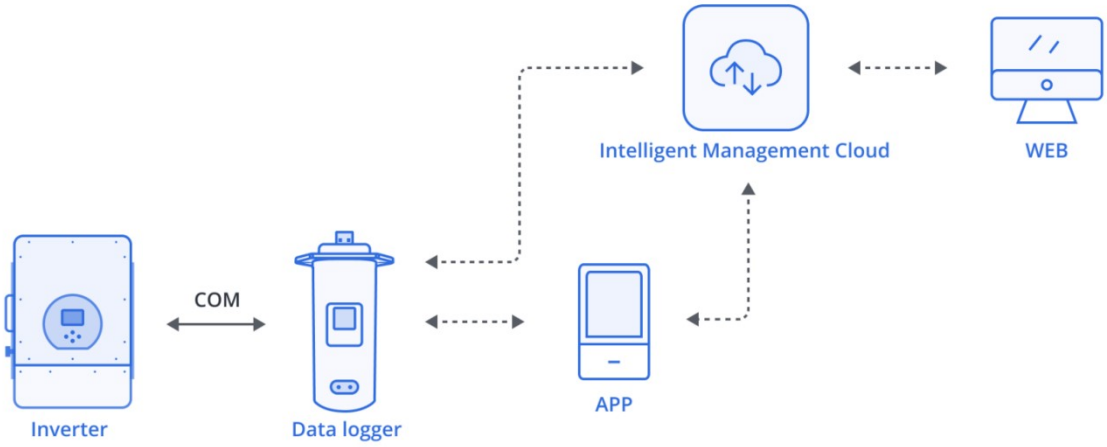
Revision	Release notes	Update time	Author
1.0	-		

Contents

1. Introduction

The DL1000B-ETH data logger stick is a communication device specifically designed for collecting inverter data. It can transmit the working status and power generation status of the inverter to the Deye Cloud platform through the local Ethernet for long-term and effective monitoring of the photovoltaic power generation system, helping users manage distributed power plants at low cost and high efficiency, greatly simplifying maintenance work.

The data logger stick DL1000B-ETH supports the local Ethernet and Bluetooth BLE, MODBUS command transparent transmission and custom command configuration, remote firmware upgrade, inverter parameter adjustment, and remote debugging. Using the local mode of the APP, the current data of the inverter can be fetched using Bluetooth BLE. After the data logger stick is disconnected from the network, the real-time data of the inverter will be continuously saved. When the network is reconnected, the saved data can be uploaded to the intelligent management cloud platform.



2. Features

1) Plug and play;

2) 1-minute data refresh interval;

3) Support App local-mode by Bluetooth;

4) Support local & remote OTA ;

5) Support data backfilling;

6） High-availability wireless design;

7）Encrypted transmission

3. Characteristics

Symbol	Characteristic	Parameter
ETH	Speed	10M/100M
	Max. communication range	100M (Direct connection)
WiFi	Operating frequency range	2400 - 2483.5MHz
	Communication protocol	IEEE 802.11b/g/n
	TX Power	19.5dBm@11b, 1Mbps 19.5dBm@11b, 11Mbps 18dBm@11g, 6Mbps 14dBm@11g, 54Mbps 18dBm@11n, HT20, MCS0 13dBm@11n, HT20, MCS7 18dBm@11n, HT40, MCS0 13dBm@11n, HT40, MCS7
BLE	Protocols	BLE 4.2
	TX power	MAX：9dBm
Hardware	Data Interface	USB
	Power supply voltage	DC 5V
	Power dissipation	1.5W
	LED	NET LED
		COM LED
	Operating temperature	-40℃ ~ +65℃
	Operating humidity	10%-90% (No Condensing)
	Storage temperature range	-40℃ ~ +85℃
	Storage humidity	<40%
	Ingress Protection	IP65
	Dimension (W×D×H)	116.6mm×70.5mm×30.5mm
Software	Serial communication speed	Default :9600bps
	Data collection interval	Default :1 minute (1-30 mins Optional)
	User Configuration	AT Command
		Remote Server
	OTA	Remote OTA
	Others	Real-Time control，Data backfilling

