



System Extension and Changing the System Controller in Existing Systems

Selecting a controller when extending a system as well as switching from Sunny Home Manager 2.0 to an integrated System Manager

1 Validity

This document is valid for:

Product	Type
Sunny Home Manager 2.0	HM-20
Sunny Boy Smart Energy 3.6 / 4.0 / 5.0 / 6.0 / 8.0 / 9.9	SBSE3.6-50 / SBSE4.0-50 / SBSE5.0-50 / SBSE6.0-50 / SBSE8.0-50 / SBSE9.9-50
Sunny Tripower Hybrid X 5 / 6 / 8 / 10 / 12 / 15 / 20 / 25 / 30	STPH5-60 / STPH6-60 / STPH8-60 / STPH10-60 / STPH12-60 / STPH15-60 / STPH20-70 / STPH25-70 / STPH30-70
Sunny Tripower X 12 / 15 / 20 / 25	STP 12-50 / STP 15-50 / STP 20-50 / STP 25-50
SMA eCharger	EVC22-3AC-20

2 Introduction

In existing or new systems, both a Sunny Home Manager 2.0 and a product with an integrated System Manager can take over the function of a system controller. Depending on the system components used and the system requirements, it may make sense to continue operating the Sunny Home Manager 2.0 as system controller or to transfer the function of the system controller to an integrated System Manager.

This technical information assists in the selection of a suitable system controller for new or existing systems. It describes typical applications, the extension of existing systems as well as switching from the Sunny Home Manager 2.0 as system controller to an integrated System Manager.

3 Additional Information

The following table provides some important additional information. Additional documents and language versions are available in the [Downloads](#) section on the product pages at www.SMA-Solar.com.

Title and information content	Type of information
"Sunny Portal powered by ennexOS"	User manual
"Operation of the user interface of products powered by ennexOS"	User manual
"Operating manual of SUNNY HOME MANAGER 2.0 in Sunny Portal powered by ennexOS"	Operating manual
"SUNNY BOY SMART ENERGY 3.6 / 4.0 / 5.0 / 6.0 / 8.0 / 9.9"	Operating manual
"SUNNY TRIPOWER HYBRID X 5 / 6 / 8 / 10 / 12 / 15"	Operating manual
"SUNNY TRIPOWER HYBRID X 20 / 25 / 30"	Operating manual
"SUNNY TRIPOWER X 25"	Operating manual
"SMA eCharger"	Operating manual
"SMA Premium - Energy Management powered by ennexOS"	Technical Information

4 System compatibility and scope of functionality

The system controller selection affects the scope of functions available in the overall system. Detailed information on this is available in the document "Compatibility of SMA Devices" in the download area at www.SMA-Solar.com.

Function	System Manager	Sunny Home Manager 2.0
Number of hybrid and battery inverters in the system	≤ 5	≤ 1
Secure power supply operation	Yes	No ¹⁾
Heat pumps	SG-ready	Control via radio-controlled sockets, direct control via the SG-Ready interface, direct control via SEMP or EEBus
Shelly relay and radio-controlled sockets	Planned	Yes
Dynamic electricity tariffs	Yes	Yes
Dynamic feed-in tariff	Yes	No
Section 14a of the Energy Industry Act (EnWG)	Yes	Yes

