

FAQ

US Residential Installer

Issue 01
Date 2019-02-20





Change History

Date	Version	Description	Revised by
2019-02-20	1.0	Initial version	Limin Huang



1 Inverter

1.1 Inverter

1.1.1 Can Huawei optimizer be configured with other brand inverters?

No, Huawei optimizer can only work with Huawei inverter.

1.1.2 Can other brands optimizer match Huawei inverters?

No, Huawei inverter can only work with Huawei optimizer.

1.1.3 Backup function use case and setup?

Reference chart:

Application Scenario	Product Selector					How to Configure in FusionHome app			
	Battery Required ?	Rapid Shutdown Push Button?	Auto-transformer?	Backup Panel Board?	Consumption Meter?	Grid Tied/Off Grid Switch Mode	Off Grid Mode	Backup Switch Button	Energy Control
PV Only	No	Optional	No	No	Optional	Manual Switching (Default)	Disabled (Default)	Out	Grid-Tied Point Control → Default
PV Backup	No	Yes	Yes	Yes	Optional	Automatic Switching	Enabled	(Default) N/A	Grid-Tied Point Control → Default
PV + Storage	Yes	Yes	Yes	Yes	Yes	Automatic Switching	Enabled	N/A	Energy storage control → Zero Export/Net Zero: Max use of self-produced power TOU: TOU price Backup → Fix chg/dis



1.1.4 Does all US residential inverters has backup function? How much power can the backup mode (without battery supply)?

All US residential inverters have backup function, rated and peak output power as follows:

Technical Specification	SUN2000-3.8KTL-USLO	SUN2000-5KTL-USLO	SUN2000-7.6KTL-USLO	SUN2000-9KTL-USLO	SUN2000-10KTL-USLO	SUN2000-11.4KTL-USLO
	Backup					
Rated continuous output power	3.5 kVA @ 240 V			5 kVA @ 240 V		
Peak output power	3.8 kVA 10s @ 240 V	5 kVA 10s @ 240 V		7 kVA 10s @ 240 V		

1.1.5 Is autotransformer always needed to enable backup function?

Autotransformer is needed to power 120V backup loads.

1.1.6 Is backup panel always needed to enable backup function?

Yes, always.

1.2 Solution

1.2.1 Can system work without optimizers?

No, US version residential inverters must work with full optimizers, one optimizer for each solar panel.

1.2.2 Can system work with limited optimizers ie 15 modules but only 3 optimizers?

No, US version residential inverters can only work with full optimizers, partial optimizer configuration is not supported.

1.2.3 What’s the warranty terms for our residential solution?

- 12 years warranty for inverter, which is extendable to 25 years
- 25 years warranty for optimizer
- 12 years warranty for auto-transformer
- Monitoring free for 25 years



1.2.4 What's the maximum distance of inverter WLAN communication signal pass through the wall?

Signal blocking capabilities of different walls are different, the design of our solution can meet the requirements of most household situations.

1.2.5 With the 4G Cellular monitoring, what carrier are they running with, are their options, how do installers handle areas with no coverage?

Our 4G models support AT&T, T-Mobile and their wholesale suppliers; for areas with no coverage, customers can choose to use WLAN.

1.2.6 Is the emergency stop switch required for all installs? Is there a recommended manufacturer/model?

No, not for all installs. Emergency like this works (UL certified, normally closed)

1.2.7 Does the electricity meter need to be installed for all modes of operation? If not, when is it optional?

No. If customer need to control the energy export to the grid, then he need a consumption power meter.



2 Optimizer

2.1 Optimizer

2.1.1 Does the optimizer have other values in addition to allowing modules to be installed in shadow?

For the installers, the solar modules inventory can also be digested because the different power and brands of modules can be installed in the same PV plant without mismatch by installing the optimizer. And the design is easier, e.g. no need to consider the different orientation and quantity of each string.

2.2 Solution

2.2.1 Does the 375 watt optimizer have a big enough MPPT window to handle thin film module, 72 cell, high wattage LG etc....?

375W optimizer is compatible with 72 cell and high wattage LG modules, also works with modules within Max. Voltage 80V, Max. Current 12A

2.2.2 How many optimizer per string and what's the maximum power per string?

6-25 optimizer per string, 3.8-7.6KTL inverters can connect up to 2 strings and 9-11.4KTL inverters can connect up to 3 string. Maximum power per string is 5550W.