	PORT	TCP 80 (Used for logging in to the device's built-in web page), TCP 502 (Used for Modbus TCP communication)

4. Data interface description

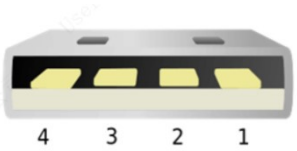


Table 2

in	Name	Type	Function
1	VCC	Power	Input Power：DC 5V （≥2.5W）
2	RXD	Input	3.3V TTL UART
3	TXD	output	3.3V TTL UART
4	GND	Power	Input Power：GND

5. Dimension information

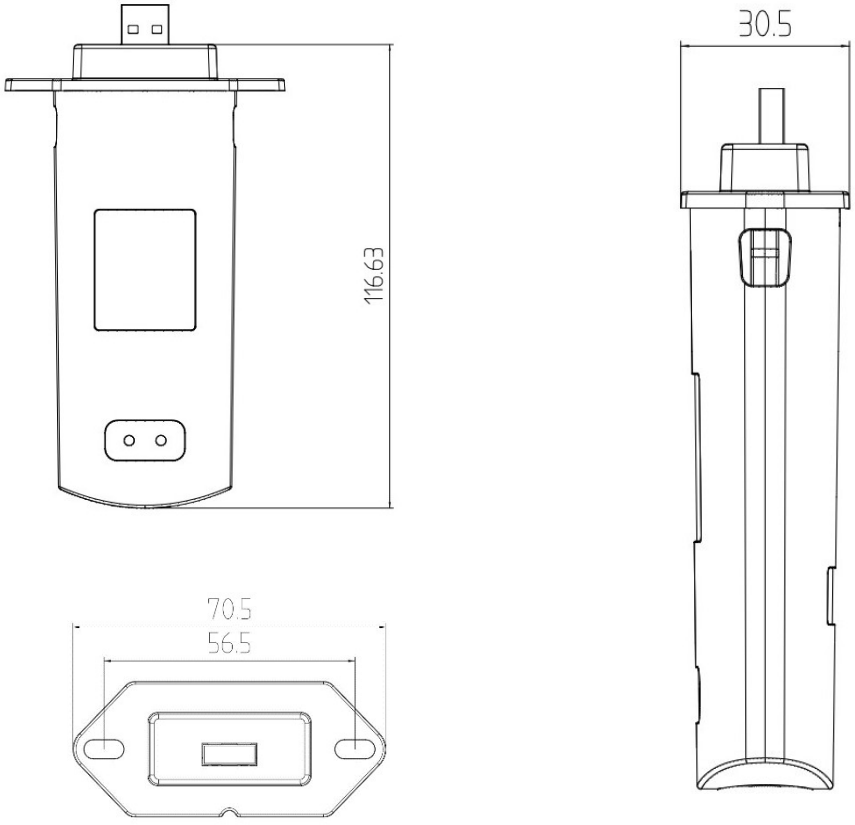


Table 3 (Unit : millimeters)

6. Logger Status

The normal operation status of the stick logger, when router connected to the network normally:

1. Connection to the server succeeded: NET blue light keeps on after the logger powered on.
2. Connection to the device succeeded: COM blue light keeps on.

Lights	Implication	Status Description(Both lights are red/blue lights)	
NET	Communication status with server	Light off	The device is not running
		Blue light on	Connection to the cloud server succeeded.
		Blue light flashing	Connecting to cloud server (duration less than 30s) or logger OTA.
		Blue light flashing slowly	Connecting to base station (duration less than 1 minute).
		Red light on	Connection error.
COM	Communication status with inverter	Light off	Communication with the device failed.
		Blue light on	Communication to the device succeeded.
		Blue light flashing	sub-device OTA running.
		Blue light flash slowly	Power On
		Red light on	Communication error
NET+ COM	Restore the factory settings	Net blue light flashing, and COM blue light flashing	Restoring factory settings.

