



SOLUTIONS FOR SAFE BUS SYSTEMS



Wireless safety

**Simplifier Gateway Profisafe
and Simplifier system**



We simplify safety
www.sspnorth.se

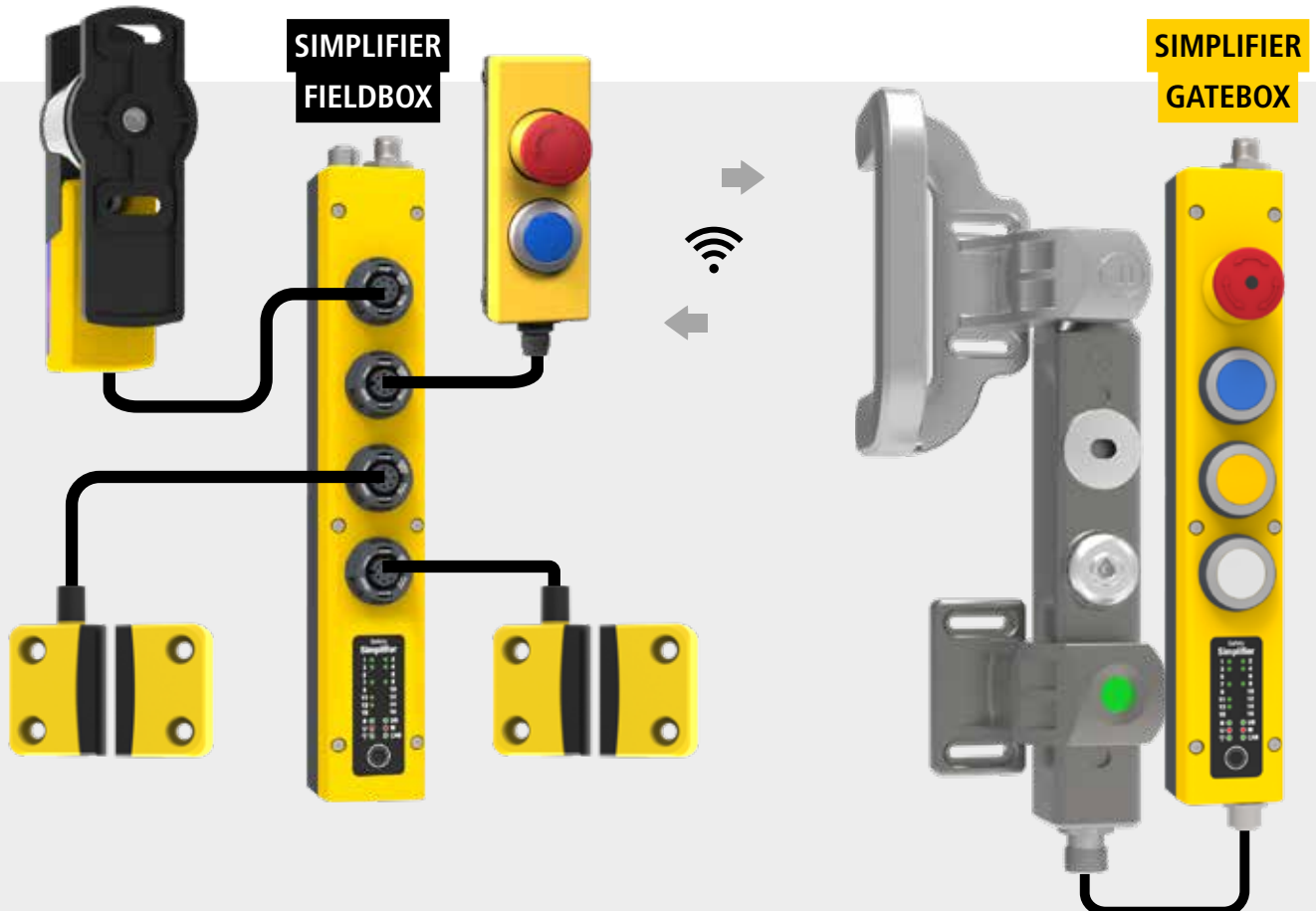
SSP
Safety System Products

The best of two worlds

Wireless safety meets safe bus systems

The Simplifier system is a flexible solution for various safety applications. Thanks to wireless communication and the integration of the PROFI-safe bus, the system enables the protection of doors, hatches, lifting gates and many more. Easy installation, seamless integration and flexible customization makes the system the perfect choice. A Simplifier Gateway can connect up to 32 Simplifier devices with the Siemens control system via PROFI-safe.

