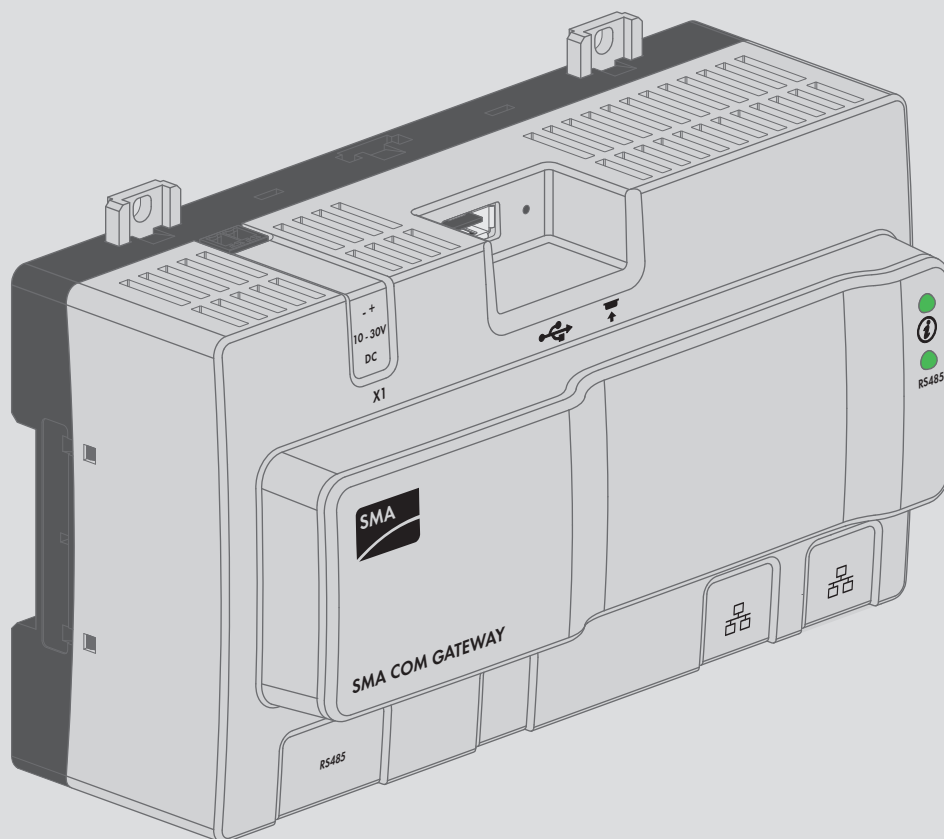Technical Information

SMA COM GATEWAY
Compatibility and Application Options

SMA

1 Supported Products

ℹ️ **Availability of SMA products in your country**

Not all SMA products are available in all countries. For information on whether an SMA product is available in your country, visit the website of your country's SMA subsidiary at www.SMA-Solar.com or contact your distributor.

The SMA Com Gateway is a media and protocol converter that integrates PV systems and components connected with each other via RS485 into the SMA Speedwire network.

Not all SMA products with RS485 interface are compatible with SMA COM Gateway. To determine the compatibility and functional options of the product, the following points must be observed:

- An update of devices within the RS485 bus is not possible via SMA COM Gateway.
- The possibility for system control of devices within the RS485 bus via SMA COM Gateway is limited by the performance of the RS485 bus (baud rate, number of devices within the bus) and by the scope of functions of the connected inverters (see also Power Reducer Box planning guidelines at www.SMA-Solar.com).
- A complete device parameterization via SMA COM Gateway may not be possible under certain circumstances. If, however, a parameterization is necessary in these rare cases, the SMA PC tool Sunny Data Control can be used for this purpose (see www.SMA-Solar.com).
- Devices that use the SMA Data (SMANet) communication protocol are supported. Devices that only use the SunnyNet communication protocol are not supported.

