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TELWIN SCADA INDUSTRIAL PROCESS VISUALISATION SYSTEM

System Overview



November 2025



Industrial Process Visualisation System

TelWin SCADA



TelWin is a modern **SCADA** (Supervisory, Control And Data Aquisition) package. It facilitates the management and control of industrial processes.

The system's core functions include:

- collection of current data (readings),
- visualisation,
- proces control,
- alerts,
- data archival,
- reporting.

The system is easy to use due to the usage of the Windows environment. The system in it's full version does not limit in any way the size of the managed objects. The system has a decentralized character – different functions are served by concurrently running modules. Those modules can be installed on different workstations operating in a local area network. It is also possible to install many modules on one workstation. Tools to extend the visualization and control of the managed process are built-in, which allows the end user to develop the application further.

Key Features

- **Client-server** architecture,
- **flexible:**
 - single or multi-workstation versions.
 - Support of a wide variety of communication links for connectivity with field devices (direct serial links, dial-up lines, GSM/GPRS, radio links, UDP/TCP, LAN, WAN)
- **modular** – individual system functions are handled by modules running in parallel, which allows for distributed deployments across LAN or WAN networks.
- **scalable** - ability to expand at any time with additional modules and new nodes within distributed deployments
- **efficient** – effectively utilises modern hardware platforms (multi-core servers, multi-core CPUs, RAM, asynchronous),
- **secure:**
 - modern access control methods (encryption, digital signing, Active Directory integration),
 - Compatibility with Data Diode devices guaranteeing the highest safety level (network separation)
 - SSL encryption
- **supports hardware platforms that enhance operational security:**
 - servers in a "hot standby" configuration
 - servers in a Windows failover cluster configuration
- **targeted at any industry sector:**
 - water & sewage,
 - gas,
 - energy,
 - wind & solar farms,
 - production,
- **Offers a dedicated visualization client (desktop application)** for presenting and managing process data, as well as a WWW interface (webSCADA) compatible with all web browsers, including mobile browsers.
- **open to cooperation with any field devices:**
 - communication with most devices available on the market (see the [*Communication Modules*](#) table for a full list)
 - integration of field devices from various manufacturers within a single system (independent of automation equipment and PLC suppliers)

- equipped with flexible data storage mechanisms:
 - disk files,
 - MS SQL and Oracle databases
- equipped with wide range of **interfaces to integrate with other systems**(e.g: ERP, simulation systems):
 - DDE,
 - OPC,
 - WebService,
 - see the list in the tables: [Data Sharing](#) and [Data retrieval](#),
- **provides full support for multi-monitor environments**, including video walls.
- **intuitive and easy to use** (Windows environment),
- **adapted to the Polish market**: The software and documentation are fully available in Polish.
- **multilingual**: An English version is available; other languages can be provided upon individual request.
- **combines runtime and development versions within a single application** – tools for application development are built into the system.

FIGURE 1: EXAMPLE APPLICATION OF THE TELWIN SCADA SYSTEM



Service package

- **24/7 support in Polish,**
- **a wide range of training courses** (confirmed by certificates),
- **developed in line with user expectations:**
 - a minimum of 4 releases per year,
 - expanded to support new communication protocols (based on provided documentation).

Key Features

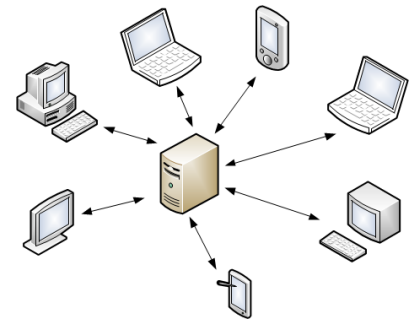
- possibility of presenting data in the form of diagrams created based on **vector graphics**,
- **advanced graphics editor** for creating diagrams and reports,
- support for popular graphic formats including BMP, JPG, PNG, GIF, TIFF, SVG, WMF
- a rich collection of graphic libraries,
- **Use of Open Street Map** (www.openstreetmap.org) digital map underlays,
- **an extensive system of alarms and events**,
- scalability of diagrams and reports to various screen resolutions,
- built-in tools for data archiving and reporting,
- archiving with a fixed time quantum (with a resolution of even 10ms, determined solely by the performance of the hardware platform) and registration of value changes,
- creating and storing hourly, daily, monthly, and periodic reports directly in the data repository,
- **alarms in the form of voice announcements and sound messages**,
- **remote alarm notification (SMS, fax, email)**,
- tools for creating and efficiently presenting historical data in the form of charts and tabular statements,
- mechanisms for easily creating subsequent objects based on existing ones, through the use of templates (derived diagrams and catalogs),
- **dedicated diagnostic tools**
(see the list in the table: [Device and network diagnostics](#)),
- **special modules** (see the list in the table: [Special modules](#)),
- possibility of creating scripts using the BASIC language.

System Architecture

The **TelWin SCADA** system was designed according to the client-server model.