- ✓ A wide variety of safety functions can be integrated independently of the system
- ✓ Less planning and design work thanks to plug & play
- ✓ Programming of all safety functions centrally in the Siemens control system or in Simplifier Manager
- ✓ Low wiring effort thanks to safe wireless or CAN communication
- ✓ Modular and expandable - for safety switches, safety light curtains, I/O modules, push-button boxes and much more
- ✓ Both Simplifier devices and the Gateway can be placed outside the electrical cabinet



SIMPLIFIER
GATEWAY

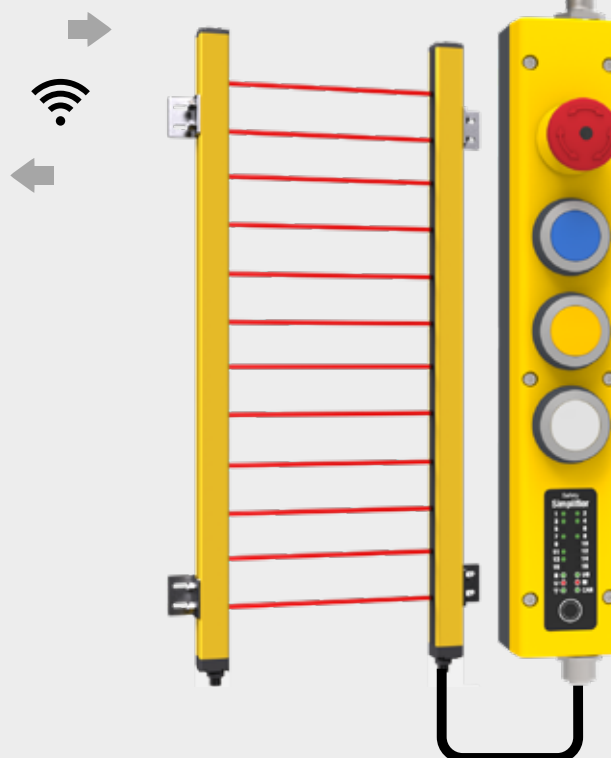


PROFI[®]
NET



Simple
CAN

SIMPLIFIER
GATEBOX

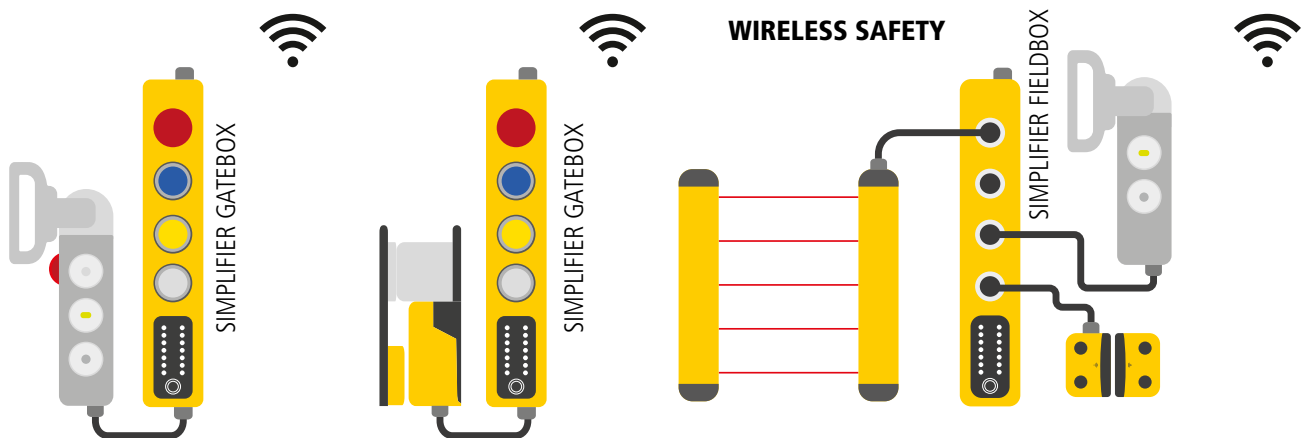


SIMPLIFIER
GATEBOX

The Simplifier System

