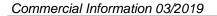


# **Products Commercial Information**

No. 03/2019

Valid since 2019.03.01





**ASKOM**® and  $\mathbf{asix}^{\otimes}$  are registered trademarks of ASKOM Spółka z o.o., Gliwice. Other brand names, trademarks, and registered trademarks are the property of their respective holders.

All rights reserved including the right of reproduction in whole or in part in any form. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from the ASKOM.

ASKOM Sp. z o. o. shall not be liable for any damages arising out of the use of information included in the publication content.

When new price list appears, the old ones expire.

Copyright © 2019, ASKOM Spółka z o.o., Gliwice



## Asix.Evo software package

Asix.Evo software package is a software product which consists of several functionally interconnected software modules. A basic part of the package is Asix.Evo visualization system being a SCADA (Supervisory Control And Data Acquisition) class software that supports wide range of functions for operator supervision over the technological objects, assuring both analog and digital data acquisition, possibility of process control, alarm and event recording, report generation and making process data available in the computer network. Every run-time license of Asix.Evo allows designing of all system components, therefore *development* is available at no charge.

The main features of Asix.Evo package are the following:

- Scalable vector graphics for desktop and web synoptic diagrams including GIS diagrams
- Fully-featured SCADA applications in web browser, with no need for conversion
- Asix Mobile module for presentation of process data on mobile devices
- Production information portal available on tablets and smartphones
- Efficient process and production data Historian
- Trends of measurements with millisecond sampling
- Integrated permission management with logging of executed control operations
- Advanced scheduling of operator actions
- Remote messaging on important events by e-mails or sms
- Operation time recording and parameter monitoring of devices
- Power Guard module designed to monitor the current consumption of any media
- Recipes and event data registration in MS SQL database
- Possibility of application development by C# and Visual Basic .NET languages, in particular to create one's own visualization objects
- A wide set of interfaces for data exchange with other software
- Easy reporting based on Microsoft Reporting Services
- Asix Excel Add-In allows for easy access to the Asix. Evo application data
- Implementation of system validation procedures according to FDA 21 CRF 11 / GAMP4 regulations
- No language barriers: Unicode opens the way to projects in any language
- Tools for multidimensional analysis of historical alarms in accordance with the EEMUA guidelines
- Multiterminal operator station redundancy
- Ability to run application in remote desktop mode of Microsoft RDS
- Pre-configured process information portal in a web browser on tablets and smartphones
- BMS application wizard for WAGO controllers
- Integration with SYDEL energy media consumption and accounting module
- Engineering station integrated in each license
- More than 100 communication drivers to collect process data

#### Additional merits:

- More than 9000 licenses sold, which verified effectiveness of the system
- Nearly 60 authorized integrator companies, trained in project implementation

The ability to design geographic map-based GIS diagrams. It opens Asix to a new type of systems called 'GeoSCADA', which relate to industrial objects dispersed geographically. Synoptic diagrams based on the GIS mechanism allow efficiently to locate selected parts of the plant, entered on the map using easy-to-find coordinates, and to diagnose the state of their work remotely. It reduces the time required to identify alarm conditions dramatically, even in the geographically remotest object branches and allows for rational management of intervention services. (More information available at the leaflet: https://www.asix.com.pl/en/downloads/commercial\_training\_materials/)

Correct Asix.Evo operation is supported for the following operating system software: Microsoft Windows 7 SP1, Microsoft Windows 8/8.1, Microsoft Windows 10, Microsoft Windows Server 2008R2 SP1, Microsoft Windows Server 2012 / 2016 / 2019 (use one of the earlier versions of Windows does not guarantee full functionality of the product) on hardware equipment which fulfils the operating system requirements. The Microsoft .NET Framework 4.72 platform is required for proper Asix.Evo package operation. Run the application in a web browser requires Internet Explorer 8 or later, or Firefox / Opera / Chrome browsers equipped with the IE Tab addition.

When using the Asix.Evo software functions that require an SQL database, one need to install the freeware MS SQL Express 2012 / 2014 / 2016 (for database to 10GB) or full servers Microsoft SQL Server 2012, Microsoft SQL Server 2014 or Microsoft SQL Server 2016.

The Asix. Evo software operates in one of the following language versions:

- Polish.
- English,

independently from the operating system language. Applications can be created in any language and any alphabet because of the Unicode standard support. It is also possible to change on-line program and application language during operation.



## **BASIC LICENSES**

Asix. Evo system is offered in the following, functionally different, six BASIC Licenses:

- Engineering Stations,
- Operator Stations,
- Operator Servers,
- Terminals,
- Operator Panels,
- AsixConnect.

### Standalone Engineering Station:

License is dedicated for development of applications. It allows to create all elements of application and perform run-time tests based either on communication links to PLC's or on virtual variables (with no connection to a physical source of data). The license has no limit on number of process variables but restricts application run-time to two hours; data archiving and alarm servicing are executed only locally.

## **Network Engineering Station:**

License is dedicated for development of network applications. It allows design and testing of applications to work in multiterminal configurations. Thus it has capabilities, beyond the ones of Standalone Engineering Station, to access process data through network channels, to use network archives. Run time in application mode is limited to two hours.

## Time Limited Development License:

Engineering Station Licenses are standard for designing and testing applications. However, if the requirements for testing or deploying applications require a license with enhanced functionality, Time Limited Development License may be purchased. Remark: Development License can not be a target license (run-time) - its use is only possible at the application design, testing and implementation stage.

For development license, the client has the possibility to specify the license type (for a basic license), number of variables and other extension functions. The Development License is provided in the form of a software-activated license dedicated to a particular computer. The license is valid for 3 months.

# **Operator Station:**

License is dedicated for local Operator Stations. It also allows to use network data (made available by Operator Servers) as well as makes data available to other applications of Windows environment by DDE/OLE/OPC/.NET server. The operator station provides servicing of alarms in local mode, collects local data archives.

License exists in eight types differing from each other by the number of process variables from physical channel and virtual variables (local variables, internal for an individual computer): 32 / 64 / 128 / 256 / 512 / 1024 / 4096 variables and without limit on number of variables (i.e. 232 variables).

Method of variables counting for purpose of Asix. Evo license is as follows:

- one analog measurement
- one 8,16, 32 or 64 bit register
- one table element (8,16, 32 or 64 bit)
- one internal (local) variable
- variable form NONE channel, not archived= does not apply to license limit, variable in network channel
- = one variable within license limit,
- = one variable within license limit.
- = one variable within license limit,
- = one variable within license limit,
  - = does not apply to license limit \*.

\*) It doesn't apply to operator station with 32 variable limit as well as computers that make data available with use of GATEWAY function.

ATTENTION: one 8, 16 or 32 bit register can transfer information about 8, 16 or 32 digital signals. The register could be split into separate signals at the level of visualization dynamic objects. Using such approach, 64 digital signals will occupy only one variable within the license limit.

## **Operator Server:**

License, like Operator Station, is a license dedicated for **building operator stations** but with additional possibility to export process data (current and archival) to other Asix. Evo computers (operator stations and terminals) and to ensure network alarm servicing (broadcasting actual alarm statuses and alarm acknowledgement on all computers within the network). Apart from all features of Operator Station, the Operator Server **makes possible to operate in hot-redundancy mode** ensuring functions of data archive synchronization and redundancy of communication channels.

Operator server can work as independent **Historian** (without operator interface), supplying other Asix.Evo computer stations with historical data and reports.

License exists in seven types differing from each other by the number of process variables from physical channel and virtual variables (local variables, internal for an individual computer): 64 / 128 / 256 / 512 / 1024 / 4096 variables and without limit on number of variables (i.e.  $2^{32}$  variables).

### **Operator Terminal:**

License is dedicated for application execution basing on data available on the network only, retrieving by Operator Servers. Operator Terminal can be used in expanded control rooms as an additional Operator Station without direct links to the PLCs. It gives also the possibility to run DDE/OLE/OPC/.NET servers and data export to other Windows applications that can retrieve data by the mentioned channel types. This terminal does not limit the number of process variables.

### **RDS Terminal:**

RDS Terminal Licenses (Remote Desktop Services) allows to run many instances of Asix.Evo application on one single Windows Server server. The users access the application using the system remote access services. Besides a specific operating mode, RDS Terminals are functionally identical to the standard Operator Terminals. RDS Licenses allow you to reduce the cost of application administration – Asix.Evo package software as well as an Asix.Evo application are installed only on a single server computer. The application developer has to, however, configure the application in a way ensuring parallel operation of multiple instances – working files (eg. Log files) have to be created in separate folders for each instance. Any computer or a device (tablet/smartphone) may be RDS Terminal, provided RDS client software having been installed (appropriate for operating system being used).

## **Operator Panel:**

License is dedicated for building the local Operator Stations based on HMI panels at half price of standard Operator Station License.

The Operator Panel allows to use network data (made available by Operator Servers) as well as makes data available to other **local** applications of MS Windows environment by DDE/OLE/OPC/.NET server. The Operator Panel supports alarms in local operator mode without writing the alarms on local disk, and also enables data archiving for 1-day period. In addition to these limitations, Operator Panel is functionally identical with Operator Station.

The Operator Panel License supports one of the following operating systems: Windows XP Embedded, Windows Embedded Standard 2009, Windows Embedded Standard 7, Windows Embedded 8.

# OPC/DDE/OLE Automation/.NET (AsixConnect):

License for a set of interfaces of software that allows you to exchange data with other systems. AsixConnect includes:

- OPC DA 2.0, OPC UA, Automation, .NET and DDE servers for current data exchange;
- OPC HDA, Automation, .NET and OLE DB servers for archived data exchange;
- OPC A&E and .NET server for alarm data available (only for applications developed in classical Asix used till Asix 6 not in Asix in Evo version);
- REST server providing process data of the Asix. Evo system application; allows sharing resources using the http / https protocol.

Any MS Windows program based on Automation, OPC, .NET or DDE protocols may co-operate with Asix.Evo application by AsixConnect servers. Using servers, one can read / write data for process supervisory control and parametrization. Thanks to such solution current process variables as well as their archived values (registered trend of process variables) are accessible on-line in Windows system environment. Examples of software, basing on Automation and DDE server, for data exchange are Microsoft Office programs: Excel, Access, Word and PowerPoint. The applications created by use of these products and AsixConnect may efficiently enrich functionality of SCADA systems. These applications may be used for data analysis and visualization, model studies, specialized reports generation and designing databases of process variables.



