

PROFINET and IP based communication with SIMATIC controllers (IK-TIAPN)

Short Description

The increasing digitalization of companies and the resulting networking in almost all areas is opening up tremendous economic potential. For that matter, PROFINET and Industrial Ethernet are set standards in automation technology. This course shows you the possibilities PROFINET and Industrial Ethernet offer and enables you to implement efficient communication with SIMATIC controllers.

Objectives

In this course you will get to know the real-time-capable standard PROFINET as well as IP based standards such as TCP/IP and OPC UA and how to use them in your automation.

You will learn how to parameterize, commission and troubleshoot a PROFINET network quickly and effectively. You will also find out how to establish communication between controllers and beyond the controller and field levels.

Numerous practical exercises with SIMATIC and SCALANCE products and TIA Portal reinforce the acquired theoretical knowledge.

Target Group

- Engineering personnel
- Programmers
- Commissioning engineers
- Service personnel

Content

- Basics of Industrial Ethernet
- Basics of PROFINET IO (RT & IRT)
- Configuring PROFINET IO
- Media redundancy
- Device and network diagnostics
- Introduction to the integrated web servers of SIMATIC and SCALANCE devices
- Utilizing and configuring Shared Device
- Parameterizing and application of I device
- Gateways and communication via PN/PN couplers
- Communication via S7 connections
- Communication via Open User Communication (TCP, ISO-on-TCP, UDP)
- Basics of OPC UA and SIMATIC S7-1500 as OPC UA server

Prerequisites

SIMATIC S7 knowledge according to the course [TIA-PRO1](#), [TIA-SERV2](#) or [TIA-SYSUP](#).

Note

This training is conducted using SIMATIC S7-1500 and the SIMATIC STEP 7 software based on TIA Portal.

For more in-depth knowledge on the topics of Industrial Security, Industrial WLAN and OPC, we offer additional courses:

[siemens.com/sitrain-ik](https://www.siemens.com/sitrain-ik)

Type

Face-to-face training

Duration

5 days

Language

en