

## X<sup>Axon</sup> Builder3

# Software for monitoring, control and data acquisition

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## AXON BUILDER 3 SCADA / IHM

Axon Builder is a specialized software for the supervision, control and data acquisition (SCADA / HMI) for the Electric power industry. Designed for fast and intuitive configuration that reduces execution times throughout the project lifecycle. It is based on a client-server architecture that supports deployment in environments ranging from a single station to multi-user distributed systems, which makes the solution flexible from small to large scale. It offers interoperability, reliability and secure access to the control and visualization functions of the critical information of your electrical system.

Axon Builder has different specialized modules for the visualization and management of information. It provides the ability to define custom data manipulation rules based on predefined or programmable logics which allow you to customize or adapt the solution to specific needs.

### **Features**

- Multiples clients of visualization and control
- Management of control zones for responsibility areas
- Update screens without supervisions and control process interruptions
- Gateway or concentrator of data for several protocols
- Hot-StandBy redundancy
- Logics for custom of graphics and data
- Historical and real time data (Alarms, events and trends).
- Reports and notifications programables
- Wizard to speed up rename of signals and create screens
- View and force of signals and commands

# **BENEFITS OF AXON BUILDER 3**







Customization: Open library for building of graphics elements



Facilities of configuration: Management of animations by expressions (language of micro languages)



Navegavility: Several types of filters od alarms and events



Automatic recollect and view of COMTRADE files (IEC 61850).



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## **CHARACTERISTICS**

#### **01.** Configuration

It allows to define general parameters of the project on the server and HMI level, for instance, management of communication ports and activate properties such as Local/Remote, Web Client or general animations, among others.



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E GIED_1	\$Started	
E Sec	\$FailCommunication	
🖯 🗊 Bahia 1	\$CommunicationStatus	
@Linea1	\$AdministrationStatus	
🖂 🛱 Linea2	\$OperationStatus	
Nodo1	\$LossCommunication	
a Bahia2	\$LossPackets	
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Nodes	\$PacketsTx	
# DEFAULT	\$PacketsRx	
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#### **02.** Topologies

Provides the option to create a hierarchical structure of the system that allows to have a better organization of project information. These structures enhance the use of functions such as the use of prefixes in scenarios with typical bays. Also facilitates the renaming of signal standards.

#### 03. Wizard

Allows the automatic creation of screens. It has a customizable and extensible gallery of templates for bays, measurements and interlocks. It offers the possibility of mapping signals manually or automatically and applicate its to the animations and actions defined in the template used.



Simulator Bay Project - Asion Builder 3.0											- 0 )
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#### **04.** Logics

Logics module facilitates the identification and creation of internal signals to know the status of the communication or generate animations in an HMI project. Also, it enables operations between signals from the implementation of the functions or scripts.

#### **05.** Deployment

The deployment module allows a remote update of the nodes, for which the configuration station can be on a different computer from the production ones. On the other hand, it allows you to create nodes, which represent the clients to whom the information will be sent, configuring the name, IP address, port and the services that will be remotely deployed to each of them.



Axon Builder Server Diag	gnostic						-	×
Send Command								
Name	Last Update	Identifier	Operation	Administration	Communication	LogLevel		
DEFAULT	2021/08/11 17:06:51	SCD-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	SCD_AE-0001	Enabled, Started			Warning		_
	2021/08/11 17:06:51	SCD_CFE-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	SCD_HIS-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	SCD_HMI-0001	Enabled, Started			Warning		_
	2021/08/11 17:06:51	SCD_PLC-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	SCD_DMZ-0001	Enabled, Started			Warning		
DEFAULT	2021/08/11 17:06:51	HIS-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	HIS_WRITER-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	HIS_READER-0001	Enabled, Started			Warning		
DEFAULT	2021/08/11 17:06:51	HMI-0001	Unknown			None		_
DEFAULT	2021/08/11 17:06:51	CFE-0001	Enabled, Started			Warning		
	2021/08/11 17:06:51	DR/VER-0010	Unknown	Disabled	Unknown	None		_
	2021/08/11 17:06:51	DRIVER-0011	Unknown	NotExecutable	Unknown	None		
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	2021/08/11 17:06:51	DRIVER-0013	Unknown	NotExecutable	Unknown	None		
	2021/08/11 17:06:51	DR/VER-0014	Unknown	NotExecutable	Unknown	None		
	2021/08/11 17:06:51	DRIVER-0015	Unknown	NotExecutable	Unknown	None		_