AsixConnect is an integral part of Asix.Evo package, but it may be also delivered as an independent module to be used on PC stations connected to computer networks containing Asix.Evo data servers. In such a case, AsixConnect makes available to Windows software the process data accessed from remote computer stations connected directly to PLCs.

The OPC UA server can connect to Asix in version 8.1.5 or higher.

The use of OPC UA server requires the purchase of an additional – separate License OpcUaServer (see below).

ENGINEERING Licenses are DEDICATED to development; permissions to work in run-time are limited to two hours.

All other BASIC Licenses, except AsixConnect, give permissions to work both in development and run-time mode of application.

Asix Engineering Stations	
Package name	Туре
Asix.Evo 10, Local engineering station	ASIX-WDUW
Asix.Evo 10, Network engineering station	ASIX-WDUN
Asix.Evo 10, LICENSE DEVELOPMENT; TIME LIMITED 3 MONTHS; 1 PC; SOFTWARE ACTIVATION	ASIX-DEV-1PC-3MONTH-SOFT

Asix Operator Stations	
Asix.Evo 10, Operator station, 32 variables limit	ASIX-WATW
Asix.Evo 10, Operator station, 64 variables limit	ASIX-WAEW
Asix.Evo 10, Operator station, 128 variables limit	ASIX-WALW
Asix.Evo 10, Operator station, 256 variables limit	ASIX-WABW
Asix.Evo 10, Operator station, 512 variables limit	ASIX-WACW
Asix.Evo 10, Operator station, 1024 variables limit	ASIX-WAAW
Asix.Evo 10, Operator station, 4096 variables limit	ASIX-WAFW
Asix.Evo 10, Operator station, 8192 variables limit	ASIX-WAGW
Asix.Evo 10, Operator station, "unlimited", limit: 2 <sup>32</sup> variables	ASIX-WAUW

Asix Operator Servers	
Asix.Evo 10, Operator server, 64 variables limit	ASIX-WAES
Asix.Evo 10, Operator server, 128 variables limit	ASIX-WALS
Asix.Evo 10, Operator server, 256 variables limit	ASIX-WABS
Asix.Evo 10, Operator server, 512 variables limit	ASIX-WACS
Asix.Evo 10, Operator server, 1024 variables limit	ASIX-WAAS
Asix.Evo 10, Operator server, 4096 variables limit	ASIX-WAFS
Asix.Evo 10, Operator server, 8192 variables limit	ASIX-WAGS
Asix.Evo 10, Operator server, "unlimited", limit: 232 variables	ASIX-WAUS

Terminals	
Asix.Evo 10, Operator Terminal	ASIX-WAUO
Asix.Evo 10, RDS Terminal with WAUO permissions for the first simultaneous client	AsixRDS+1CAL
Asix.Evo 10, RDS Terminal license extension with WAUO permissions by one simultaneous client	AsixRDS CAL

Asix Operator Panels	
Asix.Evo 10, Operator panel, 32 variables limit	ASIX-WATP
Asix.Evo 10, Operator panel, 64 variables limit	ASIX-WAEP
Asix.Evo 10, Operator panel, 128 variables limit	ASIX-WALP
Asix.Evo 10, Operator panel, 256 variables limit	ASIX-WABP
Asix.Evo 10, Operator panel, 512 variables limit	ASIX-WACP
Asix.Evo 10, Operator panel, 1024 variables limit	ASIX-WAAP
Asix.Evo 10, Operator panel, 4096 variables limit	ASIX-WAFP

AsixConnect Server	
OPC/DDE/OLE/.NET Server	AsixConnect
The addition that allows to use OPC UA server	OpcUaServer

# **EXTENDING LICENSES**

The Asix.Evo package functionality can be extended by purchase of additional EXTENDING Licenses (extension) to BASIC package:

- Asix4Internet+CAL
- AsAudit
- AsLogger
- AsixMobile+CAL

#### @Asix4Internet:

License for additional module allowing use of Asix. Evo WWW applications on a single IIS web server. It is offered only as extension to Operator Server License. @Asix4Internet includes the following modules:

- EvoNet System for execution of Asix.Evo application in web browser; in the EvoNet mode, www browser stations are functionally equivalent to Operator Terminal License in servicing process being controlled;
- AsPortal Web-based Process Information Portal is ready for immediate use and lets you browse process data from any Asix. Evo system application on the Internet. The portal allows you to browse the variables database, read current values, view the active alarms and alarm history, present historical values of process variables in tables or charts. AsPortal is an HTML website compatible with all web browsers and all operating systems;
- AsTrend Web-based version of the application for graphical analysis of historical data with features consistent with the Windows version of Asix.Evo.

In order to use the @Asix4Internet License you need to use Internet Explorer web browser in version 8.0 or upper. Acceptable are also Chrome, Opera and Firefox with IE Tab add-in installed. In addition to the basic License @Asix4Internet you need to purchase the appropriate number of client Licenses @Asix4InternetCAL. The client Licenses (CAL) are concurrent-user type, so a single License allows any one user to access the web server at any given time. There are two types of CAL Licenses:

- @Asix4Internet1CAL-Lite extension of the Portal/Web Server License by 1 Lite client (per server).
   The Lite Licenses are dedicated for viewing the controlled process status. They provide full visualization functionality, access to current and historical data, as well as alarms. They do not feature functions allowing operators to control the process
  - The 1CAL-Lite client License is sufficient for most applications that require access to data from the web browser
- @Asix4Internet1CAL-- extension of the Portal/Web Server License by 1 full client (per server). In addition to all the features of the Lite version the full License also allows the operator to perform typical operations. It is possible to control the process remotely, edit AsBase recipes and archives, and configure the schedules. The full web-based client features all the necessary functions to support the application-controlled process in a manner equivalent to the WAUO Operator Terminal License.

The @Asix4Internet base License includes a single full client.



You can purchase Lite and full client Licenses in packages of 5, 10, 20, 50 with attractive discounts.

#### AsAudit:

License for an additional module which ensures additional functions related to the control of the application execution and activity registration:

- Logging control operations performed on selected process variables. AsAudit registers the following data: time of control
  execution, name of machine performing the control, ID of the logged-in user, value of process variable before the control
  operation and the control value.
- Logging the operator's actions. It is possible to register which masks (screens), tables of variables, trends were opened and closed by operator on the selected Asix.Evo system stations.
- Application file integrity control. This functionality consists in verification whether the contents of the variables database
  and the application files have been changed in an unauthorized way (i.e. whether user-made modifications were not
  confirmed through registration in AsAudit database). Each event of files modification is logged in the database.

Functionality of AsAudit module in the field of application integrity control and registration of system operation history enables to realize system validation in accordance with FDA 21 CFR 11 / GAMP5 regulations, applied in pharmaceutical and food processing industry.

To use AsAudit module, the additional AsAudit or AsAudit – Lite License need to be bought for the mentioned above Asix.Evo system Licenses. Type of required AsAudit License depends on the basic Asix.Evo system License used as follows:

WDUW local engineering station — no additional AsAudit License is needed WDUN network engineering station — *AsAudit – Lite* License is needed WATW, WAEW, WALW, WABW operator station — *AsAudit – Lite* License is needed WACW, WAAW, WAFW, WAGW, WAUW operator station — *AsAudit* License is needed Operator server — *AsAudit* License is needed Terminal — *AsAudit – Lite* License is needed

Using AsAudit functionality with the License @Asix4Internet or RDS terminal needs one of the following Licenses to be bought, regardless of the number of Licenses @Asix4Internet or AsixRDS:

- AsAudit-WWW addition for @Asix4Internet Licenses;
- AsAudit-RDS addition for AsixRDS Licenses.

## AsLogger:

License of recorder of fast measurement series, used for recording, archiving and analysing of measurement series in which samples are stamped with the time stamp up to 1 µs. Measurements can be performed by analog-to-digital cards directly controlled by the Asix.Evo application or by automatic measurement / registration devices connected to a PC (including PLCs and electrical protection devices). AsLogger supports analysis of measurement experiments collecting the data series of high resolution. The series data is retrieved from a recording device, pre-processed and stored in an SQL database.

The AsTrend program allows displaying graphs of AsLogger measurement series in charts or tables. It is possible to display simultaneously AsLogger and other data type series supported by AsTrend.

Data analysis can be made on the computer on which data is recorded as well as on network stations. It is also possible to access the AsLogger data from any other programs equipped with ODBC or OLE DB/ADO interfaces.

AsLogger supports retrieving of data from the OPC server, which allows to work with any device meeting requirements of open standards for data exchange. Moreover, AsLogger supports hardware recorders: MUPASZ 2001G, MUPASZ 07, MUPASZ710 and MultiMuz family units.

One of the uses of the AsLogger program is to analyse electrical protection actions - the fast-changing time series (current, voltage, power) and digital signals gathered at the time of protection operation. The internal memory of electrical protections is usually small and allows to store at most a few - and most often only one - the last registration. Analysis of time series requires connection with a computer equipped with appropriate software tools and readout of data series from the device memory. If the protection has acted once more before reading the series, they are irretrievably lost. When using protection systems from different manufacturers, it is necessary to have and learn several different utility programs (mostly with no Polish language support). AsLogger allows to create the station both of automatic readout of the time series recorded by electrical protections and archiving in one database available on Ethernet to any number of users. In addition, hierarchical organization of data structure (switching station - field - protection type - specific device) considerably simplifies later search and analysis of data. All time series are available for analysis purpose in one - easy to use and Polish - software environment, regardless from what device they come from.

## Asix Mobile – access to process data from mobile devices:

License for a module that is an extension of a set of tools and programs available in the Asix. Evo system with dedicated functionality for all kinds of mobile devices of a smartphone or tablet type.

Asix Mobile enables creating a fully functional interface for visualization of selected measurements of the inspected facility, as well as control of its operation. Design and use of the graphical interface has been fully adapted for devices with small screens. Much emphasis has been put on the effective use of touch screens.

Thanks to Asix Mobile, the user gains instant access to data regardless of his location. It is possible to track current values of measurements and view their registered history. If necessary, you can influence the state of the process by sending a remote command or set points. There is also possibility to check alarm status including acknowledgment of the alarm reading.