Notes: 1. Flashing： LED flashes at 10Hz ;

2. Flashing slowly：LED flashes at 1Hz.

7. Abnormal State Processing

If the data on platform is abnormal when the stick logger is running, please check the table below and according to the status of indicator lights to complete a simple troubleshooting. If it still can not be resolved or indicator lights status do not show in the table below, please contact Customer Support.

NET	COM	Description	Possible Reason	Recommended Process
Red light flashing slowly	Any	Communication between data logger and cloud abnormal	1. Network congestion 2. Wireless signal unstable	1. Check router network 2. Check wireless signal strength 3. Contact customer service
Red light on	Any	Communication between data logger and cloud abnormal	1. Network limited 2. The cloud address connected by the data logger has changed	1. Check router network 2. Contact customer service
Any	Red light flashing slowly	Communication between data logger and inverter abnormal	1.Loose connection with inverter 2.Electromagnetic interference causes data transmission error	1.Check connection between data logger and inverter, unplug and reinstall 2.Long press Reboot button for 5s to reboot data logger 3.Check if there are high power electrical appliances nearby
Any	Red light on	Communication between data logger and inverter abnormal	1.Loose connection with inverter 2.Communication rate between inverter and data logger does not match	1.Check connection between data logger and inverter, unplug and reinstall 2.Check if inverter's communication rate matches data logger 3.Long press Reboot button for 5s to reboot data logger

Notes: 1. Flashing slowly：LED flashes at 1Hz.

2. Please using the following table query after power-on for 2mins at least.

8. External packing Information

Packing Box Size（W×D×H）：130mm×82mm×41 mm

Label Information

Type	Content
Product Label	Name: Deye Data Logger Model: DL1000B-ETH Input: DC 5V 1.5W CE certification, etc. NINGBO DEYE INVERTER TECHNOLOGY
SN Label	SN QR Code、SN、PWD
Material No.	

9. Firmware Configuration

Default Configuratio	
Domain name	eu1-fwupgrade.deyecloud.com us1-fwupgrade.deyecloud.com

Appendix A

Packing List

	Mount	Notices
Deye Data Logge	1	--
Screw	2	--
Data Logger Quick Guide	1	--

Appendix B

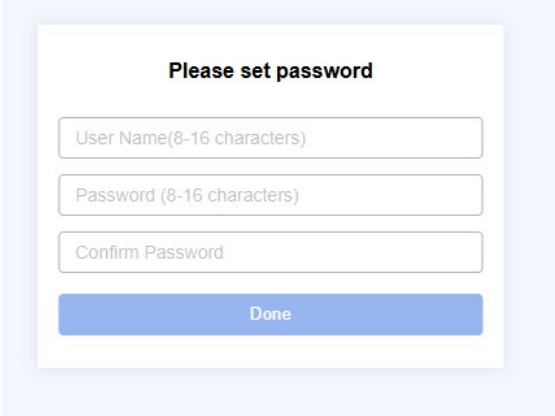
Built-in Page Operation Instructions for Logger

1. Login to the built-in page

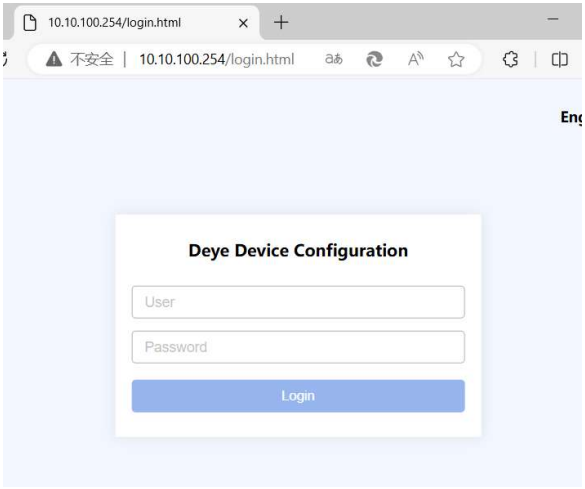
1）Turn on the wireless network of your PC or smartphone.