The device types listed in the following table are supported by SMA COM Gateway as of firmware version 1.00.01.R. (other device types and firmware versions on request):

SMA Inverter

SUNNY BOY		
SWR 1800U	SB 3000TLUS-22	SB 5000US-12
SWR 2100U	SB 3300	SB 5000TL-20
SWR 2500U	SB 3300-IT	SB 5000TL-21
SB 1100-IT	SB 3300TLHC	SB 5000TL-US-22
SB 1100U	SB 3300TLHC-IT	SB 5000TL-JP-22/MP
SB 1100LV	SB 3300-11	SB 6000U
SB 1200	SB 3300U	SB 6000US
SB 1200-IT	SB 3500TL-JP-22	SB 6000US-11
SB 1300TL-10	SB 3500TL-JP-22/MP	SB 6000US-12
SB 1600TL-10	SB 3600TL-20	SB 6000TL-US-12
SB 1700	SB 3600TL-21	SB 6000TL-US-22
SB 1700-IT	SB 3800	SB 6000TL-21
SB 2000HF-30	SB 3800-IT	SB 7000US
SB 2000HFUS-30	SB 3800-11	SB 7000US-11
SB 2100TL	SB 3800U	SB 7000US-12
SB 2500	SB 3800-US-10	SB 7000TL-US-12

SUNNY BOY

SB 2500-IT	SB 3800-US-12	SB 7000TL-US-22
SB 2500HF-30	SB 4000US	SB 7700TL-US-22
SB 2500HFUS-30	SB 4000US-12	SB 8000US
SB 2500TLST-21	SB 4000TL-20	SB 8000US-11
SB 2800i	SB 4000TL-21	SB 8000US-12
SB 3000	SB 4000TL-US-22	SB 8000TL-US-10
SB 3000-IT	SB 4200TLHC	SB 8000TL-US-12
SB 3000US	SB 4200TLHC-IT	SB 9000TL-US-10
SB 3000US-12	SB 4500TL-JP-22	SB 9000TL-US-12
SB 3000HF-30	SB 4500TL-JP-22/MP	SB 10000TL-US-10
SB 3000HFUS-30	SB 5000TLHC	SB 10000TL-US-12
SB 3000TL-20	SB 5000TLHC-IT	SB 11000TL-US-12
SB 3000TL-21	SB 5000US	
SB 3000TLST-21	SB 5000US-11	

SUNNY MINI CENTRAL

SMC 4600A	SMC 6000TL-IT	SMC 9000TL-10
SMC 4600A-11	SMC 7000TL	SMC 9000TL-10/IT
SMC 5000A	SMC 7000TL-IT	SMC 9000TLRP-10
SMC 5000A-11	SMC 7000HV	SMC 10000TL-10
SMC 5000A-IT	SMC 7000HV-11	SMC 10000TL-10/IT
SMC 6000A	SMC 7000HV-11/IT	SMC 10000TLRP-10
SMC 6000A-11	SMC 7000HV-IT	SMC 11000TL-10
SMC 6000A-IT	SMC 8000TL	SMC 11000TL-10/IT
SMC 6000TL	SMC 8000TL-IT	SMC 11000TLRP-10

SUNNY TRIPOWER

STP 5000TL-20	STP 12000TL-10	STP 20000TLHE-10
STP 6000TL-20	STP 12000TL-US-10	STP 20000TL-US-10
STP 7000TL-20	STP 12000TL-20	STP 20000TLEE-JP-11
STP 8000TL-10	STP 15000TL-10	STP 20000TL-30
STP 8000TL-20	STP 15000TLEE-10	STP 25000TL-30
STP 9000TL-20	STP 15000TLHE-10	STP 25000TL-JP-30

SUNNY TRIPOWER

STP 10000TL-10	STP 15000TL-US-10	STP 24000TL-US-10
STP 10000TL-20	STP 15000TL-30	STP 30000TL-US-10
STP 10000TLEE-JP-10	STP 17000TL-10	
STP 10000TLEE-JP-11	STP 20000TLEE-10	