Each of the system's modules can perform one or two basic functions:

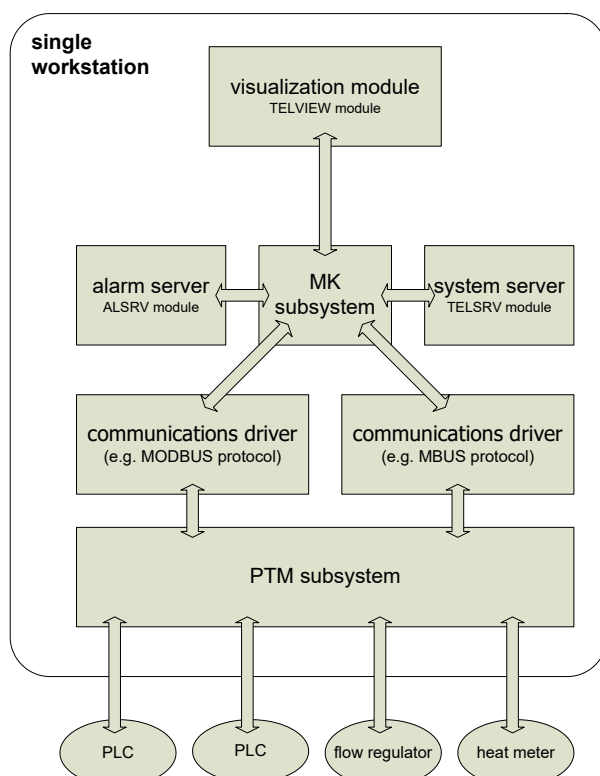
- data server,
- data user (client).



The role of a module implementing **server** functions is to share data, obtained directly from measurement devices or appropriately processed, with other modules performing **client** functions.

An example of a module implementing server functions is a program handling communication with a measurement device (e.g., a PLC controller). An example of a module implementing client functions is a program responsible for presenting data directly to the operator. There are also modules that combine both basic functions (server and client). An example is the TelSrv program from the TelWin system. In relation to the communication modules directly responsible for connectivity with field devices, it performs client functions (retrieves data), whereas in relation to the modules presenting data, it performs data server functions (shares data).

FIGURE 2 AN EXAMPLE SINGLE-WORKSTATION
TELWIN SCADA CONFIGURATION



Depending on the configuration of the MK communication subsystem, there are two basic configurations of the TelWin system:

- single-workstation configuration,
- multi-workstation configuration

The **single-station configuration** allows for the use of the TelWin system on a single workstation without using a local network. All modules of the TelWin system must run simultaneously on one computer.