#### **06.** Diagnostic

The diagnostic module displays an interface to view the communication status of each device created in the project. In addition, it allows to identify the latest update, the driver it used to run it and the license of protocol communication.



#### **07.** Redundancy

It is about a Hot-StandBy data redundancy, where there is an active instance and another backup instance. The active instance will be establish the communication with the IEDs, while the backup instance will establish communication with the IEDs and will take control in case the active instance presents a fault. It must take account that in this redundancy model the databases are independent, that is how they must be permanently synchronized with each other.

#### **08.** Reports

The reports module is for important signals in the project, whose behavior must be recorded in a document in order to be viewed and analyzed later. In the same way, the signals assigned in this module have to come from any input devices that have been created and their operation depends on the configurations made on each of them.

Simulator Bay Project - Axon Builder 3.0	
Archivo Componentes Herramientas Ayuda	
	General
General Redundancia simple	General Puerto 3506 Tipo Single •







Alarm and Event > Alarms > Digital

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NN/NR	тт	T T	TT	τT	NN/NR	тт	TT	тт	TT	NN/NR	тт	тт	Ē
Prioridad	0	0	0	1	Prioridad	0	0	1	0	Prioridad	0	0	
Etiqueta	DEFAULT	DEFAULT	DEFAULT	DEFAULT	Etiqueta	DEFAULT	DEFAULT	ALARM	DEFAULT	Etiqueta	DEFAULT	DEFAULT	D
Etiqueta		DEFAULT	DEFAULT	_	-			ALARM				00000	0
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Etiqueta Indi Estado	cador	DEFAULT _ZZ3 o1 T T T T		Ø	Swit	tch_Pl	R5		0	Swit	tch_LF	2	
Etiqueta Indi Estado AN/AR	cador	CEFAULT ZZZ 01 T T T T 0		Ø	Swit Estado AN/AR	tch_Pl	R5		0	Swit Estado AN/AR	tch_LF	2	

## Access and security

It allows to control the access and has levels of security for the users of the system. It eases the definition of privileges in the operation and administration roles. In addition, it supports the management by areas or zones of responsibility for the operation.

### **Alarms and events**

It defines the properties of alarms or events. It creates and linkes formats and other management parameters. In addition, it is possible to create different types of events or alarms both for the states of digital sources and based on thresholds of power supplies.



## Communications

It supports a wide range of communication protocols to link devices, both at the level of Masters and Servers. Also, It is possible to adjust rulers of normalization and historical persistence to the analog signals.



## **Data Sheet**

## **Minimum technical specifications**

Operating system	Windows 10 and Windows Server 2016 onwards
Framework .NET	4.8
Visual C	VC 2013 y 2019
Recommended processor	Intel - AMD
RAM	Minimum 1 GB free. Recommended 3 GB free or higher
HDD	30 GB

## Discharge

Axon Builder 3.0 license allows full access for all the features of the Axon Builder 3.0 design.

Its licensing process can be through hardware or software and depends on:

#### 1. Tags number

- 500 8000
- 1.000 10.000
- 1.500 15.000
- 2.000 18.000
- 3.000 20.000
- 4.000 30.000
- 5.000 50.000
- 6.000 100.000



#### 3. Number of remotes clients

4. Number of web clients

## **BENEFITS** Axon Group





#### **Contact us**

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