SUNNY ISLAND / SUNNY BACKUP

SI3.0M-11	SI4548-US-10	SI6048-US-10
SI 2012	SI 5048	SI8.0H-11
SI 2224	SI 5048U	SBU 2200
SI4.0M-11	SI6.0H-11	SBU 5000

Additional SMA Products

- Sunny SensorBox
- Meter Connection Box
- SMA Meteo Station

2 Application

PV System Communication with Conventional RS485 Technology

In the past, RS485 was the most important data communication bus for the operational management of PV systems. Sunny WebBox, Power Reducer Box and Sunny Boy Control were communication products for ensuring parameterization, control and monitoring of SMA devices in PV systems. From today's perspective, RS485 is not longer expedient for the fulfillment of current and future requirements for system communication in scenarios such as intelligent energy management.
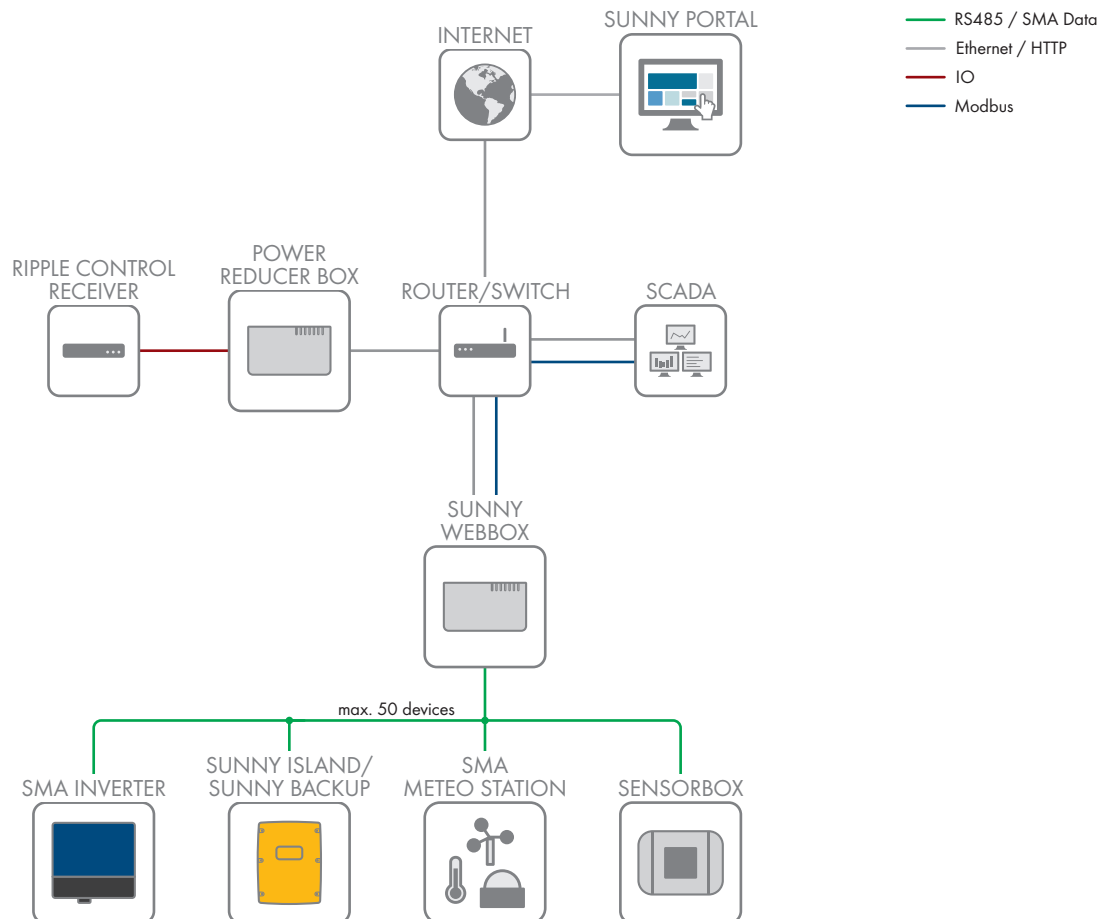