To run Asix Mobile any Operator Server License is needed. Under this License user gets the right to connect one mobile device in the service mode of Asix Mobile. To connect additional devices, you have to purchase the appropriate number of CALs @Asix4MobileCAL. Each device when used leases one access license for 24 hours. If the device is not used for 24 hours, the License is automatically released.

Asix Mobile Client requires the operating system Android or iOS. It is also possible to launch the Client in the web browser running on Windows platform – the browsers supported are: Google Chrome, Mozilla Firefox and Microsoft Edge.

Asix Mobile is the winner in the "Mobile Applications" category of the "Product of the Year 2016" competition, organized by the editorial staff of the "Control Engineering Polska" magazine.

Asix4Internet	
Package name	Туре
Portal/ Server WWW for simultaneous operation of 1 client	@Asix4Internet
Portal/ Server WWW license extension - next 1 web client Lite type – with functionality of full visualization and current, archival, alarm data reading, with NO POSSIBILITY of control (see page 5 for details)	Asix4Internet1CAL-Lite
Portal/Server WWW license extension by 5 Lite clients	@Asix4Internet5CAL-Lite
Portal/Server WWW license extension by 10 Lite clients	@Asix4Internet10CAL-Lite
Portal/Server WWW license extension by 20 Lite clients	@Asix4Internet20CAL-Lite
Portal/Server WWW license extension by 50 Lite clients	@Asix4Internet50CAL-Lite
Portal/Server WWW license extension by 1 web client of functionality funkcjonalności in full compliance with WAUO Operator terminal	@Asix4Internet1CAL
Portal/Server WWW license extension by 5 clients	@Asix4Internet5CAL
Portal/Server WWW license extension by 10 clients	@Asix4Internet10CAL
Portal/Server WWW license extension by 20 clients	@Asix4Internet20CAL
Portal/Server WWW license extension by 50 clients	@Asix4Internet50CAL

AsAudit module	
AsAudit, license for operator servers and WACW, WAAW, WAFW, WAUW operator stations	AsAudit
Addition for @Asix4Internet license	AsAudit-WWW
Addition for AsixRDS license	AsAudit-RDS
AsAudit – Lite, license for WDUN network engineering station, WATW, WAEW, WALW, WABW operator stations and WAUO terminals	AsAudit - Lite

AsLogger	
AsLogger Server + OPC DA 2.0 + Mupasz 2001G driver	AsLoggerServer-Mupasz2001G
AsLogger Server + OPC DA 2.0 + Mupasz07 driver	AsLoggerServer-Mupasz07
AsLogger Server + OPC DA 2.0 + MultiMuz driver	AsLoggerServer-MultiMuz



AsLogger Server + OPC DA 2.0 + Mupasz710 driver	AsLoggerServer-Mupasz710
AsLogger Client	AsLoggerClient
Mupasz2001G communication driver for AsLogger	AsLogger-Mupasz2001G
Mupasz07 communication driver for AsLogger	AsLogger-Mupasz07
MultiMuz communication driver for AsLogger	AsLogger-MultiMuz
Mupasz710 communication driver for AsLogger	AsLogger-Mupasz710

Asix Mobile	
1 Asix Mobile Client	@Asix4Mobile1CAL
5 Asix Mobile Clients Pack	@Asix4Mobile5CAL
10 Asix Mobile Clients Pack	@Asix4Mobile10CAL
20 Asix Mobile Clients Pack	@Asix4Mobile20CAL
50 Asix Mobile Clients Pack	@Asix4Mobile50CAL

# **AUTONOMOUS LICENSES**

Asix. Evo package also consists of a number of autonomous modules/services, the use of which may require, but doesn't have to, to buy extra AUTONOMOUS licenses as EXTENSION.

- AsRaport
- AsAlert
- AsAlarm
- AsService
- AsixCAL
- AsixExcel

## AsRaport:

**Autonomous service without purchasing a separate License.** Reporting system integrated with Microsoft Reporting Services. For the user this means an option of freely designing, modifying, browsing and generating reports in Asix.Evo environment.

Microsoft® SQL Server™ Reporting Services provides a complete, server-based platform designed to support a wide variety of reporting needs enabling organizations to deliver relevant information where needed across the entire enterprise. By using Reporting Services, which is a component of SQL Server 2008, one can create reports based on different data sources (including ad hoc reporting available through user-friendly interface), manage reporting environment involving planning how and when reports are generated, manage report subscriptions and control access rights, as well as provide users with reports in the appropriate formats (e.g., XLS, PDF, DOC, TIFF) in a convenient way (e.g. electronically by subscription, or by embedding reports in the business applications and portals).

As a part of Asix.Evo integration with Reporting Services, the proprietary method for retrieving logged data from an ultraefficient Asix.Evo archive through SQL queries is of key importance. A correct query to retrieve data from the Asix.Evo archive is constructed with a user-friendly application supporting drag-and-drop functionality, which does not require the user to have any IT experience. Modules facilitating viewing and publishing of reports were developed as a consequence of integration with the Reporting Services.

The Asix.Evo system is compatible with both Reporting Services offered by free MS SQL Server Express and the services made available in full MS SQL Server.

#### AsAlert:

License of alert server used for remote notification of selected persons about important events and alarms. The messages can reach the addressees by means of e-mails or SMS messages sent through a GSM network or using OAP protocol dedicated for Ascom notification devices. AsAlert Server License allows sending alarms from Asix.Evo application that operates on the same station. To enable sending of alarms by AsAlert server from a remote station, the AsAlert Client License should be additionally installed on the remote station.

#### AsAlarm:

License for a module providing tools for detailed analysis of alarms generated by the monitored site and of other data relating to alarm system operation. The application meets the EEMUA (The Engineering Equipment and Materials Users Association) guidelines No. 191. The module allows two-level alarm analysis:

- assessment of the alarm system structure validity for a specific application;
   The application offers specific measures to the system designer, by which it is possible to assess if the system has been designed according to the universal guidelines and takes into account the operator's perception capacity
- In depth statistical and dynamic analysis of alarms registered on site;
  In this scope AsAlarm is an essential tool for maintenance and repair services, both in the aspect of event timeline analysis and statistical analysis to determine trends in system behaviour.

AsAlarm License included in all Asix.Evo packages entitles you to analyze systems with a number of alarms limited to 128 (no limit on the analysis time horizon), or restriction of the horizon of analysis to 2 weeks prior to the current date (with no limit on the number of alarms).

AsAlarm-Pro License – has no limit on the number of alarms and the period of analysis - it is offered as a separate item on the price list. Free MS SQL Server Express (with 10 GB database size limit) or the full MS SQL Server version (no database size limitations) must be installed in order for AsAlarm-Pro to work.

Free MS SQL Server Express (with 10 GB database size limit) or the full MS SQL Server version (no database size limitations) must be installed in order for AsAlarm-Pro to work.

#### AsService:

License for a module dedicated to plant asset maintenance and production resources management. This tool - easy in setup and use - can log the equipment operation times and number of times the devices are switched on-off - all with the use of software counters and based on data collected in Asix. Evo application. This makes possible to monitor maintenance and repair operations, to alert user on necessary actions, to report any missed operations as well as to log the related technical and record data for each monitored device. The AsService module operates using database of equipment and machines being under control. There are two types of installations of AsService:

- server one, which controls License requirements,
- client one, providing interface to the AsService program (with no limit on number of client installations within an AsService License).

The ability to configure interface between AsService and an application developed in Asix.Evo allows for access to status and configuration data of counters, configuration data of devices and last reset data of any counter - all of these directly from the application diagram.

AsService is available in two Licenses:

- AsService Lite up to 30 counters,
- AsService with no limit on number of counters.

AsService requires the full version of Microsoft SQL Server database server (from the version: MS SQL Server 2008 R2). The 'Express' version is not sufficient for proper operation of the program.

#### AsixCAL:

License for independent access to the Asix.Evo system data. When using the user's own mechanisms for access to current and archive data of Asix.Evo application from a remote computer, that is not equipped with the of Asix.Evo system Licenses for network data access, a separate access License AsixCAL is required to be purchased for each computer.

#### AsixExcel Add-In:

Autonomous service without purchasing a separate License. It allows a typical MS Excel user to use current and historical process data of Asix. Evo application, in a simple manner. Add-in is installed automatically during the installation of Asix. Evo package. MS Excel interface is then extended with tools supporting use of Asix. Evo data: set of specialized functions and Asix Table object. The add-in also facilitates access to Asix. Evo system data using VBA scripts based on a specially prepared for this purpose object of AsixEvo class.

Two models of AsixExcel licensing are offered. The choice of the model depends on the user and can be changed at any time. The first model uses the License OPC/DDE/OLE/.Net Server (AsixConnect) as a part of Operator Stations, Operator Servers and Terminals Licenses or is purchased separately. The second model uses the @Asix4Internet License in Lite



(To get access to the prices, please call ASKOM or use the form http://www.asix.com.pl/en/price\_list/)

Autonomous modules	
Package name	Туре
AsAlert Server	AsAlert
AsAlert Client, license for remote access to AsAlert Server	AsAlertCAL
AsAlarm for analysis of alarm/event logs of Asix.Evo system application, no-limit license	AsAlarm-Pro
AsService for logging operating time / number of switching on- off devices – licence for max. 30 counters	AsService - Lite
AsService for logging operating time / number of switching on- off devices – no limit licence	AsService
License for remote access to Asix.Evo application data	AsixCAL

# EXTENSION, UPDATE/UPGRADE, MIGRATION, TECHNICAL SUPPORT

#### The latest version ONLY:

ASKOM offers and sells the most recent version of the Asix.Evo package. The License allows the user to install and use previous versions of Asix/Asix.Evo if it is dictated by the technical requirements of an existing application. ASKOM has no obligation to provide media, documentation or separate key for previous Asix versions, as well as to provide technical support for them.

## Version Subscription:

You may install and use more than one version of Asix. Evo for the purpose of designing and testing applications, but only one at a time.

# Rules for providing technical support

ASKOM provides limited, free and complex, paid technical support. Free support is only available for the latest (current) and one previous main version of Asix. Evo package. The support covers only the help in determining the causes of problems in the software operation and the advice on how to make/parameterize the application.

