

XAIBUS Driver Manual

Yudian AI-BUS Protocol Driver



CPKSoft Engineering Process Monitoring and Industrial Automation Software

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1. Introduction

CPKSoft Engineering assumes no responsibility for any errors that may appear in this document. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

This driver is included with all unlimited licenses of TAS-HMITalk. It is not sold separately. It requires the TAS-HMITalk ActiveX to work, therefore it cannot be used as a stand-alone driver.

If you use this driver in your applications, you need to include the xaibus.tlk in the set of files that you distribute. This file must be located in the same folder where the hmitalk.ocx file is registered in order to be found by the activex when the applications are executed.

The source-code for the xaibus.tlk driver is available in plain-C language for additional USD 199 if you own a license of TAS-HMITalk 8.04 or higher (this price is subject to change).

Refer to the following link to visit the xaibus driver page at CPKSoft Engineering website: <http://www.cpksoft.com/tabid/55/ProductID/122/PageIndex/1/Default.aspx>.

Visit this link if you want to see a complete list of drivers that are currently available for TAS-HMITak: <http://www.cpksoft.com/Drivers/tabid/55/Default.aspx>.

Also, refer to this link if you are interested in purchasing a license of the most recent version of TAS-HMITalk: <http://www.cpksoft.com/Products/tabid/54/Default.aspx>.

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2. Driver details

2.1. Driver overview

XAIBUS driver allows you to connect to any equipment which uses the Yudian AI-BUS Protocol.

This driver was developed by Jiantao Yu from China.

This driver implements Read/Write Register as they are described in the Yudian AI-BUS Protocol Manual.

This driver expects that you connect to your device through its serial port. The device should behave as a slave in your RS-232/485 network.

Required communication settings:

BaudRate: 1200-19200 bps Parity: None DataBits: 8 StopBits: 1 or 2

2.2. Supported devices

This driver can communicate with these devices, but is not necessarily limited to this list:

Yudian AI Series

3. Command list

3.1. Read Register

Description of this command:

Obtains current values.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-5

Meaning of the DriverP0 parameter:

Station number (0-100).

Meaning of the DriverP1 parameter:

0

Meaning of the DriverP2 parameter:

Indicates the register address (0-255).

Values that are returned:

Value in PointValue (0) = Register value

Value in PointValue (1) = PV

Value in PointValue (2) = SV

Value in PointValue (3) = MV

Value in PointValue (4) = Alarm Status

3.2. Preset Register as Signed 16-bit Integer

Description of this command:

Places a specified value into a register as an signed 16-bit integer value from -32768 to 32767. The device also returns current values.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-5

Meaning of the DriverP0 parameter:

Station number (0-100).

Meaning of the DriverP1 parameter:

0

Meaning of the DriverP2 parameter:

Indicates the register address (0-255).

Values that are sent:

Value in PointValue (0) = New register value (-32768-32767)

Value in PointValue (1) = PV

Value in PointValue (2) = SV

Value in PointValue (3) = MV

Value in PointValue (4) = Alarm Status

4. Appendices

4.1. Error messages

The following list shows all the possible error messages that can be returned by the protocol driver during a failed communication in the 'DriverStatus' property.

This list does not include some error messages that can be returned by the activex component while attempting to establish a connection.

- [1005] DRIVER (Internal): Invalid driver stage
- [1300] PROTOCOL (Timeout): No answer
- [2002] CONFIG (DataType): Digital inputs are not supported by this driver
- [2003] CONFIG (DataType): Digital outputs are not supported by this driver
- [2185] CONFIG (NumValues): Too many values (max=5)
- [3014] CONFIG (P0): Invalid device address (0-100)
- [3015] CONFIG (P1): Invalid extended address
- [4001] CONFIG (P2): Invalid address
- [8146] CONFIG (Remote): Frame checksum error (FCS)

4.2. Keywords list

The following list shows a set of words directly related to this driver.

"AI, AI-BUS, Series, Yudian".