Two types of safety communication

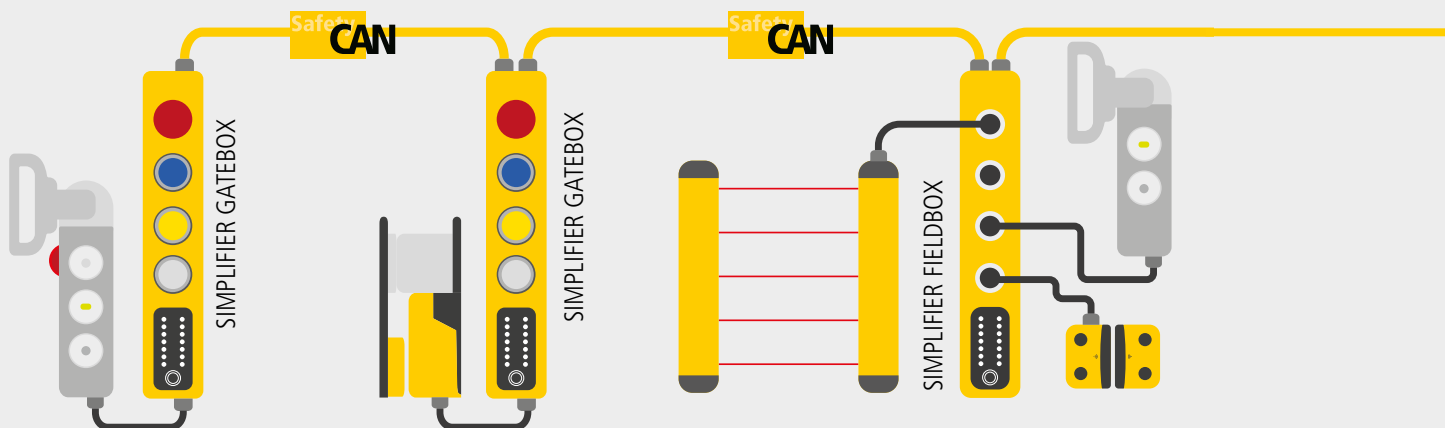
1 | WIRELESS COMMUNICATION

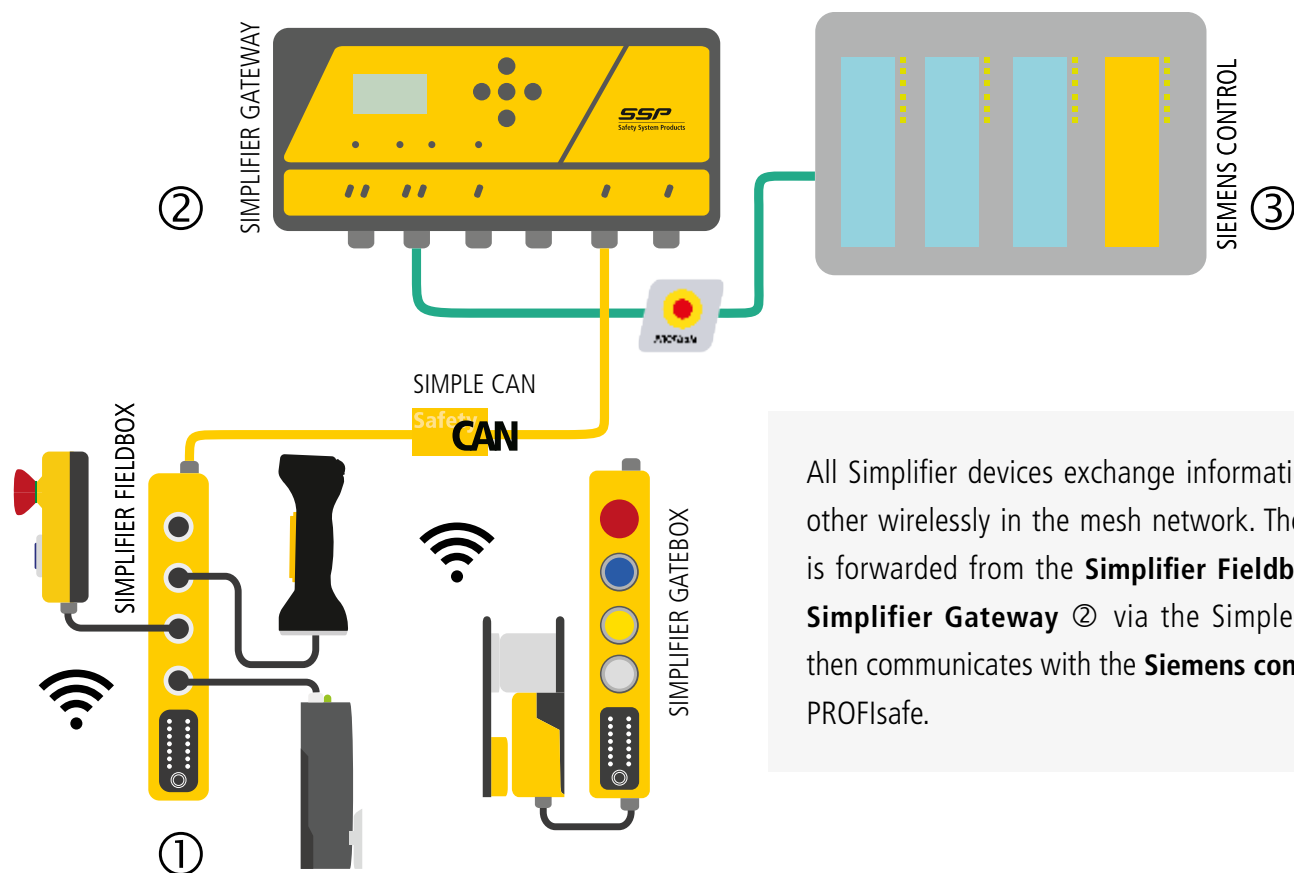


Independently of CAN or wireless safety, all information reaches the Siemens controller via the Simplifier Gateway on PROFI-safe and can be programmed and managed centrally in the TIA programming software.



