ibaPDA-PLC-Xplorer

ABB
AC 800M, AC 800PEC

Ethernet

Bachmann
M1-System

Ethernet

Beckhoff
TwinCAT 2, TwinCAT 3

Ethernet

B&R
X20-System, ...

Ethernet

CODESYS
ABB, ELAU, Schneider Electric, ...

Ethernet

SIEMENS
SIMATIC S7-200, S7-300, S7-400,
S7-400H, S7-1200,
S7-1500, LOGO! ...

MPI

Profibus

Ethernet

Rockwell Automation
Allen-Bradley PLC-5,
SLC 5/05, ControlLogix, ...

Ethernet

MITSUBISHI
MELSEC

Ethernet

OMRON
NX-System, CV-System ...

Ethernet

SIGMATEK
C-IPC

Ethernet

Interfaces to various PLC systems
Ideally suited for system
suppliers, service technicians
and control programmers

Fields of application
› Troubleshooting
› Locating sporadic errors
› Commissioning support
› Mobile use

Measurement Systems for Industry and Energy
www.iba-ag.com

Measuring from the beginning

ibaPDA-PLC-Xplorer offers the full ibaPDA functionality with access to different PLCs. Without additional hardware, this is an inexpensive way of measuring, displaying and recording signals.

ibaPDA-PLC-Xplorer is the ideal entry-level solution as PC-based acquisition and recording system for various measuring data in automated processes.

ibaPDA-PLC-Xplorer enables the acquisition and recording of up to 64 signals and offers data interfaces to SIMATIC S7 systems as well as CODESYS-based systems, Allen-Bradley, ABB, B&R, Bachmann, Beckhoff, Mitsubishi, OMRON and SIGMATEK systems. Hence, it is possible to read internal data from the most common PLCs without modifying the PLC itself.

ibaPDA-PLC-Xplorer offers an economical solution for troubleshooting and commissioning and is suitable for long-term analysis and process optimization as well.

Access without additional hardware or programming

The inexpensive software solution ibaPDA-PLC-Xplorer provides the complete functionality of ibaPDA and is able to record 64 signals from up to 16 independent PLCs per PLC-Xplorer interface. The PLC system can be accessed via standard interfaces – usually via Ethernet – without additional hardware. It is not necessary to modify the PLC configuration nor to program the PLC.

Free operand/symbol selection

The variable list of the PLC can easily be imported in ibaPDA-PLC-Xplorer. All I/O signals and other operands from the PLC programs can be measured.

Most of the ibaPDA-PLC-Xplorer interfaces support a convenient selection of signals based on their symbolic names via address book. Address books are generated in ibaPDA-PLC-Xplorer and contain the available symbols. Depending on the system the address book is generated from the configuration data or loaded directly from the PLC. The signals can easily be selected by mouse click in the integrated symbol browser.

If necessary, the selected signals may flexibly be changed without modifying the PLC program. This flexibility offers many advantages especially for mobile service support.

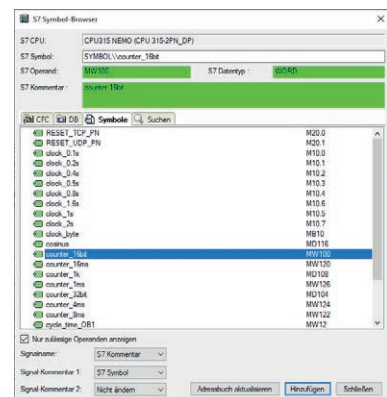## Writing data to the controller

S7- and TwinCAT-Xplorer also offer output modules. So it is possible to write data from ibaPDA to the respective controllers.

Variable recordings

As known in ibaPDA, various recording profiles can be defined for different applications. Continuous data recording of measurement files in iba format

At a glance

› Measuring signals directly from a PLC
› Including interfaces for various PLCs
› Can be used without additional hardware and without intervention in the PLC
› Comfortable selection of operands with a symbol browser
› Up to 64 signals, including full ibaPDA functionality
› Signals to be measured may be modified or enhanced without programming or restarting the PLC system
› Including analysis with ibaAnalyzer
› Data acquisition and analysis simultaneously or independent

Convenient operand selection using a symbol browser

ibaPDA-PLC-Xplorer interfaces

S7-Xplorer
SIMATIC S7 systems (LOGO!®, S7-200®, S7-300®, S7-400®, S7-400H®, S7-1200®, S7-1500®), WinAC (WinLC RTX), PLCSIM

AB-Xplorer
Allen Bradley controllers PLC-5 and SLC500, MicroLogix

ABB-Xplorer
AC 800M, AC 800PEC controllers

B&R-Xplorer
B&R controllers[1]

Bachmann-Xplorer
Bachmann M1 controllers

CODESYS-Xplorer
CODESYS-V2- and CODESYS-V3-based PLC systems

Logix-Xplorer
Allen-Bradley controllers Control-Logix, GuardLogix, CompactLogix, SoftLogix or FlexLogix

MELSEC-Xplorer
Mitsubishi MELSEC controllers

OMRON-Xplorer
NX, CV and other PLC systems supporting the FINS protocol

SIGMATEK-Xplorer
SIGMATEK controllers

TwinCAT-Xplorer
Beckhoff-TwinCAT V2- and V3-controllers

Possible extensions (subject to a fee)

Connection of drives and CNC controllers
› SINAMICS-Xplorer
› SIMOTION-Xplorer
› GH180-Xplorer
› SINUMERIK-Xplorer

also available as bundle Drive-Xplorer

Connection of cameras
› ibaCapture
› Camera licenses on demand

(*.dat) is necessary for long-term analyses or process optimizations, and triggered recordings are useful when errors have to be located. Trigger conditions can be defined time or event related. With ibaHD-Server, data can be recorded without file boundaries over very long periods of time.