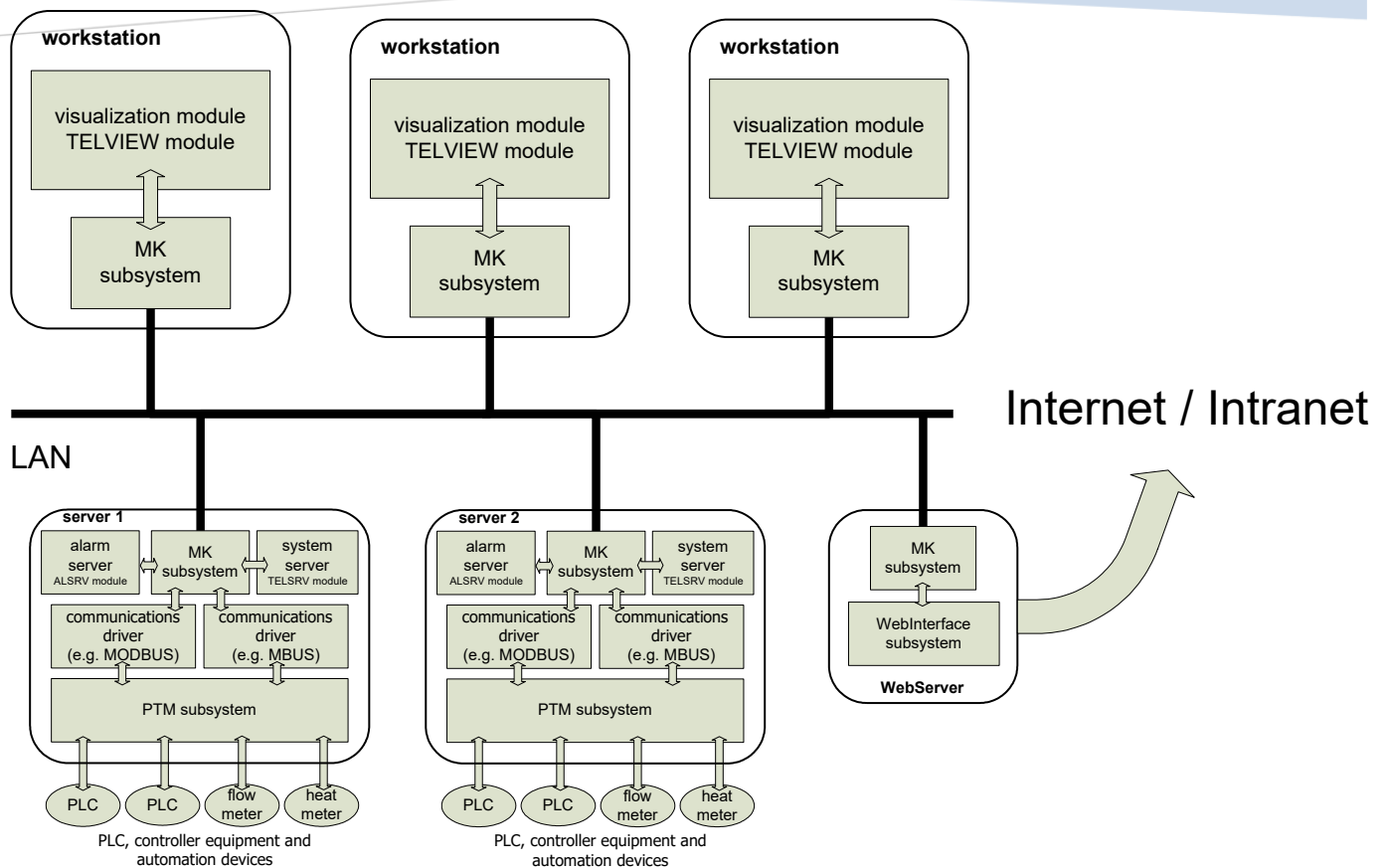


FIGURE 3 AN EXAMPLE MULTI-WORKSTATION
TELWIN SCADA CONFIGURATION

In the case of a **multi-workstation configuration**, it is possible to build, using a local network, a distributed system, which can consist of multiple TelWin system servers and multiple stations used for visualizing the supervised process.

In such a configuration, individual modules run on different workstations, and each station is equipped with a communication module (MK) that communicates with other MKs via the local computer network.

The MK communication modules hide the type of local network used to connect the individual stations. Currently, an implementation of the MK communication module utilizing TCP/IPv4 protocols is available.

System components

TelWin SCADA includes the following core elements:

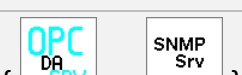
	→ system server - TelSrv ,
	→ alarm server – AlSrv ,
	→ scripting module - ProcWin ,
	→ visualization module - TelView ,
	→ MK communication subsystem,
	→ PTM communication subsystem,
	→ modules facilitating the communication with field devices ,
	→ protocol server modules enabling data retrieval and sharing ,
	→ WebInterface module for sharing data via a web browser.

FIGURE 1 TELWIN SCADA
MODULES

															
AbDrv	Adam4Drv	AlSrv	ArchDrv	Archview	BackMgr	BmDrv	BmsDrv	BTLSrv	CellHDrv	CellSrv	CMB3Drv	DataManage	DataSrv	DDEDrv	DDEsrv
															
DNP3Drv	DSfGDrv	EasyDrv	EnDrv	EneDrv	EplDrv	FinsDrv	FpDrv	GM2Drv	GM2Srv	GMDrv	gmkonc	GMSrv	HTTPDrv	IEC62056Drv	IgnigDrv
															
InfoprodDrv	InventiaDrv	KbusDrv	Ko128Drv	KWMSDrv	MA12Drv	MacDrv	MachInfo	MBConDrv	MBSyn	MbusDrv	mbussrv	McsDrv	McsuDrv	MicDrv	Mk
															
mktst	MM05Drv	MRG2100Drv	MspDrv	MTDrv	MTPDrv	Name2Id	odbcSrv	OncDrv	OPCAEDrv	OPCDrv	OPCHADrv	OPCHDSrv	OPCSrv	OPCUADrv	OPCUASrv
															
PerfMonDrv	Pmc4Drv	PMEEcologyDrv	ProcWin	PT2Drv	pt2Srv	ptm	ptmdrv	ptmtest	RowDataSrv	RtmcDrv	SapDrv	SbusDrv	SimDrv	Sm01Drv	SmartGasDrv
															
SmbusDrv	SMSDrv	SnmpDrv	SnmpSrv	SovDrv	SQLDrv	SRTPDrv	StarterAdm	StarterCfg	StarterRun	StrDrv	SucomDrv	SymDrv	TarDrv	TBaseDrv	TCPComman
															
TelCorrDrv	TelDiode	TelSrv	TelView	TelWatch	TelWinWS	TimeZone	TPASrv	TWSDrv	TwsSrv	TxtDrv	TXTSrv	WdpfDrv	WebEngine	WebMgr	ZAPDrv

TelSrv

is the TelWin system's server responsible for retrieving data from controller modules, preparing hourly, daily, monthly and periodic reports, and archiving current data. The TelSrv server's method of operation is defined by a parameter list describing all parameters of the supervised technological process.