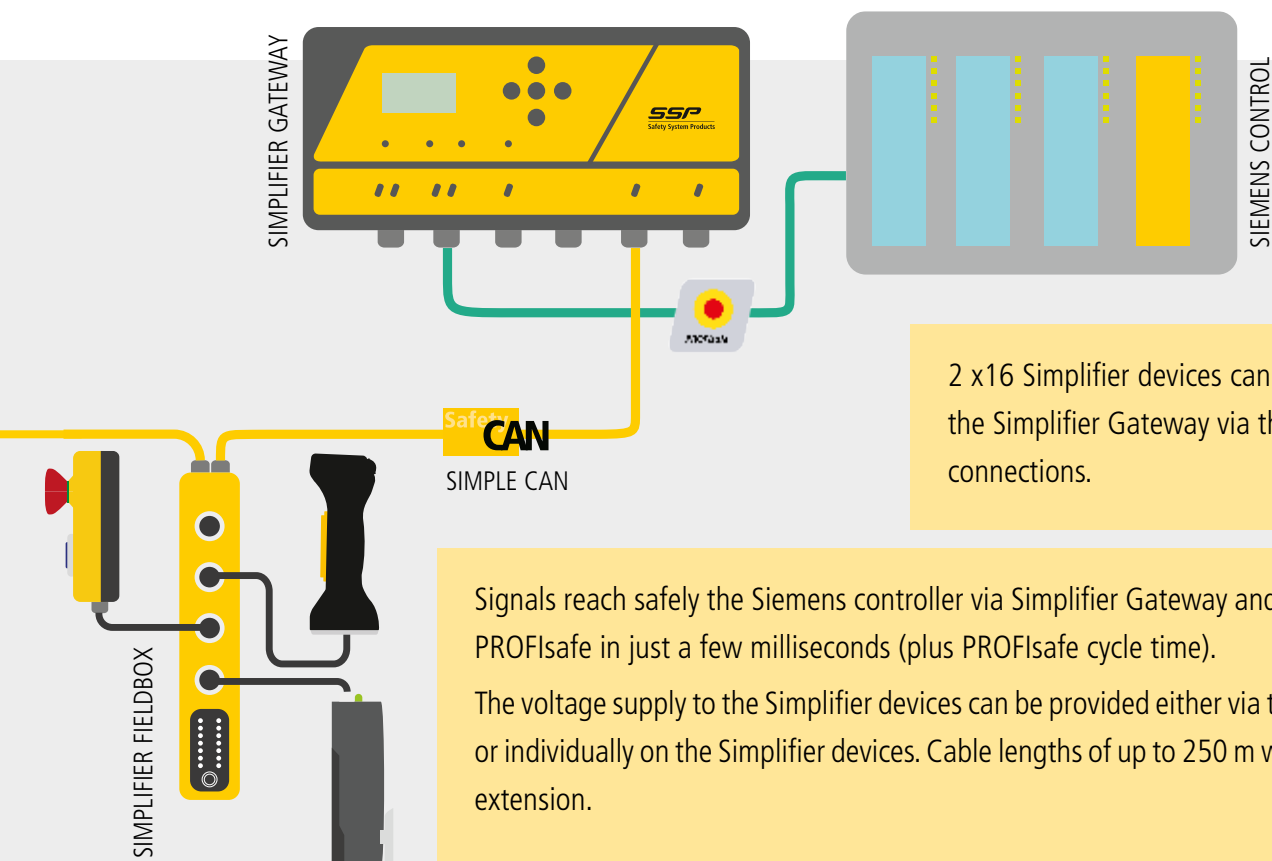
2 | CAN COMMUNICATION





All Simplifier devices exchange information with each other wirelessly in the mesh network. The information is forwarded from the **Simplifier Fieldbox** ① to the **Simplifier Gateway** ② via the Simple-CAN, which then communicates with the **Siemens controller** ③ via PROFIsafe.

✓ Wireless transmission and stable communication of the units up to 100 m.