In all other cases, it is possible to obtain paid support in accordance with the valid price list or under the terms of a separate service agreement.

In no case, ASKOM does not guarantee making corrections to the other main versions of the package than the latest one. The condition of obtaining technical support, both free and paid, is to refer to the number of the granted and registered License to use the software.

# Version update and upgrade:

The versions of Asix.Evo are numbered by **x.y.z**, where: **x** is a major number of the version, digit **y** is a minor number of the version and **z** is a number of package release. When only the digits **y.z** are different when version changes, it's called an **update/Upd** - ASKOM ensures **free update of system version**. If the major number **x** changes for new version, it is called an **version upgrade/VUPG** and it follows against payment according to the current price list.

If you raise the version number for client Licenses @Asix4InternetCAL from the lower version than 8, available in the past in packs of 5 Licences, the client License Lite is offered - but Purchaser may change once both client type and number of client Licenses.

The right to obtain a VUPG license (version upgrade) is conditioned by referring to the number of the granted and registered BASE license to use of the software.

#### **Extension:**

Asix. Evo package is extended by purchasing EXTENDING (extension/EXT) or AUTONOMOUS Licenses (see above).

The rule of the package latest version sale applies to the case of extension purchase - if you extend the package the version of which differs from the distributed one, you have to upgrade your package to the current version (upgrade). There are exceptions for License changes that only consist in increase of the License parameters:

- purchase of additional client Licenses @Asix4InternetCAL
- purchase of additional client Licenses AsixRDS CAL
- purchase of additional client Licenses @Asix4MobileCAL

The right to obtain a EXT license (extension) is conditioned by referring to the number of the granted and registered BASE license to use of the software.

## Product migration (product upgrade):

Licenses of Asix.Evo package have different functionality (Operator Station, Operator Server, Engineering Station, Terminal) and the limit of supported variables. There are paid migrations involving the transition to a "higher" functionality and / or increase the number of process variables.

The rule of the package latest version sale also applies to the case of product migration - if you extend the package the version of which differs from the distributed one, you have to upgrade your package to the current version (upgrade) together with the change of package type (migration/PRUPG). The version upgrade is not mandatory for the migration that only increases the process variables number.

The right to obtain a PRUPG license (product upgrade) is conditioned by referring to the number of the granted and registered BASE license to use of the software.



All purchases of new Licenses or UPG Licenses are covered by the protection Program Assurance. That means that, if within 4 months from the date of purchase of the new License or UPG License by the customer, the new version of the main software will be released (available for sale), then the customer automatically will receive the right to purchase the new main version (VUPG) free or at special promotional conditions (depending on the type of original transaction). The right to the PA program applies only to the period of 4 months from the date the new version of the main software has been released.



Each client, at the time of purchase of the new License or V/PR UPG License can join the program PM. Joining the program gives you the right to a **free upgrade of the main software version (VUPG)** if during the program membership the new main version of the software will be released (available for sale). Under the PM the following applies:

- joining the program requires a fee specified in the price list;
- duration of PM is equal to one year; sustain of participation for next year requires the re-payment of fee;
- if during the PM the user performs the migration (PRUPG) or extension (EXT) of the License, a supplementary License fee resulting from the difference in License prices before and after migration / extension should be paid in order to preserve the validity of PM;



(To get access to the prices, please call ASKOM or use the form http://www.asix.com.pl/en/price\_list/)

EXTENSION, UPDATE/UPGRADE, MIGRATION	
Migration  Notice: when product migration (product upgrade), the fee for mandatory version upgrade to the current package version should be added to the charge for the License type change - except the cases described in the chapter EXTENSION, UPDATE/UPGRADE, MIGRATION.	difference in Licenses price
Update	free of charge
Upgrade from version 2,3,4,5,6.yy.zzz to version 10.y.z	90% of specific license price
Upgrade from version 7.y.z to version 10.y.z	80% of specific license price
Upgrade from version 8.y.z to version 10.y.z	50% of specific license price
Upgrade from version 9.y.z to version 10.y.z	35% of specific license price
Joining the PM for 1 year	15% of package price
Technical support for each started hour (does not apply to cases eligible for free support)	USD 50,-
USB HASP key exchange	USD 80,-
Surcharge for MaxMicro USB HASP key	USD 20,-

# COMMUNICATION MODULES

Each Asix. Evo BASIC License includes a large set of communication drivers, which allow data exchange with measurement devices and most common PLC's of worldwide manufacturers. Apart from dedicated drivers for specific PLC's, Asix.Evo includes open communication interfaces matching the standards of Windows environment and allowing connection of almost any PLC or measurement device, delivered by the manufacturers with appropriate data servers. These are:

- client OPC DA 1.0, 2.0A, OPC HDA, OPC A&E, OPC UA
- **OLE** Automation
- OLE DB
- client DDE
- **DLMS**
- **MODBUS RTU**
- MODBUS TCP/IP
- NCP
- **PROFIBUS**
- **PROFINET**
- **CANBUS**
- **CANopen**
- DNP3
- IEC61850
- IEC62056-21
- M-Bus
- **SNMP**

Additionally, a special drivers: BUFOR and File2Asix (including full protocol specification) are delivered, which make available an universal interface for data exchange with Customer's drivers. It is also possible to import data into Asix.Evo application using the Application Scripts.

All available drivers, except OPC UA, are included in each Asix. Evo package License at no additional fee. Using some drivers may require additional hardware or software libraries from the third parties (see PRICE LIST).

ASKOM offers (against payment) a development of special communication drivers for any device of the Customer, when data transfer protocol specification is delivered and, for non-typical solutions, also a testing device.

Communication drivers - payable			
Driver	Туре		
License allowing use of communication driver of OPC UA protocol client	OpcUaClient		
IEC61850 Info-Tech library needed by the IEC61850 driver of Asix.Evo	IEC61850		
Implementation of any communication protocol, not included on the list of available communication drives			

	ION DRIVERS II	NCLUDED IN THE PRICE
Driver	Protocol	Use
ADAM	ADAM 4000	RS485 serial bus protocol for ADAM 4000 series modules.
AdvWise	HTTP/REST	Used to exchange data between the Asix system and the WISE series modules manufactured by Advantech. Komunikacja jest realizowana przy pomocy łącza Ethernet z użyciem protokołu HTTP/REST. The communication is carried out using an Ethernet link using the HTTP / REST protocol.
Aggregate	-	Driver allows definition of variables the values of which are generated as a result of calculations performed on other variables of the Asix.Evo system.
AirPointer	НТТР	The AirPointer is used for data exchange between Asix.Evo and air monitoring station AirPointer developed by Recordum Messtechnik GmbH, Austria. The transmission is performed with use of HTTP protocol using <i>info.php</i> and <i>download.php</i> websites of monitoring station web server.
AK	AK	Protocol for data exchange between Asix.Evo system and Emerson MLT2 analyzers.
AM_SA85	MODBUS PLUS	MODBUS PLUS network protocol, based on Schneider Electric AM-SA85-000 card.
AREVA	AREVA	Protocol for digital protection devices MiCOM of AREVA; the list of serviced devices includes MiCOM P127 and MiCOM P34x series.
AS511	AS511	Protocol using programming device interface of SIMATIC S5 PLC.
AS512	AS512	Protocol of CP524/525/544 communication processors.
AS512S7	AS512	AS512 protocol for SIMATIC S7 PLC's, based on CP340 processor.
BACnetIP	BACnet/IP	Protocol for data exchange with devices with BACnet/ IP protocol interface. The driver does not support all BACnet standard objects (details in driver user's documentation).
Baski	BASKI	Protocol for data exchange between Asix.Evo system and BASKI system.
BAZA	-	Communication protocol which allows to import database into Asix.Evo system. Access to database is realized based on ADO technology.
BUFOR	BUFOR	Communication protocol using memory buffer; data exchange with driver developed by user.
Calec	CALEC MCP	Communication with CALEC MCP devices by Aquametro.
CAN_AC_PCI	CANBUS	Protocol of CAN network based on CAN_AC1_PCI and CAN_AC2_PCI cards of Softing GmbH.
CAN_OPEN	CANBUS	CANBUS network protocol based on PCI_712 NT card by SELECTRON LYSS AG.
Cip	CIP	Used to exchange data between the Asix system and the Danfoss VLT MCA 121 EtherNet / IP modules using the CIP protocol in the Unconnected Messages (UCMM) mode.
CipAB	EtherNet/IP	Data exchange between Asix.Evo and PLCs of Logix5000 by Allen-Bradley.
CipOmron	EtherNet/IP	Used to exchange data between the Asix system and Omron NJ / NX series drivers using the EtherNet / IP protocol in Explicit Messaging mode.
COMLI	COMLI	COMmunication LInk protocol allowing communication with AC800C, AC800M and AC250 PLCs from ABB as well as SattCon PLC. Data exchange takes place over RS-232 or RS-485 serial link.
CPIII	СРІІІ	Communication protocol for CP-III/E control panels used to control compressors manufactured by MYCOM (MAYEKAWA).
CZAZ	CZAZ	Protocol for digital protection devices CZAZ-U and CZAZ-UM of ZEG-Energetyka.
DataPAF	DataPAF	Communication protocol for energy meters DataPAF.
DDE	DDE KLIENT	DDE protocol of WINDOWS XP (and later) system, communication with any PLC using its DDE server.
Diris	Ethernet in Open Modbus Tcplp mode	Used to exchange data between the ASIX system and Diris Digiware modules using the Diris D-50 gateway. Data exchange takes place via the Ethernet link in the Open Modbus Tcplp mode.
Diva	DIVA	Protocol for control of industrial DIVA cameras manufactured by VDG Security B.V.