FIGURE 2 TelSrv
– EXAMPLE WINDOW WITH THE PARAMETER LIST

No.	Name	Variable class	Value type	Desc.	Source	Source name	Cur... Current v...
1	RND	Measurement	any	-	Sym...	RND	vo -
2	temperature	Measurement	any	-	local	-	vo -
3	Time_s_1	Measurement	any	minuty	-	-	vo -
4	Time_s	Calculation	any	-	local	-	vo -
5	SV2_Time_1	Measurement	any	-	-	-	vo -
6	Signal45s_N	Calculation	any	-	-	-	vo -
7	Signal45s	Calculation	any	-	-	-	vo -
8	Signal30s_N	Calculation	any	-	-	-	vo -
9	Signal30s	Calculation	any	-	-	-	vo -
10	Signal15s_N	Calculation	any	-	-	-	vo -
11	Signal15s	Calculation	any	-	-	-	vo -
12	Signal15s45s	Calculation	any	-	-	-	vo -

FIGURE 3 ALsRv
– EXAMPLE WINDOW WITH ALARM LIST

Alarms server of TelWin system - ALsRv_DEMO - [Edit variables base...]

View Configuration Liver Variables Help Edit

Group Key Lock Parameters

Undo Fields

Insert ALsRv banner
Add Add derivative folder
Move

Don't update derivative folders
Fill derivative folders
Empty derivative folders
Sort
Cut
Paste
Copy
Delete
Find
Find previous
Find
Search

Abx
Reply
Update
Verify
Base previous
Edit current base

Source folders
Building
Derivatives
Special actions
Substituting

Show notes

ALsRv

No.	Name	Variable	Desc.	Alarm contents	Alarm	Value	Ignor...	Ignor...	Source	Source	Com...	Auto...	Cond...	Value	The...	Delay...	Delay...	Incre...	Rate
1	...	Korose PQ1_P_CV	Predefined	Predefin...	Korose PQ1 - Level pressure	source...	YES	YES	TelS...	Kom...	>	>0.05...	60	60	0				
2	...	Chamber PQ1_P_CV	Measure...	Measure...	Chamber PQ1 - Power failure	source...	YES	YES	TelS...	Kom...	>=	=1	0	0	0				
3	...	Chamber PQ1_Power	Measure...	Measure...	Chamber PQ1 - Measurement chamber opened	source...	YES	YES	TelS...	Kom...	>=	=1	0	0	0				
4	...	Chamber PQ1_Open	Measure...	Measure...	Chamber PQ1 - Measurement chamber closed	source...	YES	YES	TelS...	Kom...	>=	=1	0	0	0				
5	...	Chamber PQ1_Roaded	Measure...	Measure...	Chamber PQ1 - No communication with the object	source...	YES	YES	TelS...	Kom...	>=	=1	0	0	0				

News base
system
WATER
tempalte
Simulation
Chamber PQ1
Chamber PQ2
Chamber PQ3
START

ALsRv

is the TelWin system's alarm server responsible for detecting, processing and archiving alarm states and events of the supervised process. It enables the monitoring of parameter values and the generation of appropriate alarm signals. It operates based on an alarm parameter list.

TelView

is used for the presentation and modification of data collected and processed by the TelWin system and for controlling processes.

The basic element used for data presentation is the diagram. Data can be presented both in numerical form as well as with the use of graphic elements such as, for example, a bar graph or an analog indicator.

Logged data is presented in the form of charts, which can cover any period of time. It is also possible to create a symbol library for presenting signaling data, e.g., valve statuses, pump operation.

Library elements can be displayed as static drawings or as animated sequences presenting the device's operation.

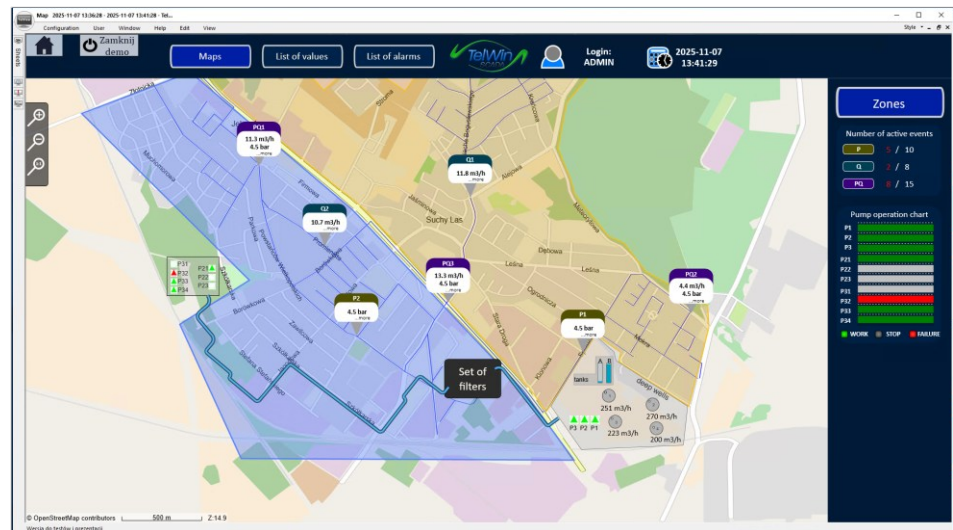
It is possible to use the computer's multimedia functions by linking sound sequences with specific measurement values. Thanks to this, in emergency situations, the computer can convey, for example, a verbal message to the dispatcher.