2.2.3 What's the oversize capability of the Huawei solution?

We recommend oversize ratio 1.55, if customer over the limit, any damage caused by this will not be covered by system warranty.



3 Commission and Troubleshooting

3.1.1 Basic requirement before commissioning start?

- All wiring connection is completed and checked
- AC breaker/switch to inverter is on
- DC disconnect switch on inverter is on
- Power-on LED status check
- Latest FusionHome APP downloaded from App Store

3.1.2 Normal commissioning steps?

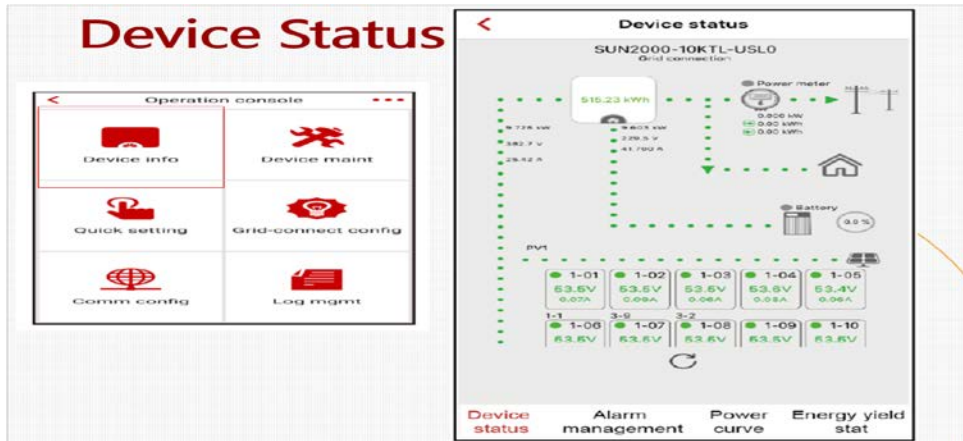
FusionHome App Connection Methods

Figure 7-7 Mobile phone connecting to the SUN2000 directly

Figure 7-8 Scanning the QR code to connect the mobile phone to the SUN2000 directly

Upgrading Inverter Firmware

Quick Setting



3.1.3 What happens if the optimizer cannot be found?

- Due to low irradiance on some/all solar panels
- Two or more inverters are adding optimizers at the same time.
- Optimizer cables are incorrectly connected.
- DC disconnect switch on inverter is on

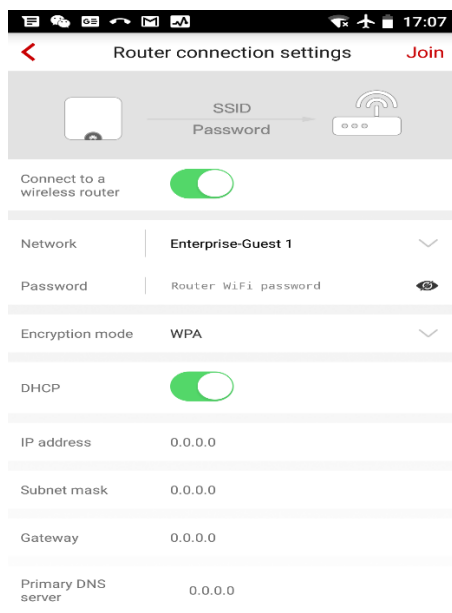


4 Management System – LocusNOC

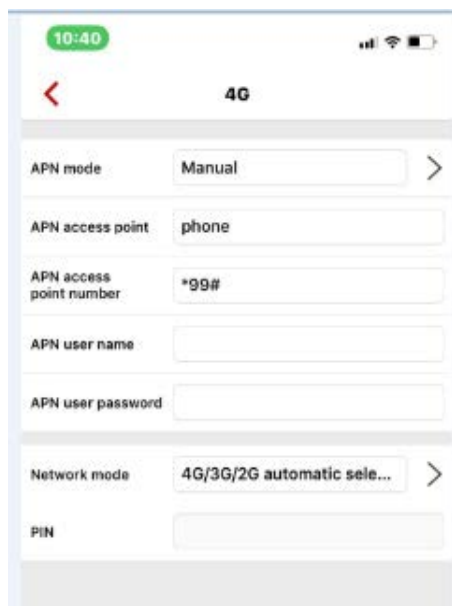
4.1.1 The Help Portal URL of the residential fleet management system