DlmsTcpip	DLMS	Used for data echange between the Asix system and electric energy counters of Landys & Gyr company, using the DLMS protocol. The communication is performed through Ethernet.	
DMS285	DMS285	Serial bus protocol for DURAG D-MS 285 pollution emission analyzers.	
DMS500	DMS500	Serial bus protocol for DURAG D-MS 500 pollution emission analyzers.	
DNP3	DNP3	Driver of Distributed Network Protocol Version 3 for Electrical Power Engineering Control and Supervision Systems.	
DP	PROFIBUS DP	PROFIBUS DP network protocol, based on PROFIboard card by Softing GmbH.	
DP5412	PROFIBUS DP	PROFIBUS DP network protocol, based on CP5412 (A2) or CP5613.	
DSC	DSC	DSC PLC protocol (analysers for chlorine ion content in water).	
DXF351	DXF351	Communication protocol for Compart DXF351 devices by Endress+Hauser.	
E2TangoTcpip	Manufacturer's protocol	Communication protocol of e2TANGO device by Elektrometal Energetyka.	
Ecl	Modbus TCP	Protocol for Communication with ECL Comfort 210/310 controllers made By Danfoss.	
EcoMUZ	EcoMUZ	Protocol used for data exchange between Asix.Evo and Microprocessor Protecting ecoMUZ devices made by JM Tronik.	
ecoMuz2	EcoMUZ	Protool used for data exchange between Asix.Evo and Microprocessor Protecting ecoMUZ-2 devices made by JM Tronik.	
EQABP	PN-EN-62056-21	Protocol used to exchange data with EQABP electricity meters of Pozyton through RS-485 interface.	
EQM	PN-EN-62056-21	Protocol used to exchange data with EQM electricity meters of Pozyton through RS-485 interface.	
Esser	Esser	Protocol fo data exchange with Esser 8008 fire protection by Honeywell.	
FESTO	FESTO Command Interpreter	Serial bus protocol for FESTO PLC's, using diagnostic interface.	
FILE2ASIX	FILE2ASIX	Communication protocol used for importing data from the text files of the specified structure into Asix.Evo system.	
FP1001	FP1001	Serial bus protocol for heat and steam flow meters by METRONIC Kraków.	
Gci	Manufacturer's protocol	Used to exchange data between the Asix system and the E94AYCEN communication module from Lenze Drive Systems GmbH. Data exchange takes place via an Ethernet link using the manufacturer protocol called GCI.	
GFCAN	CANBUS	CANBUS network protocol based on CanCard by Garz&Fricke Industrieautomation GmbH.	
Global	-	Driver used to exchange data between Asix.Evo application and so-called exchange file, which is a container for the current parameters of the driver variable (name, status, value, timestamp).	
IEC61850	IEC61850	Power stations protocol. Requires purchase of INFO-TECH 61850 CCC library.	
COMPOWAY/F	K3N	Meters protocol of K3N series by OMRON.	
K-Bus	K-Bus	Communication protocol implemented within DECAMATIC regulators of VIESSMAN boilers.	
КМР	Kamstrup Meter Protocol (KMP)	Used to exchange data between the ASIX system and the Kamstrup Multical 801 meters according to the Kamstrup Meter Protocol (KMP). Data exchange takes place via RS-232. A cable manufactured by Kamstrup symbol 66-99-106 is required for connection to the meter.	
Lb480	Manufacturer's protocol	Used to read the current and historical data from the concentrator LB-480 manufactured by LAB_EL Elektronika Laboratoryjna.	
LG	LG proprietary protocol	Serial communication via dedicated protocol with Master-K and Glofa GM PLCs.	
Logo	LOGO	Used to exchange data between Asix.Evo system and Logo OBA5 controller from SIEMENS with use of programmer interface of the controller.	
LUMBUS	LUMBUS	Communication protocol for meters manufactured by LUMEL.	
Lzqm	PN-EN-62056-21	Protocol for exchange of data with LZQM electricity meters, produced by POZYTON Electronic Measuring Instruments Facility in Częstochowa.	
M200	M200	Communication protocol for data exchange between Asix.Evo and M210G Spirax Sarco stations.	
MACMAT	GAZ_MODEM	Serial bus protocol for gas flow correctors MACMAT and COMMON.	
Max1000	MAX-1000	Protocol to exchange data with MAX 1000 camera managing system of ULTRAK.	
M-BUS	M-BUS	Serial bus protocol according to EN 1434-3, frequently implemented within heat meters (eq. MULTICAL by KAMSTRUP). Data exchange over RS-232 serial links, (attention: third-party master station of M-Bus network required).	
MEC	MEC	Proprietary protocol allowing communication with heat meters MEC07 and MEC08 manufactured by ITC Łódź.	