FIGURE 4 TelVIEW
- SAMPLE DIAGRAM WITH ALARM LIST



Advanced capabilities of vector graphics, using OpenStreetMap (OSM) maps allow for the creation of complex diagrams, in accordance with user expectations.

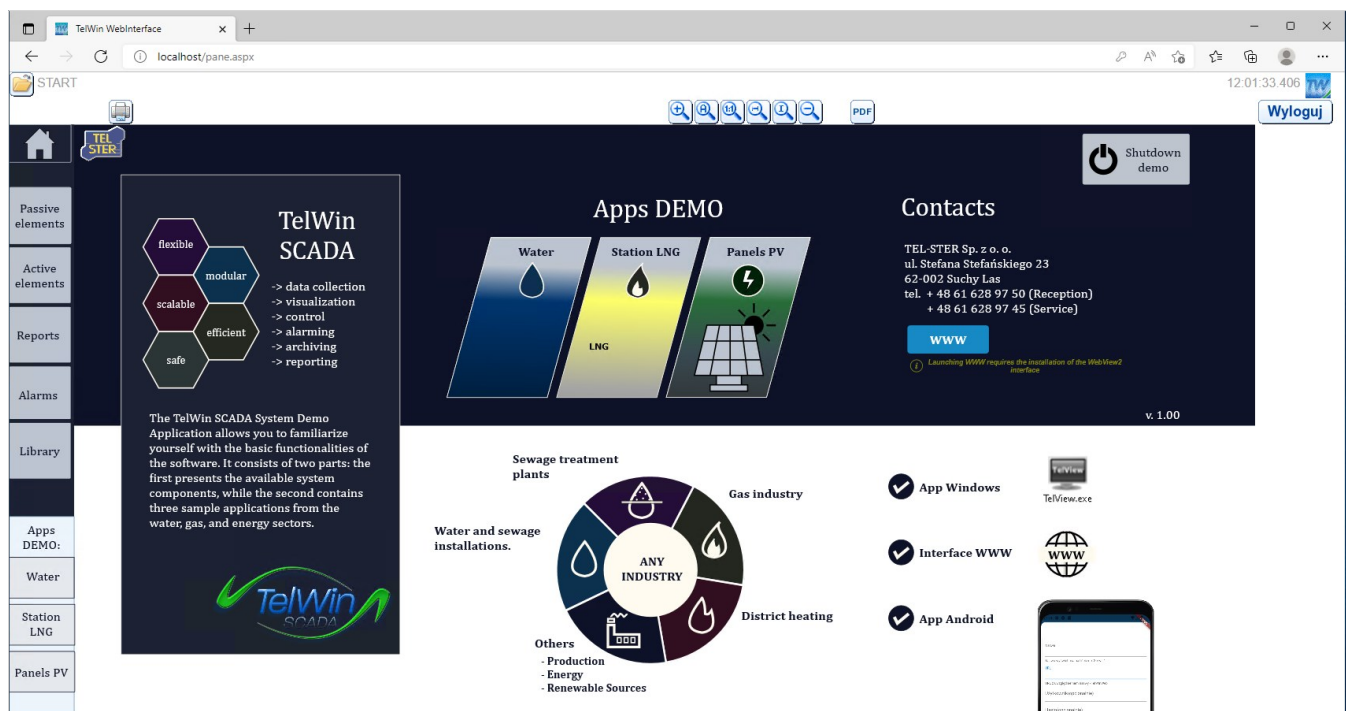
FIGURE EXAMPLE DIAGRAM
BASED ON OPENSTREETMAP



WebInterface Module

enables access from any WWW browser.

FIGURE 5 WEBINTERFACE MODULE
- EXAMPLE APPLICATION



MK communication subsystem

enables communication between individual modules of the TelWin system (e.g., between the system server, the visualization module, and controller modules).

It enables TelWin system elements to establish connections and reliably transmit messages, without duplication or loss of information. The subsystem's architecture allows for these services to be provided both within a single computer and when using a computer network, enabling the distribution of individual TelWin system components across multiple computers (this ensures appropriate system scalability and multi-access).

Currently, the following implementations of the MK subsystem are available:

- LOCAL version providing MK services only within a single computer,,
- TCP/IP version providing MK services via TCP/IPv4 protocols.

Regardless of the MK service implementation method, for the TelWin system modules they are identical. Because the TelWin system elements using the MK subsystem are separated from the currently used communication method, changing it, decentralizing system components, or moving some modules to other workstations may, at most, require modification of the MK subsystem's configuration.

PTM communication subsystem

enables communication between the TelWin system and the other elements of telemetry systems, in particular with field station controllers, as well as other devices or systems. It allows other TelWin system modules to transmit messages via various transmission media. The subsystem enables asynchronous message transmission via standard RS232 interfaces of a PC-class computer or additional multi-port cards with RS232/485/422 interfaces. In addition to direct communication, transmission using a modem is also possible, with the capability of establishing dial-up connections (TAPI) and sending SMS messages via GSM modems. It is also possible to send encapsulated messages in LAN/WAN (UDP/TCP) protocol packets.