<http://help.locusenergy.com/locusnoc> is the Locus Help Portal

4.1.2 How to setup WiFi communicate with Locus management system

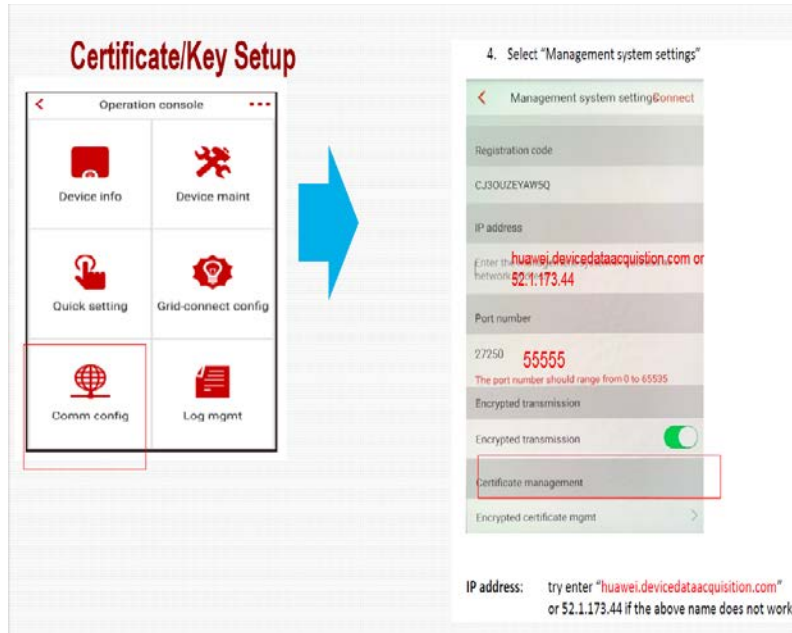


4.1.3 How to setup 4G communicate with Locus management system





4.1.4 How to upload Locus management system certificates





5 Accessory – Battery

5.1.1 What kind of battery is compatible with Huawei Inverter? And where to download the datasheet, warranty terms and installation information?

Current supported battery brands and models: LG Chem RESU 10H Type-R, the Product Info., User Manual and Warranty Terms:

<http://www.lgesspartner.com/front/normal/en/product/productInfo.dev>

Huawei Inverter & LG battery installation quick guide link:

<http://support.huawei.com/enterprise/en/doc/EDOC1100019947?idPath=9452479%7C9475815%7C9487731%7C22027611>

LG Chem RESU Products Compatible With Huawei



Models	RESU10H Type-R	
Total Energy [kWh]	9.8	
Usable Energy [kWh]	9.3	
Voltage Range [V]	Charge	400~450V DC
	Discharge	350~430V DC
Max. Continuous Power [kW]	5.0	
Dimensions [W x H x D] / Weight	29.3" x 35.7" x 8.1" / 214 lbs	
Expandable Storage	No	

- 1) Battery Total Energy is measured at the initial stage of battery life under the condition as follows : Temperature 25°C
- 2) Battery Usable Energy is based on battery cell only and lower values are expected with conversion losses to AC property use

5.1.2 Is battery needed to enable backup function?

No, not necessary.

5.1.3 If no battery, does a backup panel still get power when sun is down and power grid is normal?

Yes. If off-grid mode and auto-switching of grid-tied/off-grid are enabled.



5.1.4 If no battery, does a backup panel still get power when sun is down and power grid is down?

No.

5.1.5 If no battery, how long a backup panel can provide power to critical loads when power grid is down?

As long as there is power from solar panels, the inverter will keep working to provide power to critical load. The inverter will stop providing power to critical load when the sun is down. If power grid is still down on the second day, inverter cannot start until the power grid is recovered.

5.1.6 When battery is added, how long a backup panel can provide power to critical loads when power grid is down?

With battery, inverter can restart in the morning, even though power grid is still down. In another word, backup mode with battery can support critical load until battery is drained.



6 Accessory – Energy Meter

6.1.1 What's the energy meter brand and model is compatible with Huawei Inverter? Can we find the supplier?

Current supported meter brand and model: **CCS, WNC-3D-240-MB**, the Product Info., User Manual, Technical Documents: <https://ctlsys.com/product/wattnode-modbus/>

Huawei Inverter & CCS Meter installation quick guide link:

<http://support.huawei.com/enterprise/en/doc/EDOC1100019947?idPath=9452479%7C9475815%7C9487731%7C22027611>

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