Figure 1: Example of a PV system with conventional RS485 communication

PV System Communication with Modern SMA Speedwire

To ensure a modern PV system communication and to meet future requirements, SMA Solar Technology AG developed the SMA Cluster Controller and Ethernet-based SMA Speedwire. SMA Solar Technology AG supported RS485 and SMA Speedwire simultaneously from 2012 to 2016. Due to the technical limits of the RS485 bus and the associated functional restrictions to the SMA Cluster Controller, SMA Solar Technology AG decided to discontinue Sunny WebBox devices in 2016.
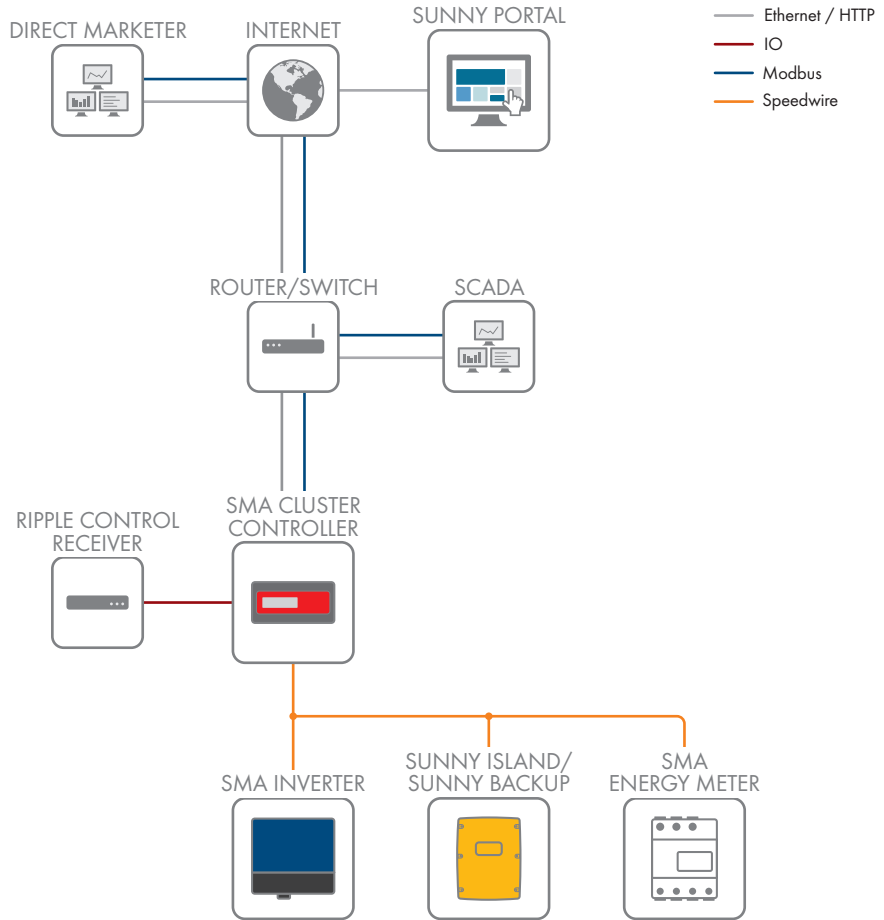
Figure 2: PV system with modern Speedwire communication