Communication modules

are another group of programs within the TelWin system, which handle communication with field devices using an appropriate protocol. It is possible to develop, at the client's request, a communication module that supports new devices appearing on the market, based on provided documentation.

A detailed list of currently available modules can be found in the [Available communication modules](#)

The mentioned communication modules are compatible with any type of modem and communication link. Communication using dedicated lines, radio links, and dial-up links is supported. This is possible by using the services offered by the PTM communication subsystem.

The TelWin system also includes modules enabling [Data retrieval/acquisition](#) from other systems and [Data sharing](#) for data collected within the TelWin system via a selected **interface** or **communication protocol**.

To support users in their daily work with the system, [Modules for device and network diagnostics](#), were also prepared, including retrieving diagnostic data from Windows systems and from active network devices using the SNMP protocol, as well as [Special modules](#).

ProcWin script module

enables the automation of site management from a central system.

Available communication modules (in alphabetical order)

ABDrv		DF1 HD/FD protocol for Allen-Bradley controllers
ACDC3EDrv		protocol for Aquard controllers
Adam4Drv		protocol for ADAM-4000 controllers
CellHDrv		protocol for CellBox-H controllers
CellSDrv		protocol for CellBox-S controllers
CMB3Drv		protocol for monitoring and configuration of the CMB-03 telemetry module from Common
DNP3Drv		protocol for DNP3 controllers

DSfGDrv		DSfG RDT protocol
EasyDrv		protocol for Moeller Easy 500/700/800 controllers
EnDrv		EN1434 (MBUS) protocol
EnelDrv		protocol for ENEL controllers
EplDrv		protocol for EPL/MSS1 controllers
FINSDrv		FINS protocol for OMRON controllers
FoxESSDrv		communication protocol for interfacing with FoxESS PV inverters
FpDrv		protocol for FP-2001/G Metronic controllers
GMDrv		GAZ-MODEM 1 protocol
GM2Drv		GAZ-MODEM 2,3 protocol
IEC62056Drv		IEC-62056 protocol for reading energy measurements
IEC60870-5-104Drv		IEC60870-5-104 protocol
InventiaDrv		protocol for interfacing with Inventia MT series devices
KBUSDrv		K-BUS protocol for VIESMANN devices
Ko128Drv		protocol for interfacing with Ko128 Instalbud Szepielak devices
KWMSDrv		protocol for interfacing with the KWMS summarizer from POZYTON
MA12Drv		protocol for interfacing with the MA-12 multichannel meter
MBUSDrv		MODBUS protocol in ASCII, RTU, TCP/IP versions
McsDrv		protocol for interfacing with MCS Instromet devices
MicDrv		protocol for interfacing with the Microrol – Yernaux Pesage scale
MM05Drv		MM05III protocol for monitoring the state of MacMat volume correctors
MRG2100Drv		protocol for interfacing with MRG2100D controllers
MTDrv		MiniTrans protocol for cathodic protection devices
MTPDrv		MiniTransPlus protocol for cathodic protection devices

MQTTDrv		MQTT (MQ Telemetry Transport) protocol for IoT devices (full functionality requires a broker, e.g. Eclipse Mosquitto)
OncDrv		ONC protocol for OpenNet Controller controllers
Pmc4Drv		protocol for interfacing with Polon-Alfa PMC-4000 fire alarm control panels
PMEcologyDrv		protocol for PMEcology devices
RtmcDrv		protocol for RTMC system controllers
SapDrv		SAP protocol for interfacing with fire alarm control panels
SBUSDrv		SBUS (standard, data mode, Ethernet) protocol for SAIA PCD controllers
SIMDrv		S7, RS/MPI, FETACH/WRITE Ethernet protocol for Siemens Simatic controllers
SMSDrv		protocol from reading data from SMS
SovDrv		protocol for interfacing with Superflow Sovtech Avtomation volume correctors
SRTPDrv		SRTTP protocol for Ge-Fanuc controllers
StrDrv		protocol for reading data from a text stream
SucomDrv		SUCOM protocol for Moeller-SUCOM-A controllers
TelCorrDrv		protocol for interfacing with ATREM TelCorr cathodic protection devices
TwsDrv		TWS protocol (communication between TelWin systems)

Data retrieval (acquisition)

OPCDrv		retrieval of current data through the OPC DA interface
OPCAEDrv		retrieval of alarm and event data via the OPC A&E DA interface
OPCHDADrv		retrieval of archival data through the OPC HDA interface
OPCUADrv		retrieval of archival data through the OPC HD interface
DDEDrv		retrieval of current data through the DDE interface
SQLDrv		retrieval of current, archival and report data via the SQL interface
TXTDrv		retrieval of current data from text files