MegaMuz         Modbus         Protocol for communication with microprocessor security devices of MegaMuz by by M-Tronic.           MegaMuz2         Modbus         Leed to exchange data between the Asix system and microprocessor protection carried out in MODBUS RTU mode via serial lains.           MegaMuz2_TCPIP         Modbus TCP         Protocol for communication by Ethernet with microprocessor security devices of MegaMuz2 type by JM-Tronic.           MegaMuz2_TCPIP         Modbus TCP         Protocol for communication by Ethernet with microprocessor security devices of MegaMuz2 by the M-Tronic.           MegaMuz2_TCPIP         Modbus TCP         Lead to exchange data between the Asix system and microprocessor protection devices of MegaMuz2 by the M-Tronic.           MELSECA         A1SJTC24-RZ         Protocol of series link for MELSEC-A and FX2P PLCs, format 1 dedicated.           Melsec         Lead to exchange data between the ASIX system and Missibility controllers according to the Melsec Communication with Missibility controllers according to the Melsec Communication with Missibility controllers according to the Melsec Communication with devices for measurement and registerion of electrical values in 1-2- and 3-prises nets of low and high voltage DIRIS A10. A20, A40/A41 of SCCOMEC.           MODBUS_TCPIP_Slave         MODBUS TCP         Modbus TCP Improtect for communication with devices for measurement and registerion of electrical values in 1-2- and 3-prises nets of low and high voltage DIRIS A10. A20, A40/A41 of SCCOMEC.           MODBUS_TCPIP_Slave         MODBUS TCP         Modbus TCPIP Improtect for MDRUS TCP specificati			Commercial information 03/2013
MegaMuz 2         Modbus         devices of MegaMuz type developed by JM-Tronik, Warsaw. Communication is carried out in MODBUS RTU mode via sarial link.           MegaMuz_TCPIP         Modbus TCP         Protocol for communication by Elhernet with microprocessor security devices of MegaMuz type by JM-Tronik.           MegaMuz2_TCPIP         Modbus TCP         Protocol of sense in kin for MELSEC-A and FX2n in KW yastem and microprocessor security devices of MegaMuz type developed by JM-Tronik. Warsaw. Communication is carried out in MODBUS RTU mode on TCPIP via Ethernet.           MELSECA         A1SJ7(224-R2         Protocol of sense link for MELSEC-A and FX2n PCs, format 1 dedicated.           Melsec         Less do exchange data between the ASIX system and Missubish controllers according to the Melsec Communication Protocol. Data exchange takes place via an Ethernet connection.           MEVAS         MeroSa         Serial bus protocol for MEVAS pollution emission analyzers.           MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS RTU         Modbus RTU protocol for Communication with devices for measurement and registration of electrical values in 1-1, 2- and 3-phase nets of low and high voltage—Diriks A10, A20, A40AA1 of SOCOMEC.           MODBUS_TCPIP_Slave         MODBUS TCP         MODBUS TCP MODBUS TCP Specification by Schneider Electric.           MODBUS_TCPIP_slave         MODBUS SLAVE         MODBUS SLAVE         MODBUS SLAVE MODBUS protocol realized via an Ethernet network with the TCPIP protocol. Melsecular t	MegaMuz	Modbus	
MegaMuz_TcPIP         Modbus TCP         MegaMuz type by JM-Tronik.         JW-Tronik.         Was because of MegaMuzz type developed by JM-Tronik. Warsaw. Communication is carried out in MODBUS RTU mode on TcPIP via Ethernet.           MELSECA         A1SJ71C24-R2         Protocol of series link for MELSECA and FXzn PLCs, format 1 dedicated.           MelsecTcpip         Welsec         Used to exchange data between the ASIX system and Missubshi controllers according to the Melsec Communication Protocol. Data exchange takes place via an eithernet cornerollor.           MEVAS         Meros         Serial bus protocol for MEVAS pollution emission analyzers.           MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for measurement and registration of electrical values in 1, 2- and 3-phase nets of low and high voltage – DIRIS A10, A20, A01/A01 A GSCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS retwork protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS SLAVE         MODBUS protocol on SIA/YE protocol Asia, Evo in SLAVE mode.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLCs, based on PCMPI converter.           MPS         Meral bus protocol of MPI network for SIMATIC S7 PLCs, based on PCMPI converter.           MGT         Used to exchange between the Asix sys	MegaMuz2	Modbus	devices of MegaMuz2 type developed by JM-Tronik, Warsaw. Communication is
MegaMuz2 TCPIP         Modbus TCP         devices of MegaMuz2 by pe developed by JM-Tronik, Warsaw. Communication is carried out in MODBUS TUT mode on TCPIP via Ethernet.           MELSECA         A1SJ71C24-R2         Protocol of series link for MELSEC-A and FX2n PLCs, format 1 dedicated.           Melsec         Used to eachange data between the ASIX system and Mitsubishi controllers according to the Melsec Communication Protocol. Data exchange takes place via an Ethernet connection.           MEVAS         MEVAS         Seria bus protocol for MEVAS pollution emission analyzers.           MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for messurement and registration of electrical values in 1, 2- and 3-phase nets of low and high voltage – DIRIS A10, A20, A40A41 of SOCOMEC.           MODBUS_TCPIP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS SLAVE         MODBUS security of the MODBUS TCP of the MODBUS TCP of the MODBUS protocol. Ask: Evo in SLAVE mode.           MODBUS_SLV         MODBUS SLAVE         MODBUS SLAVE         MODBUS protocol for MIS protocol for MIS protocol for MIS protocol.           MIPS         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.           MPS         Serial bus protocol for MIS protocol for MIS	MegaMuz_TCPIP	Modbus TCP	
MelsecTcpip         Melsec         Used to exchange data between the ASIX system and Mitsubishi controllers according to the Melsec Communication Protocol. Data exchange takes place via an Ethernet connection.           MEVAS         MEVAS         Serial bus protocol for MEVAS pollution emission analyzers.           MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for measurement and registration of electrical values in 1-2, 2-and 3-phase nets of low and high voltage – DIRIS A10, A20, A40/A41 of SOCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS TCP         For data exchange between the Asix system and other computers/devices with use of the MODBUS protocol realized via an Ethernet network with the TCP/IP protocol.           MODBUS_TCPIP_Slave         MODBUS_SLAVE         MODBUS protocol, Asix Evo in SLAVE mode.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC ST PLC's, based on PC/IMPI converter.           MPS         MPI (converter)         Protocol of MPI network for SIMATIC ST PLC's, based on PC/IMPI converter.           Mps         Metal (converter)         Protocol of MPI network for SIMATIC ST PLC's, based on PC/IMPI converter.           Mps         Metal (converter)         Protocol of MPI network f	MegaMuz2_TCPIP	Modbus TCP	devices of MegaMuz2 type developed by JM-Tronik, Warsaw. Communication is
MelsecTopip         Melses         according to the Melsec Communication Protocol. Data exchange takes place via an Ethernet connection.           MEVAS         MEVAS         Serial bus protocol for MEVAS pollution emission analyzers.           MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for measurement and registration of electrical values in 1-, 2- and 3-phase nets of low and high voltage DIRIS AID, A2D, A40441 of SOCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUSSLV         MODBUS SLAVE         MODBUS protocol, Asix Evo in SLAVE mode.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.           MPS         Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologil Elektrycare in Zelorias Góra.           Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.           MY223         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the M	MELSECA	A1SJ71C24-R2	Protocol of series link for MELSEC-A and FX2n PLCs, format 1 dedicated.
MicroSmart         MicroSmart         Used for exchanging data with MicroSmart controllers of IDEC.           MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for measurement and registration of electrical values in 1-, 2- and 3-phase nets of low and high voltage—DIRIS A10, A20, A40/A41 of SOCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS TCP         For data exchange between the Asix system and other computers/devices with use of the MODBUS protocol realized via an Ethernet network with the TCP/IP protocol.           MODBUS_SLV         MODBUS SLAVE         MODBUS SLAVE mode.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.           MPS         MPS         Methologii Elektrycznej in Zielona Góra.           Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3-1.1 of the MQTT protocol is supported.           MSP1X         Serial bus protocol for MSP-1x PLC's by ELMONTEX.           Mt723         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MILLIOS library developed by Inventia.           MultiMuz         Modbus         RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik). </td <td>MelsecTcpip</td> <td>Melsec</td> <td>according to the Melsec Communication Protocol. Data exchange takes place via</td>	MelsecTcpip	Melsec	according to the Melsec Communication Protocol. Data exchange takes place via
MODBUS         MODBUS RTU         Modbus RTU protocol for communication with devices for measurement and registration of electrical values in 1-, 2- and 3-phase nets of low and high voltage – DINIS A10, A20, Ad0/A41 of SOCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schnieder Electric.           MODBUS_TCPIP_Slave         MODBUS TCP         For data exchange between the Asix system and other computers/devices with use of the MODBUS protocol realized via an Ethernet network with the TCP/IP protocol.           MODBUS_LV         MODBUS SLAVE         MODBUS protocol of MPID protocol asix. Evo in SLAVE mode.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.           MPS         Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologil Elektrycznej in Zielona Góra.           Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3-1.1 of the MQTT protocol is supported.           MSP1X         MSP1X         Serial bus protocol for MSP-1x PLC's by ELMONTEX.           Mt723         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MtLibő library developed by Inventia.           Muel         MUEL         Protocol for data exchange with microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)           MutliMuz         Mo	MEVAS	MEVAS	Serial bus protocol for MEVAS pollution emission analyzers.
MODBUS         MODBUS RTU         registration of electrical values in 1, 2- and 3-phase nets of low and high voltage – DIRIS A10, A20, A40/A41 of SOCOMEC.           MODBUS_TCP/IP         MODBUS TCP         MODBUS network protocol based on TCP/IP, according to OPEN MODBUS/TCP specification by Schneider Electric.           MODBUS_TCPIP_Slave         MODBUS TCP         For data exchange between the Asix system and other computers/devices with use of the MODBUS protocol realized via an Ethernet network with the TCP/IP protocol.           MODBUS_SLAVE         MODBUS protocol realized via an Ethernet network with the TCP/IP protocol.           MPI         MPI (converter)         Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.           MPS         Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologic Elektrycznej in Zielona Góra.           Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.           MSP1X         MSP1X         Serial bus protocol for MSP-1x PLC's by ELMONTEX.           Mt723         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia.           Muel         Protocol to exchange data between Asix Evo and a MUEL system maintenance computer.           MultiMuz         Modbus         RS232/485 serial link protocol for microprocessor devices of MultiMulZ type (manufactured by JM-Tronik)           MultiMuz_TCPIP         Modbus	MicroSmart	MicroSmart	
MODBUS_TCPIP_Slave	MODBUS	MODBUS RTU	registration of electrical values in 1-, 2- and 3-phase nets of low and high voltage -
MODBUSSLV MODBUS ICPIC_Slave of the MODBUS protocol realized via an Ethemet network with the TCP/IP protocol. MODBUSSLV MODBUS protocol, Asix.Evo in SLAVE mode.  MPI MPI (converter) Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.  MPS MPS Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologii Elektrycznej in Zielona Góra.  Mqtt MQTT Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.  MSP1X MSP1X Serial bus protocol for MSP-1x PLC's by ELMONTEX.  Mt723 MQTT Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethemet using the MtLib5 library developed by Inventia.  Muel MUEL Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.  MultiMuz Modbus RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)  MultiMuz_TCPIP MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)  MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor security devices MultiMUZ type, (manufactured by JM-Tronik)  MultiMuz3 tcpip Protocol for data exchange with microprocessor devices of MultiMUZ type, (manufactured by JM-Tronik).  MUHIMUZ3 tcpip Protocol for data exchange with microprocessor devices of MultiMUZ3 type, produced by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethemet and 10502 port.  MUPASZ Modbus Protocol for data exchange with microprocessor devices of MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu_TCPIP Modbus Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunica	MODBUS_TCP/IP	MODBUS TCP	specification by Schneider Electric.
MPI (converter) Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.  MPS MPS Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologii Elektrycznej in Zielona Góra.  Mqtt MQTT Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.  MSP1X MSP1X Serial bus protocol for MSP-1x PLC's by ELMONTEX.  Mt723 MQTT Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia.  Muel MUEL Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.  MultiMuz Modbus RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik) Protocol for data exchange with microprocessor devices of MultiMUZ type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.  MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor devices MultiMUZ3 type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.  MultiMuz3 tcpip MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.  MUPASZ Modbus Protocol for data exchange with microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication a		MODBUS TCP	
MPS         Serial bus protocol for MPS power network parameter meters MPS by OBR Metrologii Elektrycznej in Zielona Góra.           Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.           MSP1X         MSP1X         Serial bus protocol for MSP-1x PLC's by ELMONTEX.           Mt723         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia.           Muel         MUEL         Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.           MultiMuz         Modbus         RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)           MultiMuz3         Modbus         RS232/485 serial link protocol of or microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik), over Ethernet by means of TCP or UDP.           MultiMuz3         Modbus         RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type, produced by JM-Tronik.           MultiMuz3_tcpip         MODBUS TCP         Protocol for data exchange with microprocessor devices of MultiMUZ3 type, (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.           MUPASZ         Modbus         Protocol for data exchange with microprocessor MUPASZ PLC for po	MODBUSSLV	MODBUS SLAVE	MODBUS protocol, Asix.Evo in SLAVE mode.
Mqtt         MQTT         Used to exchange data between the Asix system and the MQTT protocol brokers. Version 3.1.1 of the MQTT protocol is supported.           MSP1X         MSP1X         Serial bus protocol for MSP-1x PLC's by ELMONTEX.           Mt723         MQTT         Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia.           Muel         MUEL         Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.           MultiMuz         Modbus         RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)           MultiMuz3         Modbus         Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik).           MultiMuz3_tcpip         MODBUS TCP         Protocol for data exchange with microprocessor security devices MultiMUZ3 type (manufactured by JM-Tronik).           MUPASZ         Modbus         RS232/485 serial link protocol of microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik).           MUPASZ         Modbus         Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik).           MUPASZ         Modbus         Protocol for data exchange with microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.           Mupasz7tu_RS         Modbus         Protocol for da	MPI	MPI (converter)	Protocol of MPI network for SIMATIC S7 PLC's, based on PC/MPI converter.
MSP1X MsP1X Serial bus protocol for MSP-1x PLC's by ELMONTEX.  Wit723 MQTT Used to collect data sent to Asix from MT-723 recorders manufactured by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia.  Muel MuEL Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.  MultiMuz Modbus RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)  MultiMuz_TCPIP MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.  MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type, produced by JM-Tronik). Communication realized in MODBUS TCP (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.  MUPASZ Modbus Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu Modbus Protocol for data exchange between Asix.Evo and Mupasz2016, Mupasz07, Mupasz Compact Golf devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.  MupaszRtu_TCPIP Modbus Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.  Mupos2 Compact Golf devices, protocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using po	MPS	MPS	
MultiMuz	Mqtt	MQTT	
Mt723         MQTT         Inventia. Data exchange takes place via Ethernet using the MtLib5 library developed by Inventia.           Muel         MUEL         Protocol to exchange data between Asix.Evo and a MUEL system maintenance computer.           MultiMuz         Modbus         RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)           MultiMuz_TCPIP         MODBUS TCP         Protocol for data exchange with microprocessor devices of MultiMUZ type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.           MultiMuz3         Modbus         RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type (manufactured by JM-Tronik). Ornmunication realized in MODBUS TYP (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.           MUPASZ         Modbus         Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.           Mupasz710_RS         Modbus         Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.           MupaszRtu         Modbus         Protocol for data exchange between Asix Evo and Mupasz20016, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.           MupaszRtu_TCPIP         Modbus         Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, ma	MSP1X	MSP1X	Serial bus protocol for MSP-1x PLC's by ELMONTEX.
MultiMuz Modbus RS232/485 serial link protocol for microprocessor devices of MultiMUZ type (manufactured by JM-Tronik)  MultiMuz_TCPIP MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.  MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type, produced by JM-Tronik.  MultiMuz3_tcpip MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ3 type, made by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.  MUPASZ Modbus Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu Modbus Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	Mt723	MQTT	Inventia. Data exchange takes place via Ethernet using the MtLib5 library
MultiMuz_TCPIP MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMuZ type (manufactured by JM-Tronik) over Ethernet by means of TCP or UDP.  MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type, produced by JM-Tronik.  MultiMuz3_tcpip MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.  Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu Modbus Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.  Mus04 Mus04 Mus Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	Muel	MUEL	
MultiMuz3 Modbus RS232/485 serial link protocol of microprocessor security devices MultiMUZ3 type, produced by JM-Tronik.  MultiMuz3_tcpip MODBUS TCP Protocol for data exchange with microprocessor devices of MultiMUZ3 type (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.  MUPASZ Modbus Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.  Mupasz710_RS Modbus Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu Modbus Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.  MupaszRtu_TCPIP Modbus Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.  Mus04 Mus04 Mus04 Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	MultiMuz	Modbus	
MultiMuz3_tcpip  MODBUS TCP  MODBUS TCP  MODBUS TCP  Modbus  M	MultiMuz_TCPIP	MODBUS TCP	
MultiMuz3_tcpip       MODBUS TCP       (manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.         MUPASZ       Modbus       Serial bus protocol for universal microprocessor MUPASZ PLC for power industry protection devices - Institute of Telecommunication and Radio Engineering in Warsaw.         Mupasz710_RS       Modbus       Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.         MupaszRtu       Modbus       Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.         MupaszRtu_TCPIP       Modbus TCP       Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.         Mus04       Mus       Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	MultiMuz3	Modbus	
MUPASZ  Modbus  Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  MupaszRtu  Modbus  Protocol for data exchange with microprocessor devices of MUPASZ 710 type made by Institute of Telecommunication and Radio Engineering in Warsaw.  Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.  Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.  Mus04  Mus04  Mus04  Modbus  Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	MultiMuz3_tcpip	MODBUS TCP	(manufactured by JM-Tronik). Communication realized in MODBUS RTU mode on TCPIP with the use of Ethernet and 10502 port.
MupaszRtu         Modbus         made by Institute of Telecommunication and Radio Engineering in Warsaw.           MupaszRtu         Protocol for data exchange between Asix.Evo and Mupasz2001G, Mupasz07, Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.           MupaszRtu_TCPIP         Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.           Mus04         Mus         Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	MUPASZ	Modbus	protection devices - Institute of Telecommunication and Radio Engineering in
MupaszRtu         Modbus         Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is performed via serial links in RS485 standard.           MupaszRtu_TCPIP         Protocol for data exchange with microprocessor protecting devices of MUPASZ 710 type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.           Mus04         Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	Mupasz710_RS	Modbus	
MupaszRtu_TCPIP       Modbus TCP       type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.         Mus04       Mus       Protocol to exchange data with microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn.	MupaszRtu	Modbus	Mupasz Compact G01 devices, produced by ITR Warszawa. Communication is
manufactured by ELEKTROMETAL S.A. from Cieszyn.	MupaszRtu_TCPIP	MODBUS TCP	type, made by Institute of Telecommunication and Radio Engineering in Warsaw. The communication is performed in MODBUS RTU mode via Ethernet link, using port no. 502.
MUZ Protocol of MUZ microprocessor PLC for power industry protection devices.	Mus04	MUS	
	MUZ	MUZ	Protocol of MUZ microprocessor PLC for power industry protection devices.



