

Hybrid Inverter Firmware Update Instruction via a Laptop

1. Overview:

To make the hybrid inverter compatible with more recent batteries in the market, the hybrid inverters may need upgrade the firmware. This document introduces the procedure for the firmware upgrade via a laptop.

2. Preparation

2.1 Firmware download

Please download the firmware upgrade kits via the link from the email sent by Sungrow service team.

SH5K-V13_V48 SolarInfo Device Manager

Figure 1 Firmware upgrade files

2.2 SolarInfo Device Manager setup

2.2.1 Software installation

Open the SolarInfo Device Manager and double click the program software highlighted with the red circle (it is only supported by Chinese version currently, but setup is as follow).

Protol
BolarInfo Device Manager(NEW_CH)

Figure 2 SolarInfo Device Manager

Click 'Next (N)【下一步(N)】', which is on the bottom right corner (in the red circle)



Figure 3 Introduction and Next

Click the 'Browse (R)【浏览 (R)】' in the blue circle to select the installation place and then click 'Next (N)【下一步(N)】' in the red circle



Figure 4 Select the installation location

Click 'Next (N)【下一步(N)】' in the red circle and start the installation



Figure 5 Installation confirmation

Then it will take a few minutes to finish the installation. When you see the window in **Error! Reference source not found.**, click 'Close (C) 【关闭(C)】' in the red circle in t he bottom right corner of the window to finish the program installation



Figure 6 Installation completed



2.2.2 Software settings

When the installation completes, there will be a shortcut on the desktop like the figure, right click to select the **Properties**



Figure 7 Select properties

Copy the file location as the red circle from Figure 8, then open the research, and paste the information search bar (Figure 9) to find the Protal folder.

🐁 SolarInfo Devi	ce Manager Properties		\times
Security General	Details Shortcut	Previous Versions Compatibility	
Sol	larInfo Device Manager		
Target type:	Application		
Target location: Target:	SolarInfo Device Manag	ger(NEW_CH)	
Start in:	Sungrow\SolarInfo Devi	ce Manager(NEW_CH)	
Shortcut key:	None		
Run:	Normal window	,	~
Open File Lo	cation Change Ico	n Advanced	
	OK	Cancel Apply	r

Figure 10 Copy file location

Figure 11 How to search the file

Then you can copy all files in the new **Protol folder** in the downloaded content to replace them in the original **Protol folder** (Figure 10)

Note: you must complete this step, otherwise, you may have some issues to setup the software.





2.3 IP settings on the inverter and the laptop

2.3.1 Inverter IP setting

Long press the '**ENT**' button to the menu, enter the '**ON/OFF**' settings and select '**OFF**' to key stop the inverter



Figure 13 Key stop the inverter

After that, select the 'Settings' and enter the password **111.** Then find the option 'Comm. Param'



Figure 14 Communication Parameters

Enter **'Comm. Param'** and select **'OFF'** for the DHCP.



Figure 15 Switch OFF DHCP



Then scroll down to the next page. Change the IP address as the Figure 14



Figure 16 Set the inverter IP address

After the IP address setting completed, press the '**ESC**' button to the '**Save Settings**' page and press the '**ENT**' button to complete the setting.



Figure 17 Save the settings

2.3.2 Ethernet cable connection

Open the hybrid inverter's cover. Connect the ethernet cable between the Ethernet interface of the inverter LCD board and the computer.



Figure 18 Connect inverter with the laptop

2.3.3 Laptop IP setting

Before conducting the upgrade, we also need to change the setting on the laptop. Make the wireless connection on the computer disabled and get the inverter's IP address

Right click the Wi-Fi icon on the bottom right corner of the taskbar.



Figure 19 Select Wi-Fi icon

In the menu click 'Open Network and Internet settings' (Figure 20).



Figure 20: Open Network and internet settings

Select the 'Ethernet' on the sidebar of the popup window, click "change adapter option".