Simple System Expansion with Speedwire Devices in RS485 Systems

With SMA COM Gateway, SMA establishes a connection between RS485 communication and SMA Speedwire. The SMA COM Gateway expands existing PV systems with RS485 data communication by devices with SMA Speedwire data communication. When replacing a data logger such as the Sunny WebBox, the SMA COM Gateway allows the use of the SMA Cluster Controller. Easy integration into the SMA Speedwire data communication supports incorporation into existing and future communication, PV system monitoring and control solutions (e.g., commercial energy management systems or the SMA Smart Home), thereby guaranteeing the security of investment for the PV system. Thus, investment security of the PV system is guaranteed.
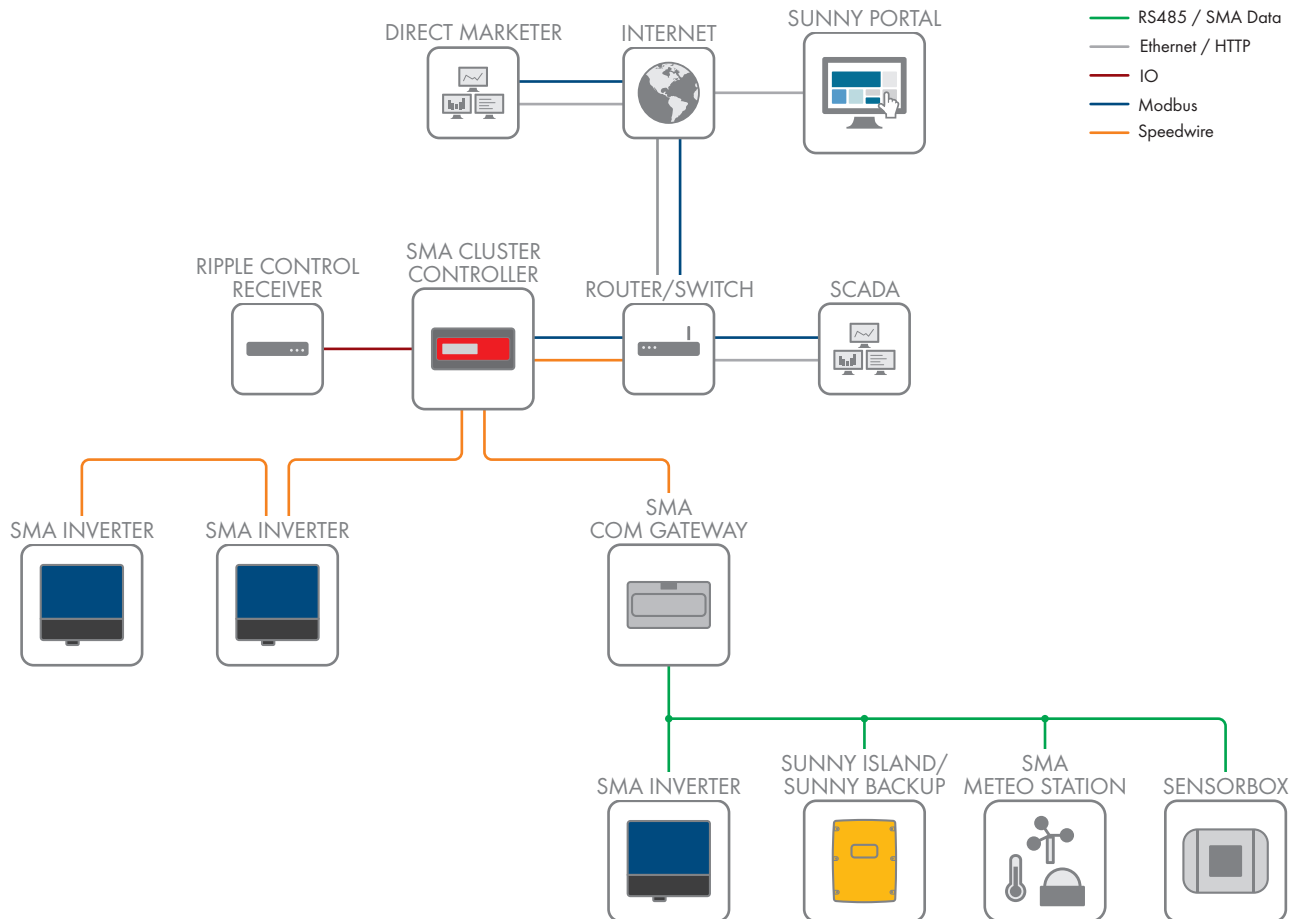
Figure 3: Simple system expansion with Speedwire devices in RS485 systems

ENERGY
THAT
CHANGES

SMA