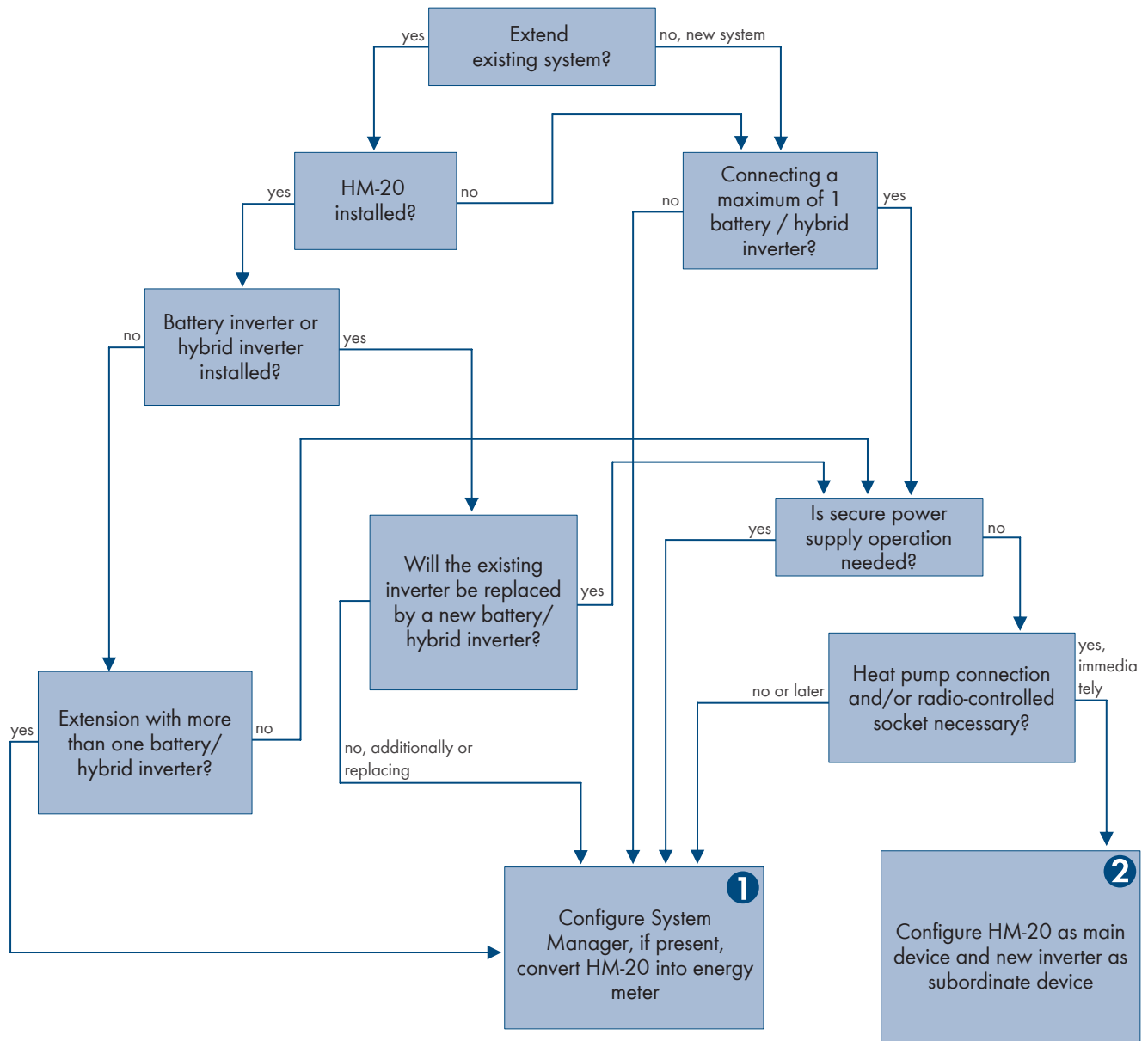
5 Selecting the System Controller

For new systems, the configuration of a System Manager with an energy meter at the point of interconnection is generally recommended. For existing systems with a Sunny Home Manager 2.0 acting as a system controller, the following recommendations apply:

- In systems with more than one hybrid or battery inverter, backup, PV increased self-consumption, integrated dynamic electricity tariff or forecast-based battery charging, the configuration of the integrated System Manager as the system controller is recommended.
- In systems with third-party components such as heat pump, heating rod, EV Charger or switchable components such as a Shelly relay, it is recommended to configure the Sunny Home Manager 2.0 as the system controller.

¹⁾ In systems with Sunny Boy Smart Energy and Sunny Home Manager 2.0, secure power supply operation is also possible.

To select a suitable system controller, the decision tree is used:



Position	Procedure	See
1	1. If your system is still located in Sunny Portal Classic, move the system to Sunny Portal powered by ennexOS.	Section 7.3, page 6
	2. If a hybrid inverter was configured as a subordinate device under the Sunny Home Manager 2.0 and is now to be configured as the System Manager, first reset the hybrid inverter.	User manual for products powered by ennexOS
	3. Configure the System Manager via the local user interface or the SMA 360° app by means of the commissioning wizard and capture the subordinate devices in the process.	Operating manual for the System Manager
	NOTICE If an SMA eCharger (firmware version $\geq 2.7.xx.R$) is to be controlled by a System Manager integrated in an inverter, the inverter requires the firmware version $\geq 3.17.xx.R$. If an SMA eCharger is to be controlled by a System Manager integrated in a Data Manager M or SMA eCharger, the Data Manager M or SMA eCharger requires the firmware version $\geq 2.7.xx.R$. In both cases, the SMA eCharger must be reset before being integrated into the System Manager.	
	4. Configure the Sunny Home Manager 2.0 as energy meter at the point of interconnection during commissioning.	Section 7.1, page 6
2	5. Replace the Sunny Home Manager 2.0 in the existing system in Sunny Portal powered by ennexOS with the System Manager.	Section 7.2, page 6
	1. If your system is still located in Sunny Portal Classic, move the system to Sunny Portal powered by ennexOS.	Section 7.3, page 6
	2. If your system is already located in Sunny Portal powered by ennexOS and a System Manager has been configured, reset the System Manager.	User manual for products powered by ennexOS
	3. Commission the inverter as a subordinate device.	Operating manual of the inverter
	4. Create the system with Sunny Home Manager 2.0 as main device in Sunny Portal powered by ennexOS.	Section 7.5, page 7
2	5. Add SMA devices or loads to the Sunny Home Manager system.	Section 7.4, page 7