Data sharing

OPCSrv		sharing current data through the OPC DA interface
OPCHDASrv		sharing current data through the OPC HDA interface
OPCUASrv		sharing archival data through the OPC UA interface
DDESrv		sharing current data, hourly and daily reports and logged data via the DDE interface
ODBCSrv		sharing current data, hourly report data, daily report data, and logged data via the ODBC interface
TelWinWS		sharing current data, hourly report data, daily report data, and logged data via the Webservice interface
TelWinRPC		sharing current data, hourly report data, daily report data, and logged data via the WebSocket interface
TXTSrv		sharing current data, hourly report data, daily report data, and logged data using text files
GMSrv		sharing of current, report and archival data using the GAZ-MODEM protocol
GM2Srv		sharing of current, report and archival data using the GAZ-MODEM2/3 protocol
MBUSSrv		sharing current data using the MODBUS protocol
SBUSSrv		sharing current, report and archival data using the SBUS protocol
TwSrv		sharing current, report and archival data using the TWS protocol
SNMPSrv		sharing current data via SNMP (Simple Network Management Protocol)
Other		development of a new protocol server based on the provided documentation (priced individually)

Device and network diagnostics

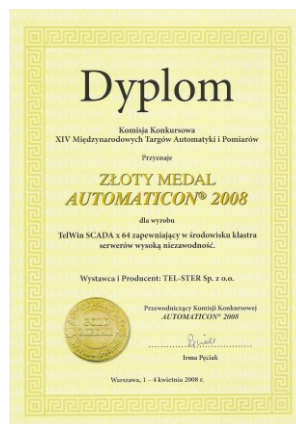
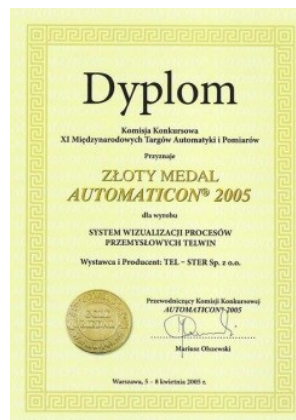
SNMPDrv		reading data from active network devices via SNMP (Simple Network Management Protocol)
PerfMonDrv		reading Windows diagnostic data (Performance Monitor)

Special modules

PTMDrv		support for backup links in the PTM subsystem
BackMgr		management of servers in a "hot standby" configuration (includes an additional server key)
TelPowerGuard		Real-time monitoring of gas consumption – helps effectively avoid exceeding the contracted capacity.
TelWatch		monitoring the proper operation of individual modules of the TelWin SCADA system (Watch Dog)
TelTase2		data exchange (retrieval and sharing) with other dispatching system in the Utility sector using the Tase.2 protocol

Awards

- ✓ Multiple Gold Medal awards at the AUTOMATICON International Fair
- ✓ Title of Best Industrial IT Supplier in the SCADA manufacturer/supplier in Poland category (awarded by Manufacturing Systems Information POLSKA)
- ✓ Gold Medal at the AUTOMA Poznań International Fair



TelWin IDS

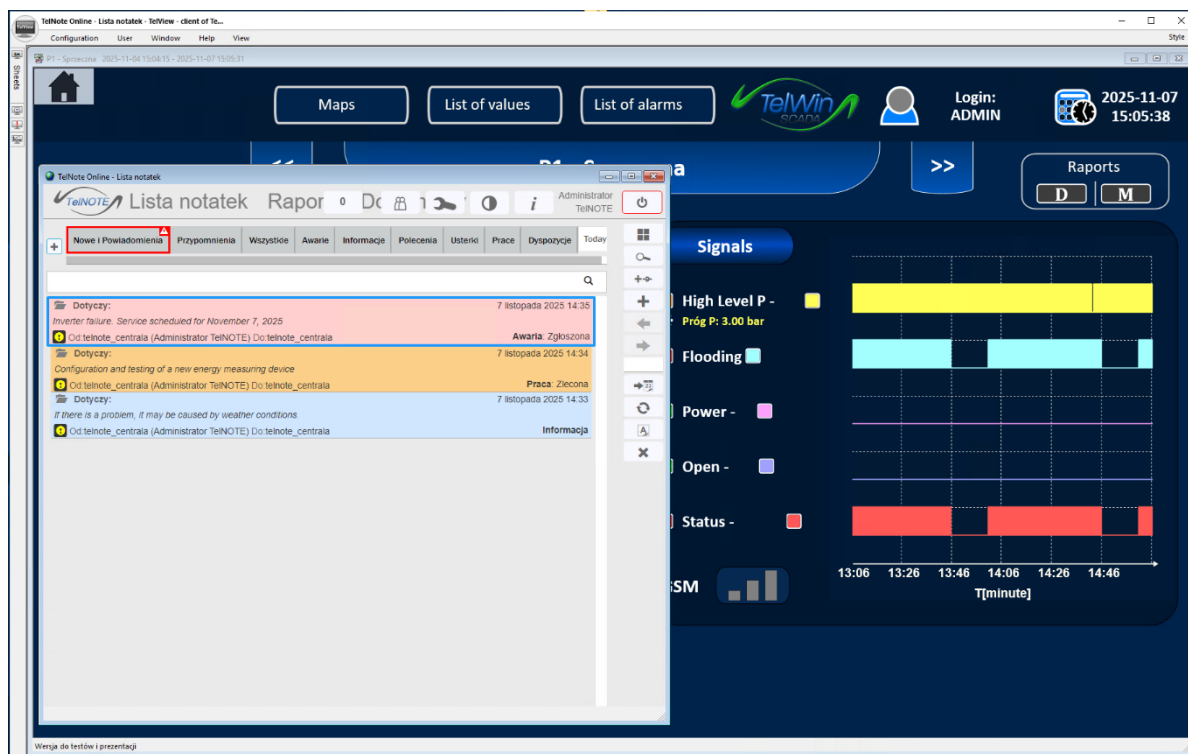
Integrated Dispatch System **TelWin IDS** is the result of the integration of two systems: **TelWin SCADA** and **TelNOTE**.