Figure 21: Change adapter settings



After you select the 'Change adapter options'. Right click the Wi-Fi and disable it.

rganize	 Connect To 	Disable this netw	vark device	Diagnose this connection	Renam	ne this connection	View status of this con	necti	on Change settings of this connecti
a a a a a a a a a a a a a a a a a a a	Ethemet Unidentified network Realtek PCIe GBE Family	y Cantroller	Etherne Networ Sangfo	et 2 rk cable unplugged r SSL VPN CS Support Syst	-	VPN Connection Disconnected WAN Miniport (IKEv	2)	N Z O	A-Fi ETGEAR38 Disable Connect / Disconnect Status Diagnose
								0000	Bridge Connections Create Shortcut Delete Rename Properties

Figure 22 Disable the Wi-Fi function

Right click the Ethernet icon and select '**Properties**' in the pop-up menu. Then double click the '**Internet Protocol Version 4 TCP/IPv4**' (Figure 21)



Figure 23: Right click Ethernet, and select properties



Set the IP address as shown in Figure 24. Make sure that the IP address must be different from the inverter's one (last three digits). Then click the '**OK'** and '**Close'** the page

Internet Protocol Version 4 (TCP/IPv4) Properties								
General								
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator							
Obtain an IP address automatically								
• Use the following IP address:		- II						
IP address:	192.168.1.103							
Subnet mask:	255.255.0.0							
Default gateway:								
Obtain DNS server address automatically								
• Use the following DNS server addresses:								
Preferred DNS server:								
Alternate DNS server:								
Validate settings upon exit	Advanced							
	OK Cance	4						

Figure 24: Set the IP address



3. Firmware upgrade

Double click on the **Solar Device Manager** to run the program, windows will appear as shown below.



Figure 25 Launching Device Manager

Close the '**DXperience**' window and wait for a while. It will pop up the search window (Figure 26). Select the '**Normal search**' and click '**Next**'.



Figure 26 Select normal search



Click on the '**Modify**' button (Figure 27). In the "Channel Configuration" pop up window, select '**Network'**, set the same IP address as the inverter's. and the Port as 502, and then click the '**Confirm**' button.

I C:\Program Files (x86)\Sungrow\SolarInfo Device Manager(NEW_CH)\SolarInfo.exe	-	\times
版本信息、V1.0.13.0 1、増加了广播设置返回地址的判断号earch		^
2、增加于属性採税失败后的重复下及。。 3、透传增加了发送效验。 Channel Configuration		
4、 修改了CAN语信/波形读取数据间隔。 5、 修改了自动搜索读SN命令的长度,由0x10改 6、 修改了记录日志最大长度512的限制,改成 8、 修复了线程中连接数据库报异常的BUG。 9、 修复了式程中连接数据库报异常的BUG。 9、 修复了了试程中连接数据库报异常的BUG。 10、 CAN通信增加了过滤,解决了整机调试信息 注意,增加过滤要在地址后面加个二进制。 11、增加了手动搜索设备数量。 2、 挨拶各条在自软化发光的数据循环间隔中:		
13、增加波形透传。		
Cancel Confirm		
Back Next Cancel		
		×

Figure 27 Modify the Network

Then click the Next and Search

C:\Program Files (x86)\Sungrow\SolarInfo Device Manager(NEW_	CH)\SolarInfo.exe				_	\times
版本信息 VI.0.13.0 1、增加了广播设置返回地址的判断 。 2、增加了广播设置返回地址的判断 。 3、透传增加了发送效验 。 4、修改了CAN通信波形读取数据间隔 。 5、修改了自动搜索读SN命令的长度,由0x10改成了10 6、修改了透传中TCP方式没有效验的处理_。) o					^
7、修改了记录日志最大长度512的限制,改成了2048 8、修复了线程由连接数据库报导常的BUG 。	💾 Search		- 0	×		
9、修复了TCP中自动搜索组SNI的BUG。 10、CAN通信增加了过滤,解决了整机调试信息量大疗 注意,增加过滤要在地址后面加个二进制0、及3	Device inform	ation configurati	on			
11、增加了手动搜索设备数量。 12、接收设备接口软件发送的数据循环间隔由30ms改	Channel Name	Number of devices	Begin Address	End Ad		
13、增加波形透传。	192.168.001.003	1	1	24		
	٢			>		
		Back	Search	Cancel		