NCP	MN_Invensys	Protocol to exchange data with MN-series controllers from Invensys (former Satchwell).
NetLink	PROFIBUS / MPI	S7 protocol of PROFIBUS network using NetLink Lite module of SYSTEME HELMHOLZ.
NetLinkPro	PROFIBUS / MPI	Protocol for exchanging data with S7 PLCs with use of NETLink PRO (gateway Ethernet <-> MPI/Profibus) manufactured by SYSTEME HELMHOLZ.
None	-	The None protocol doesn't realize a physical connection with the controller. It may be used for:  • application testing in simulation mode,  • data exchange between Asix.Evo applications by means of process variables.
NordicRF	NordicID protocol	Protocol to exchange data with Nordic ID RF 601 bar code reader of NordicID.
OMRON	HOSTLINK	Serial bus protocol for SYSMAC series PLCs.
OmronTcpip	FINS	Protocol for data exchange with Omron controllers supporting the FINS/UDP and FINS/TCP protocols.
OPC	OPC KLIENT	OPC (OLE for Process Control) protocol, communication with any PLC using its OPC server, according to OPC 2.04 specification.
OPCUA	OPC UA CLIENT	OPC UA protocol, communication with any PLC according to OPC UA specification.
OpcLogger		Used to register measurement series read from current data OPC servers.
Pa5	Pa5	Communication protocol for data exchange between Asix.Evo and PA-5 converters of POWOGAZ S.A. Poznan.
PD21	LUMBUS	Protocol for data exchange with PD21 concentrator made by LUMEL S.A.
Pmc4000	PMC-4000	Communication protocol for data exchange between Asix.Evo and POLON 4800 fire alarm control panel; data are transferred via serial interface RS-232.
PPI	PPI	Protocol of PPI interface for SIMATIC S7 series 200 PLC's, based on PC/PPI converter.
Protherm300	PROTHERM	Protocol of Protherm 300 DIFF PLC of Process-Electronic GmbH (RS-422 serial link).
PROTRONICPS	PROTRONICPS	Communication protocol for PROTRONIC PS regulators by Hartmann & Braun.
REST	HTTP/HTTPS	Used to exchange data between the Asix system application and the REST server.
S700	AK	Protocol for gas analyzers by MAIHAK.
S7Opt		Used to exchange data with the SIMATIC S7-1500 and S7-1200 series controllers (from version 4.0), constituting a completely new generation of Siemens controllers.
S7_TCPIP	S7_Ethernet	Used for data exchange with SIMATIC S7 PLC's through Ethernet connection with use of standard computer network card; the product does not require the installation of SIEMENS SIMATIC NET software on Asix.Evo system PC as well as the adaptation of PLC software for data exchange purposes.
SAPIS7	MPI (CP5611/SOFTNET)	Protocol of MPI network for SIMATIC S7 PLC's , based on CP5611/SOFTNET.
SAPIS7	PROFIBUS	S7 protocol of PROFIBUS network based on CP5412 (A2) or CP5613.
S-BUS	S-Bus	Protocol of programmer unit interface and S-Bus network for SAIA Burgess Electronics PLCs.
SbusTcpip	Ethernet S-Bus	Protocol used for data exchange between Asix.Evo system and PLCs of PCD SAIA-Burgess family by means of TCP/IP.
Simulator		Used to generate test trends. The trends generated can be based on previously created csv files, or calculated by the driver as a random trends and a sinusoidal trend.
SINECH1	SINEC H1	Protocol of Ethernet industry network for SIMATIC S5 PLC's, SEND/RECEIVE interface, based on CP1413.
SINECL2	SINEC L2	Protocol of PROFIBUS network with SEND/RECEIVE (FDL) interface for SIMATIC S5.
Si400	SINTONY SI	Communication protocol for alarm exchanges with Sintony SI 400 of SIEMENS.
SNG	SNG-Synergia/IP	Protocol for data exchange between Asix.Evo and SNG systems provided by the Warsaw based Synergia Tech company, via an Ethernet link.

ONIMB	ONIND 4 : ONIND 0	SNMPv1 and SNMPv2c protocols – management of various elements of telecommunication networks, such as routers, switches, computers, or telephone
SNMP	SNMPv1 i SNMPv2c	switchboards. The driver performs its functions by using the SNMP Management API.
SNPX	SNPX	Protocol for communication with GE_FANUC 90-30 PLCs as well as GE_FANUC 90 CMM and PCM modules.
Sp100H	Manufacturer's protocol	Protocol for exchanging data between Asix.Evo and SP-100H controller of storm water center Aqua Center Industrial 100 H 14-60, produced by MARLEY Polska Sp. z o.o. The transmission is performed via serial links using RS-232 std serial port.
SPA	SPA	SPA bus protocol for protection of switching stations manufactured by ABB.
Srio	ANSI X3.28	Protocol for data exchange with SRIO 500M ABB hub; communication via RS-232 interface; the transport layer based on ANSI X3.28 protocol in full-duplex mode with BCC checksum.
SRTP	SRTP	SRTP protocol allowing communication over TCP/IP with VersaMax Nano/Micro PLC's (based on IC200SET001 converter) and VersaMax or Series 90 PLC's over TCP/IP (based on IC 693 CMM321).
TALAS	TALAS	Serial bus protocol for TALAS pollution emission analyzers according to the TALAS 2.3 (007)22 specification.
TwinCAT	(with use of Beckhoff libraries)	Data exchange between Asix.Evo and PLCs of Beckhoff Industrie Elektronik: CX1000, TwinCAT PLC ( PC based control system), BC9000, BX9000. Communication is based on Ethernet.
TwinCATTcpip	ADS/AMS over TCPIP (without use of Beckhoff libraries)	Data exchange between Asix.Evo and PLCs of Beckhoff Industrie Elektronik: CX1000, TwinCAT PLC ( PC based control system), BC9000, BX9000. Communication is based on Ethernet with the use of ADS interface.
Vantage	Manufacturer's protocol	Readout of current data from weather stations of Vantage Pro family developed by Davis Instruments Corp., USA.
Wago	Wago	Protocol for data exchange with Wago PLCs. Communication realized with the use of Ethernet in UDP mode based on network variable list ("Network Variables").
WagoUps	Wago	Used to communicate the Asix system with WAGO 787-87x power supplies using the RS-232 or Ethernet serial link.
ZdarzenieZmienna	-	The driver is used to generate process variables of WORD types (16-bit word) on the basis of current values of alarm events in the Asix.Evo system.
ZxD400	IEC 61107	ZxD400 driver is used for data exchange between Asix.Evo and electric energy counters of ZxD400 type, manufactured by Landys & Gyr, via RS-485 interface.



# OTHER PRODUCTS

# Preferential purchase of Microsoft SQL Server License and Windows Remote Desktop Services access Licenses

As part of the Microsoft ISV Royalty Licensing, ASKOM offers a purchase of Microsoft software at a very attractive prices (see price list). There are available Licenses of database Microsoft SQL Server and Client Access Licences (CAL) for Windows Remote Desktop Services. Embedded Runtime Licenses are on sale. These products do not have any functional limitations, but are subject to the following licensing restrictions:

- Purchase of a Microsoft License is only possible in conjunction with the simultaneous acquisition of Asix.Evo License. Both Licenses are inseparable.
- The end user may use the licensed Microsoft only in conjunction with the Asix. Evo application as one integrated solution.
- The end user may not use a licensed Microsoft to run other applications or create new applications, or in any other context that is not associated with the solution based on the Asix.Evo application.