2）Select logger network (network name: SN) and connect. The SN and the password can be found on the label of the inverter. The password is the letter following PWD.

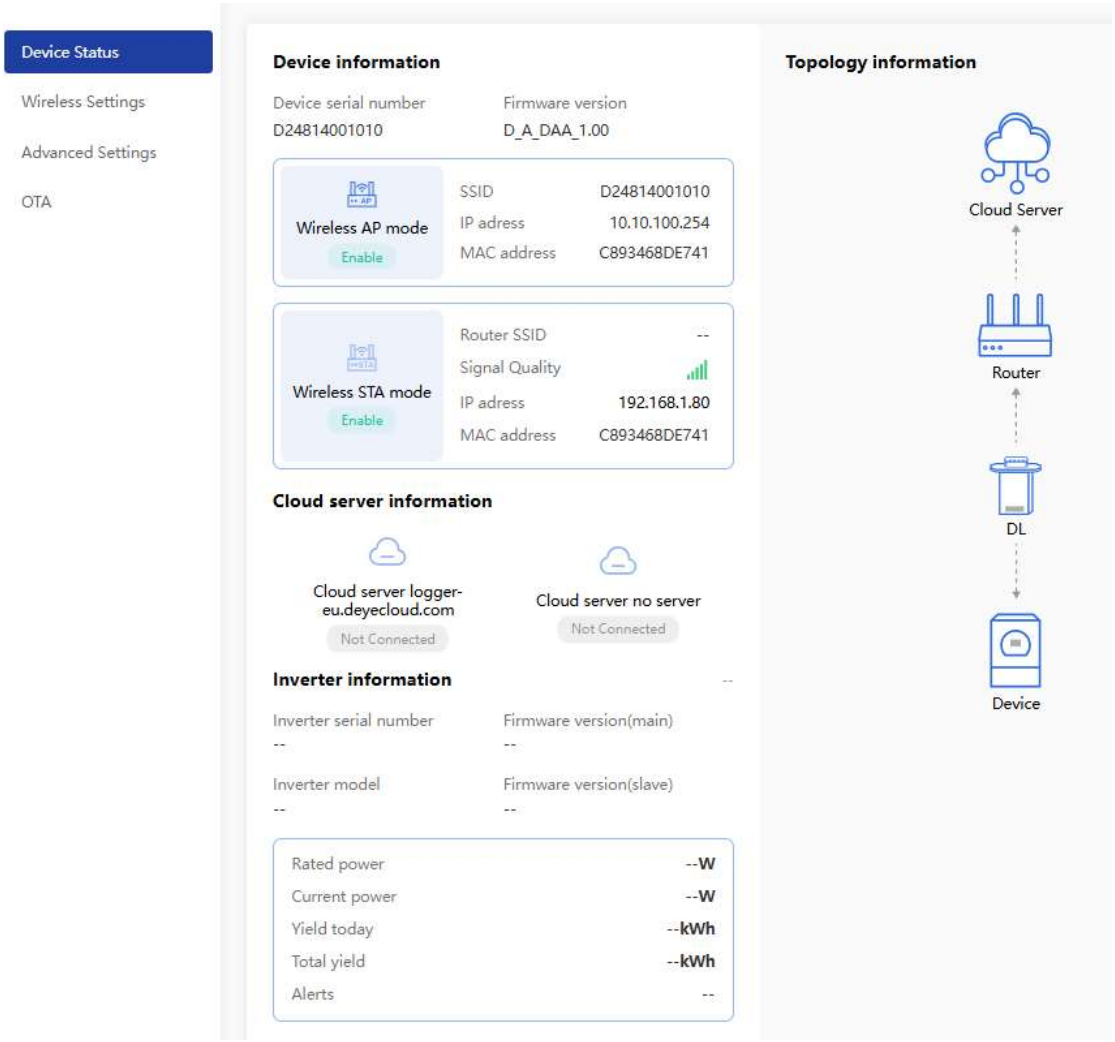
3）Open a browser and enter 10.10.100.254. When logging in for the first time, a username and password need to be set, and the password must be at least 8 characters long. After setting up, click "Done" to complete the setup. (Recommended browser: IE 8+, Chrome 15+, Firefox 10+.)



