Technical Information

Establishing a Wi-Fi connection to SMA products without Wi-Fi interface

This document describes two applications for connecting SMA products without Wi-Fi interface:

- Direct connection for initial configuration via Wi-Fi without integration into a network
- Integration into a local network via Wi-Fi

For both applications, an additional router or access point is required.

Router or access point requirements:

☐ Internet access should be available. Initial configuration is possible without connection to the Internet.

☐ Wi-Fi interface must be available.

☐ DHCP must be supported (if possible, with static DHCP).

☐ If several inverters that are equipped with one Ethernet interface only are available: Ethernet interfaces with integrated network switch must be available.

☐ Fast Ethernet with 100 Mbit/s data transfer rate

☐ IGMP protocol version 2 or version 3 (IGMPv2 or IGMPv3) must be supported.

☐ The IPv4 protocol must be used at least in the internal network. The IPv6 protocol may be active in parallel.

☐ Do not use an IGMP Snooping Switch as per RFC 4541.

ℹ️ **Direct access with SMA 360° or Energy app not possible (applies only to SMA inverters without Wi-Fi interface)**

Direct access to SMA inverters without Wi-Fi interface by scanning the QR code using the SMA 360° app or the SMA Energy app is not possible.

If the inverters without Wi-Fi interface are integrated into the local network, and the system is registered in the Sunny Portal, you can use the SMA 360°app or the SMA Energy app for system monitoring.

1 Direct connection for initial configuration

ℹ️ **Without Internet connection no reliable system time (applies only to SMA Data Manager)**

If the additional router or access point neither has an active Internet connection nor access to an NTP server, no reliable system time can be assigned to the SMA Data Manager. You can transmit the time set in the web browser of the smart device you are using to access the SMA Data Manager to the SMA Data Manager. After transmission, the SMA Data Manager performs a restart.

If the SMA Data Manager is operating and an Internet connection to the NTP server is available later, the SMA Data Manger synchronizes the system time with the time provided by the NTP server. Data may be lost during this process.
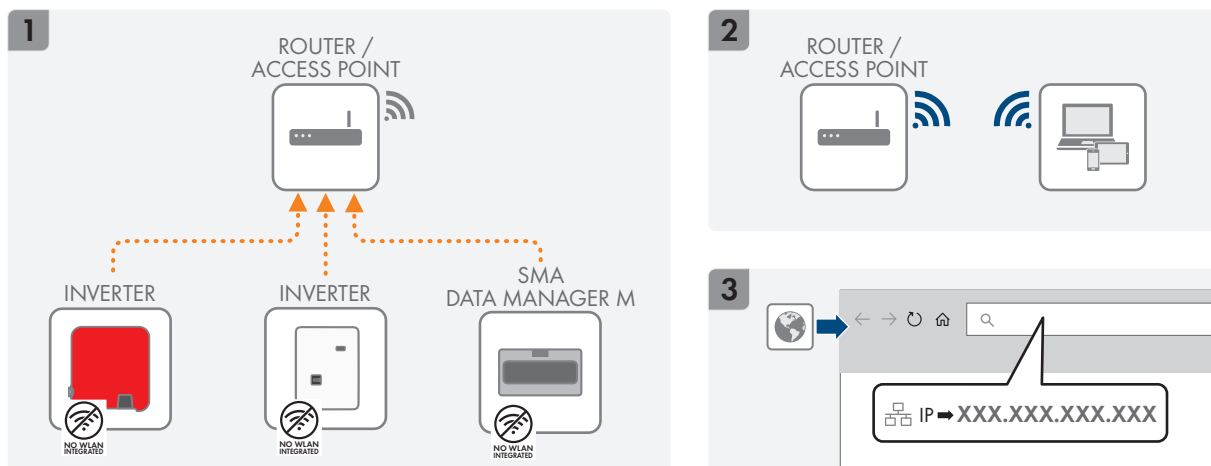
- An active Internet connection and an NTP server should be available.
- If no active Internet connection is available, use the system time of the web browser of the smart device you are using to call the user interface.

If, for initial configuration, you want to establish a direct connection to the SMA products without Wi-Fi interface using a smart device, you require an additional router or access point. The additional router or access point must be configured as a bridge between the Ethernet interface and the Wi-Fi interface.

Connect the additional router or access point via Ethernet to the product you would like to configure.

You can establish a direct connection between a smart device and the SMA product without Wi-Fi interface via the Wi-Fi interface of the additional router or access point. For this, the smart device must be in the network of the additional router or access point.

For direct access to the product, enter the IP address assigned via DHCP into the address bar of the web browser. The IP address of the respective product can be retrieved by accessing the additional router or access point. Once you have entered the IP address, the user interface of the respective product opens and you can carry out the initial configuration. After the initial configuration, you can disconnect the Ethernet connection between the respective product and the additional router or access point.

2 Integration into a local network

2.1 SMA Energy System Business

To integrate SMA inverters without Wi-Fi interface into a local network, you can either use the existing Internet router or use an additional router or access point. The additional router or access point must be configured as a bridge between the Ethernet interface and the Wi-Fi interface and must be integrated into the local network.