Online display
Due to the client server architecture it is possible to display the time curve of all signals live on one client. For example PLC programmer or service technicians can have their own view on regions of their specific interest - and of course as mobile user with a laptop. Besides the realtime trend graph, ibaPDA-PLC-Xplorer offers all views known from ibaPDA like oscilloscope, FFT, or digital meter.

Free analysis included
Measurement files generated by ibaPDA-PLC-Xplorer can be analyzed using ibaAnalyzer[2] which is available free of charge. Since data acquisition and analysis are done separately, the files can

be analyzed during recording or at a later point in time, e. g. by experts outside the plant. Since ibaAnalyzer can be used on several computers, several users may individually analyze the data according to their needs. Data can centrally be stored on a server or sent by email.

Automated analysis saves time
Once the evaluation criteria have been defined, analyzing

can automatically be done in order to save valuable time. With the help of ibaDatCoordinator, an analysis of the last file can be started automatically, or a report can be generated.

Measurement files can also be processed automatically so that, for example, the measurement data is collected from the acquisition systems and made available to all authorized users at a central location.

ibaAnalyzer provides detailed display functions and broad options for analyzing and evaluating.

Reports at the push of a button

Using ibaAnalyzer-Reportgenerator, reports can automatically be generated in various formats and individual layouts. Individual job reports, shift reports or product reports for production, quality management or controlling can be created in different formats virtually at the push of a button.

Connecting data bases

When the data shall be processed in a database, measuring data can be loaded into a database with ibaAnalyzer. It is also possible to analyze data from a database with this application. The main database formats are supported, like Microsoft SQL-Server, Oracle, IBM DB2-UDB, MySQL, PostgreSQL, Microsoft Access.

Video surveillance with ibaCapture

When launching the latest version of ibaCapture, it is possible to connect ibaPDA-PLC-Xplorer with an ibaCapture Server. Thus, measuring data and video data can be recorded synchronously. An ibaCapture Server license, available in graduaded steps depending on the frame rate, and separate camera licenses are needed for video recording. Connecting one camera is an inexpensive entry-level solution to record videos along with measuring data.

Licenses and extensions

The software ibaPDA-PLC-Xplorer includes the interfaces S7-Xplorer, AB-Xplorer, ABB-Xplorer, B&R-Xplorer, Bachmann-Xplorer, Codesys-Xplorer, Logix-Xplorer, MELSEC-Xplorer, OMRON-Xplorer, Sigmatek-Xplorer and TwinCAT-Xplorer, and is designed to record 64 analog or digital signals in total.

If 64 signals are not sufficient or other extensions are required in ibaPDA, the system can be upgraded to a complete ibaPDA system. All Xplorer interfaces are also available separately for an existing ibaPDA system.

It is possible to use ibaCapture, ibaHD-Server or ibaDaVIS together with ibaPDA-PLC-Xplorer without upgrading to the full ibaPDA version.

However, the connection of iba devices is not possible with ibaPDA-PLC-Xplorer.

Training program

The iba training program offers a course „Measurement and data evaluation with the iba system". During this 2-day training you learn the two-step method for signal configuration, triggering and recording with ibaPDA as well as offline analysis with ibaAnalyzer. In addition the training gives an overview of the automatic report generation using ibaDatCoordinator and ibaAnalyzer-Reportgenerator.

You find more information regarding the iba training under www.iba-ag.com/training.

System requirements

› Windows 10 (x86/x64), 11 (x64), Windows Server 2016 (x64), 2019 (x64), 2022 (x64)
› min. .NET 4.8
› PC, Multicore CPU 2 GHz, 4 GB RAM, 100 GB HDD

Order no.	Name	Description
30.681502	ibaPDA-PLC-Xplorer	ibaPDA system for 64 signals, 2 clients, 2 data recordings, standard interfaces incl. the latest Xplorer interfaces
30.681505	ibaPDA-PLC-Xplorer-EUP	Extended Update Period - maintenance fee
30.770009	Upgrade-PLC-Xplorer to PDA-64	Upgrade to ibaPDA with 64 signals and PLC-Xplorer interface
31.001042	ibaPDA-Interface-PLC-Xplorer	Extension license for an ibaPDA system with PLC-Xplorer interfaces
31.000030	ibaPDA-Interface-SINAMICS-Xplorer [1]	Xplorer interface for SINAMICS drives
31.000031	ibaPDA-Interface-SIMOTION-Xplorer [1]	Xplorer interface for SIMOTION systems
31.000033	ibaPDA-Interface-SINUMERIK-Xplorer [1]	Xplorer interface for SINUMERIK CNC controls
31.001051	ibaPDA-Interface-GH180-Xplorer [1]	Xplorer interface for SINAMICS Perfect Harmony GH180 drives
31.001044	ibaPDA-Interface-Drive-Xplorer [1]	Bundle of SINAMICS, SIMOTION and GH180-Xplorer interfaces
61.000200	Measurement and data evaluation with the iba system	2-day training

[1] The interfaces are not included in the ibaPDA-PLC-Xplorer license, but can be licensed additionally.