SDongleB-06 Smart Dongle Quick Guide (4G)

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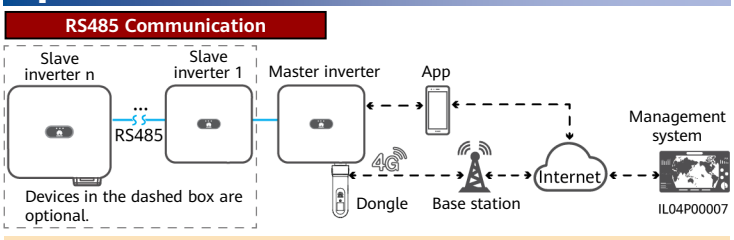
- SDongleB-06 Smart Dongle (also referred to as the Dongle) is a smart communications expansion module that works with Huawei inverters to implement wireless communication between inverters and the management system through the 4G network.
- If multiple inverters are cascaded, use either a Dongle or a SmartLogger for networking. You cannot use two networking methods at the same time.

1 Communication Scenario

RS485 Communication



NOTE

- In the networking, the inverter where the Dongle is installed is the master inverter, and other inverters are slave inverters. Slave inverters can communicate with the Dongle through cascading.
- This document uses connection to the Management System as an example. For details about connection to a third-party management system, see the user manual.
- For details about Dongle performance parameters and supported inverter models, see the user manual.

User Manual

Number of Devices Required for Networking

Limit		Actual Number	
Maximum Number of Devices That Can Be Connected to the Dongle		Number of Slave Inverters	Number of Non-Inverter Devices (Such as Power Meters)
10	10	n ≤ 9	≤ 9 – n
	3 (with energy storage systems)	n ≤ 2	≤ 2 – n
	3 (with single-phase inverters)	n ≤ 2	≤ 2 – n
2	2	n ≤ 1	≤ 1 – n

NOTE

- The number of devices that can be cascaded varies with the Dongle model. You can view the maximum number of devices that can be connected to the Dongle from the label on the external package.
- If devices are connected to the RS485-2, RS485_2, or 485B2 and 485A2 ports of the master inverter, the devices are not included as cascaded devices.

2 Installation and Commissioning

1. Install a SIM card.

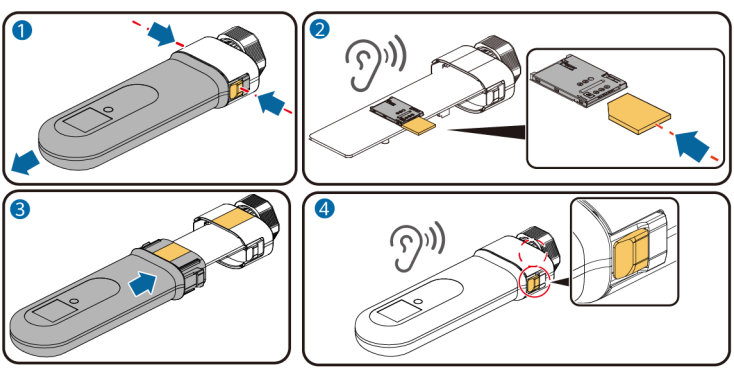
NOTE

- You need to prepare a standard SIM card (size: 25 mm x 15 mm; capacity: ≥ 64 KB). When connecting to Smart PV management system, prepare a SIM card based on the data requirements in the following table.
- Before installing a SIM card, you need to remove the Dongle from an inverter.

Recommended Monthly Requirement Plan for the SIM Card			Data Capability
Inverters	Without a power meter or energy storage system	15 MB + 4 MB x Number of inverters	• Device performance data can be updated every 5 minutes. • The Dongle logs, inverter logs, and I-V diagnosis data can be exported once a month. The Dongle and inverters can be upgraded once a month.
	With a power meter	15 MB + 7 MB x Number of inverters	
	With energy storage system	18 MB + 7 MB x Number of inverters + 5 MB x Number of DC-DC converters	
	With a power meter and energy storage system	18 MB + 7 MB x Number of inverters + 5 MB x Number of DC-DC converters	
With optimizers		Inverter data usage + 2 MB + 0.2 MB x Number of Smart PV Optimizers	

NOTE

- The following are examples of recommended monthly data plans for a SIM card to be used with the management system:
  - If two inverters and a power meter are installed, the recommended monthly data plan is 15 MB + 7 MB x 2 = 29 MB.
  - If one inverter and two energy storage systems are installed, the recommended monthly data plan is 18 MB + 7 MB x 1 + 5 MB x 2 = 35 MB.
  - If one inverter, two energy storage systems, and 10 optimizers are installed, the recommended monthly data plan is 35 MB + 2 MB + 0.2 MB x 10 = 39 MB.