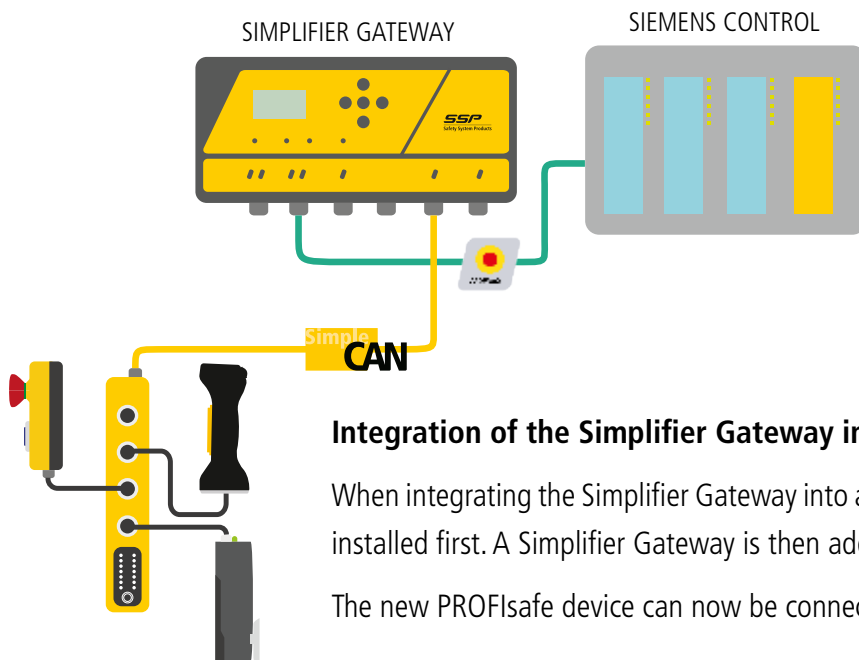


2 x16 Simplifier devices can communicate with the Simplifier Gateway via the two Simple CAN connections.

Signals reach safely the Siemens controller via Simplifier Gateway and Simple-CAN using PROFIsafe in just a few milliseconds (plus PROFIsafe cycle time).

The voltage supply to the Simplifier devices can be provided either via the CAN connection or individually on the Simplifier devices. Cable lengths of up to 250 m with possible further extension.

Siemens integration



Integration of the Simplifier Gateway in the TIA Portal.

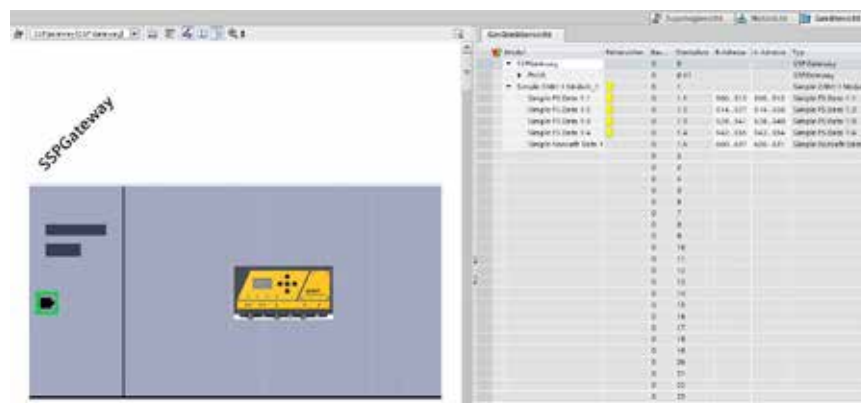
When integrating the Simplifier Gateway into an existing project, the GSDML file should be installed first. A Simplifier Gateway is then added in the hardware configuration.

The new PROFIsafe device can now be connected to the master PLC using drag & drop.