6 Specifics when Commissioning the SMA eCharger

When commissioning the SMA eCharger, depending on the system layout, consider how the device should behave in the system. During commissioning via the SMA eCharger commissioning wizard, the setting must be configured according to the specific application:

- **System Manager:** If the integrated System Manager of the SMA eCharger is to be used as the system controller, configure the SMA eCharger as the System Manager.
- **Subordinate charging station:** If another product powered by ennexOS takes over system control as System Manager, the SMA eCharger must be configured as a subordinate charging station.
- **Subordinate charging station (Sunny Home Manager):** If there is a Sunny Home Manager 2.0 in the system as the main device, the SMA eCharger must be configured as a subordinate charging station (Sunny Home Manager).

7 Configuration

7.1 Configuring the Sunny Home Manager as Energy Meter

Requirements:

- ☐ A System Manager must be provided for the system.
- ☐ The commissioning wizard must be started locally or via the SMA 360° app via the product that is to be configured as the System Manager.

Procedure:

1. Start the commissioning wizard (see manual for the System Manager).
2. In the step **Device function**, select the functioning [**System Manager**].
3. In the step **Device registration**, select > [**SMA Speedwire devices**].
4. Start the search for devices in the local network via [**Search devices**] and confirm with [**Next**].
 - ☒ The Sunny Home Manager 2.0 is identified as an energy meter and additional devices may be found.
5. Select activated SMA Speedwire devices using the button and confirm with [**Next**]. Assign a device name if needed.
6. In the step **Meter configuration**, configure the energy meter at the point of interconnection. To do this, select the Sunny Home Manager 2.0 from the dropdown menu and select the appropriate **Channel** for grid feed-in and grid-supplied power.
7. Adjust further settings depending on requirements.

7.2 Replacing the Sunny Home Manager

Requirements:

- ☐ The Sunny Portal powered by ennexOS is open and you are logged in as **Installer**.
- ☐ The system is already registered in Sunny Portal powered by ennexOS.

Procedure:

1. Go to **Device management** via the side menu **Configuration**.
2. Open the context menu in the row of the Sunny Home Manager to be replaced via the button
3. Select [**Replace device**].
4. Enter the PIC and RID of the new device and select [**Identify**].
5. Click [**Replace**] to confirm.
 - ☒ The Sunny Home Manager 2.0 has been replaced by the main device or the System Manager. All data will be retained. The Sunny Home Manager 2.0 can remain in the system as an energy meter.

 After replacing the Sunny Home Manager, it may be necessary to manually adjust the meter configuration in the user interface of subordinate devices (e.g., in the SMA eCharger). The SMA eCharger may need to be reset and captured again by the System Manager.

7.3 Moving System from Sunny Portal Classic to the Sunny Portal powered by ennexOS

Requirements:

- ☐ You must be a **System administrator** in Sunny Portal Classic.
- ☐ You must be an **Installer** in Sunny Portal powered by ennexOS.

Procedure:

1. Log in to [Sunny Portal powered by ennexOS](#) with the SMA ID.
2. Go to **Create system** via **[Configuration]**.
3. Select **[Moving an existing Sunny Portal system with Sunny Home Manager 2.0]**.
4. Enter the system name in the input field and start the search using the button.
5. Follow the instructions in Sunny Portal powered by ennexOS.
 - ☒ The migration is complete within a few minutes.

7.4 Adding SMA devices or loads

Requirements:

- ☐ The new device must be in operation.

Procedure:

1. Go to **[Device management]** via the side menu **Configuration**.
2. Add a new device via the button **+**.
3. Select **SMA device or load**.
4. Click on **[Next]**.
5. Select the device via the button. In doing so, observe the information in Sunny Portal powered by ennexOS.
6. Click on **[Next]**.
7. Define the **Nominal system power** when selecting PV inverters.
8. Click **[Continue]** to confirm.
 - ☒ The device is added to the Sunny Home Manager system.

7.5 Creating a Sunny Home Manager System in Sunny Portal Powered by ennexOS

1. Select the **[Create System]** menu item under **Configuration**.
2. Depending on the application, select **[Create System]**, **[Sunny Design Project]**, or **[Data transfer from an existing Sunny Portal system]**.
3. Click **[Continue]** to confirm.
 - ☒ The system setup assistant opens and guides you through all the steps.