Figure 28: Add button

If the inverter is being searched for, users should be able to see a searching window (Figure 29)



Figure 29: searching window

Once the search is complete, the window will pop up with a summary table containing inverter information such as the inverter SN and software version.

Solarinto Device Manager	ware the			- 0
Search Pause Event record	I Batch configure Upgrade setting Curve setting	2 Help		SUN GRØW
Device Information = 192.168.137.172 (1) #1-SH5K	Device Information Application param.	Configuration Parameter Test parameter	ters Device Upgrade	
	SN D	A1605230508	DeviceType	SH5K
	DeviceTypeNumber	0	DeviceVersion	V13
	Mac1	ac199f00f040	Mac2	00000000000
	AttributeProtocolNumber	00002001	AttributeProtocolVersion	01000100
	ApplicationProtocolliumber Maintain attribute information	01002101	AnnicationDrotocol/larcion	01000100
	MaintainProtoiNumber	4	FirmwareVersionNumber	3
	IACProtocolNumber	02012101	IACProtocoNersion	01000100
	IAPProtocolNumber	03002001	IAPProtocolVersion	02000100
	IATProtocolNumber	05012001	IATProtocolVersion	01000100
	MCUFirmwareVersionNumber1	LCD_SH5K-V13_V00	MCUFirmwareVersionNumber2	MDSP_SH5K-V13_V00
	MCUFirmwareVersionNumber3	SDSP_SH5K-V13-V00		

Figure 30: SolarInfo Device Manager

Click on '**Device upgrade**', then click '**Add a new file**' near the top right of the window, then choose '**Browse**' to add the firmware document. Because all three files cannot be uploaded simultaneously, it is needed to add each file consecutively. Finally, click "upgrade".

earch Pause Event record	Batch configure Upgrade set	tting Curve setting Help		SUNGRO
evice Information	Device Information	Configuration Parameter Test parameters Device Upgrad	e	
192.168.1.100 (1) #1-SH5K	Select File:			Add a new file
In a brinne	No. Device Typ	e Device Version App Version	Path	Delete
	1	Dpen	×	Browse-
		← → ~ ↑ 🦲 « Desktop → SH5K Upgrade →	✓ ຽ Search SH5K Upgrade ,0	
	Upgrade	Organize • New folder	BI • 🔲 🔘	Clear Log
	Device	Downloads # ^ Name Documents # Protol	Date modified Type	Time remaining
		Tropbox # LCD_SH5K_V11_V1_L_M.sgu	26/08/2016 4:23 AM SGU File	
		SH5K Upgrade MDSP_SH5K_V11_V1_J_M.sgu	25/08/2016 1:17 AM SGU File	
		Shipping Folder Support Team Troubleshooting Dropbox ConcDrive	25/06/2016 1:20 AM SGU File	
	Upgrade Log	This PC		

Figure 31: Device upgrade→"Add a new file"→Browse→Upgrade

4. Upgrade Verification

It will take about 10 to 15 minutes to complete the process.

When all three required documents have been successfully upgraded, restart the inverter.

Then press '**ENT**' to '**Setting**' via the main menu, use password "002" to enter, then choose '**Soft Version**' to verify



Figure 32: Select Soft Version

Soft Version: MDSP_SH5K_V11_V1_G_M SDSP_SH5K_V11_V1_G_M LCD_SH5K_V11_V1_H_M

Figure 33: Soft Version files

Click here for the firmware upgrade package (SH5K+) via a laptop and click here to watch the video tutorial.