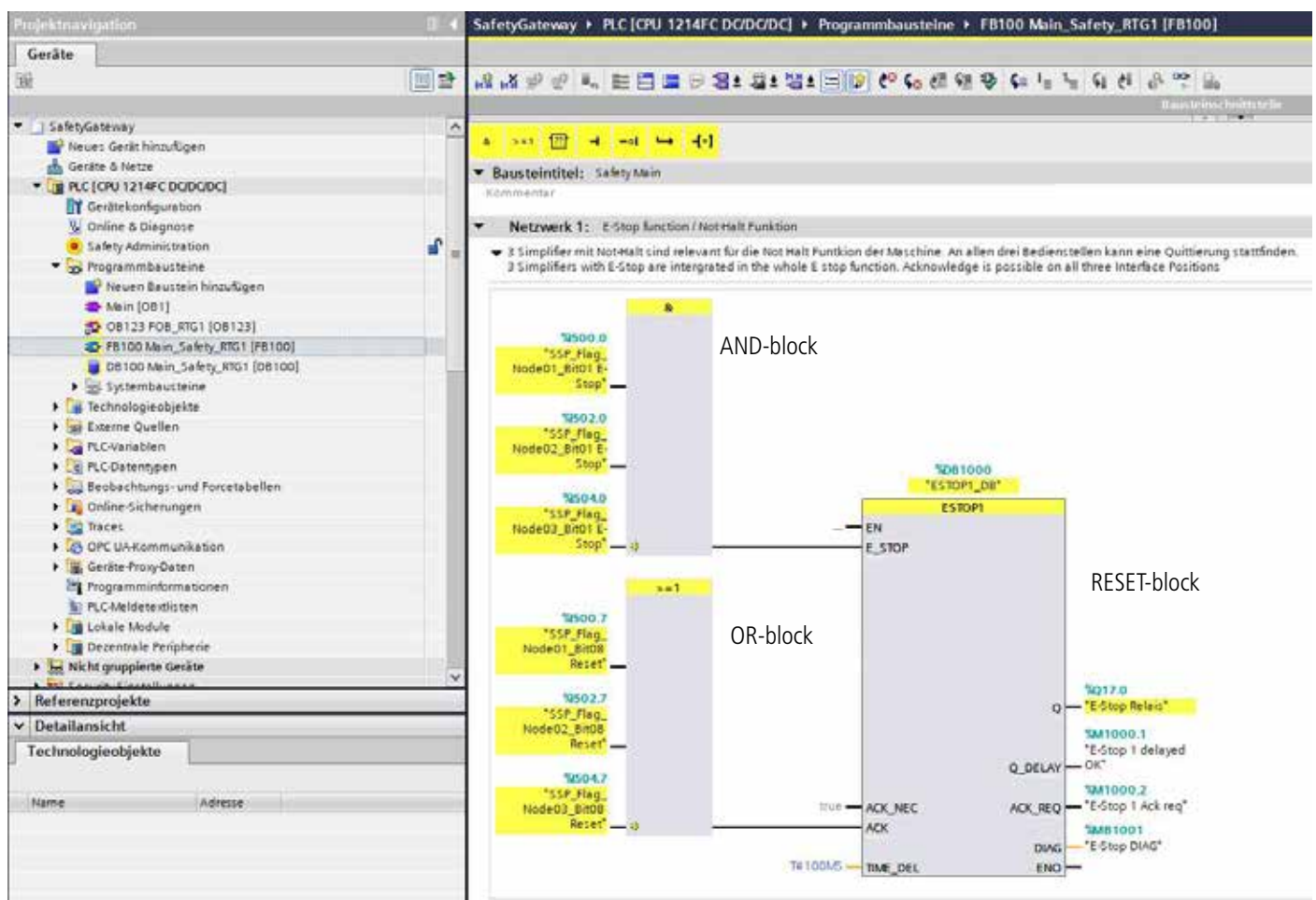
The data areas can be added to the device overview using drag & drop.

In our example, only module_1 is shown, which already provides 64-bit information.



The safe function blocks are configured in the next step. The safe signals from the Simplifier Gateway can be processed there.

The example below shows an emergency stop function with signals from 3 Simplifiers. Each Simplifier sends an emergency stop signal and a reset signal. The three emergency stop button signals are linked via an AND module and the three RESET button signals are linked via an OR module. The signals then go accordingly to the RESET module provided by Siemens.



Simplifier Gateway



Display for
diagnosis

Function buttons

LED
diagnosis

2 PROFINET connections M12-D coded
with integrated switch function

2x power supplies in/out

Two Simple CAN connections for safety
networks with Simplifiers



Exchangeable at any time

Seamless gateway change without new settings: Simply change the memory card - no configuration adjustment or F-address change necessary. All central system data, such as number of subscribers, baud rate or F-address are transferred directly.

Pin 1	Pin 1	24 V	Pin 1	shield
Pin 2	Pin 2		Pin 2	24 V
Pin 3	Pin 3	0 V	Pin 3	0 V
Pin 4	Pin 4		Pin 4	CAN H
	Pin 5		Pin 5	CAN L

Different connections for the perfect application

- ✓ Voltage supply via M12-A coded plugs on CAN cable up to max. 4 A
- ✓ Voltage supply by means of M12-L coded plugs up to max. 16 A
- ✓ Ethernet / voltage supply with and without daisy chain option

The Simplifier devices can be supplied with operating voltage via the Simple CAN connection or individually to each device. Extra operating voltage if needed.

SSPN Safety System Products North

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For our partner see our website

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