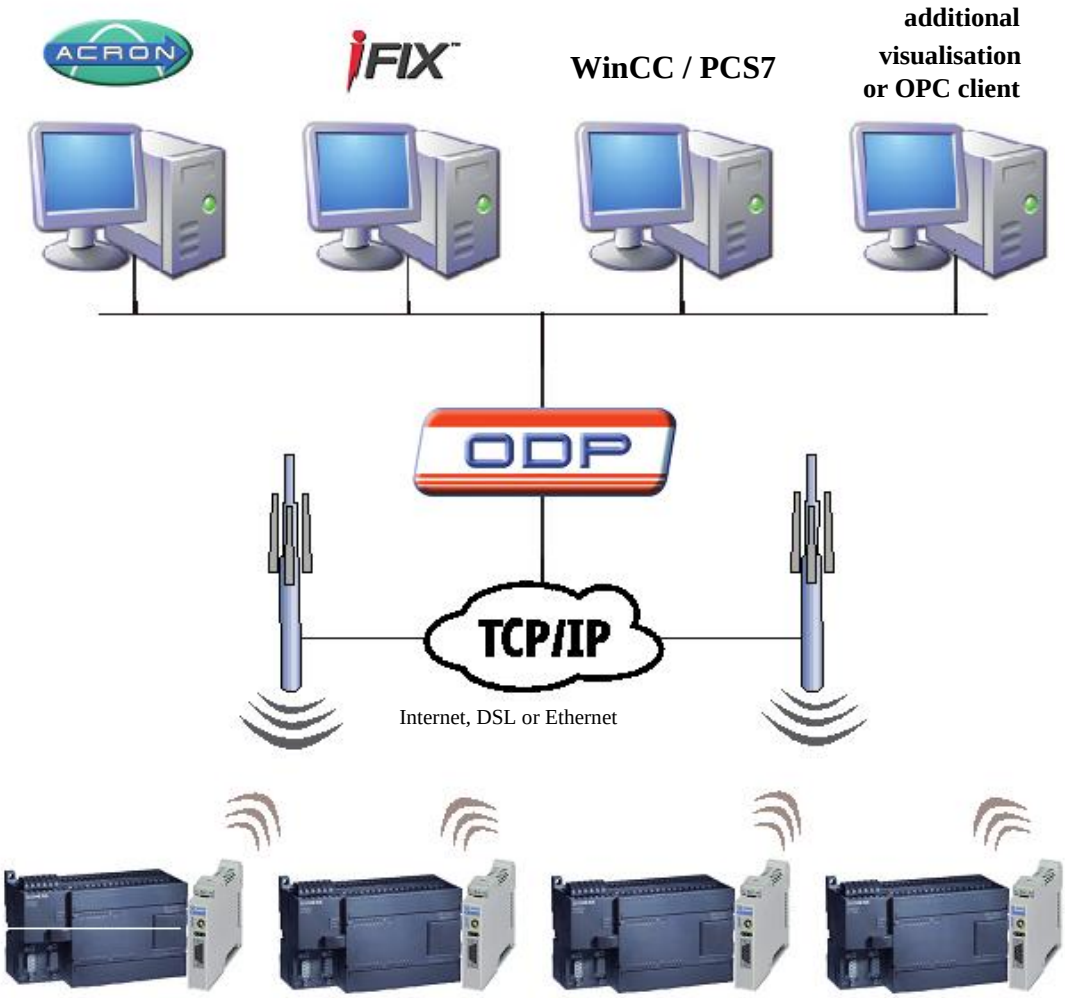
Siemens S7-200 Serial Connection with ODP

Measured values, messages, alarms, and commands should be exchanged between the control centre and the substations. Along with the online-connection, the data will be buffered in the substation, if a connection failure occurs. After the reconnection of the communication line, these data will be saved by ODP into the control centre's factory data capture in chronological order. Along with the online data exchange (ODP part 1) and the historical data exchange (ODP part 2), the active sending by the substation will also be supported in the case of an alarm (ODP part 3).

Design



Configuration per Substation:
S7-200 and S1 modem and antenna from Dr. Neuhaus

Benefits

Design	No head-SPS required, therefore, simple and fast configuration
	Usage of Siemens technology
	Just only a few defined interfaces
Safety	Broad network of integrators
	High availability due to data buffering in the SPS in cases of connection failures. (The memory depth depends on the recording cycle and SPS data storage)
	High availability, unproblematic procurement of spare parts
Costs	Low connection costs and a complete cost control
	Protocol with very small overhead

Required Components

Substation	Hardware / Software
	• Siemens S7-200 from CPU222 onwards • ODP SPS programme for S7-200 (order number: ODP-PLC S7-200)
	Required SPS memory
	• CPU 222 (only online data) Programme memory 1,4 KB, data memory 1,2 KB • From CPU 224 onwards (online and historical data) Programme memory 3,9 KB, data memory 2,3 KB • From CPU 224 onwards (online, historical data and alarms) Programme memory 5,5 KB, data memory 2,3 KB • 576 Bytes per historical measured value (Recording interval 5 minutes, duration of recording 1 day) • 10 Byte per alarm entry (1 KB for 100 alarm entries)
Substation Modem	Dr. Neuhaus modem
	• GMOD-S1
Control Centre	Internet, DSL or Ethernet
	• ODP software package • Visualisation i.e. iFIX, InTouch, WinCC / PCS7 • Factory data capture ACRON • All OPC client compatible programmes for further data processing
ODP Level of Integration	Following functions of the ODP specification are met
	• Part 1 (online data) from CPU 222 onwards • Part 2 (historical data) from CPU 224 onwards • Part 3 (disturbances, alarms, and messages) from CPU 224 onwards
System Requirements Computer	• Processor 2 GHz, 1 GB working memory • Operating system: Windows XP, 2003/2008 Server, Vista

For more information visit **www.videc.de** or send an e-mail to **info@videc.de**
Specifications for the connection of automation devices, starter kits, as well as system descriptions, and demo versions available upon request.