It combines the use of the SCADA system on operator stations for managing sites and industrial processes with a "dispatcher's notebook". The user, from the SCADA system console, has full access to information (notes, messages, documents) collected in the TelNOTE system and can present them in the TelWin system in various ways.

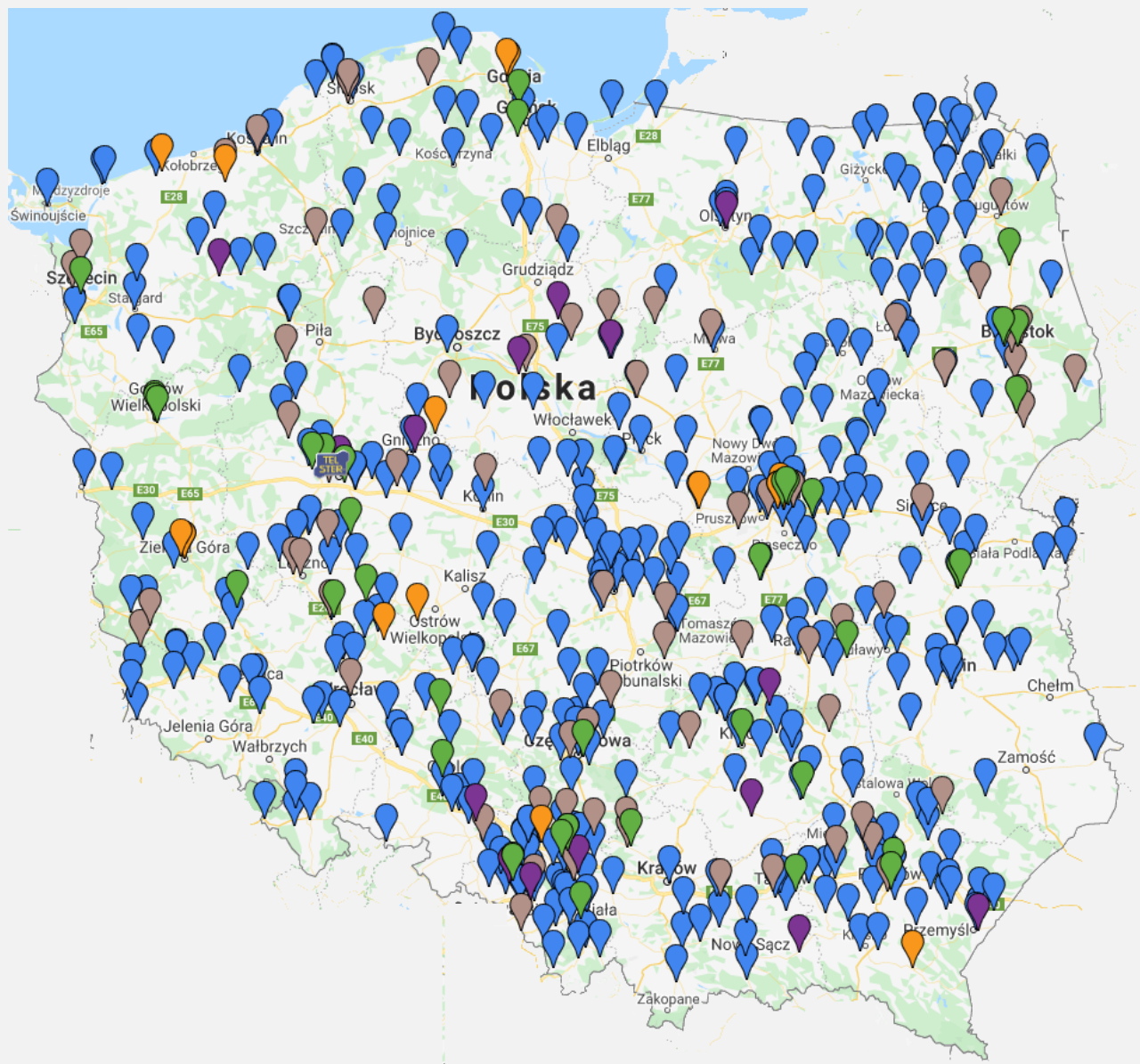
FIGURE 6 ARCHITECTURE OF THE TELWIN IDS SYSTEM



FIGURE 7 EXAMPLE TELWIN IDS SYSTEM CONSOLE



Deployments



-  WODOCIAGI-KANALIZACJA / water and sewerage systems
-  PRZEMYSŁ / industry
-  GAZ / gas
-  CIEPŁOWNICTWO / heating industry
-  POZOSTAŁE / Others