4）Enter the login page, enter the set username and password, and click login.

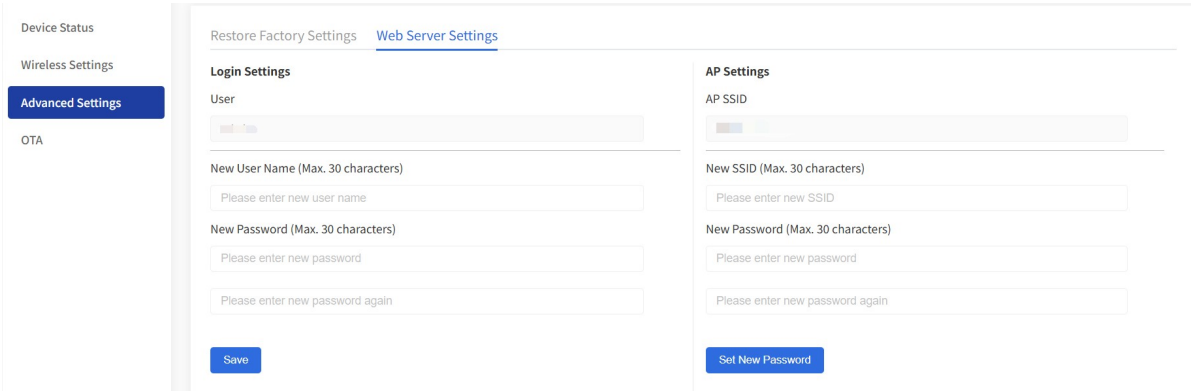


5）Go to logger setup page. The basic information are listed here.



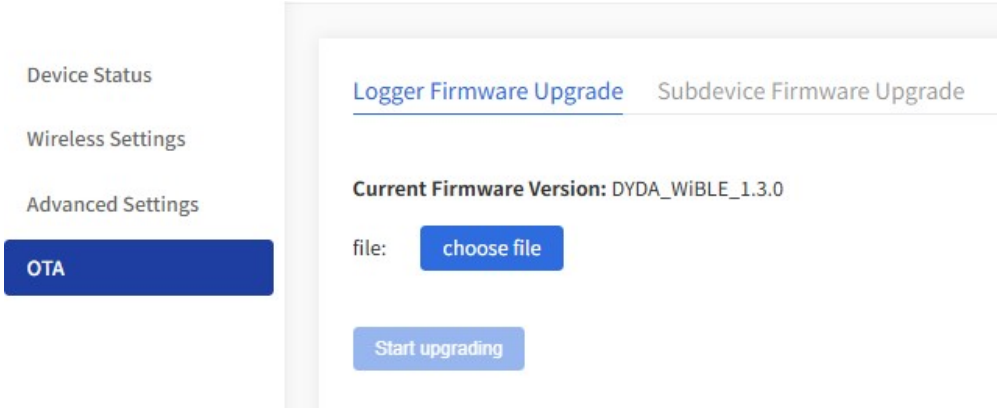
2. Modify Device Information

After logging into the built-in page, click on the Advanced Settings page. In the Web Server Settings interface, you can modify the login username, login password, AP SSID, and AP password.



3. Firmware update

After logging into the built-in page, enter the OTA interface. In the Logger Firmware Upgrade interface, click choose file, select the appropriate firmware version on the local PC, and click Start Upgrading. After the upgrade is completed, the logger will automatically restart.



4. Delete or reset relevant configuration passwords

Go to the Advanced Settings interface on the built-in page and click on Restore in the Restore FactorySettings. The device can be restored to factory mode and automatically restarted. Delete all device configurations, login built-in page usernames and passwords, and restore AP passwords to default.