A complete integration of the SMA Data Manager via Wi-Fi into a local network is not possible. The SMA Data Manager only provides a Wi-Fi access point for direct connection with a smart device.

Either connect each SMA product without Wi-Fi interface directly to the existing Internet router or to the additional router or access point. If the existing Internet router or the additional router or access point does not feature enough Ethernet interfaces for all products, you can connect the SMA products in line downstream of one another and then connect only the last product in line with the existing Internet router or the additional router or access point.
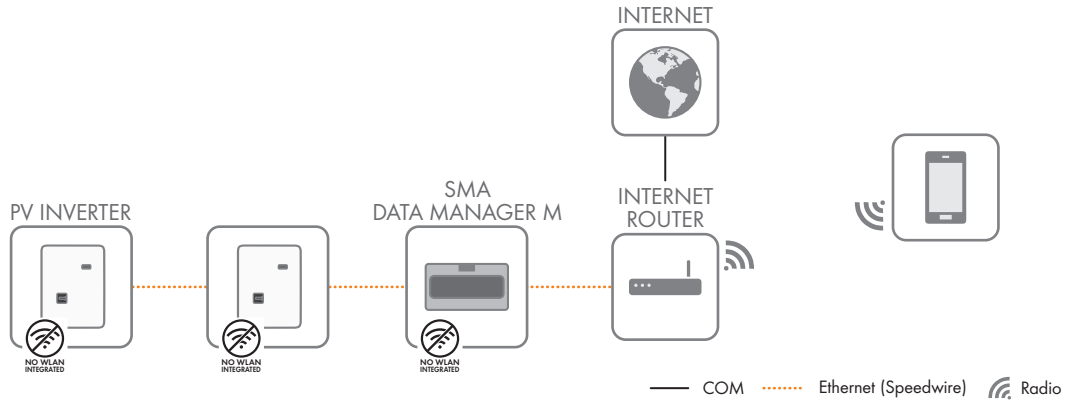
Overview:

Figure 1: Communication setup in an SMA Energy System Business with inverters and SMA Data Manager without Wi-Fi interface (example)

2.2 SMA Energy System Home

To integrate SMA inverters without Wi-Fi interface into a local network, you require an additional router or access point with enough Ethernet interfaces for connecting all inverters. The additional router or access point must be configured as a bridge between the Ethernet interface and the Wi-Fi interface and connected to the existing Internet router via Wi-Fi.

Connect each inverter without Wi-Fi interface via Ethernet to the additional router or access point.
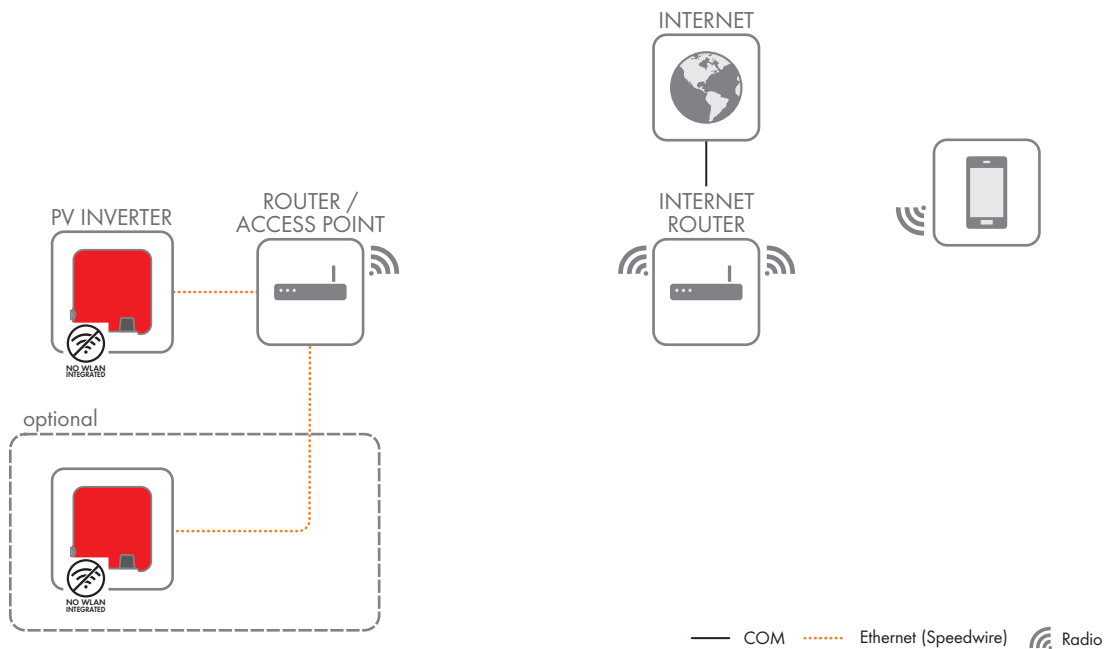

Figure 2: Communication setup in an SMA Energy System Home with inverters without Wi-Fi interface (example)