Microsoft SQL Server can be licensed on either server-client or per-processor basis. The server-client mode requires the purchase of a License for the server and the appropriate number of CAL access Licenses for all potential clients. In the per-processor mode the purchase of a CAL License is not required.

As an additional option one can buy Embedded Maintenance protection that provides updates of the licensed Microsoft the new versions. The right to receive updates only applies to the product versions issued during the validity of the Embedded Maintenance protection (normally one year). Embedded Maintenance protection can be purchased only at the time of License purchase. Protection can be renewed annually during the contract period.

ISVR Microsoft SQL Server licenses	
Package name	Туре
Microsoft® SQL Server Standard Edition RUNTIME 2012 All Lng Embedded Microsoft Volume License 1 Client	E65-00244
Microsoft® SQL CAL RUNTIME 2012 All Lng Embedded Microsoft Volume License 1 License	C30-00376
Microsoft® SQL Server Standard Edition Runtime 2012 All Lng Embedded Maintenance Microsoft Volume License 1 License 1 Client	E65-00245
Microsoft® SQL CAL Runtime 2012 All Lng Embedded Maintenance Microsoft Volume License 1 License	C30-00377
Microsoft® SQL Svr Standard RUNTIME Core 2012 All Lng Embedded Microsoft Volume License 2 Licenses Core License	7RQ-00003
Microsoft® SQL Svr Standard Runtime Core 2012 All Lng Embedded Maintenance Microsoft Volume License 2 Licenses Core License	7RQ-00004
Microsoft® SQL Server Standard Edition RUNTIME 2014 AllLng Embedded MVL 1License 1Client	E65-00255
Microsoft® SQL CAL Runtime 2014 All Lng Embedded MVL 1License	C30-00387
Microsoft® SQL Server Standard Edition RUNTIME 2014 All Lng Embedded Maintenance MVL 1License 1Client	E65-00256
Microsoft® SQL CAL Runtime 2014 All Lng Embedded Maintenance MVL 1License	C30-00388
Microsoft®SQLSvrStandardCore 2014 AllLng Embedded MVL 2Licenses CoreLic	7NQ-00592
Microsoft®SQLSvrStandardCore 2014 AllLng EmbeddedMaintenance MVL 2Licenses CoreLic	7NQ-00593
Microsoft®SQLServerStandardEditionRUNTIME 2016 AllLng Embedded MVL 1License 1Client	E65-00261
Microsoft®SQLCALRuntime 2016 AllLng Embedded MVL 1License	C30-00393
Microsoft®SQLServerStandardEditionRUNTIME 2016 AllLng EmbeddedMaintenance MVL 1License 1Client	E65-00262

C30-00394
7NQ-00853
7NQ-00854
6VC-02098
6VC-02099
6VC-02100
6VC-02101
6VC-03185
6VC-03186
6VC-03187
6VC-03188

# Asix4WAGO for BMS systems based on WAGO controllers (in Polish version)

The Asix4WAGO package has been developed by working closely with WAGO ELWAG — the market leader in building automation. The key idea behind Asix4WAGO is to link the WAGO controller software with the Asix.Evo visualization system into a coherent system providing comprehensive control and visualization in intelligent buildings.

On the one hand Asix4WAGO includes a ready-to-use library of program modules dedicated to the WAGO controllers which are used to control devices and instrumentation commonly used in building automation, while on the other hand, it also comprises SCADA BMS Application Wizard.

WAGO library contains software modules to such device groups as:

- HVAC air handling units component templates,
- Climate air-conditioning controller templates,
- Lighting lighting monitoring and control templates,
- Blinds blinds component control templates,
- Scheduler scheduling software modules,

that include but are not limited to heat exchangers, heaters, coolers, fans, dampers, pumps, filters, lights and measurements. Thanks to the built-in mechanisms of CODESYS software used for WAGO controller programming, it is possible to export application controller data to Asix.Evo. Based on this, BMS Application Wizard included in Asix4WAGO will automatically generate the SCADA application variables database and create the application framework including the alarm system. Asix4WAGO provides ready-to-use BMS visualization object templates associated with WAGO controller software modules (the controller software module collects data and implements the control algorithms while the associated Asix.Evo system graphic object clearly presents all the information to the operator and allows master control). Parameterization of Asix.Evo objects required of the designer could not be easier and all it takes to parameterize an object is to select an object and identify whole variables set with one click from the drop down tree. Communication with controllers is performed via WAGO driver, based on Network Variables.

Asix4WAGO is a unique package that facilitates and reduces to a minimum the amount of work associated with the preparation of BMS applications. By automating most of the activities the time needed to design and run BMS applications and the likelihood of errors are greatly reduced.

Asix4WAGO License is the only one that allows you to run an application that contains variables definition database generated from CODESYS files. Asix4WAGO licenses are sold by WAGO controller distributor

WAGO ELWAG Sp. z o.o., ul. Piękna 58A, 50-506 WROCŁAW, Poland tel. 71 360 29 70, fax 71 360 29 99, e-mail: wago.elwag@wago.com



# LICENSES LIST

Asix4WAGO ( in Polish version ) Distribution: WAGO ELWAG, 50-506 Wrocław , ul. Piękna 58a, Poland, e-mail: wago.elwag@wago.com			
Package name	Туре		
A4W-WACP, Operator panel, 512 variables limit	A4W-WACP		
A4W-WAAP, Operator panel, 1024 variables limit	A4W-WAAP		
A4W-WAFP, Operator panel, 4096 variables limit	A4W-WAFP		
A4W-WAUP, Operator panel "unlimited" (232 variables)	A4W-WAUP		
A4W-WACW, Operator station, 512 variables limit	A4W-WACW		
A4W-WAAW, Operator station, 1024 variables limit	A4W-WAAW		
A4W-WAFW, Operator station, 4096 variables limit	A4W-WAFW		
A4W-WAUW, Operator station "unlimited" (232 variables)	A4W-WAUW		
A4W-WACS, Operator server, 512 variables limit	A4W-WACS		
A4W-WAAS, Operator server, 1024 variables limit	A4W-WAAS		
A4W-WAFS, Operator server, 4096 variables limit	A4W-WAFS		
A4W-WAUS, Operator server "unlimited" (2 <sup>32</sup> variables)	A4W-WAUS		
A4W- WAUO, Operator terminal	A4W-WAUO		
A4W- @Asix4Internet, Server WWW/1 client	A4W-@Asix4Internet		
A4W- @Asix4Internet+1 CAL, WWW server extension of 1 additional client	A4W-@Asix4Internet1Cal		
A4W- @Asix4Internet+5 CAL, WWW server extension of 5 additional clients	A4W-@Asix4Internet5CAL		
A4W- AsAlert, Alarm notification system	A4W-AsAlert		
A4W- AsAudit, Audit system	A4W-AsAudit		
A4W-AsAudit-Lite – addition for Operator terminal license	A4W-AsAudit-Lite		
A4W-AsAudit-www – addition for @Asix4Internet license	A4W-AsAudit-WWW		
A4W-WDUW – local engineering station	A4W-WDUW		
A4W-Asix Mobile LICENSE EXTENSION by 1 Client	A4W-@AsixMobile1CAL		
A4W-Asix Mobile LICENSE EXTENSION by 5 Clients	A4W-@AsixMobile5CAL		
A4W-Asix Mobile LICENSE EXTENSION by 10 Clients	A4W-@AsixMobile10CAL		
A4W-Asix Mobile LICENSE EXTENSION by 20 Clients	A4W-@AsixMobile20CAL		
A4W-Asix Mobile LICENSE EXTENSION by 50 Clients	A4W-@AsixMobile50CAL		
A4W-AsAlertCAL, access remote license of client to AsAlert server	A4W-AsAlertCAL		

# **Training**

Fast mastering of basic skills required to develop and run an application is possible by 4-day training at ASKOM company site. Every Participant has his personal computer for training purposes, with latest versions of Asix.Evo installed, and is learned how to develop the application from the very beginning. We make also our knowledge available about various non-typical solutions which make development works faster and easier, we share our knowledge of so-called "tricks" improving maintenance of the software and development of the applications. Part of information presented during the training is not included in any manual. Achieved knowledge and skills are tested by the users in their own original applications developed at training course.

Training	
4 days training *In the case of registration of 2 people - 5% discount; more than 2 people - 10% discount	



# **Additional information**

ADDITIONAL INFORMATION	
Trial pack (90-day License) including full electronic documentation (DVD)	free of charge
When you buy Asix.Evo package, the transport costs are covered by ASKOM. The exception is the purchase of the License WDUW and dongle change - the transport costs are paid by the customer.	

#### **Discount rules**

Companies that buy Asix. Evo package for re-sale get 5% discount of the List Price with each purchase.

Discounts for companies being 'Integrator of Asix Package' are calculated on the basis of total net turnover during preceding 12 months.

Discounts do not apply to purchase of local engineering station license (ASIX-WDUW).

#### **ORDERS**

Order in writing shall include full company name, address and VAT identification number.

Payments shall be made in cash or by bank transfer to following account:

ASKOM sp. z o.o. Gliwice, POLAND

Józefa Sowińskiego 13

Bank PKO SA o/ Gliwice, SWIFT: PKOPPLPW, account number: PL83124013431978000023375365

Prices specified are net value and do not include VAT tax.

Ordering by e-mail: office@askom.pl

#### **CONTACTS**

Technical information, documentation and examples are available in INTERNET - www.asix.com.pl

#### Favorable discounts for authorized Asix. Evo System Integrators and OEM's

Commercial information:	Alicja Padak:	Alicja.Padak@askom.pl	Tel. +48 32 30 18 198
	Marek Kucera:	Marek.Kucera@askom.pl	Tel. +48 32 30 18 180
Technical information:	Wacław Bylina:	support@askom.pl	Tel. +48 32 30 18 141
	Marian Strzałkowski:	asix@askom.pl	Tel. +48 32 30 18 152



# RELIABLE SOLUTIONS OF AUTOMATION AND PRODUCTION MANAGEMENT SYSTEMS

44-100 Gliwice, POLAND ul. Józefa Sowińskiego 13, tel +48 32 3018100, fax +48 32 3018101, www.asix.com.pl, www.askom.pl