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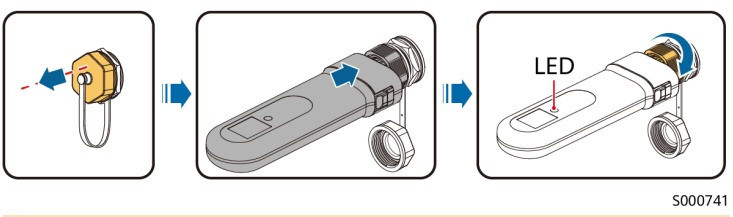
2. Install the Dongle.



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NOTE

Ensure that the AC and DC sides of the inverter are powered on before setting parameters.

3. Install the app and perform the operations in **Setup wizard**. If you have already performed the operations, skip them. If not, obtain the app quick guide to learn the operation method.

NOTE

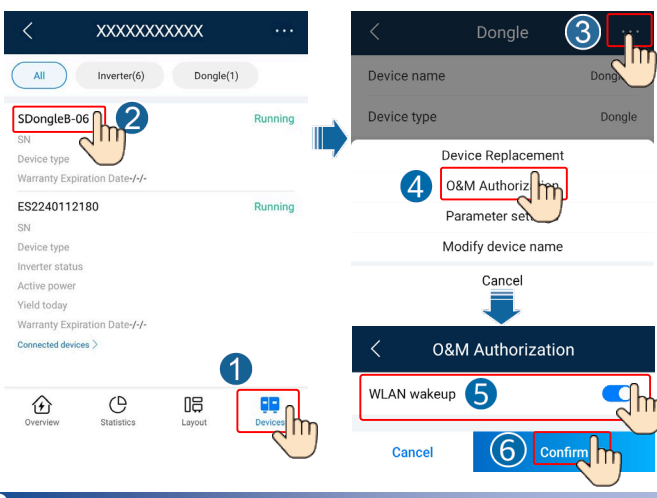
- You can obtain SIM card parameters from the SIM card carrier. For more details about how to use the app, scan the QR code to obtain related documents.
- To create multiple installer accounts for a company, log in to the app and then tap **Add user**.

LED		Remarks	Description
Color	Status		
-	Off	Normal	The Dongle is not secured or not powered on.
Yellow	Steady on		The Dongle is secured and powered on.
Green	The blinking interval is 2s. The indicator is on for 0.1s and then off for 1.9s.	Normal	Dialing (lasts for less than 1 minute)
		Abnormal	If the duration is longer than 1 minute, the 4G parameter settings are incorrect. Re-configure the parameters.
	Blinking slowly (on for 1s and then off for 1s)	Normal	The dialup is successful (lasts for less than 30s).
		Abnormal	If the duration is longer than 30s, the management system parameters are incorrectly set. Re-configure the parameters.
	Steady on	Normal	The management system is successfully connected.
	Blinking fast (on for 0.2s and then off for 0.2s)		The inverter is communicating with the management system through the Dongle.
Red	Steady on	Abnormal	The Dongle is faulty. Replace the Dongle.
	Blinking fast (on for 0.2s and then off for 0.2s)		The Dongle has no SIM card or the SIM card is in poor contact. Check whether the SIM card has been installed or is in good contact. If not, install a SIM card or remove and re-insert the SIM card.
	Blinking slowly (on for 1s and then off for 1s)		The Dongle fails to be connected to a management system because the SIM card has poor or no reception, or has run out of mobile data. If the Dongle is reliably connected, check the SIM card connectivity through the app. If you have poor or no reception, contact the carrier. Check whether the tariff and mobile data plan of the SIM card are adequate. If not, ensure sufficient balance in the SIM card or purchase a data package.
Blinking red and green alternately	Blinking slowly (red for 1s and green for 1s)		No communication with the inverter • Remove and then insert the Dongle. • Check whether the inverter matches the Dongle. • Connect the Dongle to another inverter. Check whether the Dongle or the USB port of the inverter is faulty.
	Blinking fast (red for 0.2s and then green for 0.2s)	Normal	The Dongle is being upgraded locally.

4. Commission the inverter locally via the Smart Dongle WLAN. If the Smart Dongle WLAN is disabled, log in to the app and tap the plant name on the **Home** screen to access the plant screen. Tap **Devices** and then tap **SDongleB-06**. Choose **O&M Authorization** > **WLAN wakeup** > **Confirm** to enable the Smart Dongle WLAN.

NOTE

If the inverter has a built-in WLAN module, the Smart Dongle WLAN is disabled by default. If the inverter does not have a WLAN module, the Smart Dongle WLAN is enabled by default.



3 Obtaining Documentation

NOTE

You can obtain the latest version of this document by scanning the following QR codes.

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